

Implications of Financial Intermediation on the Performance of Microfinance Banks in Nigeria: 2000-2016

[https://doi.org/10.21272/fmir.2\(4\).68-81.2018](https://doi.org/10.21272/fmir.2(4).68-81.2018)

Adewole Joseph Adeyinka

MSc, Department of Banking and Finance, Faculty of Management and Social Sciences, Adekunle Ajasin University, Nigeria

Nwankwo Odi

PhD, Department of Banking and Finance, Faculty of Management Science, Kogi State University, Nigeria

Ogbadu Elijah Ebenehi

PhD, Department of Business Administration, Faculty of Management Science, Kogi State University, Nigeria

Olukotun Gabriel Ademola

PhD, Department of Banking and Finance, Faculty of Management and Social Sciences, Kogi State University, Nigeria

Samuel Olusegun James

PhD, Department of Banking and Finance, Faculty of Management Science, Kogi State University, Nigeria

Abstract

This paper examined the relationship between Financial Intermediation and the performance of Microfinance banks in Nigeria. The main objective of this study is to examine the effect of financial intermediation on the performance of Microfinance banks in Nigeria. Data were sourced from the Central Bank of Nigeria Statistical Bulletin. The method adopted for data analysis to the stated objective was regression analysis. It was discovered in the Credit Supply Equation 1 that there was a significant relationship between Total loans of Microfinance banks and deposit mobilized by Microfinance banks in Nigeria. It was revealed in MFBs Performance Equation 2 that there was a significant relationship between total asset and Capital employed by Microfinance banks in Nigeria. It was also revealed in MFBs Performance Equation 3 that there is a significant relationship between Loans to deposit ratio of Microfinance Banks and Liquidity ratio of Microfinance banks in Nigeria. The study, therefore, recommends that Microfinance bank deposits should be mobilized on a continuous base in order to increase the availability of credit to Microfinance bank Customers; Microfinance banks should efficiently utilize the Mobilized deposits, Shareholders funds to achieve loan distribution and withdrawals which will also have positive effect on total asset; Microfinance banks should foster higher level of liquidity in order to increase its ability to cover withdrawals made by its customers.

Keywords: microfinance bank, financial intermediation, deposit mobilization, capital employed, shareholders fund, total loans, total asset, liquidity ratio, loans to deposit ratio.

JEL Classification: G21, G12, E4, E5, H8.

Cite as: Adeyinka, A. J., Odi, N., Ebenehi, O. E., Ademola, O. G., James, S. O. (2018). Implications of Financial Intermediation on the Performance of Microfinance Banks in Nigeria: 2000-2016. *Financial Markets, Institutions and Risks*, 2(4), 68-81. [https://doi.org/10.21272/fmir.2\(4\).68-81.2018](https://doi.org/10.21272/fmir.2(4).68-81.2018)

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1. Introduction

1.1 Background to the Study

Financial Intermediation is the process of mobilizing funds from the surplus economic unit to the deficit economic unit. In other words, financial intermediation is the process of mobilizing financial resources from the ultimate saver to the ultimate user. Andrew and Osuji (2013) state that financial intermediation involves the transformation of mobilized deposits liabilities by banks into banks assets or credits such as loans and

overdraft. This means that financial intermediation is the process of taking in money from depositors and lending same to borrowers for investments which in turn help the economy to grow. Efficient financial intermediation causes a high level of employment generation and income, which invariably enhances the level of economic development. According to Blum (2002), financial intermediation is the process of transferring the savings of some economic units to others for consumption or investment at a price. For financial intermediation to take place there must be instruments and financial institutions operating together with the objective of bringing about the economic growth of the country. Mahmood & Bilal (2010) opined that the rising magnitude of financial intermediation costs have adverse implications on the development of Nigerian economy because, in the absence of developed capital market, the private sector which contributes a greater percentage to economic development in Nigeria will primarily depend on bank credit as a source of financing their investments which will lead to economic development. This means that the constant rise of financial intermediation discourages potential savings due to low returns on deposits. Financial intermediation is an institution that facilitates the channeling of funds between lenders and borrowers indirectly. That is, savers (lenders) give funds to an intermediation institution (such as a bank), and that institution gives those funds to spenders (borrowers). Onodugo, Anowor and Kalu (2013) opined that financial intermediation plays a very vital role in economic development in Nigeria. For financial intermediation to aid development, there must be an efficient financial system. This means that financial intermediation mitigates the costs associated with information acquisition and the conduct of financial transactions through the level of lending rate and credit to the private sector in accelerating development in an economy. The impact of financial intermediation on the development of an economy generated a heated debate. While some studies opined that financial intermediation drives economic development (Odedokun, 1998; Nieh, 2009; Islam & Osman, 2011), others have argued that economic development drives financial intermediation. However, Odhiambo (2011) argued that a bi-directional causality exists between financial intermediation and economic development. This study seeks to contribute to the body of literature by examining the effect of financial intermediation on economic development in Nigeria. Okereke (2004) stressed that; channeling of funds from surplus to deficit units of the economy will encourage productive innovation even though it is also risky.

In financial intermediation, there is direct and indirect finance. Direct finance is a form of financial intermediation that does not require the activities of middlemen i.e it does not financial intermediaries; the lender makes credit available to the borrower directly. Indirect finance is a form of financial intermediation that requires the activities of middlemen i.e this method makes use of financial intermediaries when mobilizing fund from the surplus economic unit to the deficit economic unit. Financial Intermediation role is being played by the financial sector of the economy, which can be formal or informal. Formal financial sector is a financial sector that operates under regulatory bodies like Central Bank of Nigeria (CBN), Nigeria deposit insurance corporation (NDIC), Security and exchange commission (SEC) etc. Informal financial sector is a kind of financial sector that do not operate under a regulatory body like thrift (Ajo Esusu in Yoruba Language, Adasi in Hausa Language), Local Money Lenders, Cooperative Societies.

The financial intermediation role that is being played by the financial sector is achievable through financial intermediaries, which can be banks and non-banks financial intermediaries. Onoh (2002) observed that the Nigerian financial sector comprises various segments including the regulatory and supervisory authorities for banks and non-bank financial institutions; others are the money market and its institution, the capital market and its players. Bank financial intermediaries are the financial institutions that carry the name bank, example of bank financial intermediaries are commercial banks, microfinance banks, agricultural banks, development banks, merchant banks, mortgage banks; investments banks etc. Non-bank financial intermediaries are the financial institutions that do not carry the name bank, example of non-bank financial intermediaries are Insurance Companies, Nigerian deposit insurance corporation (NDIC), Finance Houses, Security and exchange commission (SEC), Nigerian stock exchange market etc. However, both bank and non-bank financial intermediaries perform the role of financial intermediation. Financial intermediaries, all over the world play crucial roles in the development and growth of the economy. An economy is made up of fundraisers and fund suppliers. Financial intermediaries are those institutions in the financial market that mediate between the fundraisers and the fund suppliers. They carry out intermediation between surplus and deficit units of the economy. The role of financial intermediaries in intermediating between fundraisers and fund suppliers has been exemplified in the various finance literature. Several studies have dwelt on the role of financial intermediaries (Benston & Smith, Jr., 1975; Holmstrom & Tirole, 1998; Gromb & Vayanos, 2010; Araiyo & Minetti, 2007). Some studies concentrate on the impact of financial intermediation on the financial system (Anad & Subrahmanyam, 2008). Other studies focus on the impact of financial intermediation on economic

growth, and the impact of economic growth on financial intermediation (Nieh et al. 2009; Odhiambo, 2011). However, this study centers on Bank financial intermediaries with a focus on commercial banks in Nigeria.

Microfinance Bank is a company licensed to carry out the business of providing microfinance services such as savings, loans, domestic funds transfer and other financial services to the economically active poor, micro-enterprises and small and medium scale enterprises that need financial services to conduct or expand their businesses. The goals of microfinance bank are the provision of diversified financial services, mobilization of savings for intermediation, the creation of employment opportunities, enhanced participation of the poor in economic development.

Microfinance banking, like other banking operations, started with the activities of the early goldsmith, who were custodians of peoples' valuables at that time, Kanu (2002). These depositors were mainly men who had a surplus to save. Banking services were fashioned to meet the needs of the rich who had valuables to deposit with the goldsmiths, at the expense of the poor. Banking in Nigeria started in 1892 (Kanu 2005) and was operated with the same concept that resulted in the rich getting richer and the poor impoverished.

Microfinance Banks, like any other banking institution, play an intermediary role between the surplus and deficit units of the economy. To ensure that they remain in business, they pursue their financial mission with vigor. To achieve the concept for which they were established they equally pursue their social mission by granting financial services to the poor.

1.2 Statement of the Problem

Many researchers have attempted to explain the effect of Financial Intermediation on the performance of Microfinance Banks. As reported by Adeoye (2003), the Microfinance banking services are still inadequate and unattractive to borrowers because they do not favour long-term lending, and even for short-term lending, their high-interest rates do not only discourage borrowing but also make repayment difficult. Moreover, the effect of policy distortions on the ability of Microfinance banks to supply credit to the various sectors is reflected in their dismal performance.

Low liquidity is still affecting Microfinance Banks Nigeria, which affects its loan to deposit ratio and it difficult for Microfinance Banks to cover withdrawals made by its customers. Also, it makes it difficult for Microfinance Banks to adequately meet up with their short and long-term obligations.

1.3 Research Questions

- What is the relationship between Total loans and Deposit mobilized by Microfinance Banks in Nigeria?
- What is the relationship between Total asset and Capital employed by Microfinance Banks in Nigeria?
- What is the relationship between Loans to deposit ratio and Liquidity ratio of Microfinance Banks in Nigeria?

1.4 Objectives of the Study

The broad objective of this study is to examine the effect of financial intermediation on the performance of Microfinance Banks in Nigeria 2000 - 2016. The specific objectives are to:

- Examine the relationship between Total loans and Deposit mobilized by Microfinance Banks in Nigeria.
- Examine the relationship between Total asset and Capital employed by of Microfinance Banks in Nigeria.
- Examine the relationship between Loans to deposit ratio and Liquidity ratio of Microfinance Banks in Nigeria.

1.5 Research Hypotheses

H₀: There is no significant relationship between Total loans and Deposit Mobilized by Microfinance Banks in Nigeria.

H₀: There is no relationship between Total asset and Capital employed by microfinance Banks in Nigeria.

H₀: There is no relationship between Loans to deposit ratio and Liquidity ratio of Microfinance Banks in Nigeria.

1.6 Significance of the Study

This research provides an in-depth analysis, which would enable the populace to fully understand the nitty-gritty of the performance of Microfinance Bank in Nigeria and ultimately enable them to be very much familiar with Microfinance Bank Financial Intermediation role. Furthermore, the development of Microfinance Bank has been given priority by the Central Bank of Nigeria in the successive reform plans.

This study is important at this level of economic development when efforts are being made to reposition the financial system to enable it to play key roles in the economic development of Nigeria. The study essentially seeks to examine in an empirical manner, the nature of Microfinance Bank in Nigeria since 2000 up to 2016. The study shall seek to ascertain the critical factors that have affected the level of financial intermediation of Microfinance Banks in Nigeria.

This study was justifiable since it employed the crucial methodology analysis used in examining the flows of credit in the microfinance banking system. While most studies conducted on microfinance bank and financial intermediation examined the banks' activities up to 2014 (Tonye and Andabai, 2014), the periods covered also made the study unique to others. It covered eleven years ranging from 2000 to 2016. Although, the performance of microfinance bank has been well documented in both international and domestic literature, this work seeks to add to the research by examining the relationship between financial intermediation in microfinance bank and its performance, which is a quiet departure from previous studies that focused on the determinant of microfinance bank credit to small and medium scale enterprise.

A review of the problems facing the Microfinance Bank in Nigeria is quite indispensable. Such a review will enable the institution to face the ever-increasing demand upon it. Finally, since the essence of every research work is to build upon and add to the existing knowledge on the performance of Microfinance Bank in Nigeria, this study would also help us understand the strong bond between financial Intermediation and the performance of Microfinance Bank in Nigeria.

2. Literature Review

This section deals with the review of literature related to the impact of financial intermediation on the performance of microfinance bank in Nigeria. The reviews consist of conceptual review, theoretical review and empirical review.

2.1 Conceptual Review

2.1.1 Concept and Nature of Microfinance Bank

The Central Bank of Nigeria recently introduced the Microfinance Policy, Regulatory and Supervisory Framework for Nigeria to empower the vulnerable and poor people by increasing their access to factors of production, primarily capital. To achieve the goals of this phase of its banking reforms agenda, the apex bank seeks to re-brand and re-capitalize hitherto community banks, to come under two categories of microfinance banks. They are MFBs licensed to operate as a unit within local governments and the other licensed to operate in the state or the federal capital territory with a minimum paid up the capital base and shareholders' funds of N20million and N1billion respectively. Microfinance is defined as a development tool that grants or provides financial services and products such as very small loans, savings, micro-leasing, micro-insurance and money transfer to assist the very or exceptionally poor in expanding or establishing their businesses (Robinson, 2003). Abiola (2012) agree that microfinance is about providing financial services to the poor who are traditionally not served by the conventional financial institutions. Microfinance is mostly used in developing economies where SMEs do not have access to other sources of financial assistance (Robinson, 1998). That is microfinance recognize poor and micro-entrepreneurs who are excluded or denied access to financial services on account of their inability to provide tangible assets as collateral for credit facilities (Jamil, 2008). The main objective of microcredit according to Maruth (2011) is to improve the welfare of the poor as a result of better access to small loans that are not offered by the formal financial institutions. Kolawole (2013) states that microfinance bank helps to generate savings in the economy, attract foreign donor agencies, encourage entrepreneurship and catalyze development in the economy.

The establishment of microfinance banks is to serve the following purposes according to Central of Nigeria, (2005); provide diversified, affordable and dependable financial services to the active poor; mobilize savings for intermediation; create employment opportunities and increase the productivity of the active poor in the country; enhance organized, systematic and focused participation of the poor in the socio-economic

development and resource allocation process; provide veritable avenues for the administration of the microcredit programmes of government and high net worth individuals on the non-recourse case basis.

2.1.2 Concept and Nature of Financial Intermediation

To ensure that investible funds are made available for economic activities, social and community services sector inclusive in the urban and rural areas and the quest for the overall development of the economy informed the decision of financial system focusing more financial intermediation. Financial intermediation is typically an institution that facilitates the channeling of funds between lenders and borrowers indirectly. That is, savers (lenders) give funds to an intermediary institution (such as a bank), and that institution gives those funds to spenders (borrowers). Gorton and Winton (2002) define financial intermediaries as firms that borrow consumers/savers and lend same to companies that need resources for investment.

Financial intermediaries can be classified into institutional investors, pure intermediaries like investment banks and Deposit Money Banks. Among all the financial intermediaries, banks are the major financial intermediaries that accept deposits and make loans directly to the borrowers (Quilym, 2012).

Mahmood and Bilal (2010) opined that the rising magnitude of financial intermediation have adverse implications on the growth of Nigerian economy because, in the absence of developed capital market, the private sector which contributes a greater percentage to economic growth in Nigeria will primarily depend on bank credit as a source of financing their investments which will lead to economic growth. This means that the constant rise of financial intermediation discourages potential savings due to low returns on deposits, and ultimately reduces lending activities and investment potential of investors as a result of high cost of funding (Ndung'u and Ngugi, 2000; Mahmood and Bilal, 2010). Financial intermediation involves the transformation of mobilized deposits liabilities by financial intermediaries such as banks into bank assets or credits such as loan and overdraft. It is simply the process whereby financial intermediaries take in money from depositors and lend the same out to borrowers for investment and other economic development purposes (Andrew and Osuji, 2013). According to Acha (2011), financial intermediation is a system of channeling funds from lenders (economic surplus unit) to borrowers (economic deficit unit) through financial institutions.

2.2 Theoretical Review

2.2.1 Theory of Financial Intermediation

The theory of financial intermediation was first formalized and popularized in the works of Goldsmith (1969), Shaw (1973) and Mckinnon (1973), who see financial markets (both money and capital markets) playing a pivotal role in economic development, attributing the differences in economic growth across countries to the quantity and quality of services provided by financial institutions. Supporting this view is the result of a research by Nwaogwugwu (2008) and Dabwor (2009) on the Nigerian stock market development and economic growth, the causal linkage. However, this contrasts with Robinson (1952), who argued that "financial markets are essentially handmaidens to domestic industry, and respond passively to other factors that produce cross-country differences in growth". Moreover, there is a general tendency for the supply of finance to move along with the demand for it. The same impulse within an economy, which set enterprises on foot, makes owners of wealth, venturesome and when a strong impulse to invest is fettered by lack of finance, devices are invented to release it. The Robinson school of thought, therefore, believes that economic growth will bring about the expansion of the financial sector. Goldsmith (1969) attributed the direct correlation between the level of real per capita GNP and financial development to the positive effect that financial development has on encouraging more efficient use of the capital stock. In addition, the process of growth has feedback effects on financial markets by creating incentives for further financial development.

Mckinnon (1973) in his study argued that there is a complementary relationship between physical capital and money that is reflected in money demand. This complementarily relationship according to Mckinnon (1973) links the demand for money directly with the process of physical capital accumulation mainly because the conditions of money supply have a first-order impact on the decision to save and invest. Debt intermediary hypothesis was proposed by Shaw (1973), whereby expanded financial intermediation between the savers and investors resulting from financial liberalization (higher real interest rates) and development increase the incentive to save and invest, stimulates investments due to an increased supply of credit and raises the average efficiency of investment. This view stresses the importance of free entry into and competition within the financial markets as prerequisites for successful financial intermediation. They labeled the main rudiments of financial suppression as high reserve requirements on deposits, legal ceilings on bank lending and deposit

rate, directed credit, restriction on foreign currency capital transactions, restriction on entry into banking activities.

2.2.2 Supply Leading Theory

The supply leading theory postulates that the existence of financial institutions like the Nigerian deposit money banks and the supply of their financial assets, liabilities and related financial services in advance of demand for them would provide efficient allocation of resources from surplus units to deficit units, thereby leading to other economic sectors in their growth process (Patrick, 1996). This theory performs two functions: first, it transfers resources from traditional sectors to modern sectors; and second, it promotes and stimulates an entrepreneurial response in the modern sectors. The supply leading financial intermediation can be linked to the term 'innovation finance'. Hence, one of the most significant effects of supply leading approach is that, as entrepreneurs have new access to the supply leading funds. Their expectation increase and new horizons as to possible alternatives are opened, thereby making the entrepreneur to think big. The supply leading theory presents an opportunity to induce real growth by financial means. Its use, analysts believe is more result oriented at the early level of a country's development than later. According to Gerschenkron (1962) 'the more backward the economy relative to others in the same time period, the greater the emphasis on supply leading finance'. According to Keynes, an increase in investment results in an increase in income, while people's propensity to consume will lead to lack of savings, nevertheless in the economic market when a function of the individuals is spending, they put back part of the income into the economy. Besides, this theory makes it clear that higher interest rate makes it more expensive for SMEs to borrow money, which means that enterprises invest less and when they do that, income is reduced such that the amount left over for savings equals the lesser amount now invested. In the theory also, investment and savings have been considered two critical macroeconomics variables with microeconomic foundation for achieving price stability and promotion of employment opportunities, which contribute to the sustainable economic growth. The conventional perception through which investment, savings and economic growth are related is that savings contribute to higher investments, hence higher GDP growth in the short run. The theory finally concludes that the financial institutions especially banks help in the reduction of risk faced by firm and businesses in their process, improve the portfolio of diversification and isolation of the economy from the change of international economic changes. It also provides linkages for the different sectors of the economy and encourages a high level of specialized expertise and economies of scale.

2.3 Empirical Review

Olujobi O.O. (2007) carried out a study on developing Microfinance banking in Nigeria; he discovered that the transformation of community banks and interested non-governmental organizations to Microfinance Institutions under the supervision of the Central Bank of Nigeria is a laudable one. However, for the smooth running of Microfinance banking in Nigeria, The services and products of Microfinance Institutions should be tailored towards the poor masses in rural and urban areas as an economic tool. In this respect, loans to be provided should be moderately priced and within the reach of the poor. Corporate governance policy should be implemented for all the owners, directors and employee of Microfinance banks to avoid asset strapping, diversion of depositor's fund. Due diligence and security report of this group of personnel should be carried out by the State Security Service under the instruction of the Central Bank so that those who plunder the banking sector do not transfer such illicit fund to Microfinance business in Nigeria.

Murtala, Ahmad, Siba and Mohammed (2015) investigated the role of financial intermediaries in the sustainable economic growth of Nigeria. Augmented Dickey-Fuller and Phillips-Perron unit root tests, as well as Andrew-Zivot, are used to check the stationarity of each variable in the model. The study employed ARDL bounds testing to examine the relationship between financial sector indicators (with particular attention to insurance, bank, and stock market development) and economic growth in both short-run and long-run. Toda Yamamoto Causality was also applied to observe the nature of causality. Their findings suggested that there was a significant positive long-run and short-run relationship between stock market, insurance development, and economic growth. The result is consistent with theoretical and empirical predictions. However, a negative short-run and long-run relationship existed between bank development and economic growth. The feedback coefficient was negative and significant, suggesting about 0.37% disequilibrium in the previous period was corrected in the current year. They found a stable long-run relationship between economic growth and financial depth, as indicated by the CUSUM and CUSUMSQ stability tests. Bank credit, insurance, value of the stock transaction, and interest rate jointly caused economic growth while bank credit, insurance, value of

the stock transaction, and GDP did not jointly cause lending. Their findings are consistent with the view that economic growth is an outcome of financial development.

The study by Emecheta and Ibe (2014) also probed the role of bank credit on growth in Nigeria for the period 1960-2011. The authors used current GDP as a measure of economic growth and financial deepening variables of bank credit to the private sector (CPS) to GDP ratio and broad money (M2) to GDP ratio and adopted VAR for the analysis and the results holds that there is an impactful linear connection between bank credit and economic growth.

Ogege and Boloupremo (2014) investigated the effect of sectoral credit allocation by deposit money banks in accelerating GDP growth in Nigeria. The authors used time series data from 1973-2011. Engle-Granger Representation Theorem of Error correction was adopted for the analysis and results suggested that credit to the production sector has a significant and real effect on the growth rate of Nigeria whereas general commerce, services and other sectors have a negative and statistically unimportant connection with GDP in Nigeria. The study concluded by saying that commercial banks should be more efficient in credit distribution to accelerate growth.

Ayadi (2015) explored the impact of financial development, Bank efficiency, on economic growth across the Mediterranean using Fixed-effect panel model from 1985–2009. Based on the variables used, the result proved that independent legal institutions, good governance, and sound financial reforms have a substantial positive impact on financial development. Furthermore, inflation affects banking sector development especially when the capital account is open. Government debt affects domestic credit to the private sector. Finally, capital inflows appear to have an income effect, increasing revenue and thereby national savings, and thus increasing the availability of credit.

2.3.1 Critique of Gaps in the Literature

From the empirical review, it was obvious that the majority of the authors that wrote on financial intermediation laid emphasis on the relationship between Bank financial intermediation and economic growth in Nigeria (Andrew & Osuji, 2013; Adekunle, Salami & Adedipe, 2013; Shittu, 2012; Hao, 2006; Odedokun, 1998). This study intends to make a difference, as it will examine the implications of financial intermediation on the actual performance of microfinance banks in Nigeria.

From the empirical review, it was obvious that most authors failed to distinguish between the financial intermediation variables and macroeconomic variables. Shittu (2012) in a country-specific study investigated the impact of financial intermediation on economic growth in Nigeria using the ratio of domestic credit to private sector (CPS)/nominal GDP and money supply (M2)/nominal GDP as measures of financial intermediation and real GDP as a proxy for economic growth. However, "Money Supply" is not an authentic variable for financial intermediation. Many researchers are fond of using "Money Supply" in place of total credit/total credit. The two are different; Money Supply is the total amount of money in circulation or in existence in a country while Bank total credit is the aggregate amount of credit available to a person or business from a banking institution. However, the total amount of money in circulation (money supply) is not a true variable for financial intermediation because financial intermediation role is being performed by financial institutions but "Money Supply" is the total amount of money in circulation which includes other sectors that are not a financial institution. Therefore, total bank credit/loan is a more appropriate variable for the explanation of financial intermediation, not money supply. However, this study intends to fill this gap, as it will use total bank credit/loan as a proxy for credit supply. Also, the study will use more appropriate financial intermediation variables neglected, misused by previous authors.

Some authors find out that savings and time deposit is a primary source of capital accumulation (Andrew & Osuji, 2013). This assumption does not absolutely hold as it neglected the "Shareholders Fund variable". All microfinance banks in Nigeria are limited liability companies, which means that all microfinance banks are entitled to using share capital to run the banking businesses. This means that "Shareholders Fund" constitute an integral part of the capital employed by microfinance bank. This study intends to fill this gap, as it will use microfinance banks shareholders fund, total deposit mobilization and a total asset to determine the asset performance of microfinance bank in Nigeria.

Most studies on bank financial intermediation were done up to 2014 (Andrew & Osuji, 2013; Adekunle, Salami & Adedipe, 2013; Shittu, 2012; Tonye and Andabai, 2014). However, this study will examine the implication of financial intermediation on the performance of microfinance banks in Nigeria from the year 2000 to 2016, which is a more current work to the previous studies.

3. Methods for Achieving the Stated Objectives

The strategies used for achieving the stated objectives were simple and multiple regressions of which three equations were formulated in order to achieve the three specific objectives stated. In the equations, the hypotheses stated were tested. The equations are MFBs credit supply equation 1, MFBs performance equation 2, and MFBs performance equation 3. Several authors have also used this approach in their works (Reinhart & Tokatlidis, 2000; Olukotun, Adewole & James, 2015; Popoola M.A, Adewole J.A & Idih O.E, 2018) and they were able to arrive at unbiased and accurate results. As a result of this, the approach of regression analysis cannot create a weakness in terms of the results presentation. The data used for this study were the source from Central Bank of Nigeria Statistical Bulletin, which is Total loans of Microfinance Bank, Liquidity Ratio of Microfinance Bank, Deposit Mobilized by Microfinance Bank, Total Asset of Microfinance Bank, Shareholders fund Microfinance Bank, Loan to deposit ratio of Microfinance Bank. The data were chosen to measure the relationship between financial intermediation and the performance of Microfinance banks in Nigeria because they are financial intermediation and bank performance variables.

3.1 Discussions

The study discovered that there exists a positive or strong correlation between the dependent variable (Total loans) and independent variable (Deposit Mobilisation) in the MFBs credit supply equation I. This means that with the level of Microfinance bank deposit, there is the availability of credit to Microfinance Bank Customers (see Appendix B).

The coefficient of determination of 92.8% in MFBs credit supply equation I measures the strength of the relationship or cause-effect relationship which means that 96.4% variation in the dependent variable (Total loans) is explained by the independent variable (Deposit Mobilization) and 7.2% of the variation in the dependent variable is explained by the disturbance term or error term due to inflationary pressure, economic meltdown, low profitability, non-performing loans etc. (see Appendix B).

Besides, in MFBs credit supply equation I, Deposit Mobilisation has been found as an increasing function of Total loans, this increases the value of the Total loans. This means that the Deposit level did not have a negative effect on Total loans. The parameter of Total loans in a relationship with Deposit Mobilisation was statistically significant at 5%, this means that the variables are not equal to zero. Also, this means that Microfinance Banks have the ability to meet up with their short and long-term loan demands (see Appendix B).

There exist a positive or strong correlation between the dependent variable (Total Asset) and independent variable (Deposit Mobilisation, Shareholders Fund, Total loans) in the MFBs Performance equation II. This means that the general performance of Microfinance Banks is worthwhile (see Appendix C).

The coefficient of determination of 99.8% in MFBs Performance equation 2 measures the strength of the relationship or cause-effect relationship, which means that 99.8% variation in the dependent variable (Total Asset) was explained by the independent variable (Deposit Mobilisation, Shareholders Fund, Total loans) and 0.2% of the variation in the dependent variable was explained by the disturbance term or error term due to inflationary pressure, economic meltdown, low profitability, non-performing loans etc. (see Appendix C).

Besides, in MFBs Performance equation 2, independent variables have been found as an increasing function of a dependent variable, this increases the value of the Total Asset. This means that deposit mobilization, shareholders' funds and total loans have a positive effect on Total Asset. The parameter of Total Asset in a relationship with Deposit Mobilization, Shareholders Fund, Total loans was statistically significant at 5%. This means that the variables are not equal to zero. Also, this means that efficient utilization of Mobilized deposit, Shareholders fund in form of loan distribution and meeting up with deposit demand leads to an increase in Total Asset (see Appendix C).

There exist a positive or strong correlation between the dependent variable (Loans to deposit ratio) and independent variable (Liquidity ratio) in the MFBs Performance equation 3. This means that Microfinance Banks in Nigeria have the ability to meet up with their short and long-term obligations (see Appendix D).

The coefficient of determination of 44.6% in MFBs performance equation 3 measures the strength of the relationship or cause-effect relationship which means that 44.6% variation in the dependent variable (loan to deposit ratio) was explained by the independent variable (Liquidity ratio) and 55.4% of the variation in the dependent variable was explained by the disturbance term or error term due to inflationary pressure, economic meltdown, low profitability, non-performing loans etc. (see Appendix D).

Besides, in MFBs performance equation 3, Liquidity ratio has been found as an increasing function of loans to deposit ratio, this increases the value of the loans to deposit ratio. This means that Liquidity is high enough and because of this, it did not have any negative effect on loans to deposit ratio. The parameter of Loans to deposit ratio in a relationship with Liquidity ratio was statistically significant at 5%, this means that the variables are not equal to zero. Also, this means that Microfinance Banks in Nigeria have the ability to meet up with their short and long-term obligations (see Appendix D).

3.2. Conclusions

The following conclusions were drawn from the investigation:

It is obvious from the results of the study that the microfinance bank reform strategies adopted in Nigeria have been geared towards making domestic credit available to support the economy. As a result of this, the supply of domestic credit to the real sector has been improved. The conclusions that can be drawn from the findings of this study is that there is an increase in the availability of credit for real sector investments and the returns on asset of Microfinance bank experienced an improvement level within the period of analysis.

3.3 Recommendations

Base on the objective and findings of this study, the study, therefore, recommends that:

1. Microfinance bank deposits should be mobilized on a continuous base in order to increase the availability of credit to Microfinance Bank Customers.
2. Microfinance banks should efficiently utilize their capital employed in order to have a continuous return on capital, which will also increase Microfinance banks' total asset.
3. Microfinance banks should foster a higher level of liquidity in order to increase its ability to cover withdrawals made by its customers.

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Appendix A

Data Presentation

Total Asset, Shareholders Fund, Total Loans, Loan to Deposit Ratio, Liquidity Ratio and Deposit Mobilized by MFBs.

Years	Total Asset in #'Millions	Shareholders Fund in #'Millions	Total Loans in #'Millions	Loans to Deposit Ratio in %	Liquidity Ratio in %	Deposit Mobilization in #'Millions
2000	12014.7	2773.6	3666.6	49.8	61.4	7689.4
2001	4884.4	1314.0	1314.0	42.0	59.3	3294.0
2002	15463.5	3825.6	4310.9	46.7	63.1	9699.2
2003	28689.2	7011.1	9954.8	57.0	54.5	18075.0
2004	34162.3	8156.4	11353.8	55.0	56.4	21407.9
2005	82866.9	18107.3	28504.8	62.2	63.9	47523.7
2006	55145.8	12829.8	16450.2	48.0	75.9	34017.7
2007	75549.8	21810.7	22850.2	55.0	83.3	41217.7
2008	122753.8	37021.8	42753.1	67.2	72.3	61568.1
2009	151610.0	45166.0	58215.7	73.8	64.9	76662.0
2010	170338.9	43997.5	52867.5	53.0	75.1	75739.6
2011	117872.1	29094.8	50928.3	79.2	58.7	59375.9
2012	189293.4	42829.1	90422.2	77.4	59.9	98789.1
2013	237837.6	64939.0	94055.6	74.5	44.9	121787.6
2014	221652.3	53039.0	112110.1	72.3	50.0	110688.4
2015	343883.1	91376.5	187247.3	90.3	45.8	159453.5
2016	326223.1	77868.7	196195.0	126.2	36.3	149798.4

Source: CBN Statistical Bulletin (December, 2016)

Appendix B

Data Analysis

MFBs CREDIT SUPPLY EQUATION

(1)

$$TLM_{si} = \alpha_0 + \alpha_1 DEM_{si} + e_1$$

(2)

Where:

TLM = Total loans of MFBs (TLM_{si});

X_1 = Deposit Mobilized by MFBs; (DEM);

α_0 = Constant (A);

α_i = Regression Coefficients;

e_i = Error term.

Variables Entered/Removed ^b			
Model	Variables Entered	Variables Removed	Method
1	DEM ^a	.	Enter
a. All requested variables entered.			
b. Dependent Variable: TLM			

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.964 ^a	.928	.924	16749.51814	.691
a. Predictors: (Constant), DEM					
b. Dependent Variable: TLM					

ANOVA ^b						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	5.455E10	1	5.455E10	194.428	.000 ^a
	Residual	4.208E9	15	2.805E8		
	Total	5.875E10	16			
a. Predictors: (Constant), DEM						
b. Dependent Variable: TLM						

Coefficients ^a													
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-18522.723	6818.427		-2.717	.016	-33055.856	-3989.590					
	DEM	1.184	.085	.964	13.944	.000	1.003	1.364	.964	.964	.964	1.000	1.000
a. Dependent Variable: TLM													

Collinearity Diagnostics ^a					
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions	
				(Constant)	DEM
1	1	1.803	1.000	.10	.10
	2	.197	3.026	.90	.90
a. Dependent Variable: TLM					

Appendix C

MFBs PERFORMANCE EQUATION (3)

$$TAM_{si} = \alpha_0 + \alpha_1 DEM_{si} + \alpha_2 SHF + \alpha_3 TLM + e_1 \quad (4)$$

Where:

Y_i = Total Asset of MFBs; (TAM);

x_1 = Deposit Mobilized by MFBs; (DEM_{si});

x_2 = Shareholders Fund; (SHF);

x_3 = Total Loans of MFBs; (TLM);

α_0 = Constant (A);

α_i = Regression Coefficients;

e_i = Error term.

Variables Entered/Removed ^b			
Model	Variables Entered	Variables Removed	Method
1	TLM, SHF, DEM ^a		Enter
a. All requested variables entered.			
b. Dependent Variable: TAM			

Model Summary ^b										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.999 ^a	.998	.997	5572.44780	.998	1960.064	3	13	.000	2.231
a. Predictors: (Constant), TLM, SHF, DEM										
b. Dependent Variable: TAM										

ANOVA ^b						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.826E11	3	6.086E10	1.960E3	.000 ^a
	Residual	4.037E8	13	3.105E7		
	Total	1.830E11	16			
a. Predictors: (Constant), TLM, SHF, DEM						
b. Dependent Variable: TAM						

Coefficients ^a													
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-1159.236	2898.885		-.400	.696	-7421.897	5103.424					
	DEM	1.066	.211	.492	5.047	.000	.609	1.522	.996	.814	.066	.018	55.898
	SHF	1.263	.327	.324	3.865	.002	.557	1.969	.992	.731	.050	.024	41.453
	TLM	.338	.086	.192	3.934	.002	.152	.524	.973	.737	.051	.072	13.976
a. Dependent Variable: TAM													

Collinearity Diagnostics ^a							
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	DEM	SHF	TLM
1	1	3.622	1.000	.01	.00	.00	.00
	2	.350	3.218	.48	.00	.00	.02
	3	.024	12.210	.24	.02	.13	.84
	4	.004	30.117	.27	.97	.87	.14
a. Dependent Variable: TAM							

Appendix D

MFBs PERFORMANCE EQUATION

(5)

$$LDR_{si} = \alpha_0 + \alpha_1 LR_{si} + e_i$$

(6)

Where:

LDR = Loans to Deposit Ratio of MFBs (LDR_{si});

X_1 = Liquidity Ratio of MFBs; (LR);

α_0 = Constant (A);

α_i = Regression Coefficients;

e_i = Error term.

Variables Entered/Removed ^b			
Model	Variables Entered	Variables Removed	Method
1	LR ^a	.	Enter
a. All requested variables entered.			
b. Dependent Variable: LDR			

Model Summary ^b										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.668 ^a	.446	.409	15.77077	.446	12.063	1	15	.003	.544
a. Predictors: (Constant), LR										
b. Dependent Variable: LDR										

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3000.163	1	3000.163	12.063	.003 ^a
	Residual	3730.759	15	248.717		
	Total	6730.922	16			
a. Predictors: (Constant), LR						
b. Dependent Variable: LDR						

Coefficients ^a													
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	134.466	19.954		6.739	.000	91.934	176.998					
	LR	-1.127	.325	-.668	-3.473	.003	-1.819	-.435	-.668	-.668	-.668	1.000	1.000
a. Dependent Variable: LDR													

Collinearity Diagnostics ^a					
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions	
				(Constant)	LR
1	1	1.981	1.000	.01	.01
	2	.019	10.337	.99	.99
a. Dependent Variable: LDR					