FINANCIAL INCLUSION, MSMEs AND ITS IMPACT ON DEPOSIT MONEY BANKS PERFORMANCE IN NIGERIA

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Abstract

This study examined the impact of financial inclusion on financial performance of listed Deposit Money Banks (DMBs) in Nigeria. The study measured financial inclusion using Micro, Small and Medium Enterprises Financing, Rural Financing, Number of branches of DMBs, Pricing and Usage of banking services, while performance was measured with return on assets (ROA). This study adopted ex-post facto research design. The population of the study comprised of the 14 listed deposit money banks on the Nigerian Stock Exchange for the period of 2005-2018. The study censured all the 14 listed DMBs as the sample size. The study collected secondary data from Central Bank of Nigeria statistical bulletin and financial reports of the sampled banks. Panel multiple regression analysis was utilized to analyse the data and Hausman specification test revealed that fixed effect model was more appropriate to random effect model. Test for adequacy were performed on the residuals and the results indicated that the residuals were homoskedastic and had no serial correlation, suggesting that the model is good. The study found that rural financing and number of branches of deposit money banks have statistically significant effects on profitability of DMBs in Nigeria. The study concluded that financial inclusion improves profitability of DMBs in Nigeria. Based on the findings, this study recommended that DMBs should increase the amount of loan and advances given to rural areas and Micro, Small and Medium Enterprises as this will strengthen profitability of DMBs in Nigeria.

Keywords: Financial Inclusion, MSMEs, Number of Bank Branches, Performance and Rural Financing

Introduction

Financial inclusion is simply an extension of banking and financial services (such as savings, deposits, payments, withdrawals, loans and advances) to an individual, group or community that were hitherto excluded. It is the universal access and usage of affordable financial services to the low income, the underserved, small businesses adequately covered under the umbrella of Micro, Small and Medium Enterprises (MSMEs). Given the gloomy picture of the low level of financial inclusion in the world and the importance of financial inclusion to poverty alleviation and inclusive growth, there are growing concerns on the need to improve the level of financial inclusion worldwide (Onaolapo, 2015). Following the Maya Declaration of 2011 in Mexico, financial inclusion received increased attention and has become more pronounced ever since. Mbutor and Uba (2013) assert that a higher degree of financial inclusion tends to boost higher economic growth and positive development both at micro and macro levels of the economy.

The World Bank (2015) asserts that about 2 billion people in the World do not use formal financial services and more than 50% of adult populations in the Developing Countries are unbanked. At multi-national levels, the new global development blueprints of the United Nations, the Sustainable Development Goals (SDGs), the successor to the Millennium Development Goals (MDGs) considered financial inclusion as a catalyst and key enabler for achieving 7 out of 17 Sustainable Development Goals (SDGs) in the areas of poverty reduction and boosting shared prosperity (Islamic Development Bank, 2016).

In Africa, the recent global financial inclusion Index shows that less than a quarter of bankable adult population has an account with formal financial institutions (Demirgue-Kunt & Klapper, 2012). This further confirms the high rate of financial exclusion as majority of African Adults in many African Countries appear to be financially excluded and perhaps use informal method to save or borrow funds outside the banking systems.

In the case of Nigeria, according to Central Bank of Nigeria (2012), 39.2 million adult population, representing 46.3% of Nigerian Adults are financially excluded with regards to access and usage of financial services. This concern has led Nigeria, among others, (more than 50 countries), after the Maya Declaration in 2011, to set formal targets of universal financial access by 2020. Consequent upon this, the CBN launched the Nigerian Financial Inclusion Strategy (NFIS) in 2012, setting a target to reduce Financial Exclusion to 20% by 2020 from the baseline of 46.3%.

Performance, as asserted by Bessler and Bittelmeyer (2006), is an indicator of how a firm has transformed its assets to generate revenue in its day-to-day business operations. Performance also mirrors how external parties evaluate a firm's ability to operate on the long run. Therefore, managers of firms are under constant pressure from a wide spectrum of stakeholders (managers inclusive) for better performance resulting in conflict of interests and subsequent agency costs which will be borne by shareholders (Bosse, Phillips & Harrison, 2009).

The Banking industry plays a very key role in the economy of any nation, through financial intermediation, robust but seamless credit and payment systems. Nwala and Abubakar (2014) asserts that viability of any nation's economy depends more often than not on how healthy the banking sector fairs. Subsequently, governments all over the world attempt to establish an efficient and effective banking system to promote economic growth and enhance the financial performance of the banking sector through supervision, regulations and reforms (Aruwa & Naburgi, 2014). Deposit Money Banks provide the platform and delivery vehicle for financial inclusion activities in the payment-credit systems and more financial inclusion could bring more people into the banking nets, which could radiate positively into the financial performance of banks through increased services patronage and broader clientele services. This study is thus necessitated by concerns on current state of financial inclusion and its implications on financial performance of Deposit Money Banks (DMBs) in Nigeria. This is premised on the fact that, it is the banks that provide, in the main, the platform, delivery vehicle and the operating environment for the financial inclusion activities.

There is a plethora of studies in the areas of financial inclusion and financial performance. But studies that link the interconnectivity between the two are few. Early studies on financial inclusion focused on macroeconomic variables, which do not clearly show the specific industry dynamics of financial inclusion and the important financial intermediation role of deposit money banks in financial inclusion activities. Although there are pockets of studies such as the empirical works of Rachana (2011); Ikram and Lohdi (2015); and Harelimana (2016) in the areas of financial inclusion and banks financial performance, studies in this area are few and this vacuum has not been exhaustively explored. For instance, Ikram and Lohdi (2015) focused on Pakistan. Their study oversimplified bank revenue generation as a proxy for profitability and the use of questionnaire instead of a more robust data collection technique has been considered inadequate by this study. This study filled these gaps by capturing five financial inclusion variables and seeks to examine how these variables of financial inclusion impact financial performance of listed DMBs in Nigeria.

The main objective of this study is to examine the impact of financial inclusion on financial performance of listed DMBs in Nigeria while the specific objectives of the study are to examine the impact of micro, small and medium enterprises financing, usage of banking services, pricing of banking services, number of DMBs branches and rural financing on performance of listed DMBs in Nigeria.

Literature Review

Concept of Financial Inclusion

Evidence from the review of literature has shown that there is a plethora of definitions and concepts of financial inclusion. Thus, there is no universally accepted definition of financial inclusion. Conceptual focus, emphasis and definitions of financial inclusion cut across the countries and geographies depending on the level of social, economic and financial development of that place and priorities of social concerns.

The term financial inclusion is unhindered access to financial resources and services for different economic agents at affordable cost, especially those with lower income and micro small and medium enterprises (MSMEs). It is delivery of financial services at affordable costs to the unbanked and low-income segments of the society (Aina & Oluyombo, 2014; Yoshino & Morgan, 2016). Simply put, financial inclusion is universal access to financial services in a fair, transparent and equitable manner at affordable cost (Thingalaya, 2012).

Financial inclusion could be understood by looking at the financial exclusion as a concept. Hence, it is necessary to understand the concept of financial exclusion as a step to better grasp of financial inclusion. Financial inclusion means the benchmark used to access how formal financial services reach the common people in the economy (Uma, Rupa & Madhn, 2013). According to Mbutor and Uba (2013), financial inclusion is the enabling process to financial services for different economic agents at affordable cost, especially to those with lower income. In a more concise manner, financial inclusion can also be defined as the opposite of financial exclusion where those services which were never available hitherto nor affordable to certain category of economic agents are now at the convenient step of accessibility.

World Bank (2008) gavea wider point of view of financial inclusion. It defined financial inclusion or broad to financial services as absence of price or non-price barrier in the use of financial services, while the report canvassed for access to unhindered amount of funds; it emphasized the creditworthiness of the borrowers as critical in providing financial services. The report also stressed the difference between access to and use of financial services as it has implication for policy makers. Accessessentially refers to the supply of services, whereas use is determined by demand as well as supply. The report further highlighted the need of a clear distinction to be made between voluntary and involuntary exclusion among the non-users of formal financial services.

Similarly, the Central Bank of Nigeria (CBN, 2012, p. 2) maintained that:

> ''Financial Inclusion or Inclusive financing is the delivery of financial services at affordable cost to sections of disadvantaged and low-income segment of society. It is the provision of broad range of high-quality financial production such as credit, savings, assurances, payments and provisions where are relevant, appropriate and affordable for the entire adult population especially low-income segment"

In the main, key issues raised by the Nigerian Apex Bank is the use of easy access, unhindered and affordable costs of financial services to a wide range of users, most especially the low income, underprivileged, the vulnerable, small scale businesses, etc. virtually captured under the umbrella of micro, small and medium enterprises.
It is evident from most of the definitions that usability, accessibility and affordability (cost) are the important dimensions of financial inclusion. Sarma (2008) and Ikramand Lohdi (2015) highlighted these three aspects of financial inclusion. According to Sarma (2008), for instance, financial inclusion is a process that ensures the ease of access, availability and usage of the formal financial systems for all members of the economy. However, Ikram and Lohdi (2015) posited that financialinclusion is usage and accessibility of the affordable financial services.

Concept of Performance

Performance is a measure of how well a firm has used its assets from its primary mode of business and generated revenues (Bessler & Bittelmeyer, 2006). Performance mirrors how external parties evaluate a firm's ability to operate on the long run. Firm's performance is the outcome achieved in meeting internal and external goals of a firm. As a multi-dimensional construct, performance has several names, including growth, survival, success and competition.

According to Alam, Raza and Akram (2011), firms performance being multi-dimensional construct, consists of four elements: customer-focused performance, including customer satisfaction and product and service performance; financial and market performance, including revenue, profit, market position, cash-to-cash time; and earning per share, human resource performance, including employee satisfaction; and organizational effectiveness, including time to market, level of innovation and products and supply chain flexibility.

Performance indicators can be measured in financial and non-financial terms (Bagorogoza & Waal, 2010; Bakar & Ahmad, 2010). Most firms, however prefer to adopt financial indicators to measure performance. Return on Assets (Profits), average annual occupancy rate, net profit after tax and return on investment (ROI) are the commonly used financial indicators by firms (Tavitiyamin, Zhong & Qu, 2012). Some other common measures are profitability, productivity growth, stakeholder satisfaction, market share and competition position (Bagorogoza & Waal, 2010).

Further, Aruwa and Naburgi (2014) posited that if these were done, they could go a long way to improving the financial performance of banks in Nigeria. According to them, improving financial performance in banks is imperative, for the financial industry and by extension the entire economy. Although previous studies according to Aruwa and Naburgi (2014) emphasized that profitability indicator is a measure performance. It was further established and re-emphasized by Davydenko (2010) that Return on Assets is the key ratio for the evaluation of financial performance of Deposit Money Banks.

Theoretical Review

This study relies on Financial Inclusion Lifecycle and Innovative Financial Inclusion Models. Financial Inclusion Lifecycle Model was propounded by Frost and Sullivan (2009). The model depicts financial inclusion as a continuous access as well as usage of banking and financial services on a regular basis and not a one-off transaction. This model adopts a three-model approach for a financially inclusive society: financial literacy, opening of accounts and usage of the account as a continuous process and a gateway to enjoying other banking and financial services.

Onaolapo (2015) used this model to explain the access, usage of banking and financial services as a means of robust financial inclusion. On the other hand, Innovative Financial Inclusion Model was propounded by G20 leaders (An alliance of twenty richest countries in the world) in 2009. Arising from the Pittsburgh Summit in September, 2009, it was resolved that encompassing usage and access to financial services deliveries to the downtrodden, low income earners and small businesses through an array of products that encourage easy patronage and inclusion should be advocated. This model emphasizes that financial inclusion could be deepened through a wide range of different banking and financial products and services to attract more customers. G20 leaders (2010) explained that Innovative Financial Inclusion is delivery of financial services beyond conventional service points of banks but also through the use of ICT, non-banking retail agents, POS, mobile banking and other device networks to reach a wide spectrum of clientele. The two models explain the variables of this study on financial inclusion as it relates to easy access and usage of banking and financial services to engender continuous usage of financial services.

Empirical Review

Micro, Small and Medium Enterprises Financing and Performance

Boadi, Dana, Mertena and Mensa (2017) examined the impact of SME's financing on bank profitability in Ghana, using regression model anchored on fixed effect model. The study found that SME financing has a significant positive impact on banks financial performance in Ghana. The study offered a fresh perspective on the SME financing and bank profitability. Equally, Chauvet and Jacolin (2015) studied the impact of financial inclusion on financial performance of firms in countries with low financial development, using firm-level data panel for a sample of 26 countries. The study found that there is a significant positive impact of financial inclusion on firms' performance. The study highlighted access to funds by SMEs as a very important financial inclusion variable. In the same manner, Shahchera and Taheri (2011) investigated the impact of loans to SMEs and banks profitability in Iran, using panel data regression model based on GMM. The study found that SMEs financing has a negative significant impact on profitability of banks in Iran as banks considered SME financing a highly risky business venture.

Usage of Banking Services and Performance

Harelimana (2016) examined the impact of financial inclusion on financial performance of microfinance institutions in Clecam Ejoheza, Rwanda, using a combined technique of primary and secondary data anchored on a regression model. The study found a positive correlation between customers' deposits and financial performance of banks. The study highlighted financial inclusion variable on rural areas deposits mobilized by banks. Likewise, Chauvet and Jacolin (2016) examined the impact of financial inclusion, bank concentration on firm performance, using a firm level data of 55,596 firms in 79 countries. The study found that usage and distribution of banking and financial services across firms has a positive impact on financial performance of firms.

The study of Tuyishime, Memba and Mbera (2015) examined the effects of deposit mobilization on financial performance in commercial banks in Rwanda adopting a combination of primary and secondary data analysis tools. The study found nexus between a rise in deposits and financial performance of banks. Ikram and Lohdi (2015) considered impact of financial inclusion on banks' profitability in Karachi, Pakistan, using correlation statistics and linear regression model for the data analysis of the study. It was found that usage of banking services has no significant relationship between on financial performance of banks as a result of the fact that banks do not pursue financial inclusion as a corporate strategy to the depressed population who were excluded from usage of financial services/products. The study carried out by Okun (2012) looked at the effect of level of deposits on financial performance of commercial banks in Kenya, based on regression model to find the nexus between deposits level and profitability of banks. The study found that there is a positive significant relationship between deposits level and financial performance of banks. The study was precise in using the appropriate research method in data analysis considered to be very reliable.

Kithaka (2011) investigated the effect of mobile banking on financial performance of banks in Kenya, based on multiple regression models. The study found that usage of banking services via mobile banking has a positive effect on Financial Performance of Kenyan commercial banks. Kagan, Acharya, Rao and Kodepaka (2005) in their study examined the impact of usage of banking services (internet banking) on financial performance of commercial banks. The sample includes all community banks with asset size less than 1 billion dollars in Iowa, Minnesota, Montana, North Dakota, and South Dakota. In total 1183 community banks were identified in these 5 States in United States of America. The study found that usage of online banking services impacted positively on the financial performance of banks. The study demonstrated a positive correlation between usage of banking services and financial performance of banks.

Pricing of Banking Services and Performance

Enyioko (2012) examined the impact of interest rate policy and financial performance of Deposit Money Banks in Nigeria, using a combination of regression and correlation methods to find and analyze the nexus between interest rate and bank performance. The study found that bank interest rate has no significant impact on profitability and efficiency of banks. The study used an elaborate methodology to analyze data during the consolidation era.

Wambari and Nwangi (2017) investigated the effect of interest rate on the financial performance in Kenyan deposit taking commercial banks, using a multiple linear regression technique. The study found that lending interest rate has a positive significant effect on financial performance of banks in Kenya. The study of Ikram and Lohdi (2015) investigated the impact of financial inclusion on Banks' profitability in Karachi, Pakistan, the study used correlation statistics and linear regression model for the data analysis of the study. The study found that pricing of banking services has no significant impact on financial performance of banks. Equally of importance is the study of Ahmed, Rehan, Chhapra and Supro (2014) which evaluated the impact of interest rate on financial performance of banks in Pakistan, using a regression model. The study found that interest rate has a significant impact on profitability of banks in Pakistan.

The effect of lending interest rate on financial performance of deposit taking microfinance institutions in Kenya was carried out by Mwangi (2013) using multivariate regression model. The study found that there is a strong relationship between lending interest rate and financial performance of deposit taking microfinance institutions. The study offered an incisive multivariate analysis. However, this study was limited by scope which was restricted to microfinance institutions. In the same manner, the study of Enyioko (2012) examined the impact of interest rate policy and financial performance of deposit money banks in Nigeria, using a combination of regression and correlation methods to find and analyze the nexus between interest rate and bank performance. The study of Musiu (2005) investigated the relationship between lending interest rate and financial performance of commercial banks in Kenya, using a linear regression model. The study found that lending rate affects the financial performance of commercial banks in Kenya. The study considered pricing of banking services as related to financial performance of commercial banks.

Numbers of Branches of Deposit Money Banks and Performance

Prasetyo and Sunaryo (2015) examined the branch expansion and the performance of banks in Indonesia, using path analysis to link the causal relationship between number of branches of banks and financial performance. The study found that there is no significant impact of number of branches on the financial performance of banks. The study carried out by Nader (2011) investigated the effect of banking expansion on the profit efficiency of Saudi Arabia Banks, using a secondary data spanning a period of 1988 to 2007. The study found that network of branches has positive effect on profit efficiency. The study of Hirtle (2007) investigated the impact of number of U.S. bank branches on overall financial performance of institutions, using a pooled regression model to analyze data. The study found that no significant relationship exists between number of branches and banks financial performance.

Pastor, Lovell and Tulken (2006) evaluated the relationship between bank branches spread and overall financial performance of big banks in Europe, adopting a complimentary non parametric technique. The study found nexus between bank branch offices and overall financial performance of banks and that, banks can increase their financial performance of its branch network.

Rural Financing and Performance

Adusei (2015) studied the impact of rural financing on banks profitability in Ghana, using a multiple regression model. The study found a negative statistically significant impact of rural financing on bank profitability. The study George, James and Margret (2014) investigated the effect of financial performance of rural banks in Ghana, using a regression model to establish nexus between rural financing and banks profitability. The study found a positive significant effect of rural financing on financial performance of banks. Likewise, Emire, Mills and Amowine (2013) examined the nexus between rural financing and bank profitability in Ghana, using a panel data regression model. The study found that rural financing has a positive significant effect on financial performance on rural banks.

Rachana (2011) studied the relationship between financial inclusion and performance of rural co-operative banks in Gujarat in India, using qualitative and quantitative data obtained from Ambasan, Jotana and Khadalpur villages and rural banks in Gujarat. The study found that there is no significant relationship between rural financing and profitability of banks in Gujarat, India as a result of high rate of non-performing loans. The study of Awo (2010) studied the financial performance of rural banks in Ghana, using a multiple regression model. The study found that a significant relationship exists between rural financing and financial performance of Naara Rural Bank in Ghana. The study was relevant and good reference point in rural financing and financial performance of bank. However, it was a case study of Naara Rural Bank of Ghana, which could hardly be generalized for the entire industry.

Methodology

This study adopted ex-post facto research design, relying on secondary data obtained from CBN statistical bulletins and annual reports of the study's population. The population of this study was all listed deposit money banks in Nigeria within the research period between 2005 and 2018. Since the number of the population is not many, all the 14 listed DMBs were taken as sample, using census sampling technique. Financial inclusion is measured with MSMEs financing (DMBs Loans to Micro Small Medium Enterprises (MSMEs), Rural Financing (Loans of rural branches of DMBs), Pricing of Banking services (weighted average lending rate) as charged by DMBs, Number of branches of listed DMBs in Nigeria (Accessibility and Availability of banking and financial services and products through service outlets and points) and Usage of Banking services (Deposits of rural branches of DMBs arising from usage of different banking products and services by customers) as independent variables, while financial performance of Deposit Money Banks, as a dependent variable, is measured with Returns on Assets of DMBs calculated as Profit Before Interest and Tax (PBIT) over Total Assets of DMBs. Analyzing data, the study utilized panel regression model combining time series and cross-sectional observations with the aid of e-view 10statistical package. In view of the discussion above, the various hypotheses and variables are combined into a functional relation to explain the nexus that subsists between financial inclusion and financial performance of DMBs in Nigeria. Multiple panel regression model is econometrically expressed as follows:

$$ROA_{it} = \beta_0 + \beta_1 MSF_t + \beta_2 UBS_{it} + \beta_3 PBS_{it} + \beta_4 NBR_{it} + \beta_5 RFI_{it} + \varepsilon_{it}$$

Where; ROA = Return on Assets

β_0 = Intercept or regression constant

$\beta_1 - \beta_5$	=	Coefficients of the independent Variables
MSF	=	MSMEs Financing (DMBs loans to SMEs)
UBS	=	Usage of Banking Services (Deposits of rural branches of DMBs)
PBS	=	Pricing of Banking Services (Weighted average lending rate)
NBR	=	Number of Bank Branches of DMBs
RFI	=	Rural Financing (Loans of rural branches of DMBs)
ε	=	Error Term

Results and Discussions

In this section, results are presented and discussed. An analysis of the descriptive statistics is presented followed by the regression result for the hypotheses tests:

Table 1: Descriptive Statistics

	ROA	MSF	UBS	PBS	NBR	RFI
Mean	0.432336	10.13125	7.397852	3.111593	8.402088	10.47083
Maximum	2.255493	11.40952	11.32376	3.407511	8.667164	13.67504
Minimum	-3.218876	9.333250	2.981797	2.910174	8.009695	9.098537
Std. Dev.	0.738084	0.710697	3.068522	0.142389	0.250565	1.349808
Skewness	-1.295636	0.614808	-0.444257	0.274297	-0.425246	0.616552
Kurtosis	3.431495	2.812888	2.650577	2.341875	2.382785	4.299428
Jarque-Bera	1.514214	3.285637	2.131828	5.995014	4.276623	0.915535
Probability	0.418092	0.170421	0.233521	0.069911	0.096329	0.636272
Observations	196	196	196	196	196	196

Source: E view 10 output, 2019.

The table 1 indicates that the mean of ROA is 0.432336 with standard deviationof 0.738084, the minimum and maximum values of -3.218876 and 2.255493 respectively. The mean value of MSME financing (MSF) is 10.13125 with standard deviation of 0.710697, the minimum and maximum values of 9.333250 and 11.40952 respectively. Usage of banking services (UBS) mean value is 7.397852 with standard deviation of 3.068522, the minimum and maximum values of 2.981797 and 11.32376 respectively. Pricing of banking services (PBS) mean value is at 3.111593 with standard deviation of 3.068522, the minimum and maximum values of 2.981797 and 3.407511 respectively. The mean value of number of bank branches (NBR) is 8.402088 with standard deviation of 0.250565, the minimum and maximum values of 8.009695 and 8.667164 respectively. The mean value of loan and advances to the rural areas (RFI) is 40.47083 with standard deviation of 1.349808, the minimum and maximum values of 9.098537 and 13.67504 respectively.

The skewness value of all the variables is close to zero, it means that the distribution of the variables is symmetric in nature. The Kurtosis values of all the variables is also closer to 3, it indicates that the shape is a normal distribution.

Table 2: Correlation Matrix

	ROA	MFI	UBS	PBS	NBR	RFI
ROA	1					
MFI	0.053222191	1				
UBS	-0.02049888	0.543092704	1			
PBS	-0.05084130	-0.03308893	-0.12390359	1		
NBR	0.023177937	-0.78390598	-0.71004582	-0.05811751	1	
RFI	0.069014832	-0.39047063	-0.49989367	0.117879186	0.457363188	1

Source: E view 10 Output, 2019.

Table 2 presents the correlation matrix of the dependent and independents variables. It is noted that the variables correlate quite well (between - 0.71 and 0.54). There is no correlation coefficient greater than 0.8, hence absence of problem of multicollinearity of data.

Post Estimation Diagnostics Tests
Variance Inflation Factor
Table 3

Variable	VIF	1/VIF
C	NA	0.010113
MFI	1.072666	0.000130
UBS	1.019271	0.001185
PBS	1.124476	0.001499
NBR	1.020068	0.000386
NFI	1.037964	0.000202

Source: E-view Output, 2019.

The tolerance values and the variance inflation factor are two good measures of assessing multicolinearity between the independent variables in a study. The result shows that variance inflation factor were consistently smaller than ten (10) indicating complete absence of multicolinearity (Neter et 'al; 1996; Cassey et 'al., 1999). This shows the suitability of the study model been fit with the six independent variables. Also, the tolerance values were consistently smaller than 1.00, therefore extend the fact that there is complete absence of multicolinearity between the independent variables (Tobachmel & Fidell, 1996).

Panel Regression Analysis

Based on the result of the Hausman test to determine which of either random or fixed effect is appropriate, this study accepts alternative hypothesis which states that Fixed effect is appropriate because the probability value of 0.02871 is less than 0.05.

Fixed Effect Regression

Variable	Coefficient	Std Error	t-statistics	Prob
C	4.528490	4.894670	0.925188	0.3561
MSF	0.198789	0.119736	1.660224	0.0986
UBS	0.001770	0.025773	0.068662	0.9453
PBS	-0.883672	0.384050	-2.300929	0.0461
NBR	0.890698	0.414922	2.146637	0.0477
RFI	0.150975	0.045597	3.311073	0.0251
R^2	0.52			
Adj. R^2	0.42			
F-Statistics	8.28			
Prob(F-Statistics)	0.044			
Hausman Prob. Value	0.02871			
Heteroskedasticity Observed R-square	0.3199			
Br-Godfrey LM Ob. R	0.2126			

Source: E-view Output, 2019.

Discussion of Findings

The results in table 5 indicates that financial inclusion accounts for about 52% variation in profitability of DMBs in Nigeria. The model is considered fit and appropriate because the p-value of F-Statistics is 0.044660 which is statistically significant at 5% levels of significance.

The empirical evidence derived from the fixed effect regression model indicates that MSME financing (MSF) has no statistical significance impact on profitability of listed DMBs in Nigeria. This finding shows that access to loans and advances by MSMEs still remain barriers and may be due to barriers usually imposed by DMBs in loans applications. Mujeri (2015) opined that a plethora of accounts documentations requirements, high pricing, setting minimum account balances, long list of checklists are barriers to MSMEs in accessing facilities. Banks' performance could be better with the removal of these barriers. The insignificant association between MSME financing and profitability of listed Deposit Money Banks in Nigeria is consistent with prior findings of Ikram and Lohdi (2015), Sharma and Kukreja (2013), Hanning and Janson (2010). But inconsistent with the findings in Adusei (2015), Emire, Mills and Amowine (2013).

On the relationship between Usage of banking services and profitability of listed DMBs in Nigeria, this study also found that usage of banking services (UBS) has no statistically significant impact on profitability of quoted DMBs in Nigeria. This finding may not be unconnected with service failure, spurious charges by DMBs, frequent systems downtime and general service dissatisfaction which discourage opening of new accounts and maintaining usage of existing accounts from going dormant. This is because when customers experience service failure, they may discontinue the service patronage. This result supports the findings of Ikram and Lohdi (2015) but contradicts kagan, Acharya, Rao and Kodepaka (2005); Kithaka (2011); Okun (2012); Harelimana (2016); Chauvet and Jacolin. The study revealed that pricing of banking services (PRCBS) has a negative statistically significant impact on profitability of quoted DMBs in Nigeria. The negative effect of the variables is contrary to the apriority expectation of the result. It shows that high interest rate really crowds out investment as noted by investment theories. This result is consistent with finding on access to banking services, since pricing is consequent upon access. This finding shows that banking services may be highly priced to encourage more financial inclusion; this barrier needs to be mitigated appropriately so that patronage can be improved upon. Thus, the issue of interest rate (pricing) increase should not be contemplated by DMBs in the interim. This position is perhaps in congruence with recent tide of the CBN recently for consecutive downward reviews of Monetary Policy Rate (MPR) in a row in pursuit of a single digit interest rate regime. This result supports the findings of Enyioko (2012) but contradicts Musiu (2005); Nwangi (2013).

The study also revealed that number of branches of DMBs has a positive statistically significant impact on profitability of quoted DMBs in Nigeria. This indicates that number of branches of DMBs in terms of spread and locations does not really matter to encourage better financial inclusion. This is because banking services can be accessed on many platforms electronically in real time and online without physical visitation to the branches, or perhaps branches are wrongly located and thus unable to support the overall profitability of banks.

This result supports the findings of Hirtle (2007); Prasetyo and Sunaryo (2015); but contradicts Pastor, Lovell and Tulken (2006); Nader (2011).

The study finally found that rural financing by DMBs has a positive significant impact on profitability of quoted DMBs in Nigeria. This finding reveals that financial inclusion is being enhanced in rural areas occasioned by loans and advances granted by DMBs. This finding supports the extant studies such as those of Nkwede (2015) Beck, Demirgue-kunt and MartinezPeria (2005) and contradicts those of Mbutor and Uba (2015).

Conclusion and Recommendations

This study found that rural financing and number of branches of deposit money banks have positive statistically significant effect on profitability of DMBs in Nigeria, while pricing of banking services has a negative significant effect on profitability. Based on the findings, the study concludes that rural financing and number of branches of DMBs improve profitability of DMBs.

The study recommends that listed DMBs should increase the amount of loan and advances given to rural areas and MSMEs as this will strengthen profitability of DMBs in Nigeria. CBN and NDIC should also encourage listed DMBs through their regulatory and supervisory functions to give priority to SMEs financing in Nigeria. Usage of banking services should be properly priced to cover the operating cost of providing those services to banks customers. The study also recommends that monetary policy objectives should be complemented with the operational motive of deposit money banks in line with lending rate to enhance return on assets through proper pricing policies. It is also recommended that usage of banking services should be properly encouraged through excellent and satisfactory service delivery of DMBs to ensure continuous usage of banking services in line with Financial Inclusion Lifecycle and Innovative Financial Inclusion Models.

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