



# **Financial Innovation and Performance of Deposit Money Banks in Nigeria**

**Ibekwe, Angela Obiageli M.Sc.**

**Ph.D Scholar, Department of Banking and Finance,  
Faculty of Management Sciences  
Chukwuemeka Odumegwu Ojukwu University, Igbariam Campus,  
Anambra State, Nigeria  
[ibekweangel22@mail.com](mailto:ibekweangel22@mail.com)**

## **ABSTRACT**

Financial Innovation is the act of creating and then popularizing new financial instruments as well as new financial technologies, institutions, and markets. The main objective of the study is to investigate the effect of financial innovations on the performance of deposit money banks in Nigeria. The specific objectives are to: examine the effect of automated teller machine on the performance of deposit money banks in Nigeria, assess the effect of mobile banking on the performance of deposit money banks in Nigeria, examine the effect of internet banking on the performance of deposit money banks in Nigeria and investigate the effect of point of sale on the performance of deposit money banks in Nigeria. The study adopted an ex-post facto research design because the data for the study are secondary data which were sourced from Central Bank of Nigeria Statistical Bulletin, CBN Annual Report and Statement of Accounts. The result of the study indicate that automated teller machine, mobile banking and point of sales have positive and significant effect on return on asset while internet banking has negative and insignificant effect in return on asset. The study thus concludes that financial innovation have positive effect on the profitability of commercial banks in Nigeria and have enhance the return on asset of the commercial banks in Nigeria. Amongst the recommendation is that government should provide adequate infrastructure in the area of power supply, telecommunications and internet. Industry stakeholders will have to join hands with other stakeholders in improving this infrastructure. The banks, switching companies, card companies etc. must work towards improving equipment quality and standardization, as well as maintenance. The banks must improve service quality and customer responsiveness in cases of lost or stolen cards, frauds, and other customer complaints in relation to e-payments. There is significant need for public education and awareness on the benefits of e-payments. All stakeholders must strengthen system security and integrity to prevent/reduce frauds and errors to improve public confidence in e-payments. There is additional need for ensuring ease of use, and customer interactive features in mobile and on-line shopping systems.

**Keywords:** Financial Innovation, Deposit Money Banks, Performance, Nigeria

## **INTRODUCTION**

Financial innovations such as those available in ATMs, phone banking, Internet banking, debit cards, credit cards, agency banking and smartcard applications are taking place at an overwhelmingly fast pace in the global banking industry. Banking can be traced back to the year 1694 with the establishment of the bank of England.

The bank was started by a few individuals who were actually money lenders with an aim of lending money at interest. The history of financial innovations is the history of the invention of tools and techniques. Innovation in the financial sector is the act of creating and then popularizing new financial instruments as well as new financial technologies, institutions, and markets (Tufano, 2002).

It may be viewed as the design, development, and implementation of innovative financial instruments and processes, and the formulation of creative solutions to problems in finance. According to Sandvik (2003), financial innovations is one of the most important competitive weapons and generally seen as a firm's core value capability. It is considered as an effective way to improve firm's productivity due to the resource constraint issue facing a firm.

Ignazio (2007) groups financial innovations into; new products for example adjustable rate mortgages and exchange-traded index funds; new services for example on-line securities trading and Internet banking; new "production" processes for example electronic record keeping for securities and credit scoring and new organizational forms for example a new type of electronic exchange for trading securities and Internet-only banks. Most of these financial innovations are used in the financial sector in Kenya by key market players including the commercial banks.

According to Makur (2014), commercial banks have continuously been innovating new products, services and governance in order to improve their financial performance.

The financial sector has over time developed successfully with innovation products and services available in financial market. Some of these products are debit cards, credit cards, ATM cards, M-pesa and others which facilitate the use of electronic means of payment and sometimes substitute for the use of physical cash. Similarly these products gain a wider recognition in financial market leading to reduction of holding amount of money.

That latest service innovation will lead to furthering of financial inclusion and innovative service offerings for all Nigerians by presenting their financial services offering on to a single platform which will make banking services more accessible, flexible convenient and more affordable.

### **Statement of the Problem**

Financial markets are becoming increasingly integrated and globalized, which has resulted in the demand for new types of investments. Ability to innovate and the financial innovation and its effects of have become the main element results in the threat of existent to deposit taking in financial institutions. Financial performance is significant to the growth of the organization. The international financial environment changes, the growing of financial markets which are international and amalgamation of domestic also lead to financial innovation. Locally, financial institutions like commercial bank have been forced to adapt to new financial innovations in order for them to handle the large sum of money they transact daily. They have continued to innovate and serve consumers better by introducing new products, new functions of financial institutions and call for transformations in the strategies of regulating agencies. In spite of all these innovations, the role of innovation on financial institution's growth has not been felt fully in the financial sector. This could be due inadequate understanding about the drivers of innovation and the slow testing of bank's performance (Mabrouk and Mamoghli, 2010).

Banks and other financial intermediaries are at the heart of the world's recent financial crisis.

The deterioration of their asset portfolios, largely due to distorted credit management, was one of the main structural sources of the crisis (Steven, 2002). The fast-changing competitive environment, globalization, economic changes, regulation, privatization and the like demands that commercial banks are run efficiently and effectively by continuously engaging in financial innovations.

In Nigeria the emergence of new technologies, products, processes, markets and competitor banks places demand on any commercial bank to apply any skills necessary to remain competitive and achieve competitive advantage. The banking industry has already been depicted (Parasuman, 2001) as exhibiting little market orientation and fulfilling services with little regard to customer needs as well as including branches dissimilar in efficiency which have contributed to low financial performance. In Kenya Long lines, transaction errors, queuing, insecurity and network failures have been said to be the most frequent problems using banking services (Smith, 1999). This highly lower customer's perception on the quality of service offered and hence reduces the bank's credibility hence profitability (Joseph et al., 2003).

As the importance of financial innovation in developing countries including Kenya increases, so does the need for research on the subject. (Joseph et al, 2003). Despite the recognized importance of financial innovations and an extensive descriptive literature, there have been surprisingly few empirical studies. This situation has denied the banks the much needed information regarding this important area of financial innovations sometimes leading to reverse causality in the innovation-performance relationship. Mugambi (2006) attest that researches have been done on areas of service excellence and customer satisfaction in the banking industry. However, there was no study in Kenya that had looked at the impact of financial innovation on commercial banks with reference to financial performance.

This study therefore, intends to investigate the impact of financial innovations on the profitability of commercial banks in Nigeria

## REVIEW OF RELATED LITERATURE

### Conceptual Framework

#### Financial Innovation

Financial Innovation is the act of creating and then popularizing new financial instruments as well as new financial technologies, institutions, and markets (Tufano, 2002).

It may be viewed as the design, development, and implementation of innovative financial instruments and processes, and the formulation of creative solutions to problems in finance. According to Sandvik (2003), financial innovations is one of the most important competitive weapons and generally seen as a firm's core value capability. It is considered as an effective way to improve firm's productivity due to the resource constraint issue facing a firm.

Ignazio (2007) groups financial innovations into; new products for example adjustable rate mortgages and exchange-traded index funds; new services for example on-line securities trading and Internet banking; new "production" processes for example electronic record keeping for securities and credit scoring and new organizational forms for example a new type of electronic exchange for trading securities and Internet-only banks. Most of these financial innovations are used in the financial sector in Nigeria by key market players including the commercial banks.

Financial innovation has been used by many banks as a formidable strategic variable to out weight any form of competition among the deposit money banks by which banks can improve their performance while simultaneously being able to maintain their effectiveness in the market (Kamau &, Oluoch, 2016). Accordingly, bank efficiency is measured by the ratio of quick and easy measures of bank ability to turn resources into revenue. The commonly used efficiency measurements are return on assets, return on equity and interest margin. The developments in the banking sub sector have not only led to the increase in the number of banking institutions but, also the development in level of sophistication with new payment systems and asset alternatives to holding money. This has resulted mainly from technological advancement and increase in competition as the number of institutions increase. Developments in payment systems have started to create close substitutes for hard currency, thus affecting a core part of banking operations (Okonkwo , Obinozie & Echekeba, 2015)

Scholars have investigated the nexus between financial innovation and efficiency of the banking industry for both developed and emerging economies of the world. The results of these studies have empirically lay credence to the positive effect of financial innovation on bank satisfaction. In the context of Nigeria as an emerging economy, findings on the linkage between financial innovation and efficiency of the banking industry are mixed. Jegede (2014) noted that the deployment of ATMs terminals have averagely improved the performance of Nigerian banks because, of the alarming rate of ATM fraud. Conversely, the findings of Okonkwo , Obinozie & Echekeba, 2015) showed that investments in electronic banking services and ATMs do not really improve banks' performance reflected with return on equity in Nigeria

The world banking and financial system is in the throes of a transformation caused by increasing globalization and deregulation. Financial innovations such as those available in ATMs, phone banking, Internet banking, debit cards, credit cards, agency banking and smartcard applications are taking place at an overwhelmingly fast pace in the global banking industry. Banking can be traced back to the year 1694 with the establishment of the bank of England. The bank was started by a few individuals who were actually money lenders with an aim of lending money at interest. The history of financial innovations is the history of the invention of tools and techniques.

Financial innovation fosters an organization to grow, prosper and transform in synchronization with the changes in the environment, both internal & external. Banking is no exception to this. The banking sector has witnessed radical transformation of late, based on many innovations in products, processes, services, systems, business models, technology, governance and regulation. The pervasive influence of information technology has revolutionaries in banking (Kumar, 2011).

#### Automated Teller Machine

ATM is a computer controlled device that dispenses and provides other services to customers who identify them with a personal identification number (PIN). The physical carriage of cash as well as frequent visit to the banks is being reduced. The principal advantage of ATM is that it dispenses cash at anytime of the day even as it needs not to be located within the banking premises but in stores, shopping malls, fuel stations etc, unlike the traditional method where customers have to queue for a

very long period of time to withdraw cash or transfer funds. The ATM is the most popular e-transaction solution in Nigeria. ATM is popular because of its convenience.

#### **Mobile Banking**

This involves the use of mobile phone for settlement of financial transactions. This is more or less fund transfer process between customers with immediate availability of funds for the beneficiary. It uses card infrastructure for movement of payment instructions as well as secure SMS messaging for confirmation of receipts to the beneficiary. It is very popular and exciting to the customers given low infrastructure requirements and a rapidly increasing mobile phone penetration in the country. Services covered by this product include account enquiry; funds transfer; recharge phones; changing passwords, bill payments. Even though the product is exciting most customers are yet to fully buy into it in Nigeria, hence, both the apex bank and other banks still have a lot to do in terms of increasing awareness of the product to the saving populace in the country (Siyanbola, 2013).

#### **Internet Banking**

Internet banking refers to systems that enable bank customers to get access to their accounts and general information on bank products and services through the use of bank's website, without the intervention or inconvenience of sending letters, faxes, original signatures and telephone confirmations (Olorunsegun, 2010). Siyanbola (2013) puts it that internet banking involves conducting banking transactions on the internet (www) using electronic tools such as the computer without visiting the banking hall. E-commerce is greatly facilitated by internet banking and is mostly used to effect payment. Internet banking like mobile banking also uses the electronic card infrastructure for executing payment instructions and final settlement of goods and services over the internet between the merchants and the customers. Commonly used internet banking transactions in Nigeria are settlement of commercial bills and purchase of air tickets through the websites of the merchants. Level of awareness of the advantages of this product to the saving populace is still very low; hence, there is every room for improvement if cashless banking would be effective as expected (Siyanbola, 2013). Funds transfer, airtime top up, balance enquiry, password change, bill payment etc can also be conducted on the internet banking platform.

#### **Performance of Deposit Money Banks**

Bank performance generally implies whether a bank has fared well within a trading period to realize its objectives. The only document that explains this is presumably the published financial statements. According to Rose, (2001), a fair evaluation of any bank's performance should start by evaluating whether it has been able to achieve the objectives set by management and stockholders. Certainly, many banks have their own unique objectives. Some wish to grow faster and achieve some long-range growth objective, others seem to prefer quiet life, minimizing risk and conveying the image of a sound bank, but with modest rewards to their shareholders (Salehi & Alipour, 2014). Ordinarily, stock prices and its behavior are deemed to reflect the performance of a firm. This is a market indicator and may not be reliable always. However, the size of the bank, the volume of deposit and its profitability could be deemed as more reliable performance indicators. For the purpose of this study, profitability indicators, precisely the Return on Equity Capital (ROE) and the returns on Assets (ROA) are used to assess bank performance.

#### **Theoretical Framework**

This study was governed by the Schumpeter theory of financial innovation. Schumpeter financial innovation theory argued that technology creates opportunities for new profits and super profits as a result of increased investment by banks or financial institution on products of innovation. The second theory is the resource based theory propounded on the sustainability of competitive advantage based on capabilities and resources (Barney, 1991). Effective performance of the banks on the premises of the resource based theory is customer centric, hence firms strive to: provide superior customer value, achievement of relative lower costs, control of dominant market share and superior financial performance.

The competitive advantage grows out of the value of a firm which creates for its buyers and should exceed the firm cost of creating the value (Peteraf & Bergen 2003)

### **Empirical Review**

Abubakar (2020) examined the effects of automated teller machine (ATM) on user satisfaction in Nigeria: A study of united bank for Africa in Sokoto metropolis: The Nigerian Banking sector over the years has been experiencing significant changes and development in its Information and Communication Technology. Among the development is the introduction of Automated Teller Machine (ATM) that intends to decongest the banking halls as customers now can go to any nearest ATM outfit to consummate their banking transactions such as: cash withdrawal, cash deposit, bill payments, and transfer of fund between accounts. The research was carried through across-sectional survey design which questioned respondents on ATM services. The population of study mainly constituted of customers of United Bank for Africa within Sokoto metropolis. The sample in this study consisted of 100 respondents who are users of the ATM services. The data collected was analyzed by use of multiple logistic regression analysis. The findings revealed that, the impact of ATM services in terms of their perceived ease of use, transaction cost and service security is positive and significant. However, the result also indicates that the impact of ATM services in terms of availability of money is positive but insignificant.

Taiwo and Agwu (2019) examined the role of e-banking on the operational efficiency of commercial banks in Nigeria. Primary data were obtained by administering questionnaires to staff of four purposively selected banks (Ecobank, UBA, GTB and First bank). Pearson correlation was used to analyze the results obtained using the Statistical Package for Social Sciences (SPSS) and it was observed that banks' operational efficiency in Nigeria since the adoption of electronic banking has improved compared to the era of traditional banking. This improvement was noticed in the strength of banks, revenue and capital bases, as well as in customers' loyalty. It was concluded that the introduction of new channels into their e-banking operations drastically increased bank performances, since the more active customers are with their electronic transactions the more profitable it is for the banks.

Asidok, and Michael, (2018) estimates the impact of automated teller machine (ATM) transactions on bank profitability in Nigeria using selected banks data from Electronic payment system office, Central Bank of Nigeria statistical bulletin from 2007-2016. The study adopts Panel unit root and SURE model estimation technique to conduct quantitative analysis for four selected old and new generation banks. The results of this study were analyzed using economic a priori criteria, statistical criteria and econometric criteria. The positive and statistically significant relationship between automated teller machine of old and new generation banks in Nigeria indicates that automated teller machine is a major factor that contributes to old and new banks performance in Nigeria. The positive and statistically significant relationship between point of sale of old and new generation bank in Nigeria indicates that point of sale is a major factor that contributes to old and new banks performance in Nigeria. The positive and statistically significant relationship between mobile banking of old and new generation banks in Nigeria indicates that mobile banking is a major factor that contributes to old and new banks performance in Nigeria.

Adaora, Jisike and, Amalachukwu (2018) empirically ascertained the effect of automated teller machine (ATM) related fraud on deposit money banks financial performance in Nigeria. Empirical studies relating to electronic banking and banks performance in Nigeria has been centered on its benefit of improving profitability of deposit money banks while the effect of fraud perpetrated on automated teller machine (ATM) platforms used by banks operating in the economy are often neglected. The Ordinary Least Square (OLS) was applied in estimating the regression equation, whereas effect of fraud on various channels of electronic banking and financial performance ascertained with the help of the granger causality analysis. The findings from the study dispelled that fraud on point of sale terminals has significant negative effect on interest income, while fraud on automated teller machines, mobile banking and web had no effect on return on assets, return on equity and non-interest income of banks. Joseph (2019) examined the impact of electronic banking on the profitability of commercial banks in Kenya. The study adopted a descriptive research design. The population of the research consists of the 43 commercial banks in operations as at 31st 2014 in Kenya. A census survey was undertaken. The study used secondary data obtained from various Central Banks of Kenya publications. Statistical Package for Social Sciences (SPSS) was used in the analysis of data. Descriptive statistics produced trends, means and percentages while inferential statistics produced regression and correlation results which showed the causal relationship among the variables. The

results from multiple regression indicated that there is a there a positive significant relationship between ATM transactions and bank profitability ( $p < 0.05 - 0.004$ ). A unit increase in ATM transactions leads to an increase in ROE (bank profitability) by 1.662 units. Further, the study found a positive significant relationship between POS transactions and bank profitability ( $p < 0.05 - 0.021$ ). A unit increase in POS transactions lead to an increase in ROE by 1.34 units. Trend analysis revealed that ATM transactions had a general positive trend over time. The highest volume of ATM transactions was registered in 2012. POS transactions have also steadily increased between January 2007 and June 2015. There has been an exponential positive growth in mobile transactions since the inception of M-Pesa in 2007. The average ROE of commercial bank has been relatively stable over the period covered by the study. The study used descriptive statistics was used to summarize the relationship between the independent variables and the dependent variable. Results indicated that the model of the study explained 16.9% of the dependent variable. The ANOVA tests further validated the model by indicating that it sufficiently explained the variation of profitability in commercial banks ( $F = 6.407$ ,  $p = 0.000$ )

Njogu, (2019) determined the effects of electronic banking on profitability of commercial banks in Kenya. These data were collected from the Central Bank of Kenya and Commercial banks. Regression analysis was done for the period to determine the effects of electronic banking on profitability of commercial banks in Kenya. The study covered a period of 5 years from year 2009 to 2013. The findings on the coefficient of determination, the study found that major changes in the financial performance of commercial banks in Kenya could be accounted to changes in internet banking, point of sales, automatic teller machine, mobile banking and size of the bank at 95% confidence interval. The study found that there was a strong positive relationship between financial performance of commercial banks and electronic banking, as it was found that there was a strong relationship between financial performance of commercial banks and electronic banking. Size of the bank was also found to positively influence the financial performance of commercial banks in Kenya. Electronic banking has helped the commercial banks to lower their cost of banking, through technology which has created greater opportunities to the banks to offer great flexibility to the customers, this has enabled commercial banks to be very fast in adopting electronic banking which has enabled commercial bank to be ubiquity in coverage, flexibility, interactivity, and with greater accessibility compared to conventional banking channels such as Automated Teller Machine (ATM), Point of Sale Mobile banking and internet banking which influence the financial; performance of the bank. Electronic banking service provides convenience and promptness to customers along with cost savings, banks are also interested in expanding their market through internet services. The study further revealed that the P-value was less than 0.05 in all the variables, which shows that all the independent variable, were statistically significant.

Jude, (2019) analyze the empirical test of whether banks offering Internet banking are profitable, and to help fill essential space in knowledge concerning profitability, cost efficiency and other characteristics based on Banks perspectives for adopting internet banking system

A panel data from 22 retail banks operating in Turkish Republic of Northern Cyprus (KKTC), comprising of 1 Public Bank, 14 Private Banks and 7 Foreign Branch Banks. Our dataset is drawn from the year-end aggregate income statements and balance sheets compiled by the Central Bank of Northern Cyprus. The finding showed that banks offering internet banking services to 57 their customers or has internet as their alternative distributive channel experienced an increase on the banks returns from their assets and while those banks that are not using internet as their medium for service delivery experienced a lower return on their assets. This also signifies a positive effect of internet adoptions on banks profitability.

Eze, and Egoro, (2016) examined the impact of electronic banking on the profitability of commercial banks in Nigeria. The study sought to examine the relationship between different e-banking channels and the profitability of commercial banks in Nigeria. Four e-banking channels (automatic teller machines, electronic mobile banking, internet banking transactions, and point of sales services) were identified and regress against the profit before tax of commercial banks operating in Nigeria between 2006 and 2014. The study used the confirmed ECM model (via residual diagnosis) to test the formulated hypotheses. The results revealed that the over impact of electronic banking on the profitability of commercial banks was significant; whereas, the impact of the individual channels was varied. The study recommends, amongst others that, commercial banks should intensify effort to



ATM= Automated Teller Machine

MB= Mobile Banking

POS=Point of Sales

ITB= Internet Banking

$\beta_0$  and  $\mu$  are the constant and error term respectively while  $\beta_1, \beta_2, \beta_3,$  and  $\beta_4$  are the coefficient of financial innovation on the profitability of commercial banks in Nigeria

**Method of Analyses**

The data will be analyzed with econometric techniques involving Augmented Dickey Fuller Tests for Unit Roots and the Ordinary Least Square (OLS).

**Data Analysis**

This test is a stationary test which is employed to ascertain the level of stationarity of all the variables employed, as time series data are prone to stationarity problem and in order to avoid having spurious result, we commence our estimation with unit root test. Augmented Dickey –Fuller techniques unit root test is used and its output is presented below in a summarize form. The result revealed that at level, under the “intercept only”, return on asset, automated teller machine, point of sale, mobile banking and internet banking were stationary at [I(0)]. From the analyses of stationarity of the variables, it was seen that the variables were stationary at level I(0). Thus, the most suitable tool of analyses is the Ordinary Least Square Methods of analysis

**Unit Root Test**

**Table 1: Summary of the Unit Root Result**

Variables	T-statistics	Probability	Order of Integration
ROA	-6.034595	0.0000	1(0)
ATM	-3.767393	0.0053	1(0)
POS	-4.619034	0.0410	1(0)
MB	-5.531824	0.0235	1(0)
ITB	-2.757183	0.0170	1(0)

Source: E-view Version 9.0

**Analyses of the effect of Financial Innovation on the Performance of Deposit Money Banks in Nigeria**

**Table 2. Ordinary Least Square**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.667553	0.824890	10.809263	0.0260
ATM	0.164745	1.010577	2.163021	0.0058
POS	0.518247	0.672745	3.770347	0.0183
MB	0.068816	0.039042	2.762604	0.0302
ITB	0.164745	1.010577	2.163021	0.0058
R-squared	0.712561	Mean dependent var		4.676947
Adjusted R-squared	0.655073	S.D. dependent var		7.153306
S.E. of regression	6.953540	Akaike info criterion		6.888364
Sum squared resid	1208.793	Schwarz criterion		7.165910
Log likelihood	-100.7696	Hannan-Quinn criter.		6.978837
F-statistic	19.349696	Durbin-Watson stat		2.971283
Prob(F-statistic)	0.006525			

Source: E-view Version 9.0

**Automated Teller Machine (ATM):** The coefficient automated teller machine is positive at 0.164745 with probability value of 0.0058 which revealed that automated teller machine had positive and significant effect on return on asset (ROA). The implication is that 1 unit increase in revenue from automated teller machine (ATM) will lead to 0.65 increases in return on asset (ROA).

**Point of Sale (POS):** The coefficient of point of sale is positive at 0.518247 with probability value 0.0183 which showed that point of sale had positive and significant effect on return on asset (ROA).



This means that 1 unit increase in revenue from point of sale will lead to 0.518 increases on return on asset (ROA).

**Mobile Banking (MB):** The coefficient mobile banking is positive at 0.068816 with probability value of 0.0302 showed that mobile banking had positive and significant effect on return on asset (ROA). This means that the 1 unit increase in revenue from mobile banking will lead to 0.068 increases on return on asset (ROA).

**Internet Banking (ITB):** To determine the effect of internet banking (ITB) on return on asset (ROA), the coefficient of internet banking (ITB) was used. The result showed that internet banking (ITB) has positive (0.518247) and significant ( $p < 0.05$ ) effect on return on asset (ROA). Thus hypothesis two: Internet (WEB) banking transactions has no significant effect the Performance of Deposit Money Banks in Nigeria, is rejected. The study therefore concludes that Internet (WEB) banking transactions has positive and significant effect on the Performance of Deposit Money Banks in Nigeria

The coefficient of the Adjusted R-squared = 0.655073 showed that about 66% of changes on the performance of deposit money banks is accounted for by the level of electronic banking in Nigeria. This implies that electronic banking in Nigeria is one major contributor on the performance of deposit money banks in Nigeria

The F-statistics (19.349696;  $p < 0.05$ ) indicated that all the variables of the model (electronic financial innovation variables) have significant effect on the performance of deposit money banks in Nigeria

The Durbin Watson statistics (2.971283) showed that there was no autocorrelation in the model employed.

#### **Test of Hypotheses**

To test the hypotheses, the statistical significance of the individual parameters in the Ordinary Least Square Analysis in Table 2 is use to test hypotheses.

**Table 3 Summary of the Hypotheses**

Variable	Probability	Coefficient	Conclusion
Constant	0.0260	0.667553	Statistically Significance
ATM	0.0058	0.164745	Positive and Significant
POS	0.0183	0.518247	Positive and Significant
MB	0.0302	0.068816	Positive and Significant
ITB	0.0058	0.164745	Positive and Significant

Source: E- view 9.0

#### **Hypothesis One**

##### **Decision Rule:**

Reject null hypothesis if p-value is less than 0.05 (i.e.  $P < 0.05$ ) and accept alternate hypothesis. Otherwise accept null and reject the alternate.

H<sub>0</sub>: Automated Teller Machine (ATM) does not have positive and significant effect on the performance of deposit money banks

H<sub>a</sub>: Automated Teller Machine (ATM) has positive and significant effect on the performance of deposit money banks

From table 5 above, since the probability value is less than 5% ( $0.0058 < 0.05$ ), the null hypothesis is rejected while the alternative hypothesis is accepted implying that: Automated teller machine has significant effect on the performance of deposit money banks. The implication is that 1 unit increase in revenue from automated teller machine (ATM) will lead to 0.65 increases effect on the performance of deposit money banks

#### **Hypothesis Two**

##### **Decision Rule:**

Reject null hypothesis if p-value is less than 0.05 (i.e.  $P < 0.05$ ) and accept alternate hypothesis. Otherwise accept null and reject the alternate.

H<sub>0</sub><sub>2</sub>: Point of sale does not have positive and significant effect on the performance of deposit money banks

H<sub>i</sub>: Point of sale has positive and significant effect on the performance of deposit money banks

From table 5 above, since the probability value is less than 5% ( $0.0183 < 0.05$ ), the null hypothesis is rejected while the alternative hypothesis is accepted implying that point of sale has significant effect

on the performance of deposit money banks . This means that 1 unit increase in revenue from point of sale will lead to 0.518 increases on the performance of deposit money banks

### **Hypothesis Three**

#### **Decision Rule:**

Reject null hypothesis if p-value is less than 0.05 (i.e.  $P < 0.05$ ) and accept alternate hypothesis. Otherwise accept null and reject the alternate.

$H_{03}$ . Mobile banking does not have positive and significant effect on the performance of deposit money banks

$H_{i1}$ . Mobile banking does not have positive and significant effect on the performance of deposit money banks

From table above, since the probability value is less than 5% ( $0.0302 < 0.05$ ), the null hypothesis is rejected while the alternative hypothesis is accepted, implying that mobile banking has significant effect on the performance of deposit money banks. This means that 1 unit increase in revenue from mobile banking will lead to 0.068 increases on the performance of deposit money banks

### **Hypothesis Four**

#### **Decision Rule:**

Reject null hypothesis if p-value is less than 0.05 (i.e.  $P < 0.05$ ) and accept alternate hypothesis. Otherwise accept null and reject the alternate.

$H_{03}$ . Internet (ITB) banking transactions has no significant effect the Performance of Deposit Money Banks in Nigeria

$H_{i1}$ . Internet (ITB) banking transactions has significant effect the Performance of Deposit Money Banks in Nigeria

From table above, since the probability value is less than 5% ( $0.0058 < 0.05$ ), the null hypothesis is rejected while the alternative hypothesis is accepted, implying that Internet (ITB) banking transactions has significant effect the Performance of Deposit Money Banks in Nigeria. This means that 1 unit increase in revenue from Internet banking transactions will lead to 0.068 increases on the performance of deposit money banks

## **DISCUSSION OF FINDINGS**

**Automated Teller Machine:** The result of the study indicates that automated teller machine has positive and significant effect on the performance of deposit money banks

The results of our findings are consistent with the work of Adu, (2016) in terms of automated teller machine, it was discovered that automated teller machine has positive effect on the performance of deposit money banks in Nigeria

**Point of Sale:** The result indicates that point of sale has significant effect on the performance of deposit money banks

The results of our findings are inconsistent with the work of Agwu, Atuma, Ikpefan, and Aigbiremolen, (2014) (2016), they posited that point of sale has negative and insignificant effect on the performance of deposit money banks in Nigeria.

**Mobile Banking:** The result indicates that, mobile banking has significant effect on the performance of deposit money banks

The result of our findings are consistent with the work of Asidok, and Michael, (2018) in terms of mobile banking (MB), it was discovered that mobile banking has significant effect on the performance of deposit money banks in Nigeria

## **CONCLUSION**

The regression result indicates that automated teller machine, point of sale mobile banking, Internet have positive and significant effect on the performance of deposit money banks. The study thus concludes that financial innovations have positive effect on the performance of deposit money banks and have improved the performance of Deposit money Banks in Nigeria within the period under review

## RECOMMENDATIONS

In line with the objectives and findings, we recommend that:

1. Managers of deposit money banks should from time to time train customers with regard to automated teller machine, its benefits, risk exposure, physical and electronic security to avoid financial loss in the hands of hackers, trainings should be held for bank staff in short periods to acquaint them with modern developments of the sophisticated technology in changing times to improve the performance of deposit money banks in Nigeria
2. Managers of deposit money banks should improve service quality and customer responsiveness in cases of lost or stolen cards, frauds, and other customer complaints in relation to point of sale to enhance the performance of deposit money banks in Nigeria
3. There is additional need for managers of deposit money banks in Nigeria to ensuring ease of use, and customer interactive features in mobile and on-line shopping systems, to accelerate to performance of the deposit money banks in Nigeria
4. Managers of deposit money banks should improve service quality and customer responsiveness in cases of lost or stolen cards, frauds, and other customer complaints in relation to point of sale to enhance the performance of deposit money banks in Nigeria

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