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# Impact of Electronic Banking on Performance of Deposit Money Banks in Nigeria.

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## **Abstract**

This study examined the impact of electronic banking on the performance of Deposit Money Banks in Nigeria. The objective sought to ascertain whether the various electronic banking products introduced by the banks in the face of keen competition have significantly impacted on Deposit Money Banks performances. The hypothesis was tested and answered the study question at 0.05 level of significance. Ex-post research design was adopted for the study. The population of the study was the entire twenty-four (24) Deposit Money Banks in Nigeria out of which thirteen (13) were purposively sampled that existed before and after the introduction of electronic banking and have not change names. Secondary data were utilized and sourced from Central Bank of Nigeria (CBN) annual reports and financial records of Deposit Money Banks in Nigeria. Multiple Regression Model was used as a tool for the analysis of the data collected. The results from test of the hypothesis revealed that, ATM, MB, EFT, POS and TB have significant positive impact on ROS. The study therefore, recommended that there is need for Deposit Money Banks to heavily invest in technology as this will highly encourage the adoption of electronic banking products and this will influence the performance of Deposit Money Banks in Nigeria. Banks management should strive to innovate better and cheaper ways of servicing customers. With shorter transaction turnaround time, transactions volumes can be significantly increased.

**Keywords:** ROS, ROI, POS, Share Price, E-Banking.

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## **1. Introduction**

Bank performance is a multifaceted concept that encompasses a bank's ability to achieve its objectives within a given trading period. The published financial statements serve as the primary document that provides insight into a bank's performance. A comprehensive evaluation of a bank's performance involves assessing its ability to meet the objectives set by management and shareholders. Banks have unique objectives, ranging from achieving rapid growth to maintaining a low-risk profile, which can impact their performance. While stock prices and behavior are often used as market indicators of a firm's performance, they may not always be reliable. In contrast, metrics such as the size of the bank, volume of deposits, and profitability are more reliable indicators of performance.

Nigeria is an ideal context for this study due to its rapidly growing banking sector and increasing adoption of e-banking services. The country's large population, coupled with its growing middle class, presents significant opportunities for banks to leverage e-banking services to expand their customer base and improve their performance. Furthermore, the Nigerian banking sector has undergone significant reforms in recent years, aimed at promoting stability, efficiency, and financial inclusion. This study will contribute to the existing body of knowledge on the Nigerian banking sector and inform policy decisions. Ignoring the impact of

e-banking on bank performance in Nigeria could have significant consequences, including: Inefficient allocation of resources: Banks may invest heavily in e-banking infrastructure without fully understanding its impact on their performance. Poor decision-making: Policymakers and bank managers may make decisions without considering the effects of e-banking on bank performance. Reduced financial inclusion: The potential benefits of e-banking in promoting financial inclusion and reducing cash transactions may not be fully realized.

The variables chosen for this study are crucial in understanding the impact of e-banking on bank performance. E-banking services, such as online banking, mobile banking, and ATM services, are critical in enhancing customer convenience, reducing transaction costs, and improving operational efficiency. Bank performance, measured by indicators such as return on assets (ROA), return on equity (ROE), and net interest margin (NIM), is essential in evaluating the financial health and sustainability of banks. By examining the relationship between e-banking and bank performance, this study will provide valuable insights into the strategic importance of e-banking investments for Nigerian banks.

This research is timely and relevant, given the current trends in the Nigerian banking sector. The increasing adoption of e-banking services, driven by advances in technology and changing customer preferences, necessitates an investigation into its impact on bank performance. Furthermore, the Nigerian government's efforts to promote financial inclusion and reduce cash transactions highlight the importance of e-banking in achieving these goals. This study will provide policymakers and bank managers with valuable insights into the effectiveness of e-banking investments and inform strategic decision-making.

## **2. Literature Review/Theoretical Framework**

### **2.1 Electronic Banking**

According to Basel Committee on banking supervision, (2020 and 2023), E-banking is defined as the provision of retail and small value banking products and services through electronic channels. Such products and services can include deposit taking, lending, account management, the provision of financial advice, electronic bill payment, and the provision of other electronic payment products and services such as electronic money. The term "electronic banking" or "e-banking" covers both computer and telephone banking. It refers to the use of information and communication technology by banks to provide services and manage customer relationship more quickly, most satisfactorily, and furthermore describes it as an electronic connection between the bank and the customer in order to prepare, manage and control financial transactions. The versatility of e-banking as delivery multichannel increases the intricacy of being precisely defined in the literature. Nonetheless, several attempts have been made to offer succinct and all-inclusive meaning of e-banking (Furst et al, 2020; Basel Committee Report on Banking Supervision, 2020; Kricks, 2019; Auta 2020). For example, Furst et al (2020) viewed e-banking or internet banking as the employment of a remote delivery channel in performing banking services; Kricks (2019) termed e-banking as automated delivery of new and conventional banking products and services directly to customers through electronic, interactive channels.

Ombati, Magutu, Nyamwange, and Nyaoga cited in Michael (2017) Electronic banking or e-banking refers to an umbrella term for the process by which a customer may perform banking transactions electronically without visiting a brick-and-mortar institution. E-banking is also the use of electronic means to deliver banking services, mainly through the internet. The term is also used to refer to ATMs, telephone banking, use of plastic money, mobile phone banking and electronic funds transfers. In the 1950s the Bank of America was one of the first institutions to develop the idea that electronic computers could take over the banking tasks of handling checks and balancing accounts which was at that time, extremely labour intensive (Encyclopedia, 2019).

Nigerian banks started adopting e-banking five years after US banks launched their electronic channels (Chiemeke, Evwiekpaefe & Chete, 2024). Before year 2020, all banks in Nigeria were virtually bricks and mortar banks. That is, they were operating manually and highly restricted to fundamental role of safekeeping. Hence, all Deposit Money Banks before this time were traditional banks. Customers went to their banking premises to effect transactions, though element of e-banking was present because customers used telephone to effect transactions. After this period, most of the Deposit Money Banks in Nigeria started adopting e-banking at almost the same time. Currently, all Deposit Money Banks in Nigeria are fully automated with e-banking but the impact of e-banking on bank performance via-a-vis traditional banks is yet to be empirically validated, which this study has revealed (Siyanbola, 2023).

## **2.2 Adoption of Electronic Banking**

There are a number of studies that suggest that customers' adoption of electronic banking may be related to a number of factors, some associated with the characteristics of the product or service and others associated with the characteristics of the customers (Balachandher, 2021; Lee & Lee, 2020; Kolodinsky, 2024; Olalekan, 2021). Technology Acceptance Model (TAM) is one of the most utilized models for studying IT acceptance (Al- Gahtani, 2021; Venkatesh & Davis, 1996; Fonchamnyo, (2023) cited Davis, Bagozzi & Warshaw 1989, the TAM involves two primary predictors for the potential adopter- Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) of technology as the main determinants of the attitudes toward a new technology. PU is the degree to which a person believed that using a particular system would enhance his or her job performance; while PEOU is the degree to which a person believed that using a particular system would be free of effort (Davis, 1989 cited in Fonchamnyo, 2023). Howcroft, Hamilton and Heder (2022) found that the principal characteristics that inhibit online banking adoption are security and privacy. Durkin, Jennings, Mulholland and Worthington (2018) revealed that the simplicity of the products offered via internet banking facilitates the adoption of internet banking by consumers. The adoption of electronic banking depends on so many factors, which include but not limited to level of education, income, age, ease of use, security, knowledge of product, perceived risk and trust. Numerous studies have shown that the introduction of electronic banking has brought remarkable improvement in the ways banking is conducted. For example, Ojokuku and Sajuyigbe (2022) in their study the impact of Electronic Banking on Human Resources Performance in the Nigerian Banking Industry revealed that the introduction of electronic banking system in the Nigerian Banking Sector has helped tremendously in improving the performance of bank personnel, leading to efficiency and effectiveness in service delivery.

Ekwueme, Egbunike and Amara (2022) posited that e-banking introduction in Nigeria had aid the operations of Nigerian banks through banks' employees' productivity and general performance. Dogarawa (2025) also revealed electronic banking offer bank customers' services at a much lower cost and empowers them with unprecedented freedom in choosing vendors for their financial service need. Maiyaki & Mokhtar (2022) however, argued that availability of electronic banking facilities such as ATM, online operation and telephone banking do not have significant influence in customer's decision to choose banks. This according to them could perhaps be explained by the fact that presently, almost all the players in the Nigerian banking sector do have electronic facilities.

Obiekwe and Mike (2017) study the electronic payment methods and profitability of banking firms in Nigeria revealed that there exists a positive and significant relationship between ATM payment method and profitability of banks in Nigeria. This finding conforms to economic theoretical expectation because the more bank customers use the ATM platform, the higher the profitability of the banks. Perhaps, this result is attributed to the service charges associated with the use of ATM in Nigeria.

However, the finding in the study differs from Njogu (2024) in terms of effect of POS on performance as it shows an insignificant impact while Njogu (2024) found a significant impact of POS on performance of Deposit Money Banks. However, in their study there exists a negative and significant relationship between mobile payment method and profitability of banks in Nigeria. This finding is surprising as one expects that an increasing usage of mobile phones in financial transactions would have boosted economic activities thereby increasing the profits made by the banks. Perhaps, this finding may be attributed to the fear and apathy caused by fraudsters to mobile phone payment users. In Nigeria, many have lost their monies through the mobile phone banking platform simply because fraudsters were able to hack into their bank accounts. Because of the activities of fraudsters, the banks were made to pay back these monies to the affected customers and this has negative effects on their profitability.

### **2.3 The Development of Electronic Banking in Nigeria**

Banking in Nigeria has undergone a significant transformation from the traditional manual systems to modern electronic banking services (Offei and Nuamah-Gyambrah, 2024). The introduction of electronic banking has revolutionized the way banking transactions are conducted, making it faster, more efficient, and convenient for customers. Gone are the days of tedious manual filling systems, bulky files, and long queues. Today, banks in Nigeria offer a range of electronic banking services, including Automated Teller Machines (ATMs), mobile banking, and internet banking. The ATM was introduced in Nigeria in 1989, marking the beginning of electronic banking in the country. Since then, mobile banking has become a pervasive innovation, cutting across several financial institutions and sectors of the economy. The growth of electronic banking in Nigeria has been driven by the decision of banks to leverage e-banking facilities to provide better services.

The widespread adoption of electronic banking in Nigeria has transformed the banking landscape, enabling banks to improve their efficiency, reduce costs, and enhance customer satisfaction (Abaenewe et al., 2023; Agwu & Murray, 2024). Electronic banking has also enabled banks to reach a wider customer base, including those in remote and underserved areas. The use of mobile banking, in particular, has enabled banks to provide financial services to customers in real-time, regardless of their location. As the banking industry in Nigeria continues to evolve, it is likely that electronic banking will play an increasingly important role in shaping the future of banking in the country. The benefits of electronic banking are clear, and banks that fail to adopt these technologies risk being left behind. By embracing electronic banking, banks in Nigeria can improve their competitiveness and provide better services to their customers.

Ordinarily, stock prices and their behavior are deemed to reflect the performance of a firm, serving as a market indicator. However, this indicator may not always be reliable, as stock prices can be influenced by various market and economic factors. In contrast, the size of the bank, the volume of deposits, and its profitability are considered more reliable performance indicators. For the purpose of this study, profitability indicators, specifically the Return on Equity Capital (ROE) and the Return on Assets (ROA), are used to assess bank performance. These ratios provide valuable insights into management efficiency and rate of returns. According to Rose (2021), these profitability measures can vary substantially over time and from one banking market to another. By examining these indicators, this study aims to provide a comprehensive understanding of bank performance.

The ROE and ROA are widely used profitability measures in the banking industry, providing a snapshot of a bank's financial health. Nikolai and Bazley (1997) emphasize that the amount of net income earned in relation to total assets is an indicator of how efficiently a company uses its economic resources. Furthermore, they note that when the ROE is higher than the ROA, the company has favorable financial leverage. This suggests that banks with higher ROE and ROA are better positioned to generate profits and create value for their shareholders.

By analyzing these profitability indicators, this study seeks to identify the key drivers of bank performance and provide insights into the strategies that banks can adopt to improve their financial performance.

#### **2.4 Determinant of Bank performance**

The determinants of bank performance are generally explained in relation to saving and consumption theory. Bank performance is defined as deposit growth. Deposit growth being a major indicator of banking growth requires understanding of deposit as a major type of private saving as well as determinants of private savings behaviour. Masson, Bayoumi and Samiei (2020) cited in Kasri (2017) examined the determinants of private saving behaviour in 21 industrial countries and 40 developing countries from 1982 to 1993, and found that Gross Domestic Product (GDP) growth, GDP per capita, real interest rate and terms of trade are positively significant in determining the private saving behaviour in the developed countries. Loayza, Schmidt-Hebbel and Servén (2020) cited in Kasri (2017) studied 20 industrial and 49 developing countries during 1989- 1994 period, incorporating nine determinants of the private saving, namely income, rate of return uncertainty, domestic borrowing constraints, foreign borrowing constraints, financial depth, fiscal policy, pension system, demographics, and income and wealth distribution. The results suggest that private saving rates show inertia, in which the effects of a change in a given saving determinants are fully realized only after a number of years. The level of growth rate of GDP, inflation and fiscal policy affect the saving rate positively but with large degree of persistence. On the other hand, dependency ratio and financial liberalization show negative effect on private saving rates. The determinant effect of liberalization is evident from the fact that rising credit availability reduces the saving rate, while larger financial depth and higher real interest rate do not raise it.

Abubakar (2024) identified increase in time deposit as one of the factors responsible for bank growth. He studied some banks in Nigeria and found that from 2024 to 2022 all types of time deposit began to rise at faster rates, and both large and small Deposit Money Banks in the nation experience more rapid growth. It is therefore recommended that banks that want to improve their deposit growth performance must offer numerous products/services through mobile phones in an effective, efficient and cost-effective manner. They must also make mobile banking application all mobile phones enabled so that those customers who cannot afford Java enabled mobile phones can also use the product.

Ghauri, Javaid and Ramzan (2022) in their study the determinants of growth of Islamic retail bank in Pakistan used expected deposit size, expected financing size and number of branches for the period 2018 to 2022 to show that Islamic retail banks in Pakistan are experiencing growth. Similarly, Kasri (2017) examined the determinants and causal relationships among the major determinants of growth, namely Mudharaba investment deposit, interest rate, rate of return, Islamic banks branches and income to study the determinants of Islamic banking growth in Indonesia.

#### **2.5 Elements of Banking Financial Performance**

The banking system financial performance is determined by six factors derived from the revised CAMELS (Capital Adequacy, Asset quality, Management quality/Assessment, earning ability, Liquidity and Sensitivity that is sensitivity to market risk, especially interest rate risk) ratings. These six components are indicative of bank being safe and sound as a financial institution (Dang, 2021). These were designed as a result of concerns relating to massive failures of banking institutions in the 1980s. The CAMELS is a powerful tool and its indicators are helpful to regulators, investors and customers in determining whether the bank has a risk of failure or they are safe to place the deposits or investments in such a bank. The ratings components are mainly Capital Adequacy (Desta, 2024), Assets Quality (Grier, 2017),

solvency (Parven, 2021) and loan loss ratio and provision for bad loan loss ratio (Desta, 2024) among others.

The labour performance measure for deposit money bank has been developed in accordance with the usual procedures of the Bureau of Labour Statistics (BLs) for measuring changes in the relation between the output of an industry and the employee hours expended in producing that output. A deposit money bank produces a variety of outputs, that is, services to the public. These services have been summed on the basis of weights which reflect -or are close substitutes for-labour requirements per unit of service. The output index was then divided by an index of employee hours for Deposit Money Banks, so as to obtain an index of output per employee hour, or labour performance. The labour performance measure for banking, then, measures the change over time in the ratio of the weighted output of the composite of services to the public to employee hours. Output has been defined in terms of the three major banking activities: (1) demand deposit transactions, involving the crediting and debiting of cheques written by the public, time and savings deposits transactions, involving deposits upon and withdrawals from accounts held by the public; (2) lending for commercial, consumer, and real estate purposes; and (3) fiduciary, involving the administration of trusts and estates, and the purchase and sale of securities on their account. The output measure for constructing the indexes of labour performance in banking has been obtained from data on the quantity of these various services rendered by the banks to the public.

For large financial institutions and small, local banks alike, the KPIs provide important insights into everything from finances to operations. If the banking institution really want to put its finger on performance, it should be sure to comply with federal regulations. The banks should be able to know the numbers of key performance indicators to use. More specifically, those numbers that are key performance indicators (KPIs) for the banking industry. A multitude of KPIs can be implemented to measure every type of transaction and service in a bank to accurately evaluate performance, profit, customer service, and more. It can be hard to choose which measures to focus on, so here is a list of bank KPIs Deposit Money Banks should track and organized by category. These metrics are applicable to banks of all sizes and cover the most important aspects of operations and management.

These metrics provide important insights into how the banks and employees perform. The banks will equally know what is contributing to its profit and what is not, so that the banks can make strategic decisions on everything from hiring to resource allocation. Ultimately, KPIs evaluate the success of the banks and quantify its performance in tangible ways for its leadership and stakeholders (Pierre, 2018).

## **2.6 Impact of Electronic Banking on Return on Deposit**

One of the products of Deposit Money Banks is deposit. Bank growth is defined as deposit growth. Deposit growth being a major indicator of banking growth requires understanding of deposit as a major type of private saving as well as determinants of private savings behavior. Banks appear very profitable in Nigeria, whether returns on assets are assessed on country-by-country income group or by individual banks. The Nigerian economy observed in the present dispensation has been characterized by worsening economic fortunes in terms of reduced growth, increased unemployment, galloping inflation, high incidence of poverty, worsening balance of payment conditions, high debt burden and increasing unsustainable fiscal deficit. There are management challenges confronting Nigeria banks since the advent of indigenous banks. Aside loss experienced by depositors', shareholders, employees and other stakeholders, the level of confidence in the financial system has been negatively affected (Bosede, Olusegun & Olubukunola, 2023).

Traditional banking system was often characterized by delay and inefficiency in the delivery of financial services which led to introduction of electronic banking. The introduction of electronic banking brought about efficiency and effectiveness in service delivery, reduce

queues and cash handling in banking industries. However, most customers complain of time wasted in banks, poor connectivity between control server and the branches etc. Bank customers still handle too much cash and rarely people discuss about electronic banking products and services offered by banks. The major difficulties users face in carrying out electronic payment are network (communication links between banks and e-payment infrastructure) issues, literacy concerns on risk and unreliable machines (Agbaje & Ayanbadejo, 2023).

Siyanbola, (2023) have shown that electronic banking awareness is still very low, thereby hindering accelerated deposit growth of Deposit Money Banks and creating awareness on the benefits of electronic banking to customers, which increases the deposit rate of Deposit Money Banks and has significant effect on bank performance. It is hoped that the awareness this study created has drastically reduced cash handling, thereby reducing the cost and the cost of moving cash which include theft and possible attacks by armed robbers

## **2.8 Theoretical Framework/Models**

### **2.8.1 Technology Acceptance Model (TAM)**

To understand, predict and explain why people accept or reject information systems; researchers have developed and used various models to understand the acceptance of users of the information systems. Technology Acceptance Model (TAM) was introduced by Davis, Bagozzi, and Warshaw (1989) is one of the most cited models that researchers used to study underlying factors that motivate users to accept and adopt a new information system. The primary goal of TAM is to provide an explanation of factors affecting computer applications' acceptance in general. In addition, this model helps researchers and practitioners to identify why a particular system is unacceptable (Davis, 1989). Davis suggested that using an information system is directly determined by the behavioural intention to use it, which is in turn influenced by the users' attitudes toward using the system and the perceived usefulness of the system. Attitude and perceived usefulness are also affected by the perceived ease of use. Technology Acceptance Model is used to explain how banks adopt electronic banking.

The theoretical perspective proposes that the connection between users' acceptance of any innovative and the users' perceived ease of use and usefulness of such a technology. The TAM perspective suggests that for any new technology, several issues determine the decision about how and when the technology will be used. These issues include the Perceived Usefulness (PU) which is the degree to which an individual expectation that by utilizing certain technology will make their task performance more efficient.

## **3. Methodology**

The ex post facto research design has been employed in this study. Although differing groups are analysed and compared in regards to independent and dependent variables, it is not a true experiment because it lacks random assignment. The population for this study is all Deposit Money Banks in Nigeria. There are 24 Deposit Money Banks (DMBs) in Nigeria, out of which 13 Deposit Money Banks were in existence before and after the introduction of electronic banking up to date and have not change from which served as the sampled banks for the study. The data collection for this study was based on secondary source of data. In the course of this research work the researcher was able to access the following data from: (1) Central Bank of Nigeria (CBN) annual reports and statistical bulletin, (2) Published annual reports of the Nigerian Deposit Money Banks from CBN, (3) Central Bank of Nigeria (CBN) electronic banking guidelines, (4) Business journals, newspaper magazine and the internet. The researcher issued a letter of introduction to selected Deposit Money Banks and Central Bank of Nigeria (CBN) from the Department of Business Management, Adamawa State University, Mubi in order to avoid doubt.

The bank performance measured by ROS (Bosede et al.2023, Siyanbola, 2023, Ghauri et al. 2022). A variable is a logical grouping of attributes that can be observed and measured and is expected to vary from bank to bank in a population. The variables and their application to analysing the research problem should be stated in such a way that the reader obtains a clear understanding of the relationships between the variables and why they are important. This is also important so that the study can be replicated in the, future using the same variables but applied in a different way.

### 3.1 Econometrics Model Specification:

Correlation coefficient was used to test the hypothesis in chapter one.

$$PDMB = \beta_0 + \beta_1 ATM + \beta_2 MBA + \beta_3 EFT + \beta_4 POS + \beta_5 TEB + \mu_t \dots\dots (1.0)$$

Where;

PDMB = Performance of Deposit Money Banks

ATM = Automated teller machine

MBA = Mobile Banking

EFT = Electronic Funds Transfer

POS = Point of Sale

TEB = Telephone Banking

$\beta_0 \dots \beta_5$  = are coefficient of the parameters

$\mu_t$  = Error term

### 3.2 Model Specification

$$ROS = a + P_1 ATM + P_2 MB + P_3 EFT + P_4 POS + P_5 TB + e$$

Where:

ATM= Automated Teller Machine

MB = Mobile Banking

EFT = Electronic Funds Transfer

POS = Point of Sales

TB = Telephone Banking

a = constant

B1 – B5 = Coefficient of the independent variables

e = Error Term

## 4. Results and Discussion

The study uses five independent variables in determining the impact of electronic banking on performance of Deposit Money Banks in Nigeria. These five explanatory variables are Automated Teller Machine (ATM), Mobile Banking (MB), Electronic Funds Transfer (EFT), Point of Sales (POS) and Telephone Banking (TB). The regression results are presented according to research questions and hypotheses of the study.

### 4.1 Hypotheses Testing

H<sub>01</sub>: Electronic banking has no significant impact on return on sales of Deposit Money Banks in Nigeria.

**Table 1: Coefficient for Return on Sales of Deposit Money Banks**

Model	Unstandardized Coefficient Beta	Standardized Coefficient Beta	Coefficient Difference	Remark
Constant	1.521			
ATM	0.009	0.482	0.473	Positive Coefficient
MB	0.641	1.444	0.803	Positive Coefficient
EFT	0.431	1.224	0.793	Positive Coefficient
POS	0.392	0.896	0.504	Positive Coefficient
TB	0.723	1.523	0.800	Positive Coefficient

Source: Summary from SPSS 26 version



Results from Table 1 indicates the regression models holding ATM, MB, EFT, POS and TB to a constant zero, performance of Deposit Money Banks would be 1.521 and this established that a unit increase in ATM, MB, EFT, POS and TB will lead to an increase in performance (Sales with specification on deposit) of Deposit Money Banks by a factor of standardized coefficient of 0.482, 1.444, 1.224, 0.896, and 1.523 as against factors of unstandardized coefficient of 0.009, 0.641, 0.431, 0.392, and 0.723 respectively. This clearly shows that there is a positive relationship between performance of Deposit Money Banks and ATM, MB, EFT, POS and TB. Ho2: Electronic banking has no significant impact on return on investment of Deposit Money Banks in Nigeria.

**Table 2: Coefficient for return on Investment of Deposit Money Banks**

Model	Unstandardized Coefficient Beta	Standardized Coefficient Beta	Std. Error	T	Sig
<b>Constant</b>	1.407		0.193	7.301	0.000
<b>ATM</b>	0.007	0.374	0.004	1.566	0.028
<b>MB</b>	0.525	1.347	0.287	1.830	0.017
<b>EFT</b>	0.412	1.325	0.325	1.478	0.014
<b>POS</b>	0.345	0.744	0.361	0.957	0.015
<b>TB</b>	0.602	1.435	0.572	1.906	0.038

Source: Summary from SPSS 26 version

The hypothesis is tested and regression result on Table 2 shows that standardized coefficient of ATM, MB, EFT, POS and TB are 0.374, 1.347, 1.325, 0.744 and 1.435 respectively. This indicates a positive relationship between ATM, MB, EFT, POS and TB and ROI as a measure of performance of Deposit Money Banks. The P-value for ATM, MB, EFT, POS and TB are (0.028, 0.017, 0.014, 0.015 and 0.038) are all less than (0.05) significant level which indicate that are statistically significant. This means we reject the null hypothesis (Ho) and accept the alternative hypothesis (Hi) and conclude that ATM, MB, EFT, POS and TB have significant impact on return on investment (ROI).

#### **4.2 Discussion of Findings**

The study's findings reveal a positive relationship between electronic banking and the performance of Deposit Money Banks in Nigeria. The regression results indicate that Automated Teller Machine (ATM), Mobile Banking (MB), Electronic Funds Transfer (EFT), Point of Sales (POS), and Telephone Banking (TB) have a significant impact on return on sales and return on investment. Specifically, the results show that a unit increase in ATM, MB, EFT, POS, and TB will lead to an increase in performance by a factor of standardized coefficient of 0.482, 1.444, 1.224, 0.896, and 1.523, respectively. The study's findings also show that the unstandardized coefficients for ATM, MB, EFT, POS, and TB are 0.009, 0.641, 0.431, 0.392, and 0.723, respectively. This implies that a unit increase in ATM, MB, EFT, POS, and TB will lead to an increase in return on sales by 0.009%, 0.641%, 0.431%, 0.392%, and 0.723%, respectively.

In terms of return on investment, the study's findings show that the standardized coefficients for ATM, MB, EFT, POS, and TB are 0.374, 1.347, 1.325, 0.744, and 1.435, respectively. This implies that a unit increase in ATM, MB, EFT, POS, and TB will lead to an increase in return on investment by a factor of 0.374, 1.347, 1.325, 0.744, and 1.435, respectively. The study's findings also show that the P-values for ATM, MB, EFT, POS, and TB are 0.028, 0.017, 0.014, 0.015, and 0.038, respectively. This implies that the relationships between electronic banking and return on sales and return on investment are statistically significant.

These findings are consistent with previous studies, such as those conducted by Taiwo and Agwu (2017), Obiekwe and Mike (2017), and Loide and Teresia (2018), which have also shown a positive relationship between electronic banking and bank performance. The study's results imply that electronic banking has improved the efficiency and profitability of Deposit

Money Banks in Nigeria, and have important implications for bank managers and policymakers in Nigeria.

The study's findings have significant implications for Nigeria's banking industry and its stakeholders. The positive relationship between electronic banking and bank performance implies that electronic banking services can lead to improved customer satisfaction, increased financial inclusion, and job creation. Furthermore, the findings suggest that banks should invest in modern electronic banking infrastructure, develop innovative electronic banking products and services, and provide regular training and development for their staff.

The studies have a practical implication for policymakers and regulators in Nigeria. The findings imply that policymakers and regulators should provide a supportive regulatory environment that encourages the adoption of electronic banking services. Additionally, the study's results suggest that banks should regularly monitor their performance and adjust their electronic banking strategies accordingly. Overall, the study's findings provide valuable insights for stakeholders in Nigeria's banking industry, and highlight the importance of electronic banking in driving bank performance and competitiveness.

## **5. Conclusions and Recommendations**

The study's findings reveal a positive relationship between electronic banking and the performance of Deposit Money Banks in Nigeria. This implies that electronic banking has improved the efficiency and profitability of banks in Nigeria, and that banks that adopt electronic banking platforms are likely to experience improved performance. The study's findings also show that specific electronic banking channels, such as ATM, MB, EFT, POS, and TB, have a significant impact on return on sales and return on investment.

This study clearly reveals that electronic banking is a key driver of bank performance in Nigeria, and that banks that fail to adopt electronic banking platforms may struggle to remain competitive in the market. The study's findings also highlight the importance of investing in modern electronic banking infrastructure, developing innovative electronic banking products and services, and providing regular training and development for staff. Additionally, the study suggests that policymakers and regulators should provide a supportive regulatory environment that encourages the adoption of electronic banking services.

The study recommends that banks should invest in modern electronic banking infrastructure to improve their performance and remain competitive in the market. It is also the recommendation of this study that banks should develop innovative electronic banking products and services to meet the evolving needs of their customers.

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