
THE IMPACT OF ELECTRONIC BANKING ON THE FINANCIAL PERFORMANCE OF NIGERIAN DEPOSITS MONEY BANKS

Nabila Kabir¹ Shafi'u Abubakar Kurfi^{2*} Muhammad Aminu Isa³

^{1&2}Department of Accounting, Umaru Musa Yar'adua University, Katsina

³Department of Accounting, Bayero University

*abubakarkurfishafiu@gmail.com

ABSTRACT

The banking industry has been tremendously influenced by technological advancements just like the other aspects of life. The emergence of e-banking has significantly redefined and transformed banks' operations. Technology is viewed as the major driving force in firms' performance success. All banks, irrespective of whether local or foreign are investing heavily on emerging technologies that assure customers' satisfaction, effective and efficient service delivery in e-banking. This is done in an effort to achieve reduction in operating costs, increase volumes of transactions processed and attraction of new clientele. The study aims at discerning impact of electronic banking on the financial performance of Deposits Money Banks in the Nigerian banking industry. The study relied on descriptive study. The study was centered on all the 21 Deposits Money Banks governed and licensed in Nigeria. The study made use of secondary data for the period 2013 to 2017 obtained from reports and publications. Statistical package for the social sciences (SPSS) used to analyses the data's descriptive statistics. To determine the associations between the return on assets and the electronic banking variables (ATM value of transactions, mobile banking value of transactions and internet banking value of transactions), a multiple linear regression model was put to use. The study established that electronic banking has contributed positively to the financial performance of Nigeria's commercial banks. The study also showed that mobile, internet banking and use of ATM cards positively and significantly influenced the financial performance of Nigeria's Deposits Money Banks as measured by the return on assets. The study recommends that Deposits Money Banks in Nigeria increase their efforts towards adoption of e-banking to automate their service delivery to customers and that the banking industry's policy makers and regulators consider electronic banking as a major input when crafting guidelines to regulate the industry.

Key words: Electronic Banking, Deposits Money Banks, Financial Performance, Nigeria

1.0 INTRODUCTION

The new millennium brought with its new possibilities in terms of information access and availability simultaneously, introducing new challenges in protecting sensitive information from some eyes while making it available to others. Today's business environment is extremely dynamic and experience rapid changes as a result of technological improvement, increased awareness and demands Banks to serve their customers electronically (Stevens, 2013). Banks have traditionally been in the forefront of harnessing technology to improve their products and services. Kolodinsky, Hogarth, & Hilgert (2004) maintained that banking industry of the 21st century operates in a complex and competitive environment characterized by these changing conditions and highly unpredictable economic climate.

Information and Communication Technology (ICT) is at the center of this global change curve of Electronic Banking System in Nigeria today (Stevens, 2013). Assert that they have over the time, been using electronic and telecommunication networks for delivering a wide range of value-added products and services, managers in Banking industry in Nigeria cannot ignore Information Systems because they play a critical impact in current Banking system, they point out that the entire cash flow of most fortune Banks are linked to Information System. The application of information and communication technology concepts, techniques, policies and implementation strategies to banking services has become a subject of fundamental importance and concerns to all Banks and indeed a prerequisite for local and global competitiveness Banking.

The advancement in Technology has played an important role in improving service delivery standards in the Banking industry. In its simplest form, Automated Teller Machines (ATMs) and deposit machines now allow consumers carry out banking transactions beyond banking hours. With online banking, individuals can check their account balances and make payments without having to go to the bank hall. This is gradually creating a cashless society where consumers no longer have to pay for all their purchases with hard cash. For example: bank customers can pay for airline tickets and subscribe to initial public offerings by transferring the money directly from their accounts, or pay for various goods and services by electronic transfers of credit to the sellers account. As most people now own mobile phones, banks have also introduced mobile banking to cater for customers who are always on the move.

Banks are mandated to provide electronic services to remain competitive. Electronic banking transactions are provided by Nigeria banks. E-banking services comprise of internet transactions, ATM, funds transfers, and access to customer service without bank employee's assistance. ATM banking has arguably been the banking industry's

biggest innovation of the past twenty years. With the success of ATMs, banks had the impetus to develop new products and new delivery channels. Such development occasioned mobile banking surpassing the usage of ATMs (CBN annual report, 2017). The suggested reason for this is ease of accessibility and convenience. Mobile networks are available on a larger scale than ATMs. The familiarity of most people with the technology has also increased the trust they have in the mobile phone as a tool for effecting financial transactions. Mobile banking facilitates quite a number of financial services via the use of mobile gadgets such as smart phones, tablets, and the use of application software for provision of financial transactions. The scope of offered services may include most services offered at local branches. All major mobile network providers in Nigeria provide m-banking services through modes such as SMS messaging and mobile phone or web applications. 25.2 million Accounts constitute the present market size for mobile (CBN Annual Report, 2017). The mobile network companies have collaborated with commercial banks to provide m-banking facilities mainly targeted at those not operating traditional bank accounts.

Nigeria's banking industry operates within the stipulated guidelines provided by the Central Bank of Nigeria Act, the Nigeria's Banking Act, the Nigeria's Companies Act, and any statutory requirements provided by the regulator Central Bank of Nigeria. Several industries growth and development have been accelerated by technological advancement. In order for a firm to remain competitive it has to adopt focused strategies such as: improving product differentiation, changing prices – raising or lowering prices to attain a temporary advantage, implementing innovation in the production process and in the actual product, improving features, formulating and implementing innovative methods in the distribution channels, and using appropriate distribution channels or vertical integration that is ideal to the industry.

Ovia (2001) observed how positively the standards of service delivery in the financial sector institutions have been improved by technological advancement. Several recent studies have also explored in great detail the resultant impact of technology on the banking sector. Kariuki (2005) studied six aspects in electronic money banking, which indicated a clear positive function of ICT on the bank's profits and anticipated turnover, and bank's performance. The study observed that high profit banks mostly generate higher profits in long-term rather than short-term because of investment costs of ICT.

While the study of Kingoo (2011) evidently revealed bank performance is enhanced by e-banking adoption. In the happening of this, a recommendation emphasized that banks must focus their needs to achieve their goals by using the appropriate technology as opposed to using ICTs in electronic banking because the competition

have positively embraced its use. They also recommended for Government participation to ensure reduction of costs of implementing e-commerce, banking sector regulation by the Central bank of Nigeria to avoid it becoming a dumping ground for outdated technology as well as manpower development in ICT skills. Asikhia & Sokefun (2003) in their study of Jordanian banks that have adopted the use of electronic banking, found out that high costs in banking sector are incurred in the acquisition of electronic infrastructure and the training of employees. Therefore, electronic banking service in the short run will negatively impact on the bank's profitability.

Mixed evidence is clearly witnessed on e-banking effect on banks' performance. Some of the studies also have a limited focus on the subject, limiting the study to the impact of mobile and internet banking (Okiro, 2013) and impact of mobile banking (Ikpefan, 2013). This research therefore aimed to ascertain the impact of electronic banking on the financial performance of commercial banks in Nigeria. Therefore, the aim of the study is to assess the impact of electronic banking on the financial performance of deposit money banks in Nigeria. Other objectives of this study are to evaluate the prospects of electronic Banking on the financial performance of deposit money banks in Nigeria, to evaluate the impact of electronic Banking on the financial performance of deposit money banks in Nigeria and finally to examine whether electronic banking has improved the fortune of deposit money banks in Nigeria.

2. LITERATURE REVIEW

2.1 Banking Sector in Nigeria

Banking Industry in Nigeria started during the colonial era with the establishment of Colonial Banks with the primary aim of meeting the commercial needs of the Colonial Government. Banking system in Nigeria is regulated through the Central Bank of Nigeria. This apex bank started operation on July 1, 1959.

In 1892, African Banking Corporation and British West Africa, now First Bank of Nigeria, were established in Nigeria. In 1925, Anglo-Egyptian Bank and National Bank of South Africa gave birth to Barclays Bank in Nigeria. In 1948, the British and French Bank for Commerce and Industry started operations in Nigeria, which metamorphosed into the United Bank for Africa. The first domestic bank in Nigeria was established in 1929 and called Industrial and Commercial Bank. The bank liquidated in 1930 and was replaced by Mercantile Bank in 1931. The African Continental Bank was created in 1949 as the only sustainable indigenous bank after the liquidation of the Industrial and Commercial bank. The year 1947, shows the

emergence of an agricultural bank called the Nigerian Farmers and Commercial Bank. The Central Bank of Nigeria (CBN) is the Central bank and apex monetary authority of Nigeria established by the CBN Act of 1958 and commenced operations on July 1, 1959.

Central Bank of Nigeria (CBN) is the major regulatory objectives of the bank as stated in the CBN Act are to: maintain the external reserves of the country, promote monetary stability and a sound financial environment, and to act as a banker of last resort and financial adviser to the federal government. The central bank's role as lender of last resort and adviser to the federal government has sometimes pushed it into murky regulatory waters. After the end of imperial rule, the desire of the government to become pro-active in the development of the economy became visible especially after the end of the Nigerian civil war, the bank followed the government's desire and took a determined effort to supplement any short falls in credit allocations to the real sector. The bank soon became involved in lending directly to consumers, contravening its original intention to work through commercial banks in activities involving consumer lending. However, the policy was an offspring of the indigenization policy at the time. Nevertheless, the government through the central bank has been actively involved in building the nation's money and equity centers, forming securities regulatory board and introducing treasury instruments into the capital market.

2.2 E-banking

Emerging information technology tremendously affects the growth and flexibility in the user friendliness of electronic banking (Nadim & Begum, 2008). In recent times electronic banking has been highly appreciated in the banking sector service provision, and especially in online banking services. Foreign as well as local banks are adopting online banking system to enhance their services. They have adopted superior technology through automated transaction systems for attracting clients and offering inter-branch and inter-bank networking.

Nadim and Begum (2008) observe that these systems seem neglected by the customers, in spite of rigorous efforts by the banks. It is perceived that in e-banking customer impression is quite vital for successful e-banking service delivery. The banking sector has tried to collect more information to discern factors that endear customers to online banking (Gerrard & Cunningham, 2003; Sathye, 1999). Various authors have proposed different models on customer online banking adoption. These models comprise of technology acceptance model that has its origin from theory of reasoned action, which has become the most widely used, and the theory of planned behaviour.

2.3 Technology Acceptance Model

This model is at times referred to as Technology Acceptance Theory (TAT) it addresses the adoption behaviour of customers which is usually assessed by the aim to use a specified system which is predicated on the impression of its usefulness and the convenient usability of the system. Previous authors researched on the fundamental construct of TAMs validity in forecasting the acceptance of individual's and noted that TAMs fundamental construct does not wholly address the explicit effect of technology and the usability factors that actually influence the user's acceptance (Moon & Kim, 2001). Davis, 1989 contents that expected usefulness is usually termed as an individual belief to improve the degree job performance by the application of modern technology of information system. Perceived effortlessness of use shows how easy an individual learns the operations of the emerging technology and information system. The model emphasizes the positive impact of perceived simplicity of use on the impression of the system's usefulness (Gefen, Karahanna, & Straub, 2003).

Pikkarainen, Karjaluoto & Pahlila (2004) carried out a survey in Finland to establish the actual impact of perceived usefulness and concluded that it endeared use of inventive, autonomous, self-service and user friendly technologies provided by banks for access of financial services to the users in the twenty first century. Gerrard and Cunningham (2003) noted that the perceived usefulness rested on the services provided by the bank. These services range from paying utility bills, checking account balances, loan applications, money transfer abroad, and getting pertinent mutual funds information.

In conclusion, the likelihood of the adoption of e-banking is dependent on its perceived usefulness (Potaloglu & Ekin, 2001). The major drivers of e-banking acceptance are viewed as the TAM variables which include the aspects of perceived ease of use and perceived usefulness.

2.4 Empirical Studies

2.4.1 International Research Studies

Several research studies have been carried out on the performance of banks that have embraced the use of e-banking platform. The main reason is that the profitability of banks utilizing e-banking purely focuses on the impending costs and resultant revenue implications (Guru & Staunton 2002; Berger, 2003).

A study by Mohammad & Saad (2011) on the impact of electronic banking on the performance of Jordanian banks over the period (2000- 2010) concluded that electronic banking negatively affects banks' performance which was akin to the

findings of Delgado, Hernando & Nieto (2007) and Siam (2006). Electronic banking adoption impacts on a bank's risk profile. The risk management principles issued by Basel Committee in July 2003 for electronic banking recognize the related risk factors and the committee's aim was to promote and enhance safety of services provided by online banking while observing flexibility in line with emerging technologies as a result of the turbulent environment.

Unlike the study of Nader (2011) who observed Saudi Arabia's commercial banks profit efficiency over the period of time ranging from 1998-2007. The survey study findings provide that accessibility of banking via the mobile phone, the ATMs and the various bank branches had a significance on profitability and efficiency in Saudi Arabia's banks. Scrutiny by Malhotra & Singh (2009) on the effect of internet banking on performance of commercial banks in India found that there was insignificant relationship. This corresponds to the deductions of DeYoung (2005); Arnaboldi & Claeys (2010).

Similarly, a study done by Hernando and Nieto (2005) on commercial banks numbering 72 in Spain over a period of 1994-2002 to establish their financial performance on the adoption of a transactional website found that there was a significant impact on profitability, which was the same as DeYoung, Lang & Nolle (2007) who observed that profitability is highly realized in internet banks than in non-internet banks in traditional analogue banks. De Young et al. (2007) identified the factors that affect bank's performance in the e-banking platform by undertaking a survey study of United States (US) community banks and did an appraisal on virtual click and mortar banks effect on firm's performance. The study confounded that bank's profits actually improved due to online banking by accelerating meaningful revenue.

A consumer acceptance of online banking study by Pikkarainen et al (2004) found that banks get noteworthy cost savings by offering online banking services and that it enables them to trim their branches and reduce on the staff numbers which gives way to self-service channels (Karjaluo, Koivumäki, & Salo, 2003). Centeno (2004) notes that there are two categories of factors affecting e-banking adoption, these are; factors that relate to retail banking, and those that relate to the infrastructure and technology accessibility comprising of skills and competences on the part of customers in the usage of internet and other associated technologies, internet penetration rate, technological attitude, and internet security and privacy issues. It again involves aspects such as online banking culture, banking culture, mutual trust in banking institutions and push in internet banking.

Berger (2003) observed how bank profits are affected by banks spending in view of the prevailing competition and concluded IT leads to cost saving, but higher spending on IT generates network effects that affect profits negatively. Simpson (2002) posits that operating costs reduction and high revenues realization is a major driver to e-banking. A comparison study between emerging and developed markets depicted that greater revenues and lower operating costs are realized in developed markets. Furst, Lang, & Nolle (2002) contended that the application of click and mortar business model in Federal Chartered US banks results in reasonably high return on equity (ROE). They also noted the banks with greater profitability resulted from embracing internet banking after 1998.

Polatoglu & Ekin (2001) undertook a study on Turkish retail banking sector in which they found out that actually e-banking reduces banks' operational costs and it accelerates customer's satisfaction and retention rate. Sullivan and Richard (2000) studied USA brick and mortar banks and found no significant advantage of internet banking in this practice. Jayawardhena (2000) showed that cost reduction, profitable gains, and efficiency are derived from internet banking, yet it is noticed that very few banks use it and that only fewer clients constituting less than five hundred thousand has so far embraced the technological services in e-banking in the UK.

2.4.2 Local Research Studies

Various studies done in Nigeria have also shown the effect of e-banking on performance in the banking industry. Kariuki (2005) studied Nigeria's commercial banks and the effect on financial performance due to the different products developed. The study found out that the development of new products positively affected financial performance in Nigeria's banks. Oluwagbemi, Abah, & Achimugu (2011) conducted a study on Nigeria's commercial banks adoption of electronic banking. The study findings revealed that the adoption was of great benefit but was predicated on the bank services being available 24/7, facilitating faster service delivery and customer satisfaction.

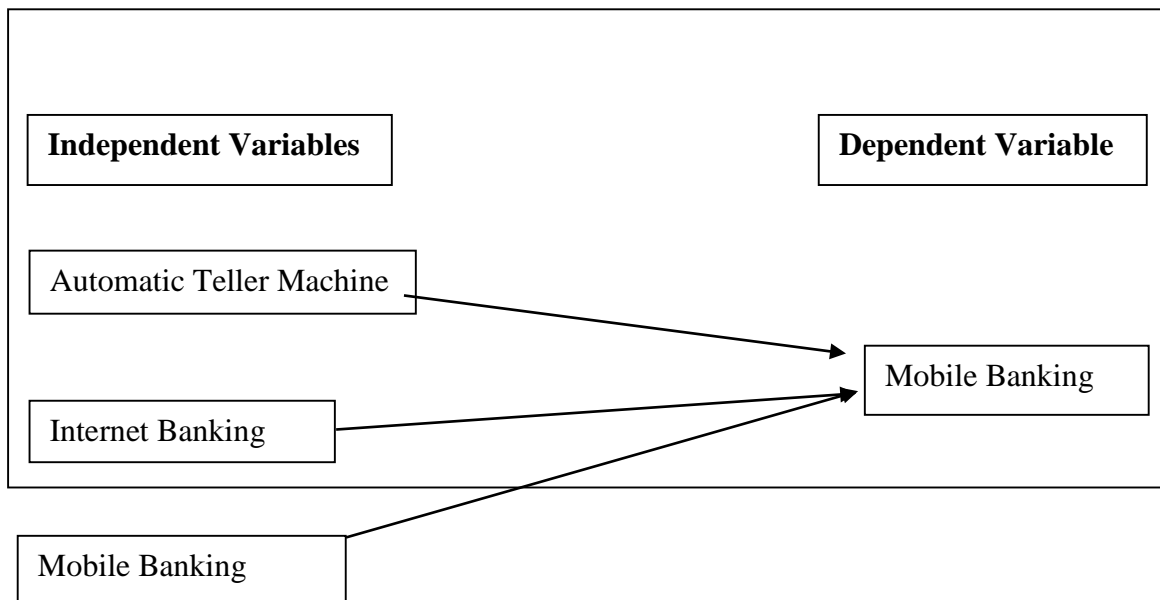
Chaven (2013) in his study found that banks offering internet banking are mainly large banks with a large asset base as well as profit margin as contrasted with non-internet banking banks. The results revealed that averagely, internet banks post more profit than non-internet banks. However, the multiple regression results revealed a small, not significant association between a bank's performance and offering internet banking, larger significant and negative association with risk profile of the banks meaning that internet based banks become better off from risks such as non-performing loans. However, the benefit expected of internet banking is yet to show

some substantial positive financial gains and requires future investigation as internet banking matures in the country.

A research paper done by Kariuki (2005), showed the positive impacts of ICT on banks' performance. He established that deployment of e-banking results in increased profits though in long-term but not in short-term due to the initial capital outlay for the ICT investment. Further he offers evidence that the usage of e-banking can result in market share growth, diversified product range and products that are tailored to suit customer needs which ensures that the commercial banks are in an improved position to satisfy customer demands.

2.5 Research Framework

A research framework is necessary to develop on how the relation between e-banking and financial performance of the Nigerian banking industry is correlated and the direction between the pairs.



3. RESEARCH METHODOLOGY

3.1 Population and sample size

The study was centered on all the commercial banks governed and licensed by the Central Bank of Nigeria. A census survey was used.

3.2 Data Collection

The study used secondary data which encompassed a mixture of published and unpublished material pertinent to the research. The secondary data is significant as it includes the logical framework of the research (Agwu & Carter, 2014). For the purpose of the study, the collected secondary data included Central Bank of Nigeria periodic reports and financial reports of the commercial banks for the period 2013 to 2017.

Data on financial performance such as earnings and financial ratios were obtained from the audited financial statements while data on electronic banking services such as services offered and their respective quantities were obtained from the various CBN periodic reports.

3.3 Data Analysis

The data was cleaned, sorted and checked for completeness and consistency after collection. Statistical package for the social sciences (SPSS) was then used to analyse the data's descriptive statistics such as maximum, minimum, mean, and standard deviation to outline sample characteristics and significant trends from the collected data. A multiple linear regression model was then employed to estimate the relationships between the variables.

3.4 Model Specification

The regression model was as follows:

$$Y_{bt} = \alpha_0 + \beta_1 ATM_{it} + \beta_2 M_{it} + \beta_3 I_{it} + \varepsilon$$

Where;

Y_{bt} = financial performance represented by ROA of bank b in year.

B_t = Estimate value of the year.

ATM = Value of transaction through ATM.

M = Value of transaction through mobile banking.

I = value of transaction through internet banking.

t = Year.

ε = Error term.

To find the value of α and β , the multivariate regression model was employed. The individual beta estimate reliability was then tested by the p-value in the ANOVA table.

The regression model's significance was tested at 95% confidence interval and 5% level of significance.

4. RESULTS AND DISCUSSIONS

4.1 Descriptive analysis

The descriptive statistics results are tabulated below:

Table 1: Descriptive Statistics

Description	ROA	ATM cards Mobile (₦M)	Paymentts Internet (₦M)	Banking (₦M)
N	42	42	42	42
Minimum	-7.54	0	0	0
Maximum	7.152	14773.21	10124.981	125109.6
Mean	2.667	8568.242	5872.34	72753.014
Std. Dev.	2.679	4236.359	2903.436	37412.21
Skewness	-1.285	-0.359	-0.359	-0.243
Std. Error	0.365	0.365	0.365	0.365
Kurtosis	3.949	-1.285	-1.285	-1.325
Std. Error	0.717	0.717	0.717	0.717

Source: Generated from SPSS statistical output

Table 4.1 above illustrates the average ROA of all the commercial banks in Nigeria over the study period to be 2.667 with a maximum of 7.152 and the minimum of -7.54. A small standard deviation of 2.679 was noted implying that there was low variation of ROA across the commercial banks. In addition, the mean of the total value of ATM cards was 8568.242 million recording the highest value of 14773.21 million. The mean total value of the mobile payments was 5872.34 million with a maximum of 10124.981 million. The internet banking mean was noted to be 72753.014 million across the commercial banks. High standard deviations were noted on total value of ATM card transactions, mobile payments as well as internet banking meaning there was a high variation across all the commercial banks with regards to total transaction value of ATM cards, mobile payments and internet banking.

4.2 Correlation Analysis

To measure the strength of the association between the variables, the study put to use the Karl Pearson’s coefficient of correlation. The Pearson product-moment correlation coefficient determines the strength of a linear association between two variables and is denoted by *r* which can take a range of values from +1 to -1. A value of 0 designates that there is no association between the two variables. A value greater than 0 designates a positive association while a value less than 0 designates a negative association. The Pearson’s coefficient was employed to ascertain the presence or absence of linear correlation between the variables of e-banking and financial performance. The outcomes are as follows:

Table 2: Correlation Analysis

Variable	ROA	ATM Cards	Mobile payments	Internet Banking
ROA	1.000			
ATM Cards	0.679	1.000		
Mobile payments	0.612	0.326	1.000	
Internet Banking	0.574	0.254	0.076	1.000

Source: Generated from SPSS statistical output

Results from table 4.2 above reveal that there is a significant positive association between use of ATM Cards and financial Performance ($r = .679$, P-value < 0.009). This implies that ATM Cards influences financial performance in commercial banks in Nigeria. The findings also disclosed a substantial positive association between mobile payments and financial Performance ($r = .612$, P-value < 0.013). Thus, implying that mobile payments influences financial performance in commercial banks in Nigeria.

The findings indicated a noteworthy positive association between internet banking and financial Performance ($r = .574$, P-value < 0.026) thus, depicting that internet banking influences financial performance in Nigeria’s commercial banks.

4.4 Regression Analysis

The correlation coefficient (R) value represents the degree and strength of relationship between dependent variable and the independent variables (Sekaran, 2003). Coefficient of correlation ranges between -1 and 1 and in this model the coefficient of correlation is 0.896 which indicates a positive correlation between ROA, ATM Cards, mobile payments, and internet banking. The R Squared is the coefficient of

determination which indicates how much of the total variation in the dependent variable. From the above the R squared statistic gives the goodness of fit of the model which shows how good the regression model approximates the real data points. The R squared of this model is 0.802 which shows that the model is a good fit of the actual data. The coefficient of determination of 0.802 implies that 80.2% of the variance in dependent variable is explained by changes in the independent variables.

4.4.2 ANOVA (Analysis of Variance)

Table 3: ANOVA (Analysis of Variance)

Model	Sum of Squares	DF	Mean	Square F	Sig.
Regression	6.942	3	2.314	6.51	.001 ^a
Residual	13.507	38	0.355		
Total	20.449	41			

Source: Generated from SPSS Statistical Output

- a. Predictors: (Constant), ATM Cards, mobile payments, and internet banking
- b. Dependent Variable: ROA

The model summary also indicates that the dependent variable (ROA) is significantly accurately predicted by the regression model. The statistical significance of the regression model that was run is shown by the F test. The P=0.001, which is less than 0.05 designates that, generally the regression model statistically and significantly predicts the outcome variable that is good fit for the data.

4.5 Coefficient of Correlation

Table 4: Coefficient of Correlation

	B	Std. Error	Beta	t	Sig.
(Constant)	7.232	0.643		11.24	.0000
Total value from ATM Cards	0.802	0.343	0.23	2.34	.0247
Total value from mobile payment	0.769	0.305	0.46	2.52	.0160
Total value from internet bank.	0.593	0.291	0.31	2.04	.0486

The overall equation model for ROA, ATM Cards, mobile payments, and internet banking was as follows:

$$Y_{bt} = 7.232 + 0.802ATM_{it} + 0.769M_{it} + 0.593I_{it} + \epsilon$$

From the model, in any given month, the ROA will be 7.232 when all the predictor values are zero. The model indicates that when the value processed through ATM Cards changes by one unit the ROA will increase by 0.802. In addition, mobile payments total changes by one unit the ROA increases by 0.769. Further, the study findings revealed that when the internet banking value changes by one unit the ROA will increase by 0.593. To test the significance of each individual variable which was based at 0.05 the t-test was carried out. The result indicates the mobile payments and internet banking have a value of 0.0160 and 0.0486 against the ROA in the model respectively. This shows that the relationship between ROA, mobile payments and internet banking is significant. The relationship between ROA and ATM cards recorded at rate of 0.0247 which is significant since it's less than p-value (P.0.05).

4.6 Discussion of Findings

The objective of the study was to assess the effect of electronic banking on the financial performance of Deposit Money Banks in Nigeria. This was evaluated by use of secondary data and the succeeding analysis centered on the variables of the study (return on assets, value of ATM transactions, value of mobile banking transactions and value of internet banking transactions).

Results indicate that the regression model is significant in explaining the changes in the independent variable as measured by return on assets caused by changes in the three independent variables namely value of ATM transactions, value of mobile banking transactions and value of internet banking transactions. This is in line with the findings of Abaenewe, Ogbulu, & Ndugbu (2013) that indicated that changes in profitability of Nigeria's commercial banks is significantly explained by variations in electronic funds transfer.

The study findings indicated that the value processed through ATM cards positively and significantly influenced the financial performance of commercial banks in Nigeria. This correlates to Abaenewe, et. al (2013) who noted that a steady rise in the financial performance of banks has been occasioned through an upsurge in ATM usage as measured by number of ATMs. This also agrees to Jayshree, (2013) who listed initiation of accounts, monitoring of accounts and execution and logging of transactions as some of the banking services that have been transformed by deployment of ICT by banks. He notes that self service facilities have resulted from

embracing ICT and this has enabled bank customers to be able to authenticate their account numbers and obtain instructions on when and how to receive their credit and debit cards and cheque books.

The study established that mobile banking significantly and positively influences the financial performance of commercial banks in Nigeria. This is in line with Mallat, Rossi & Tuunainen (2004) who state that mobile services are among the newest services that the banks offer. Through this service, the customers receive messages on their cell phones when transactions that pertain to the customers such as those involving their cards or accounts take place. This goes a long way into lowering the risk that the customers' account or cards are being exploited by an individual who is not the customer. The finding also tallies to Jegede (2014) that mobile banking has reinvented the methods of operations of banks in Nigeria and positively influenced the performance of the commercial banks.

The study further reveals that internet banking positively and significantly influences the financial performance of commercial banks in Nigeria. This correlates with Joseph (2013) who states internet banking permits clients to execute transactions at an opportune place and time. The finding also agrees to Agboola (2006) who indicated that modern technology was the major driver of competition in the banking sector. In the study an upsurge in the deployment of various e-banking tools was highly evident. The study indicated that the utilization of modern ICT practices significantly improves the bank's reputation and eventually results to foster efficient and effective service delivery.

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The study indicates that the e-banking independent variables (ATM, mobile and internet banking) measured by the value of transactions effected explain the financial performance of Nigeria's commercial banks as measured by the return on assets. This is inferred from the strong relationship between the dependent variable and the independent variables found by the study.

The study concludes that e-banking has contributed positively to the financial performance of Nigeria's commercial banks. This is inferred from the trends recorded in the variables where the value of transactions effected through e-banking had a positive and significant influence on financial performance of commercial banks in Nigeria. E-banking provides effective and efficient channels that facilitate improved service delivery and diversified products tailored to client needs.

Kaye, Ongundele & Obaro, (2013) believed that it is now glaring that ATM cards positively and significantly influenced the financial performance of commercial banks in Nigeria. In addition, the study concludes that mobile banking significantly and positively influences the financial performance of commercial banks in Nigeria. The study further concludes that internet banking positively and significantly influences the financial performance of commercial banks in Nigeria. Deployment of ATMs, mobile banking and internet banking has enabled banks to cut down on their costs for offering services to customers and also to expand their reach to a wider market (Sanusi, 2010). E-banking has also enabled the banks to increase the volumes of transactions that can be processed in a day to virtually an unlimited number. This works towards improving the performance of the banks.

5.2 Recommendations

Following the findings above, it is this study's recommendation that:

1. There is dire need for commercial banks to increase their efforts towards adoption of e-banking to automate their service delivery to customers. This follows the positive effect that e-banking usage has on the financial performance of Nigeria's commercial banks as noted through the study.
2. The banking industry's policy makers and regulators also need to cogitate on e-banking as a major input when crafting guidelines to regulate the industry. This is as a result of the major influence that technology has on the performance of the commercial banks. As the country continues to take on developing partners to accentuate its technological capacity, banks will continue to increasingly leverage on technology to improve their performance notwithstanding the risks associated
3. The study further recommends that commercial banks keep embracing the use of mobile banking in their day to day operations because the population of people with access to a cell phone keeps swelling every day. The banks should keep working in tandem with mobile network companies to craft innovative services that are tailored to their targeted market.

Suggestions for Further Research

1. The banking industry has other players in addition to commercial banks. This study was centered on only the registered commercial banks and excluded mortgage finance companies, Bank of Industry, Bank of Agriculture, cash remittance providers, credit reference bureaus, microfinance banks, foreign banks representation offices and foreign exchange bureaus. It is this studies recommendation that research be carried out on the other players in the

banking industry to determine effect of electronic banking on the whole banking industry in Nigeria

2. The study also recommends that research be carried out on the effect of e-banking on the performance of commercial banks in other countries within west Africa. Most of the major commercial banks in Nigeria have expanded into the neighboring countries and such a research will benefit them to focus their strategies for increasing their returns in the external market
3. In addition, the study proposes that research be done in Nigeria on the influence of e-banking on the growth of the country's real gross domestic product in order to establish the residual effect of e-banking on Nigeria's economy. This will enable the banks and Government understands how e-banking usage translates to the country's economic performance instead of looking at its benefits in isolation.

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