Short-Run Effect of Electronic Banking on the Growth of Nigerian Money Deposit Banks

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A B S T R A C T

This study is an empirical investigation into the effect of electronic banking on the growth of the Nigerian money deposit banks. Specifically the study determined the effect of internet banking, mobile banking, ATM operations, and POS transactions on the growth of deposit money banks in Nigeria. The independent variables are internet banking, mobile banking, ATM operations and POS transactions. The dependent variables include growth rate of total deposit and growth rate of total assets. Secondary data relating to the variables were sourced from the Central Bank of Nigeria (CBN) annual report and account and CBN statistical bulletin. The Ordinary Least Square (OLS) multiple regression model was used to analyse the data. The study showed a significant effect with internet banking on the growth of deposit money banks, a significant effect with mobile banking on the growth of deposit money banks, no significant effect with ATM operations on the asset growth of deposit money banks and also no significant effect with POS transactions on the asset growth of deposit money banks. The study recommended among others that all banks should adopt electronic banking as a matter of urgency if they must grow, remain relevant, be competitive and profitable and aggressive e-banking awareness through all media of communication should be embarked upon by bank.

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INTRODUCTION

The business environment is always changing and therefore requires dynamic strategized adaptation to these changes by businesses that wish to survive. These changes could be social, economic, legal, technological, etc. [1;2]. The 21st century has witnessed a dramatic evolution in the financial service industry as a result of the rapid advancement in technological transformation which has become known as e-developments. These changes have engulfed all areas of financial intermediation and financial markets such as e-finance, e-money, electronic banking (e-banking), e-brokering, e-insurance, e-exchange and e-supervision. This new information technology (IT) is turning into the most important factor in the future development of banking, influencing bank's marketing and business strategies. As a result of rapid advances in IT and intensive competition in the banking sector, the adoption of e-banking is being increasingly used as a channel of distribution for financial services [3]. Nigeria did not embrace electronic banking early, compared to developed countries of the world, example USA, Britain, Spain, Germany to mention a few. Electronic banking evolution in Nigeria can be traced to 1986 when the banking sector was deregulated. The result of this deregulation brought far-reaching transformation through computerization and improved bank service delivery.

According to Olusegun, Ishola and Hammed [4], the transformation from the traditional banking to Electronic banking has been a 'leap' change, there is however a high level of job insecurity among employees in the modern-day banking industry. In other words, the modern-day banking services place more emphasis on technological innovations to improve service delivery and high level of customers' satisfaction; and this however no doubt increases the level of employees' job security by rendering some skills obsolete and demanding high level of skill in promoting e-banking occasioned by information technology evolution or development. The world has witnessed an upsurge of electronic payment instruments meant to facilitate trade and simplify payments before the introduction of electronic payment into Nigerian banking system; customers had to walk into the banking hall to do transactions of all kind. They had to queue up and spend more hours to carry out their transactions. Inconveniences caused by these long queues discourage most customers who sometimes renege from the queues in annoyance. Echekoba and Ezu [5], in a research carried out in Nigeria, it was observed that 68.2% of the respondent complained about long queues in the bank, 28.9% complained of bad attitude of teller officers (cashiers), while 2.89% complained of long distance of bank locations to their home or work places. Likewise in her 24th NCS national conference in December 2011, Central Bank of Nigeria (CBN) data shows that 51% of withdrawal done in Nigeria was through Automated teller machine (ATM), while 33.6% was through over the counter (OTC) cash withdrawals and 13.6% through Cheque. Payment was also done through point of sales machine (POS) which accounted for 0.5% and web 1.3%.

Before the emergence of modern banking system, banking operation was manually done, and that solely account for the inefficiency in handling transactions. This manual system involves posting of transactions from one ledger to another without the aid of computer systems. Computations which should be done through computer or electronic machines were done manually, which sometimes lead to miscalculation due to human errors, which results in extension of closing hours when account is not balanced on time [6]. The introduction of electronic banking system which was supposed to bring about efficiency and effectiveness in service delivery, reduce queues and cash handling, rather resulted to disappointment to customers. Most customers complain of time wasted in banks, mostly due to long queues and network downtime due to poor connectivity between central server and the branches. 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 payments are network (communication links between banks and e-payment infrastructure) issues, literacy, concerns on risk and unreliable machines [7]. The adoption of electronic banking has brought major challenges to the banking industry in terms of risk exposure. Adelowo and Mohammed [8], stated that the Automated Teller Machine (ATM) is one of many Electronic Funds Transfer (EFT) devices that are vulnerable to fraud attacks. Brunner et al. in Adelowo and Mohammed [8], affirmed that ATM fraud is a big threat and it requires a coordinated and cooperative action on the part of the bank, customers and the law enforcement machinery. The ATM frauds not only cause financial loss to banks but they also undermine customers' confidence in the use of ATMs. It is for the purpose of tackling these afore-mentioned challenges that this study seeks to examine the effects of electronic banking on the deposit growth of deposit money banks in Nigeria.

REVIEW OF RELEVANT LITERATURE
Concept of Electronic Banking
Electronic banking is the delivery of banking services and products through the use of electronic means irrespective of place, time and distance. Such products and services can include deposit-taking, lending, account management, the provision of financial advice, electronic to bill payment, and the provision of other electronic payment products and services such as electronic money [9]. Electronic banking can also be defined as the variety of platforms than just such as internet banking (or online banking), telephone (or offline banking) whereby customers access these services using an intelligent electronic device, like a personal computer, Personal digital assistant (PDA), automated teller machine (ATM), point of sale (POS), kiosk or touch tone telephone [10].

According to Hossain et al. [11], electronic banking, though generally viewed as a means of providing traditional services in a modern way, is aimed at providing much speedier and time efficient transactions for clients with little or no paperwork involved. In the words of Oluyemi [12], e-banking is "the totality of the deployment of modern information technology and communication systems to record financial transactions as well as deliver financial services to the customers". It is therefore the provision of bank services by financial institutions to their customers through electronic devices. Electronic transactions are known to be quicker and more efficient, some, of which attributes may explain the growing popularity of electronic banking services. Ajayi [13], regarded electronic banking is the basis for the cashless monetary policy of the Central Bank of Nigeria that was introduced in April, 2011. Chimezie [14] revealed that the components of electronic banking transactions include: the bank, bank customer, banking transactions and electronic device. He defined electronic devices as the bedrock of electronic banking. They are what make the difference between cash/coin banking and cheque/paper banking on one hand and electronic banking on the other hand.

Bank Growth
Taiwo [15] viewed bank growth from the perspective of growth in bank lending. Bank growth can be ascertained from the annual growth rates of bank loans and advances. However, growth in bank lending is affected by factors such as the bank's lending rates, banking habits of the public and demand for bank loans, bank's lending policy and statutory lending requirements. Commercial banks decisions to lend out loans are influenced by a lot of factors such as the prevailing interest rate, the volume of deposits, the level of their domestic and foreign investment, banks liquidity ratio, prestige and public recognition. Bank's lending operation therefore constitutes one of the significant vehicles through which banks aid increased investment activities [16]. By bank performance, generally it 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. 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. Ordinarily, stock prices and its behaviour 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. Another important dimension of bank growth is the growth in bank deposits. 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. Ikechukwu and Ifeanyi [17] classified bank deposits into three key parts: savings deposits, demand deposits and fixed deposits. Hence, bank growth can be ascertained from the annual growth rates of bank total deposits.

Theoretical Foundation

The technology acceptance model (TAM) was proposed by Davis [18]. TAM primarily aims to provide an explanation of factors that contribute to the acceptance of computer applications. Added to this, the model assists researchers and practitioners alike in determining the reason behind the unacceptability of a specific system Davis, [18]. According to Davis [18] found attitudes of the user towards system use and the system's perceived usefulness effect on the using information system in organization Moreover, both attitude and perceived usefulness are influenced by the perceived ease of use. TAM posits that the greater the perceived usefulness of the system and the perceived ease of use, the more positive will be the attitude towards it. In this regard, attitude leads to higher intention towards system use, which in turn positively influences the actual system use. According to TAM, with other things remaining constant, perceived usefulness is affected by the perceived ease of use because when technology is easier to use, its usefulness increases. This research study is anchored on technology acceptance model (TAM) because this study seeks to evaluate the impact that the use of computer applications and other electronic channels had had on the growth of banks.

In the perspective of the Theory of Reasoned Action, an individual's intent to adopt an innovation is influenced by his attitude toward the behaviour and subjective norm. Subsequently, a person's behaviour is determined by his intention to perform the behaviour. The attitude toward performing the behaviour is an individual's positive or negative belief about the performing the specific behaviour. In fact, attitudes are comprised of the beliefs a person accumulates over his lifetime. These beliefs are created from experiences, outside information, or from within the self. Only a few of these beliefs, however, actually influence attitude. Subjective norm is beliefs about what others will Subjective norm is beliefs about what others will influences of social pressure on an individual to perform or not perform the behaviour[19].

The Theory of Planned Behaviour (TPB) was originally developed on the basis of the Theory of Reasoned Action (TRA), where the latter is able to explain almost every human behaviour throughout different application contexts. TRA posits that an individual's behavioural intention directs his actual performance of some specific action, where behaviour intention is predicted by subjective norm and attitude towards behaviour [20]. The TPB proposes three independent intention determinants namely attitude towards behaviour, subjective norm and perceived behavioural control. Attitude refers to the level of an individual's positive/negative evaluation of a specific behaviour. Moreover, perceived behavioural control is described as the perception of individuals concerning the ease/difficulty of performing a certain behaviour and it is considered to indicate past experiences and predict difficulties and barriers [21]

Empirical Studies

Ajayi [13] examined the effect of cashless monetary policy on Nigerian banking industry. The data collected was analysed using frequency table and percentages while for non-parametric statistical test, Chi-square was used to test the formulated hypothesis. The results of the study showed that there are significant reasons and benefits inherent in the implementation of cashless policy. It also showed that the policy has positively affected the development of banks; as it facilitates ease of operations and reduces queue and congestion in the banking hall, among others. However, inadequate technological infrastructures, high rate of cyber-crime and high rate of illiteracy, among others are hindering the full implementation and benefits of the policy. It was therefore recommended that government should put in place a law preventing cyber-crime and intensify public enlightenment campaign about the cashless system.

Abaenewe [22] investigated the profitability performance of Nigerian banks following the full adoption of electronic banking system. Judgmental sampling method was adopted by utilizing data collected from four Nigerian banks. The profitability performance of these banks was measured in terms of returns on equity (ROE) and returns on assets (ROA). The study revealed that the adoption of electronic banking has positively and significantly improved the returns on equity (ROE) of Nigerian banks. On the other hand and on the contrary, it also revealed that e-banking has not significantly improved the returns on assets (ROA) of Nigerian banks.

Kehinde [23] examined the impact of electronic banking on the operations of Nigerian banks. Five banks were randomly selected for the study. The study revealed that the adoption of electronic banking has enhanced the banks' efficiency. It has also enhanced the banks' fortunes through bank charges and withdrawal charges. It also enhanced the bank-customer relationship.

Ojokuku and Sajuyigbe [24] examined the impact of electronic banking on Human Resource (HR) performance in the Nigerian banking industry, using First Bank Plc. as a case study. Chi-square test was applied for data analysis. Result showed among other things that introduction of electronic banking has impacted positively on the bank's HR

performance, in terms of improved efficiency and effectiveness of service delivery by bank personnel. Bank-customer relationship and customers' satisfaction was also found to have been greatly enhanced. Hence, Government should lower the tariff on information technology-aided tools and equipment imported and possibly subsidized the cost.

Shilpan and Vyas [25] investigated the impact of e-banking on traditional banking services. It was discovered that Internet banking is changing the banking industry, having the major effects on banking relationships. Banking is now no longer confined to the branches were one has to approach the branch in person, to withdraw cash or deposit a cheque or request a statement of accounts.

Taiwo and Agwu [26] investigated the roles of e-banking adoption on the operational efficiency of commercial banks. Pearson correlation was used to analyse 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.

Abubakar [27] examined the effect of electronic banking on growth of deposit money banks in Nigeria. The Ex-post facto research design was used in analysing the data. It concluded that electronic banking has moderately improved the growth performance of deposit money banks in Nigeria.

Umar and Ogohi [28] investigated on the impact of e-banking on the development of banking sector in Nigeria. The Pearson product moment correlation was used in analysing the data. The research concluded that electronic banking has promoted social, economic and political development in the state.

Olaiya and Adeleke [29] examined electronic banking and profitability of deposit money banks in Nigeria. The Ex-post facto research design was used in the analysis of the data. The research concluded that digital banking channels has no significant effect on the performance of banks in Nigeria in the short run of the period covered by the study.

Samuel and Ukpata [30] investigated on the Implication of electronic banking on central bank performance in Nigeria. The ordinary least square (OLS) research design was used in analysing the data. The research concluded that the adoption of electronic banking has influenced the content and quality of banking performance.

Alex [31] examined the factors affecting the adoption of internet banking in Nigeria. The regression analysis was used in analysing the data. The research concluded that security is the major factor preventing customer from using internet banking.

Ikpefan, O. A., Akpan, E., Osuma, G., Evbuomwan, G. O. & Ndigwe, C. [32] examined electronic banking and cashless policy in Nigeria. The ordinary least square research design was used in analysing the data. The study concluded that cashless policy has not been fully utilized by Nigerians.

Angela, Stanley, Elizabeth and Onyekachi [33] investigated on the effect of electronic banking on domestic investment in Nigeria. The ordinary least square design was used to analyse the data. The study concluded that electronic banking transaction had an insignificant effect on the domestic investment within the period under review.

Babatunde and Adediji [34] examined the impact of electronic banking on the operations and performance of deposit money banks in Nigeria. The Pearson correlation was used in analysing the data present. The study concluded that electronic is viable and plays a significant roles in the operations and performance of deposit money banks in Nigeria.

Amu and Nathaniel [35] studied the relationship between electronic banking and the performance of Nigerian commercial banks. Electronic banking was measured by value of Point-of-Sale transactions while commercial banking performance was measured by customers' deposits. Engle-Granger co-integration model was used to analyse data for the sample period January 2009 to December 2013. The results showed that POS is not co-integrated with both the savings and time deposits but are co-integrated with demand deposits. It was recommended that the monetary authorities and commercial banks should embark on an all-inclusive enlightenment campaign for the banking public on the benefits, convenience and importance of adopting e-banking channels in completing their transactions.

Ibrahim and Garba [36] examined the impact of electronic banking product on profitability. The Ex-post facto research design was used in analysing the data. The study concluded that electronic banking product has a positive impact on bank profitability.

METHODOLOGY

This study focused on only on the short-run effect of electronic banking on the growth of deposit money banks in Nigeria thus the Ordinary Least Square (OLS) was employed as its technique for analysing the data. The choice of the OLS approach is on the basis that the study is centred on the short-run effect only. The data were gathered from the Central Bank of Nigeria (CBN) statistical bulletin covering the period 2009 to 2019. The dependent variables adopted were growth measures of deposit money banks in Nigeria namely: growth rates of Total Deposits (TD) and growth rates of Total Assets (TA). The independent variables are Internet Banking (WEB) Mobile Banking (MB) ATM Operations (ATM), and POS Transactions (POS). The functional models developed for this research is stated as thus:

$$TD = f(WEB)$$ Equ.1
$$TD = f(MB)$$ Equ.2
$$TA = f(ATM)$$ Equ.3
$$TA = f(POS)$$ Equ.4

Econometric transformation of the models result the following:

$$TD_{it} = \beta_0 + \beta_1 WEB_{it} + \varepsilon_{it}$$ Equ.5
$$TD_{it} = \beta_0 + \beta_1 MB_{it} + \varepsilon_{it}$$ Equ.6
$$TA_{it} = \beta_0 + \beta_1 tM_{it} + \varepsilon_{it}$$ Equ.7
$$TA_{it} = \beta_0 + \beta_1 POS_{it} + \varepsilon_{it}$$ Equ.8

Description of variables

Variables	Explanation	Reason for inclusion
Growth rates of Total Deposits (TD)	This refers to the percentage difference between the previous year total deposit of DMBs and the current year total deposit of DMBs.	Growth variable
Growth rates of Total assets (TA)	This refers to the percentage difference between the previous year total assets of DMBs and the current year total assets of DMBs.	Growth variable
Internet Banking (WB)	Refers to the total value of transactions performed through the internet.	E-banking variable
Mobile Banking (MB)	Refers to the total value of transactions performed through mobile phones.	E-banking variable
Automated Teller machine (ATM)	Refers to the total value of transactions performed through the ATM.	E-banking variable
Point-of-Sales (POS)	Refers to the total value of transactions done through POS.	E-banking variable

DATA ANALYSIS AND DISCUSSION
Characteristic Statistics of the Data

From table 1 It is seen that total deposit of deposit money bank average 23374.50 between 2000 and 2019 while total assets of deposit money banks average 28775.40 between 2000 and 2019. While value of internet and mobile banking of deposit money banks average 160.1900 and 915.9000 respectively between 2010 and 2019. However, value of ATM and POS transaction average 3940.340 and 887.0600 between 2010 and 2019. The Jarque-Bera probability for Total asset, internet banking, ATM and POS transaction are insignificant at 5% level of significance which shows that there are not normally distributed However, total deposit and mobile banking were found to be normally distributed. This may be attributed to non-availability of data for some years on said variables.

Table 1: Data Descriptive Statistics

	Mean	Median	Maximum	Minimum	Std. Dev.	Skewness	Kurtosis	Jarque-Bera	P-value	Obs
TD	23374	17766	84213.00	10837.00	21627.34	2.550792	7.759324	20.28222	0.0034	20
TA	28775	26647	42080.00	15544.00	9882.468	0.151433	1.524633	0.945182	0.6233	20
WEB	160.19	95.55	478.1000	31.60000	155.5191	1.273814	3.043121	2.705111	0.2585	10
MB	915.90	3901	5080.900	6.700000	1530.239	2.267253	6.831021	14.68270	0.0016	10
ATM	3940.3	3827	6512.600	954.0000	2110.806	0.014648	1.574430	0.847129	0.6547	10
POS	887.06	380.30	3304.700	12.70000	1136.422	1.203251	3.056183	2.414338	0.2990	10

Source: E-views 9.0 version data output

OLS Regression Output

From Table 2, the p-value (0.0277) is less than 0.05 therefore, there is a significant effect with internet banking on the growth of money deposit banks in Nigeria. The coefficient value of 5986.267 reveals that there is a positive effect

with internet banking on the growth of money deposit banks in Nigeria. It follows that an increase in internet banking will result also to an increase on total deposit of money deposit banks in Nigeria. The R-squared of 0.609258 reveals that only about 60% of the variation in total deposit of money deposit banks in Nigeria is explained by variation in internet banking. The probability F–statistics is less than 0.05 suggesting that the effect with internet banking on the growth of money deposit banks is significant. The Durbin-Watson statistics is up to two therefore the model is free from the problem of auto-correlation.

As can be seen in Table 2, the prob (F-statistic) (0.0437) is less than 0.05, therefore, there is a significant effect with mobile banking on the growth of deposit money banks in Nigeria. The coefficient value of 10636.91 reveals that there is a positive effect of mobile banking on the growth of deposit money banks in Nigeria. It follows that an increase in the mobile banking will result to an increase on total deposit of deposit money banks in Nigeria. The R-squared of 0.658257 reveals that only about 65% of the variation in total deposit of deposit money banks in Nigeria is explained by variation in mobile banking. The probability F–statistics is less than 0.05 suggesting that the effect of mobile banking on the growth of deposit money banks is significant. The Durbin-Watson statistics is up to two therefore the model is free from the problem of auto-correlation.

From table 4, the p-value (0.2683) is greater than 0.05, therefore we accept the null hypothesis. There is no effect with ATM operations on asset growth of deposit money banks in Nigeria. The coefficient value of -10490.99 portrays that there is a negative effect with ATM operations on asset growth of deposit money banks in Nigeria. The r-squared of 0.482336 reveals that only about 48% of the variation in the asset growth of deposit money bank in Nigeria is explained by the variation in ATM operations. The probability f-statistics is greater than 0.05 suggesting that there is no significant effect with ATM operations on asset growth of deposit money in Nigeria. The Durbin-Watson statistics is up to two therefore the model is free from the problems of auto- correlation.

Table 2: OLS Regression for Total Deposit and Internet Banking

Variable	Coefficient	Std. Error	t-Statistic	Prob.
WEB	108.5476	30.73405	3.531834	0.0277
C	5986.267	6693.280	0.894370	0.3972
R-squared	0.609258	Mean dependent var		23374.50
Adjusted R-squared	0.560415	S.D. dependent var		21627.34
S.E. of regression	14339.19	Akaike info criterion		22.15624
Sum squared resid	1.64E+09	Schwarz criterion		22.21675
Log likelihood	-108.7812	Hannan-Quinn criter.		22.08985
F-statistic	12.47385	Durbin-Watson stat		2.151182
Prob(F-statistic)	0.027711			

Source: E-views 9.0 version data output

Table 3: OLS Regression for Total Deposit and Mobile Banking

Variable	Coefficient	Std. Error	t-Statistic	Prob.
MB	13.90719	0.890267	15.62137	0.0437
C	10636.91	1528.135	6.960710	0.0331
R-squared	0.658257	Mean dependent var		23374.50
Adjusted R-squared	0.654290	S.D. dependent var		21627.34
S.E. of regression	4086.964	Akaike info criterion		19.64585
Sum squared resid	1.34E+08	Schwarz criterion		19.70637
Log likelihood	-96.22925	Hannan-Quinn criter.		19.57946
F-statistic	24.40271	Durbin-Watson stat		2.400711
Prob(F-statistic)	0.043650			

Source: E-views 9.0 version data output

Table 4: OLS Regression for Total Assets and ATM

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ATM	4.640313	0.219994	1.09289	0.2683
C	-10490.99	972.3699	1.78909	0.3780
R-squared	0.482336	Mean dependent var		28775.40
Adjusted R-squared	0.480129	S.D. dependent var		9882.468
S.E. of regression	1393.095	Akaike info criterion		17.49330
Sum squared resid	15525705	Schwarz criterion		17.55382
Log likelihood	-85.46650	Hannan-Quinn criter.		17.42691
F-statistic	0.069101	Durbin-Watson stat		2.579335

Prob(F-statistic)	0.268300			

Source: E-views 9.0 version data output

Table 5: OLS Regression for Total Assets and POS

Variable	Coefficient	Std. Error	t-Statistic	Prob.
POS	7.649007	1.462674	1.229469	0.1788
C	21990.27	2042.086	1.076854	0.7530
R-squared	0.553675	Mean dependent var		28775.40
Adjusted R-squared	0.525384	S.D. dependent var		9882.468
S.E. of regression	4986.643	Akaike info criterion		20.04377
Sum squared resid	1.99E+08	Schwarz criterion		20.10429
Log likelihood	-98.21885	Hannan-Quinn criter.		19.97738
F-statistic	0.034734	Durbin-Watson stat		2.015012
Prob(F-statistic)	0.178793			

Source: E-views 9.0 version data output

The result in Table 5 shows that the p-value (0.1788) is greater than 0.05 therefore we accept the null hypothesis. Therefore there is no effect with POS transactions on growth of total assets of deposit money banks in Nigeria. The coefficient value of 2199.27 reveals that there is a positive effect with POS transactions on total assets of deposit money banks in Nigeria. It follows that an increase in POS transaction will result also to an increase on total assets of deposit money banks in Nigeria. The R-squared of 0.553675 reveals that only about 55% of the variation in total assets of deposit money bank in Nigeria as explained by variation in POS transactions. The probability F–statistics is greater than 0.05 suggesting that the effect POS transactions on total assets of deposit money banks is not significant. The Durbin-Watson statistics is up to two therefore the model is free from the problem of auto-correlation.

Discussion of Findings

The findings of the study revealed that internet banking has a positive and statistical significant effect on total deposit of deposit money banks. However, the findings tend to agree with the researcher's a prior expectation, in conjunction with Abubakar [27] who found a negative and statistical significant effect with internet banking on liquidity of deposit money banks in Nigeria. Hence disagrees with the findings of Babatunde and Salawudeen et al., [37], established an insignificant effect with e-banking on security of financial transaction of the banking industry in Nigeria. Mobile banking was found to have positive and statistical significant effect on Total deposit of deposit money banks. The findings tend to agree with the priori expectation of the researcher. The positive effect implies that an increase in mobile banking will lead to increase in the total deposit of DMBs. The findings however disagree with that of Abubakar [27] who found a negative and statistically insignificant between mobile banking and liquidity of deposit money banks in Nigeria. But agrees with the findings of Abaenewe [22] who found a positive effect with e-banking on return on equity of deposit money banks in Nigeria.

ATM transactions are seen to have a negative and insignificant effect on asset growth of deposit money banks in Nigeria. The findings tend to match the researcher priori expectation of the study. However the findings tend to disagree with the findings of Kehinde et al. [23], who found that electronic banking has significant effect with operations of banks in Nigeria. The finding also agrees with that of Abaenewe et al. [22] who found no significant effect with e-banking on return on asset of deposit money banks in Nigeria. The findings also revealed that point of sale has a positive and insignificant effect with asset growth of deposit money banks. The findings tend to be out of line with the researcher priori expectation. However, the findings tend to match with the findings of Babatunde and Salawudeen, [37] who found out e-banking to have a positive effect with customers' satisfaction. The finding also disagrees with Abubakar [27] who found a negative effect with point of sale on liquidity of deposit money banks in Nigeria.

CONCLUSION AND POLICY IMPLICATION

This research was undertaken to show the effect of electronic banking on the growth of deposit money banks in Nigeria. It was aimed at determining the effect of internet banking and mobile banking on the deposit growth of deposit money banks; the effect of ATM operations and POS transactions on the asset growth of deposit money banks. This study was anchored on the technology acceptance model (TAM). The growth rates of total deposits and total assets of DMBs were used as the dependent variables while internet banking, mobile banking, ATM operations and POS transactions stood as the independent variables. Secondary data relating to the variables were sourced from the CBN annual reports and accounts and CBN statistical bulletin. The ordinary least square (OLS) regression model was adopted for the empirical analysis. The study showed that there is a significant effect with internet banking on deposit growth of deposit money banks. It also revealed a significant effect with mobile banking on deposit growth of deposit money banks. The study further revealed an insignificant effect with ATM operations on the asset growth of deposit money banks and also showed a non-significant effect with POS transactions on the asset growth of deposit money banks.

Due to the significant effect of internet banking on deposit growth, banks that are yet to fully adopt internet banking should do so as a matter of urgency if they must grow, remain relevant, competitive and profitable. Banks that seek to improve their deposit growth performance must offer numerous products/services through mobile phones in an effective, efficient and cost effective manner. They should also make mobile banking applications available and installed to all mobile phones, so that those customers who cannot afford Java enabled mobile phones and smart phones can also use the product.

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