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Abstract

The study investigated the effect of cashless policy on the financial performance of selected deposit money banks in Nigeria. A panel data were Deposit Money Banks in Nigeria" collected from a sample of 14 banks covering 6 years spanning from 2012 when Published in International Journal of the policy was introduced in Nigeria to 2017. The study used return on Asset as Trend in Scientific Research and proxy for bank performance while the value transactions done through the ATM, Development POS, Internet Banking, NIP and NEFT platforms (E-banking Products) were used to proxy cash less policy. In other to ensure the validity and the reliability of our data, we therefore subjected our data to a diagnostic test using Descriptive Statistic Analysis, Multicolinearity test, Correlation testing, and Herteroskadaticity testing. Findings from the study revealed that that (ATMV) has a positive and significant effect on return on assets (ROA) of banks in Nigeria while, POSV, WEBV, NIPV and NEFV were found to have a positive but insignificant effect on ROA of quoted banks in Nigeria. The study concluded that E-banking products as a proxy for cash less policy has positive effect on the financial performance of Deposit Money Banks in Nigeria.

Keywords: Cashless Policy, Financial Performance, Deposit Money Banks

INTRODUCTION

Banks are the linchpin of the economy of any country. They occupy central position in the country's financial system and are essential agents in the development process. By intermediating between the surplus and deficit savings units within an economy, banks mobilize and facilitate efficient allocation of national savings, thereby increasing the quantum of investments and hence national output (Ajayi & Ojo, 2006). In a developing economy such as Nigeria, financial sector development has been accompanied by structural and institutional changes and the sector generally has long been recognized to play a crucial role in the economic development of the nation. Cashless economy depicts an economic situation whereby transactions are done without the necessary movement of cash as a means of exchange or as a means of transaction but rather with the use of credit card or debit card payments. Several scholars have attempted to analyse this policy, but only few of them presented a comprehensive evaluation of its implications in developing countries. The payments system plays a very crucial role in any economy, being the channel through which financial resources flow from one segment of the economy to the other. Therefore, it represents the major foundation of the modern market economy. Essentially, there are three pivotal roles for the payments system namely; the Monetary Policy role, the financial stability role and the overall economic role (CBN, 2011). The cashless policy introduced by the CBN is aimed at achieving a cashless economy. One of the prerequisite for the development of national economy according to (Ajayi & Ojo, 2006) is to encourage a payment system that is secure, convenient and affordable. In this regard, developed countries of the world, to a large extent are moving from paper payment instruments towards electronic ones (Humphrey, 2004).

The policy was conceptualized by the apex bank to migrate Nigeria's economy from a cash based economy to a cashless one through electronic payment systems (e-payment), not only to enable Nigeria's monetary system fall in line with international best practices or discourage movements of huge cash manually, but at the same time, increase the proficiency of Nigeria's payment systems which will in turn improve the quality of service being offered to the banking public. The Nigerian cashless system of payment has been evolving in line with the global payments evolution. Cashless system of payments and instruments are significant contributors to the broader effectiveness and stability of the financial system.

Innovations in technology and business models have implications for the efficiency and safety of cashless system of payments. Cashless system of payment is defined as a society where transactions is functioning, and operated or performed without using coins or banknotes for money transactions but instead using credit cards or electronic transfer of funds (Humphrey, 2004). Cashless economy is an economy where transactions can be done without necessarily carrying physical cash as a means of exchange of transaction but rather with the use of credit or debit card payment for goods and services. The nation's quest of migrating from cash to cashless economy has been on the front burner. Analysts have posited that to meet the target of becoming one of the leading world economies by the year 2020, efforts must be made to embrace electronic payment system in its entirety. It was in this consciousness that the CBN, which is the apex regulatory body of the banking sector, came up with are form of policy to check the increasing dominance of cash in the banking sector in order to enhance e-payment system in the economic landscape. Nigeria's preparedness in adopting this new policy has been questioned by stakeholders given her socio-cultural milieu and other social vices associated with electronic payments that drive cashless policy. Against this backdrop, the study sought to examine cashless policy as regards the Nigerian deposit money banks with a view to exposing the issues relating to it, the possible challenges to be faced by it, as well as the prospects of the policy on the industry.

There is often delay in payment of cheques which led to the adoption of electronic banking system. Adoption of electronic banking which was supposed to ease banking transactions rather resulted to woes to customers. Most customers complain of time wasted in banks, mostly when there is network failure due to linkage problem between the central server and the branches. This aside, banks have since 2000 being introducing payment cards in form of ATM cards, but usage has been very low due to lack of interconnectivity. To resolve some of these problems, most especially to reduce the volume of cash transaction, government decided to encourage the use of e-Commerce instruments to transact business in place of cash, thereby reducing the traffic in the banking hall and other hardships faced daily by customers. The cashless policy was introduced to drive the development and modernization of the Nigerian payment system in line with the nation's vision 2020 goal of being among the top 20 economies in the year 2020 but the use of cash, according to Nwaolisa & Kasie, as a means of carrying out transactions still remains very high in Nigeria. Poor network and connectivity which results most often into debiting customers' account more than once, high transaction cost, as well as security and technical setback, are some of the factors still posing as challenges to the recent move. The current transition to a cashless economy raises a lot of concerns and there is yet no substantial evidence to justify its implementation in Nigeria. Against this backdrop, the study sought to examine cashless policy as regards the Nigerian deposit money banks with a view to exposing the issues relating to it, the possible challenges to be faced by it, as well as the prospects of the policy on the industry.

LITERATURE REVIEW

Concept of Cashless Economy

Cashless economy does not mean a total elimination of cash as money will continue to be a means of exchange for goods and services in the foreseeable future. It is a financial environment that minimizes the use of physical cash by providing alternative channels for making payments. Contrary to what is suggestive of the term, cashless economy does not refer to an outright absence of cash transactions in the economic setting but one which the amount of cash-based transactions are kept to the barest minimum. It is an economic system in which transactions are not done predominantly in exchange for actual cash. It is not also an economic system where goods and services are exchanged for goods and services (the barter system). It is an economic setting in which goods and services are bought and paid for through electronic media. According to Woodford (2003), Cashless economy is defined as "one in which there are assumed to be no transactions frictions that can be reduced through the use of money balances, and that accordingly provide a reason for holding such balances even when they earn rate of return". Basel Committee (1998) expressed the difficult in rightly defining the electronic money but agree that it blends technological and economic characteristics. Other renowned institutions and experts have tried to define

concept of electronic money which they all believe is the backbone of the cashless economy. For European Central Bank (1998), electronic money is broadly defined as an electronic store of money value on a technical device that maybe widely used for making payments to undertakings other than the issuer without necessarily involving bank accounts in the transactions, but acting as a prepaid bearer instrument. Electronic payments as argued by scholars have a significant number of economic benefits apart from their convenience and safety. These benefits when maximized can go a long way in contributing immensely to economic development of a nation. Automated electronic payments help deepen bank deposits thereby increasing funds available for commercial loans – a driver of all of overall economic activity.

Efficient, safe and convenient electronic payments carry with them a significant range of macro-economic benefits. The impact of introducing electronic payments is akin to using the gears on a bicycle. Add an efficient electronic payments system to an economy, and you kick it into a higher gear. Add better-controlled consumer and business credit, and you notch up economic velocity even further. In a similar narrative by (Hord, 2005), electronic payment is very convenient for the consumer. In most cases, you only need to enter your account information such as your credit card number and shipping address once. The information is then stored in a database on the retailer's Web server. When you come back to the Web site, you just log in with your username and password. Completing a transaction is as simple as clicking your mouse: All you have to do is confirm your purchase and you're done (Hord, 2005). Hord (2005) further emphasizes the fact that electronic payment lowers costs for businesses. The more payments that is processed electronically, the less money is spent on paper and postage. Offering electronic payment can also help businesses improve customer retention. A customer is more likely to return to the same e-commerce site where his or her information has already been entered and stored (Hord, 2005).

Cashless as the transitory phase of payment systems development

Cashless banking is that banking system which aims at reducing, not eliminating the amount of physical cash (study notes and coins) circulating in the economy, whilst encouraging more electronic based transactions (payment for goods, services, transfers etc.). In other words, it is a combination of two ebanking and cash-based systems. In most developing countries, it represents a middle phase in the development of payment system. A cashlesseconomy forms the middle phase of a three-phased economic model of payment systems. This essentially means that countries (particularly developing countries) would transit from a "cash-based" economic model to "cash-less" economic model before achieving the pure state of a "cashless economic" model. Cash-based economy is defined as one in which day-to-day payments and business activities are predominantly transacted in physical notes and coins. Cashless economy, on the other hand, is an economy where the physical cash circulating in the economy is minimized while other forms of payment especially electronic based payments are utilized. In other words, cashless economy is a combination of the cash-based payment system and electronic payment systems with the latter exceeding the former in terms of utilization. A cashless economy represents the pure state of non-cash payment systems where no more sturdy coins and notes are printed for circulation by the Central Bank. As (Claudia and Grauwe 2001) define it, cashless society is a regime in which currency issued by the central bank has ceased to exist. All the money is private money issued by banks in the form of deposits or some fancier e-money issued by institutions that are not necessarily banks.

Automated Teller Machine (ATM)

This is an automated teller machine that dispenses cash and basically performs all other functions done by a teller in a banking hall like balance inquiry, give mini statements and bills payment, recharge functions etc. A personal identification number (PIN) has to be entered along with credit or debit card to access cash. Some ATMs will allow for cash deposits and bill payments. The CBN has approved N55 as income to the bank from the 4th transaction done by the cardholder of another bank's card on the ATM terminal. It is a cash point that can be used to withdraw cash or do Transfers. A debit card or credit card is used at

the machine to withdraw cash. The CBN has stipulated 72 hours for responding to ATM complaints by banks, failing which the customer can escalate to the CBN. The CBN is also trying to establish a card arbitration panel that will act as a payments system ombudsman to fast track resolution of disputes. We should also note that card fraud particularly at the ATM have reduced drastically with the migration of cards to adopt the chip and PIN technology.

Point of Sale (POS) Machine

Point of Sales (POS) machine or terminal is an electronic device used in payment for goods and services. You find it in supermarkets, hotels, filling stations, shops etc. A charge known as Merchant Service Charge (MSC) is charged on all transactions done on POS terminals; this charge is borne by the merchant. The maximum total fee a merchant can be charged for any POS terminal transaction is 0.75% of the transaction value or N1,200.00 cap. Point of Sale refers to the location at which a payment of a card transaction occurs, usually by way of a device such as a credit card terminal or cash register. The industry has endorsed four manufacturers for the supply of Point-of-Sale terminals - PAX, Bitel, Ingenico, and Verifone - with negotiated discounts and local support arrangements. A POS can be purchased from any of these four for as low as N45,000.00 per terminal. However, parties are free to purchase POS terminals from any manufacturer; so far they meet the POS specifications in the Point-of-Sale guidelines.

Internet Banking

It is an electronic payment system that enables customers of a bank or other financial institution to conduct a range of financial transactions through the financial institution's website via electronic devices like mobile phones, Ipads, laptops, Desktops e.t.c right at the comfort of their homes, offices and other places of convenience. In Siyanbola, (2013) internet banking, like uses the electronic card infrastructure for executing payment instructions and final settlement of goods and services over the internet between the merchant and the customers). Internet banking gives customers the opportunity of enjoying banking services from the comfort of their homes and offices. This means that customers can buy goods by placing orders from the net, instruct their banks to pay the vendor the invoice amount involved, and the products are delivered to the destination where the buyer wants.

Nibss Electronic Funds Transfer (NEFT)

Electronic Fund Transfer (NEFT) is an irrevocable electronic fund transfer instruction for payment to a 3rd party bank. It was introduced in Nigeria in 2004. NEFT is usually used for high volume payments such as salaries, vendor payments, etc. and are processed via scheduled batch clearing sessions on NIBSS ACH. NEFT transactions are not real-time but beneficiaries receive same day value for transactions posted before the clearing sessions. NEFT payments are implemented in 2 clearing cycles; same day settlement for the transaction received before clearing sessions. Next day settlement for the transaction received after clearing cycle. You can transfer funds through NEFT by first logging into your bank's internet banking platform using your ID and password. Then you go to fund transfer tab and select add beneficiary (receiver's bank). Select beneficiary type for example transfer to other bank then enter the account number of the beneficiary and click on send. The bank will first debit your account to ensure that the funds are set aside, then the customer's instruction (along with other customers' instructions) are sent to NIBSS by the bank as an electronic file for onward processing.

Empirical Studies

Obiekwe and Anyanwaokoro (2017) in their study investigated the effect of Electronic Payment Methods (EPM) on the profitability of commercial banks in Nigeria. In order to achieve the broad objective, the study specifically investigated the effect of Automated Teller Machine (ATM), Point of Sale (POS) and Mobile Payment (MPAY) on the profitability of commercial banks in Nigeria. A total sample of five (5) banks was considered for the period 2009 to 2015 and the study adopted the Panel Least Squares (PLS) estimation technique as the analytical tool. Data were collected from the Central Bank of Nigeria (CBN)

Statistical Bulletin and Annual Reports and Statements of Accounts of the five banks used in the study. Findings revealed that Automated Teller Machine (ATM) and Mobile Phone payment have a significant effect on the profitability of commercial banks in Nigeria. However, Point of Sale (POS) has an insignificant effect on commercial banks' profitability in Nigeria. Ewa and Inah (2016), investigated 'Evaluating Nigeria Cashless Policy Implementation using Simple percentages and Relative Important Index (R.I.I), found using a four-point Likert scale questionnaire administered to six hundred respondents. The results of the study show that the twin policy objectives investigated were partially achieved. Also, the study reveals that social infrastructures in power and telecommunications need improvement and expansion and the need to create more awareness to encourage the unbanked to embrace banking culture. Umanhonlen, Umanhonlen, and Omoruyi (2015) appraised the impact of e-banking and cashless society in the Nigerian economy. The study explores various aspects of e-banking and cashless economy using the banking sector of the Nigerian economy as a focal point. Specifically, the paper articulates empirical opinions that highlight the possible ways these policy measures have direct links to beneficiaries and the weighted outcomes when divergence is noticed and how to bring back the soundness, sustainable and rebranding policy that ensures economic growth. The paper holds that for a sustainable cashless society to emerge all hands must be on deck; banks should de-emphasize all odds and ensure that efficiencies of ebanking mechanisms are of utmost priority. Osazevbaru, Sakpaide, and Ibubune (2014) in their study examined the impact of cashless policy on the profitability of Nigerian banks, against the backdrop that these banks in a cash-based economy are known for their huge profits even in the face of the associated high cost of operations. Basically, will banks in the cashless regime still make as many profits as they use to make? To address this, secondary data were collected and analyzed using content analysis comparing profits under the cash-based policy with a cashless regime. The results revealed that cashless economic policy positively impacts on banks' reduction profit in the cost of operations through banking the unbanked populace.

Taiwo, Ayo, Afieroho, and Agwu (2017) in their study appraised the implementation of the cashless policy since its introduction into the Nigerian financial system in 2012 and also to examine the persistent challenges facing its implementation. In view of the above-stated objective, primary data were collected with the aid of the questionnaire, which was randomly administered to 120 respondents ranging from First Bank, Zenith Bank and United Bank for Africa. The banks were selected based on their total assets and the information collected covered the activities of the CBN and that of these banks towards implementation of the cashless policy from 2012 to date. The data collected were presented and analyzed with the aid of the Statistical Package for Social Sciences (SPSS) using descriptive statistics and onesample t-test. The results led to the conclusion that despite the need to operate cashless transactions dominating the modern Nigerian economy, the cashless policy will have the desired impact only if a lot is done to ensure the implementation of an effective cashless system. Princewell (2013) examined issues in economic policy drift in payment systems with reference to Nigeria's shift from a cash-based economy to a cashless society. Using the survey method, the study sampled 650 stakeholders (respondents) comprising of Businessmen, University Students, and civil servants. Results show that the majority of the stakeholders support the policy. The key reason why they support the policy is that of its potential in reducing cash-related robberies, corruption, and other fraudulent practices among others. On the other hand, stakeholders who are against the policy shift hinged their reasons on payment fraud associated with the cashless economy; high rate of illiteracy and infrastructural decay in Nigeria. Okoye and Ezejiofor (2013) examined the significant benefits and essential elements, of cashless policy and to check the extent to which it can enhance the growth of financial stability in the country. Two research hypotheses were formulated in line with the objectives of the study. The descriptive research design was adopted for the study with a sample size of 68. The convenience sampling technique was used. The questionnaire which was structured was the main instrument used for data collection. The data collected was subjected to face validity test, and was tested with ANOVA and chi-square (x2) technique was used to test the hypotheses. The results indicate that: a majority of Nigerians are already aware of the policy and majority agree that

the policy will help fight against corruption/money laundering and reduce the risk of carrying cash. Major problems envisaged hampering the implementation of the policy are cyber fraud and illiteracy.

Tunmibi and Falayi (2013) investigated Information technology security and e-banking in the Nigeria banking industry. A total of forty customers were sampled from nine different banks in Nigeria using accidental sampling method and questionnaire was used as the data collection instrument. Information technology has been acknowledged as the life wire of banks in the financial sector as it promotes and facilitates the performance of banks in various countries. However, with respect to IT security in Nigeria, there is a variation in the level of trust that customers have in their banks. Most of the sampled customers responded that network is unreliable and there is an occasional experience of cash deduction without cash withdrawal when using ATM. They noted that IT security is a major challenge to e-banking in Nigeria and the banking industry is not stable enough for e-banking. In his study, Adewoye (2013) examining the impact of mobile banking on service delivery in the Nigeria commercial banks. The study was carried out in Lagos state with One hundred and forty (140) Questionnaires administered and distributed to both senior and junior staff of the selected banks, Thirty-five (35) staff each was picked from the four (4) selected banks. One hundred and Twenty-five (125) Questionnaires were found useful for the purpose of the study representing 83.3% of the total questionnaire distributed. Data collected was analyzed using frequency table, percentage and mean score analysis while the non-parametric statistical test Chisquare was used to test the formulated hypothesis using STATA 10 data analysis package/software to examine the impact of mobile banking on service delivery and also look at the relationship between mobile banking and service delivery in the sampled banks. The results of the findings show that Mobile banking improved banks service delivery in a form of transactional convenience, savings of time, quick transaction alert and save of service cost which has to recuperate customer's relationship and satisfaction.

Ajayi, (2014) in his study examined the effect of cashless monetary policy on the Nigerian banking industry. Out of 5000 Guaranty Trust Bank (GTBank) staff, 370 sample sizes were selected based on Taro Yemane's formula for sample size. The study was carried out in Ekiti State, Nigeria with 370 questionnaires administered to the bank staff in the state. Of the total questionnaires distributed, 350questionnaires (representing 95%) were returned. The data collected were analyzed using frequency table and percentages while for the 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. Omotunde, Sunday and John-Dewole (2013) investigated the impact of cashless policy in Nigeria. Survey research was adopted with the questionnaire as data collection instrument. Responses from the respondents show that cashless policy will increase employment; reduce cash related robbery thereby reducing the risk of carrying cash; cashless policy will also reduce cash related corruption and attract more foreign investors to the country. The study, therefore, shows that the introduction of the cashless economy in Nigeria can be seen as a step in the right direction. It is expected that its impact will be felt in the modernization of Nigeria payment system, reduction in the cost of banking services, reduction in high security and safety risks and also curb banking related corruptions. Ezuwore-Obodoekwe, Eyisi, Emengini, and Alio (2014) critically analyzed Cashless Banking Policy in Nigeria. Using survey design, they found that Cashless policy has affected deposits taking, cash withdrawals, money transfers, loan administration; the provision of banking services in several ways, these include quick data processing and retrieval of information increased customers' satisfaction, quick customer service delivery and production of accurate and reliable information, faster access to capital, reduced revenue leakage and reduced cash handling costs.

Odior and Banuso (2013) in their study examined the implications of cashless banking, with a view to exposing the possible challenges and prospects it poses to the Nigerian economy whilst employing the aggregated approach. Descriptive statistics were used to highlights/overview of the effectiveness of the cash-less policy of the CBN in Nigeria. This study also seeks to evaluate the policies of the Central Bank

of Nigeria as well as proffer valuable recommendations on the execution of the cash less policy. The result showed that cashless banking has the possibility of stimulating trade and commercial activities as the velocity of circulation (rate at which money changes hands) is likely to increase in the long-run. In 2013, Hassan, Mamman, and Farouk investigated the influence of electronic banking products on the performance of Nigerian DMBs. The study became necessary as a result of increased penetration of electronic banking which has redefined the banking operations in Nigeria and the world over. The population of the study is all the twenty-one Deposit Money Banks (DMBs) listed on the Nigerian Stock Exchange. Systematic sampling technique was used and six (6) banks were selected as the sample of the study. Data were collected from the secondary source through the annual report and accounts of the sampled Banks and insider information from the employees working in the selected banks, respectively. The performance of these banks was measured in terms of returns on equity (ROE) The study revealed that the adoption of electronic banking products (emobile and ATM transactions) has strongly and significantly impacted on the performance of Nigerian banks while on the other hand, it revealed that edirect and SMS alert have not significantly impacted on the performance of the banks. Morufu (2016) in their study examined the impact of four (ATM, POS, web/Internet and mobile) e-payments adoption and banks specific variables on the profitability of the Nigerian Deposits Money Banks (DMBs). Secondary data were obtained from the annual report and accounts often quoted(DMBs) between 2005 and 2012. Data were analyzed using panel logistic regression. The overall result from data analysis shows that when bank adopts e-payment systems, their performance level, such as gross margin, profits after tax, return on assets and return on equity changes. This is reflected in the positive association between adoption and gross earning of banks. Further, adoption of the four epayment instruments like ATM, WEB, POS and Mobile banking influenced performance indices measured by return on assets (ROA), gross margin and profits after tax (PAT) of the sampled banks. Oyewole, Abba, Gambo and Arikpo (2013) investigated the impact of electronic banking on banks' performance in Nigeria. Panel data comprised annual audited financial statements of eight banks that have adopted and retained their brand name banking between 2000 and 2010 as well as macroeconomic control variables were employed to investigate the impact of ebanking on return on asset (ROA), return on equity (ROE) and net interest margin (NIM). The result from pooled OLS estimations indicate that e-banking begins to contribute positively to bank performance in terms of ROA and NIM with a time lag of two years while a negative impact was observed in the first year of adoption.

Theoretical Discussion

The research is anchored on the Bank focused theory, though two other relevant theories are explained. The Bank focused theory is a theory of branchless banking. It is used here because of the concept of electronic payment anchors on branchless banking.

Bank Focused Theory

This theory was propounded by Kapoor (2010) and anchors on the ground that banks use non-traditional but conventional low-cost delivery channels to provide services to its numerous customers. Such channels include the automated teller machines (ATMs), Internet banking, Point of Sale (POS) among others. By making use of these channels, the bank offers a wide range of services to its customers not minding the location and branch where the customer is. The only thing required is to input the needed information into the system and the transaction is concluded. This theory supports this study since the emphasis here is on electronic platforms as a means of delivering services.

Bank-Led Theory

The bank-led theory of branchless banking was proposed by Lyman, Ivatury, and Stachen (2006) and emphasizes the role of an agent who acts as a mediator between the banks and the customers. In this case, the retail agents have direct interaction with the banks' customers and take up the role expected of the bank by either paying cash or collecting deposits (Owens, 2006). Finally, this agent is expected to

transmit all his dealings with the bank's customers to the bank he is representing through electronic means (such as phones, internet, etc).

Non-Bank-Led Theory

This theory was put forward by Hogan (1991). In this theory, customers do not deal with any bank and they do not maintain any bank account. The customers only deal with is a non-bank firm such as mobile network operator or prepaid card issuer who they exchange their cash with for e-money account. The e-money account is then stored in the server of this non-bank agent. This tends to represent the riskiest platform in the electronic payment methods because of the lack of existing regulatory framework upon which these eagents operate.

METHODOLOGY

This study used ex-post facto research design to describe the effects of E-banking products on the financial performance of deposit money banks by using existing data from financial statement of the quoted firms which cannot be manipulated. The study covered all listed Deposit Money banks from 2012 to 2017. The period was chosen as the cashless policy took effect in Nigeria in 2012. This study made use of secondary data as the main source of information and was sourced from the annual report and accounts of the banks and data from CBN payment statistics from 2012 to 2017. The data on the e-banking products (ATM transactions, POS transactions. Internet banking transaction, NEFT and NIP transactions) were analyzed using Descriptive Statistic Analysis, Multicollinearity test, Correlation testing, and Herteroskadaticity testing

Operationalization of Variables:

Variables (code)	Proxies (operational definitions)			
Dependent Variable				
Return on Assets	Profit Before Interest and Tax/Total			
(ROA)	Assets			
Independent				
Variables				
ATM Transactions	Volume/Value of ATM transactions			
POS Transactions	Volume/Value of POS Transactions			
Internet Transactions	Volume/Value of Internet Transactions			
NEFT Transactions	Volume/Value of NEFT Transactions			
NIP Transactions	Volume/Value of NIP Transactions			

Model Specification

The linear regression model used in this study is adapted from the prior studies of Shehu et al (2013) and Ogare, (2013) with modification. Consistent with previous studies, this model modified and extended the model tested by prior studies and the ordinary least square was guided by the following linear model

ROA denotes the return on assets (the proxy for DBMS Performance)

ATM = Volume of Transactions done through the Automated Teller Machine

POS = Volume of Transactions done through the Point of Sale machine

IB = Volume of Transactions done through the internet

NFT = Volume of Transactions done through the NEFT platform

NP = Volume of Transactions done through the NIP platform ϵ is the error term of the model and

 β 0, β 1, β 2, β 3, β 4, β 5.....=Regression model coefficients.

RESULT AND DISCUSSION

Table 1: descriptive statistics

Tuble II dese							
	RO	ATM	POS	WEB	NIPV	NEFV	FSIZ
	A	V	V	\mathbf{V}			E
Mean	1.68	3981.6	523.1	93.67	25763.5	14200.3	21.06
		7	7		0	3	
Median	1.63	3825.0	380.5	83.00	22785.0	14446.0	20.98
		0	0		0	0	
Maximum	5.09	6438.0	1410.0	185.0	56166.0	14946.0	22.45
		0	0	0	0	0	
Minimum	-	1985.0	48.00	32.00	3891.0	13087.0	19.31
	5.59	0			0	0	0
Std. Dev.	1.65	1449.2	459.0	52.24	17481.7	638.96	0.75
		9	2		5		
Skewness	-	0.35	0.96	0.56	0.51	-0.65	-0.20
	0.98						
Kurtosis	7.32	2.13	2.66	2.09	2.11	2.03	2.42
Jarque-	78.7	4.38	13.25	7.38	6.36	9.12	1.75
Bera	4						
Probability	0.00	0.11	0.00	0.03	0.04	0.01	0.42
Observatio	84	84	84	84	84	84	84
ns							

Significance, ***10% level of significance.

From Table 1 the mean (average), maximum values, minimum values, standard deviation and Jarque-Bera (JB) Statistics (normality test) were shown. The results expressed in Table 1 helps to provide some insight into the nature of the selected quoted manufacturing firms in Nigerian used in this study. First, it can be observed that on the average, in a 6-year period (2012-2017), the sampled deposit money banks used for this study were characterized by positive ROA = 1.599383. This is an indication that most quoted banks in Nigeria have a positive Return on Assets (ROA). Similarly, the table also shows that on the average during the period under study that volume of transaction for ATMV was 3981.667, the maximum value stood at 6438.000 while the minimum value stood at 1985.000, thus showing a large difference between the minimum and maximum values of the ATMV transaction volume, meaning that large number of Nigeria bank customers are using more ATM facilities in most of their transactions that involves cash transactions. This result therefore justify the need for this study as we expect those banks that are recorded high ATM transactions to perform better than those with less ATM transactions, in terms of ROA of such banks. Furthermore, the table also shows that on the average during the period covered by this study, that volume of transaction for POSV was 523.1667, the maximum value stood at 1410.000 while the minimum value stood at 48.000, thus showing a large difference between the minimum and maximum values of the POSV transaction volume, meaning that large number of Nigeria bank customers have adopted the use of POS facilities in most of their transactions that involves cash. This result therefore justifies the need for this study as we expect those banks that recorded high POS transactions to perform better than those with less POS transactions, in terms of ROA of such banks in Nigeria.

In addition, the table also shows that on the average during the period under study that volume of transaction

for WEBV was 93.66667, the maximum value stood at 185.0000 while the minimum value stood at 32.0000, thus showing a large difference between the minimum and maximum values of the ATMV transaction volume, meaning that large number of Nigeria bank customers are using also WEBV facilities in most of their transactions that involves cash transactions. This result therefore justify the need for this study as we expect those banks that are recorded high WEBV transactions to perform better than those with less WEBV transactions, in terms of ROA of such banks. Again, the table also shows that on the average during the period under study that volume of transaction for NIPV was 25763.5, the maximum value stood at 56166.00 while the minimum value stood at 3891.000, thus showing a large difference between the minimum and maximum values of the NIPV transaction volume, meaning that large number of Nigeria bank customers are using more NIP facilities in most of their transactions that involves cash transactions. This result therefore justify the need for this study as we expect those banks that are recorded high NIP transactions to perform better than those with less NIP transactions, in terms of ROA of such banks

Also, the table also shows that on the average during the period under study that volume of transaction for NEFV was 14200.00, the maximum value stood at 14946.00 while the minimum value stood at 13087.00, thus showing a large difference between the minimum and maximum values of the NEFV transaction volume, meaning that large number of Nigeria bank customers are using more NEFV facilities in most of their transactions that involves cash transactions. This result therefore justify the need for this study as we expect those banks that are recorded high NEFV transactions to perform better than those with less NEF transactions, in terms of ROA of such banks. The table also shows that firm size (FSIZE) showed that the sampled banks used for this study are not mainly dominated by either large or small banks and are widely dispersed. This is confirmed by the wide variations recorded in the standard deviation values of the FSIZE variables used. Lastly, in table 1, the Jarque-Bera (JB) which test for normality or the existence of outliers or extreme values among the variables shows that most of the variables are distributed normally at the 1% level of significance except WEBV, NIPV and ATMV that were normally distributed at 5and 10% level of significance respectively. This implies that any variable with outlier are not likely to distort our conclusion and are therefore reliable for drawing generalization. This also implies that the least square estimation can be used to estimate the pooled regression model.

Diagnostic Test to Check for Multicolinearity Problem, Using Correlation Matrix.

Multicolinearity is a near perfect, a high correlation between any two (2) independent variables. It is a problem of crosssectional data and our data have cross sectional characteristics as it cut across fourteen (14) deposit money banks in Nigeria. When there is multicolinearity, all your tvalues, F-statistics value becomes invalid and the R² of the regression result becomes unreliable. The study on trying to diagnose for the presence of multicolinearity in our data used, as well as evaluating the association among the variables adopted, employed the Pearson correlation coefficient (correlation matrix) analysis. The result obtained is presented in Table 2. on Assets (ROA) while NEFV= 0.0732, FSIZE= 0.4152 were found to be positively associated with ROA. In checking for multicolinearity, we notice that some of our explanatory

TABLE 2: Pearson Correlation Matrix Correlation Analysis

	ROA	ATMV	POSV WEBV	NIPV	NEFV	FSIZ E
ROA	1.0000					
ATM	-0.0386	1.0000				
${f V}$						
POSV	-0.0264	0.9739	1.0000			
WEB	-0.0353	0.9926	0.9880 1.0000			
\mathbf{V}						
NIPV	-0.0380	0.9966	0.9855 0.9991	1.0000		
Bingham Internation	naVD7434a1	of Ac&Adding	and 30 marks (\$121AF)	0.5084	1.0000	Page 313
\mathbf{V}						
FSIZ	0.4154	0.2762	0.2640 0.2717	0.2735	0.1502	1.0000
\mathbf{E}						

Table 2 focused on the correlation between Return on Assets measured as ROA and the independent variables (ATMV, POSV, WEBV, NIPV, NEFV and FSIZE). The finding from the correlation matrix table shows that most of our independent variables, (ATMV = -0.0386; POSV = -0.0264; WEBV= -0.0353, NIPV= -0.0380, and FSIZE= -0.1157) were observed to be negatively and weakly associated with Returnvariables were perfectly correlated (POSV, ATMV=0.9739; WEBV, ATMV=0.9926; WEBV, POSV=0.9880; NIPV, ATMV=0.9966; NIPV, POSV=0.9855; NIPV, WEBV=0.9991). This means that there is problem of multicolinearity between the explanatory variables. Multicollinearity usually results to wrong signs or implausible magnitudes in the estimated model coefficients obtained. There will also be bias in the standard errors of the coefficients. To further check for the presence of multicolinearity problem in our model, the Variance Inflation Factor (VIF) test was used. The results of this test are presented in table3

Table 3: VIF test for Multicolinearity in Regression Model

EXPLANATORY VARIABLES	VIF
ATMV	10190.23
POSV	316.74
WEBV	19886.75
NIPV	64643.41
NEFV	15.31
FSIZE	1.09
MEAN VIF	13579.22

The VIF for each of the explanatory variables was much greater than the threshold of 10 and the overall VIF mean value was more than 5. Another major regression estimation problem is the existence of heteroskedaticity (i.e. nonconstant residual term) which is often common with cross- sectional data. The existence of this problem may result in wrong t-values and f-statistics. To test for the existence of this problem, the Breush-Pagan-Godfrey heteroskedaticity test was used. The result of this test is presented in table 4.

Table 4: Breusch-Pagan-Godfrey Heteroskedaticity Test

Test	Values	P-Values
F-Statistics	3.16	0.0757
Obs*R-squared	5.22	0.64

The F- Statistics and Obs* R-squared values of 3.16 and 5.22 respectively shows that there is the absence of heteroskedaticity problem in our model. The P-value 10% level also confirms that we should accept H0 (Absence of heteroskedaticity) and reject H1 (Presence of heteroskadeticity.

MODEL 1 ROA = $\beta 0+\beta 1$ ATMV $+\beta 2$ POSV $+\beta 3$ WEBV $+\beta 4$ NIPV $+\beta 5$ NEFV $+\beta 6$ FSIZE+ Er

Testing of Hypotheses Formulated for Quoted Deposit Money Banks in Nigeria In other to examine the impact relationships between the dependent variable ROA and the independent variables (ATMV, POSV, WEBV, NIPV, NEFV and FSIZE) and to also test the formulated hypotheses given, the study used a pooled multiple regression analysis, owing to the fact that the data had both time series (2012-2017) and cross sectional properties (14 quoted Deposit Money Banks in Nigeria). The result of the regression analysis is presented in is presented as table 5 and is interpreted below.

Method: Panel Least Squares

Sample: 2012 2019 Periods included: 8 Cross-sections included: 14

Total panel (balanced) observations: 84

Variable	Coefficient	Std. t-		Prob.
		Error	Statistic	
С	-40.57734	16.90403	-	0.0188
			2.400454	
ATMV	0.012565	0.011904	1.055506	0.0945
POSV	0.006904	0.006591	1.047575	0.2982
WEBV	0.557556	0.464165	1.201202	0.2334
NIPV	-0.002875	0.002494	-	0.2526
			1.152843	
NEFV	-0.000673	0.001022	-	0.5126
			0.657914	
FSIZE	0.972391	0.229492	4.237138	0.0001
R-squared	0.238073	Mean dependent var		1.682143
Adjusted R-	0.167896	S.D. dependent var		1.649000
squared				
S.E. of	1.504214	Akaike info criterion		3.744810
regression				
Sum squared	171.9620	Schwarz criterion		3.976317
resid				
Log likelihood	-149.2820	Hannan-Quinn criter.		3.837874
F-statistic	3.392442	Durbin-Watson stat		1.546802
Prob(F-	0.003321			
statistic)				

In table 5, R-squared and its adjusted R-squared values were (0.238073) and (0.167896) respectively. This is an indication that all the independent variables jointly explain about 24% of the systematic variations in Return on Assets (ROA) of our sampled quoted banks over the six-year period (2012-2017) while 86% of the systematic variations are captured by the error term. The F-statistics of 3.392442 and its P-value of (0.00) portrays that fact that the ROA regression model is well specified. In addition to the above, the specific findings from each explanatory variable are provided as follows:

Test of Hypothesis One

Based on the t-value of 1.055506 and P-value of 0.09, in table 5 was found to have a positive influence on our sampled quoted deposit money bank's (ROA) and this influence is statistically significant at 10% level of significance as the P-value is within 10% significance level. This result, therefore suggests that we should reject our null hypothesis one (H0₁) which states that ATM transactions have no significant effect on return of assets (ROA) of depositmoney banks in Nigeria. This means that in Nigeria, there is a high level usage of ATM machines by customers of the sampled banks in Nigeria and this high usage level of bank's ATM machine influences the ROA of the sampled banks positively, thus, leading to the banks better performance. Therefore, as this influence is statistically significant, management should pay more attention on the activities that will improve the ATM services of their banks if they wish to increase the ROA value of their banks as this will lead to high customer's satisfaction and patronage as the study discovers that such efficient ATM services will influence their ROA positively. Therefore on the basis of efficient use of ATM transactions to generate increased ROA, those firms that embark on more activities that improve their ATM services performance better than those with less ATM transactions in Nigeria.

Test of Hypothesis Two

Based on the t-value of 1.047575 and P-value of 0.30, in table 5 was found to have a positive influence on our sampled quoted deposit money bank's (ROA) and this influence is not statistically significant since the P-value is more than 10% significance level. This result, therefore suggests that we should accept our null hypothesis two (H0₂) which states that there is no significant influence of POS transactions on return of assets(ROA) of deposit money banks in Nigeria. This means that in Nigeria, there is a high level usage of POS machines by customers of the sampled banks in Nigeria and this high usage level of bank's POS machine influences the ROA of the sampled banks positively, thus, leading to the banks better performance but this influence is not statistically significant and therefore, should be ignored by managements when planning to improving their ROA value through POS transactions.

Test of Hypothesis Three

Given the t-value of 1201202 and P-value of 0.23, in table 5 was found to have a positive influence on our sampled quoted deposit money bank's (ROA) and this influence is not statistically significant since the P-value is more than 10% significance level. This result, therefore suggests that we should accept our null hypothesis three (H0₃) which states that internet banking transactions has no significant influence on return of assets (ROA) of deposit money banks in Nigeria. This means that in Nigeria, there is a high level usage of internet banking (WEBV) machines by customers of the sampled banks in Nigeria and this high usage level of bank's WEBV transactions influences the ROA of the sampled banks positively, thus, leading to the banks better performance but this influence is not statistically significant and therefore, should be ignored by managements when planning to improving their ROA value through internet banking (WEBV) transactions.

Test of Hypothesis Four

Based on the t-value of -1.52843 and P-value of 0.25, in table 5 was found to have a negative influence on our sampled quoted deposit money bank's (ROA) and this influence is not statistically significant since the P-value is more than 10% significance level. This result, therefore suggests that we should accept our null hypothesis four (H0₄) which states that NIPV transactions have no significant reactions on return of assets (ROA) of deposit money banks in Nigeria. This means that in Nigeria, there is a high level usage of NIPV services by customers of the sampled banks in Nigeria and this high usage level of bank's NIPV machine influences the ROA of the sampled banks positively, thus, leading to the banks better performance but this influence is not statistically significant and therefore, should be ignored by managements when planning to improving their ROA value through NIPV transactions.

Test of Hypothesis Five

Based on the t-value of -0.657914 and P-value of 0.51, in table 5 was found to have a negative influence on our sampled quoted deposit money bank's (ROA) and this influence is not statistically significant since the P-value is more than 10% significance level. This result, therefore suggests that we should accept our null hypothesis five (H0₅) which states that NEFV transactions have no significant improvementon return of assets (ROA) of deposit money banks in Nigeria. This means that in Nigeria, there is a high level usage of NEFV services by customers of the sampled banks in Nigeria and this high usage level of bank's NIPV machine influences the ROA of the sampled banks positively, thus, leading to the banks better performance but this influence is not statistically significant and therefore, should be ignored by managements when planning to improving their ROA value through NEFV transactions.

Test of Control Variable (Firm size)

Given the t-value of 4.237138 and Pvalue of 0.00, in table 5 was found to have a positive influence on our sampled quoted deposit money bank's (ROA) and this influence is statistically significant at 1% level since the P-value is less than 1 significance level. This result, therefore suggests that we should reject our null hypothesis six (H0₆) which states that firm size (FSIZE) does not significantly affect return of assets (ROA) of deposit money banks in Nigeria. This means that in Nigeria, large sized firms significantly

perform better than small sized firms in terms of their ROA performance. Therefore on the basis of efficient use of firm size(FSIZE) transactions to generate increased ROA, those firms with large firm sizes performance better than those with less firm sizes in Nigeria and since this effect is statistically significant. Management should consider improving their firm sizes as this will increase their ROA significantly positive.

Discussion of Results

This study investigated the effect of CBN cashless policy on return of assets (ROA) of deposit money banks in Nigeria. Using pooled data, the data generated were subjected to different statistical tests such as descriptive statistics, correlation analysis multicolinearity test, heteroskedaticity test and Ordinary Least Square regression analysis. The descriptive statistics revealed the individual characteristics of the variables used in this study which also revealed that the variables were normally distributed. The regression result shows that (ATMV) has a positive and significant effect on return on assets (ROA) of banks in Nigeria. This finding supports our prior expectation as we expect that the use of ATM will lead high performance of ROA of banks in Nigeria. This our findings agrees with the findings of Obiekwe and Anyanwaokoro (2017) and did not negates the findings of Oyewole, Abba, El-maude, Gambo and Abam (2013) out rightly but that the positive performance is noticed after two years. Secondly, the regression results also show that POSV, WEBV, NIPV, and NEFV all were found to have a positive but insignificant effect on ROA of quoted banks in Nigeria. Theses finding do not support our prior expectation and also agrees with the findings of Abaenewe, Ogbulu, Onyemachi and Ndugbu (2013) and negates the findings of Alagh and Ene (2014). In other words, CBN cash less policy does not significantly affect return on assets (ROA) except ATMV, even though they all have positive effects on ROA of banks in Nigeria.

CONCLUSION AND RECOMMENDATION

This study investigated the effect of CBN cashless policy on return of assets (ROA) of deposit money banks in Nigeria. The study attempted to provide empirical evidence of the effects of the E-banking products (ATMV, POSV, WEBV, NIPV and NEFTV) on the financial performance of deposit money banks in Nigeria. Findings from the study revealed that that (ATMV) has a positive and significant effect on return on assets (ROA) of banks in Nigeria. On the other hand, POSV, WEBV, NIPV and NEFV all were found to have a positive but insignificant effect on ROA of quoted banks in Nigeria. On the basis of the findings and conclusions of the study the paper recommends among others that:

- i. Management should pay more attention on the activities that will improve the ATM services of their banks if they wish to increase the ROA value of their banks as this will lead to high customer's satisfaction and patronage.
- ii. When planning to improve their ROA value, Management should not just focus on POS transactions but on other activities that would enhance the ROA.
- iii. Management while considering the enhancement of the ROA should not depend on WEBV though it is important for the general performance of the bank.
- iv. Though the NIPV has insignificant positive effect on the ROA, the bank needs it to remain competitive
- v. Management in attempting to improve the ROA should not base its decision on the NEFTV though it is still necessary for customers' convenience and satisfaction.

References

Abaenewe, Z.C., Ogbulu, O.M. & Ndugbu, M.O. (2013). Electronic banking and bank performance in Nigeria. West African Journal of Industrial & Academic Research, 6(1).

Adewoye, J. O. (2013). Impact of mobile banking on service delivery in the Nigerian commercial banks. *International Review of Management and Business Research*, 2(2).

- Effect of Cashless Policy on the Financial Performance of Selected Deposit Money Banks (DMBs) in Nigeria
- Ajayi, L. B.(2014). Effect of cashless monetary policy on Nigerian banking industry: Issues, prospects and challenges. *IJBFMR*, 29(41), 2053-1842
- Ajayi, S. I. & Ojo, O. O. (2006). *Money and banking: Analysis and policy in the Nigerian context*. Nigeria: Ibadan Daily Graphics
- Ayodele T.D. (2015) Nigerian payment systems through electronic banking: A review. *International Journal of Transformations in Business Management*, 5(5), 5-11.
- CBN Presentation July (2012). Towards a cashless Nigeria: Tools and Strategies. Nigeria: National Pub.
- Ewa, K.E & Inah, E. U. (2016). Evaluating Nigeria cashless policy implementation. *International Journal of Business and Social Research*, 6(5).
- Ezuwore- Obodoekwe C. N., Eyisi A.S, Emengini S.E. & Alio F. C. (2014). Acritical analysis of cashless banking policy in Nigeria. *IOSR Journal of Business and Management*, 16(5), 30-42.
- Hassan S.U., Aliyu M. & Farouk M.A. (2013). Electronic banking products and performance of Nigerian listed deposit money banks. *American Journal of Computer Technology and Application*, 1(10), 138 148
- Itah A. J. & Ene E. E. (2014). Impact of cashless banking on banks' profitability: Evidence from Nigeria. *Asian Journal of Finance & Accounting*, 6(2).
- Mohammad, O.A. & Saad, A.A. (2011). The impact of e- banking on the performance of Jordanian banks. *Journal of Internet Banking and Commerce*, 16(2).
- Morufu, O. (2016) E-payments adoption and profitability performance of deposits money banks in Nigeria. *IPASJ International Journal of Information Technology*, 4(3).
- Obiekwe C.J. & Anyanwaokoro M. (2017). Electronic payment methods and profitability of banking firms in Nigeria: A panel data analysis. *International Journal of Finance and Accounting*, 6(3), 67-74.
- Okoye, P.V.C. & Ezejiofor R. (2013). An appraisal of cashless economy policy in development of Nigerian economy. *Research Journal of Finance and Accounting*, 4(7).
- Omotunde M., Sunday T. & John-Dewole A.T. (2013). Impact of cashless economy in Nigeria. Greener Journal of Internet, Information and Communication Systems, 1(2), 40-43.
- Ordu, M. M. & Anyanwaokoro, M. (2016). Cashless economic policy in Nigeria: A performance appraisal of the banking industry. *IOSR Journal of Business and Management (IOSR-JBM)* 18(1), 1-17.
- Osazevbaru, H. O. & Yomere, G.O. (2015). Benefits and challenges of Nigeria's cash-less policy. Kuwait Chapter of Arabian Journal of Business and Management Review, 4(9).
- Oyewole O.S., Abba M., Gambo E. J. & Arikpo, I. A. (2013). E-banking and bank performance: evidence from Nigeria. *International Journal of Scientific Engineering and Technology*, 2(8), 766-771.
- Princewell, N. A. (2013). Shifting policy paradigm from cash-based economy to cashless economy: The Nigeria experience. *Afro Asian Journal of Social Sciences*, 4(4), 2229 5313
- Taiwo, J.N. Ayo, K. O., Afieroho E. O. & Agwu, M. E. (2016) Appraisal of cashless policy on the Nigerian financial system. *West African Journal of Industrial & Academic Research*, 16(1).
- Tijani, J. A. & Ilugbemi, A. O. (2015). Electronic payment channel in the Nigeria banking sector and its impacts on national development. *Asian Economic and Financial Review*, 5(3), 521-531.
- Tunmibi S. and Falayi E. (2013). IT security and ebanking in Nigeria. *Greener Journal of Internet, Information & Communication System*, 1(3), 061-065

- Effect of Cashless Policy on the Financial Performance of Selected Deposit Money Banks (DMBs) in Nigeria
- Umanhonlen, Umanhonlen, and Omoruyi (2015). Appraisal of the Impact of e-banking and cashless society in the Nigerianeconomy. *Management and Economics Research Journal*, 1(3), 34–45
- Yaqub J.O., Bello H.T., Adenuga I.A. & Ogundeji M.O. (2013). The cashless policy in Nigeria: prospects and challenges. *International Journal of Humanities and Social Science*, 3(3).