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## **PROFITABILITY AND TURNOVER APPRAISAL OF LISTED DEPOSIT MONEY BANKS IN NIGERIA**

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### **Abstract**

The study seeks to appraise the performance of deposit money banks in Nigeria, given the mounting pressure for cashless transactions and the increasing digitization and automation of financial services around the globe. Appropriately, the ex-post facto/casual comparative research design was adopted to obtain relevant and desirable secondary data from the Annual Bulletins of the Central Bank of Nigeria and E-payment Statistics Platforms from 2012 to 2020, to empirically appraise the profitability and turnover of all the 15 Nigerian deposit money banks quoted as at January 1, 2021, in the light of the non-bank led theory. Specifically, the study interrogates the effect of point of sale and online loans on the profitability and turnover of Nigerian deposit money banks, using Pearson Product Moment Correlation and Linear Regression Analysis. The conclusions from findings from E-View 9.0 (inferential) statistical results at 0.05 level of significance are that, while the increasing use and patronage of point-of-sale terminals significantly improves the profitability of Nigerian deposit money banks, it adversely affects their turnover insignificantly; and the flexibility of and increasing preference for online loan facilities adversely affect the profitability, but improves the turnover of deposit money banks in Nigeria. The study recommends that deposit money banks should be operationally flexible and competitive, and fully automate their financial products and services.

**Keywords:** Deposit money banks, profitability, turnover, digital non-banking financial services, point of sale terminals, online loan facilities.

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### **1. Introduction**

The digitization and automation of financial services is gradually emptying the counters and banking halls of deposit money banks in Nigeria, to artificial intelligence gadgets and internet financial facilities and agents. The irony is, while

some smart innovative individuals and firms are busy crafting and creating new strategies and jobs offered by the technology that drives the current industrial era, most deposit money banks in Nigeria seem to be obliviously moving to the graveyard of irrelevance and outmodedness. Taiwo and Agwu (2017) rightly observed that some deposit money banks in Nigeria have already been pressured by digital financial innovations into merger and acquisition, and have severally changed their names, logos and brands. They regrettably remarked that, despite the rejig and reorganization, many deposit money banks in Nigeria are not still like those of China and other developed nations that are driven by modern automated systems. The increasing use and patronage of some digital-financial services and products particularly point of sale (POS) and on-line loans (OLL) seem to have affected the volume of transaction and profitability of deposit money banks in emerging economies like Nigeria. Digital-financial services such as point of sale (POS) and on-line loans (OLL) are increasingly made available and being patronized by both the educated and the uneducated in Nigeria. Unlike, conventional banks that have operating hours and operate in cities and towns, POS terminals are operated and increasingly patronized anytime, every day and everywhere that has mobile network in Nigeria. This is largely due to the cost implication and its flexibility in its establishment and operation.

Inarguably, unlike the automated teller machine (ATM) that is mostly operated by deposit money banks in Nigeria, the establishment of POS business does not require much capital outlay and big-luxurious office space; and its operation does not require high educational qualification or background. Similarly, OLLs are at the beck and call of the average android mobile phone user that has a steady source of income and a bank account. On-line loan apps and platforms are very many and available and persuasively advertised on the internet. Like point of sale, they can be flexibly applied for and seamlessly granted in few minutes, hours or days, anytime, every day and everywhere that has mobile network, without manual documentation. Obviously, the emergence of these digital non-banking financial services has made financial transactions and undertakings very flexible, fast and cost effective. The problem however is, while banks in advanced nations are increasingly counting the gains of digitization, the attitude and operational ineptitude of deposit money banks in Nigeria present a case of oblivion or pretense. Deposit money banks in Nigeria seem not to appraise and evaluate the effect of digital-financial agents and services on their annual profit and turnover. They seem to be competitively insensitive and are still struggling to actualize the reality of the past industrial revolution. An empirical examination on the effect of contemporary

digital non-banking financial services on the annual profit and turnover (transactional volume) of conventional banks is incontrovertibly required to challenge deposit money banks in Nigeria. Consequently, this study seeks to obtain ten years' data made up of aggregate annual profit-after-tax of deposit money banks, transactional volume and value of deposit money banks, point of sale operators and on-line loans, to econometrically analyze the profitability and turnover of a number of deposit money banks in Nigeria, to challenge deposit money banks to the realities and competitive activities of their phantom digital rivals in the new banking world.

Significantly, this is an *expos-facto* expository study designed to challenge deposit money banks to wake up to the realities of the current digital age. It is emphatically intended to reveal and re-echo the competitive strategies and advantages of the new (phantom) competitors of deposit money banks, and would definitely spur them to innovatively re-strategize to fit into the current digital space and appreciate the gains therein. It is further envisioned to improve banking services and the banking sub-sector of the economy, and would ultimately restore and increase the satisfaction, confidence and patronage of dissatisfied customers, and therefore, increase the profitability and turnover of deposit money banks in Nigeria and her neighbouring developing economies.

The indisputable contributions of digitization to the definition of efficiency and service delivery is subtly daring the banking sector of Nigeria. The emergence of digital-non-bank firms and financial services seem to have challenged deposit money banks in emerging economies to an inescapable technological duel. Despite the availability and apparent flexibility of the automated teller machine (ATM) at deposit money banks in Nigeria, most people seem to prefer point of sale (POS) to the ATM, due to the conspicuous inability of conventional banks to effectively operate and optimize the ATM to earn its propitious advantages and returns. More so, unlike deposit money banks and the ATM that are strategically located in cities and towns, POS machines and operators are available and accessible both day and night in all nooks and crannies in cities, towns and villages. Above all, most of these POS machines are owned by Chinese mobile banks that also have on-line platforms for financial deposits and withdrawals at near zero cost. Worryingly, these mobile banks unlike deposit money banks in Nigeria offer very flexible, fast and collateral-free on-line loans at very low interest rate. The concern is, given the technological indifference and complacency and poor customer relationship of deposit money banks in Nigeria, and the gearing competitive advantages of speed,

flexibility and cost effectiveness of digital-on-line-banks, how is the turnover and profit margin of deposit money banks in Nigeria? Besides, a cursory look at existing studies in this respect reveals that the perceived effect of digital non-banking financial services on the turnover and profit margin of deposit money banks in Nigeria has not been adequately investigated, and therefore, requires an empirical enquiry.

Accordingly, the objectives of the study are to ascertain the effect of the increasing use and patronage of point-of-sale terminals on the profitability and turnover of Nigerian deposit money banks, and establish the effect of the flexibility and increasing preference for online loan facilities on the profitability and turnover of Nigerian deposit money banks. Drawing from the objectives of the study, the first question is, to what extent do the increasing use and patronage of point-of-sale terminals affect the profitability of Nigerian deposit money banks? The second question is, to what extent do the increasing use and patronage of point-of-sale terminals affect the turnover of Nigerian deposit money banks? The third question is, to what extent do the flexibility and increasing preference for online loan facilities affect the profitability of Nigerian deposit money banks? The last question is, to what extent do the flexibility and increasing patronage of online loan facilities affect the turnover of Nigerian deposit money banks?

### **Bank Profitability and Turnover**

Succinctly, profit generally refers to total revenues less expenses (Kenton, 2022). Profit is the heart-beat of investors, directors and almost every stakeholders of business entities because it is the secret of financial stability and the first line of defense against impairment and or risk (Guindos, 2019). However, risk in the banking sector is a function of market supremacy. Congruently, Das, Hu and Xu (2019) opined that banks with greater market power have lower risks. But contemporary market supremacy in the digital era is a function of operational automation cum availability, visibility, accessibility and flexibility of products and services in the internet. A substantial percentage of banks' profit comes from fees charged for services and interest earned from assets. But then, most of the revenue yielding services rendered by banks are being competitively and seamlessly offered by digital non-banking financial institutions with sophisticated applications and machines such as the POS. Again, a major interest-earning asset of banks is loan, which is presently offered effortlessly to individuals and small and medium enterprises by non-banking financial institutions at comparatively low interest rates (Thismatter, 2016). The competitive activities of digital non-banking financial

institutions seem to have grave implications on the profitability, turnover and capital of conventional banks (Kayshap & Stein, 1994; Van den Heuvel, 2002).

Bank turnover is the amount of revenue banks generate over a period of time (Findling, n.d.). Precisely, the term turnover is “an accounting concept that calculates how quickly a business conducts its operations” (Kenton, 2022). Turnover in the accounting parlance, particularly in this context is how rapidly and competitively the financial services and products of deposit money banks deliver are purchased and or sold, given the existence of mobile, flexible and less expensive alternatives from digital non-banking financial institutions. It is used to evaluate how effectively banks perform their businesses, and can be partly ascertained from the annual volume and value of annual cheques issued, received and processed by DMBs. This implies that a quick turnover rate generates more commissions and or revenue to deposit money banks (Findling, n.d.). Specifically, bank turnover comprises total deposits and advances from and given to customers (Sanker, n.d.). Prior to the 21<sup>st</sup> century, most bank transactions and deposits were made by cheque. Similarly, most advances and short-term loans were granted and processed with cheques. But the emergence and introduction of POS and online loans in contemporary time seem to have reduced the use and relevance of cheques in the financial circle, and may affect the turnover of deposit money banks, thereby necessitating an empirical enquiry on the extent and nature of effect.

### **Point of Sale**

This though, not self-dispensing, functions like the Automatic Teller Machines (ATM), and can be best described as a micro-ATM (Okonkwo & Ekwueme, 2022). Like the ATM, the POS machine reads and captures relevant and desirable details of users contained in special cards, issued by deposit money banks and some digital non-bank financial firms. Remarkably, these cards are inserted into the POS terminal which electronically relates with users’ financial institutions through intermediary service providers to confirm users’ identity, financial status and approval for payment (Ugbede et al., 2019). This is achieved by electronically transferring a desired amount from the account (electronic purse) of a payer to the account of a payee by completing a specific programmed procedure in the POS terminal, via the internet (Chukwuma, 2018). Accordingly, the POS terminal as it were, is a mobile-flexible, user-friendly micro automated sophisticated machine that intelligently identify, read, confirm details and transfer money in electronic purse of bank account holders with the aid of a silicon chip on an automated teller card which contains circuit elements.

Historically, the POS system, according to Heinig (2020) was first invented and used as a cash register in 1879 in the US by Saloon owner, James Ritty, and was sold to the National Cash Register Corporation in 1884. It was modified in the early 1900s with a cash drawer and receipt-paper roller to perform additional functions. It was further modified into a digital machine with an LCD screen, credit card magnetic strips and thermal printing component in the mid-1900s. Progressively, the card register was further automated and computerized, and referred to as electronic cash register for use in restaurants by IBM in 1973. The electronic cash register was further improved with a graphic touchscreen interface component in New York by Gene Mosher in 1986 (Heinig, 2020). Mosher's innovation was amplified, commercialized and introduced to restaurants by Microsoft in 1990, and was regarded as electronic point of sale (Athow, 2023). The POS became exceptionally efficient and universally adopted as an electronic payment/transaction machine and system in the 21<sup>st</sup> century with the advent of the internet and the eventual digitalization and globalization of the commercial world and its activities. Contemporarily, the POS system is cloud based and is accordingly referred to as cloud point of sale by some scholars (Rivera, 2023). The current status of the POS unarguably facilitates business and financial transactions and is increasingly used and patronized by bank account owners despite the associated transaction cost of 1.25% (Omoso, 2011). Deposit money banks also generate revenue from POS transactions (Omoso, 2011). The assumption however, is that the increased use and patronage of the POS affects DMBs, and the question is to what extent does it affect their profitability and turnover.

### **Online Loan Facilities**

An online loan is a kind of loan that is not directly obtained from traditional deposit money banks, but seamlessly through online alternative lenders without physical documentation and collateral (Han & Greene, 2007). Online loans as it were, can be defined as loans from technology firms that are not traditionally part of the financial institution, where lenders use different methods to communicate and transact with their clients, and where clients and their requests are electronically verified and approved via the internet. The operation of online loans does not require much tangible fixed assets, human labour, paper work and overhead costs, and therefore, offers both conventional banks and contemporary online lenders the opportunity to substantially reduce cost, but denies conventional banks the opportunity to secure and retain loan customers, due to the hassles and stringent conditions associated with conventional bank loans (Han & Greene, 2007). Consequently, young and small firms are increasingly diverting attention from



traditional bank loan providers to online alternative lenders, because the Federal Reserve Bank of Philadelphia (2015) passionately remarked that some obstacles to younger, smaller and less profitable firms were application, documentation, accessibility logjams and inauspicious collateral requirements, which unnecessarily made loan facilities inaccessible. The required trust in online lending is simply borrower's reputation and information integrity, which makes online lending an alternative credit market and gives it a strategic competitive advantage over traditional deposit money banks (Li, Li, Bellotti & Yao, 2022). The flexibility and accessibility, and the resulting competitive advantage of online loans are evident particularly in their low interest rates, requirements and repayment periods in fig.1:

**Table 1: Online loan Lenders and platforms**

S/ N	Name of Firm	Accessibl e Amount (₦)	Interes t Rate	Purpose	Requiremen t	Repaymen t Period
1.	Fair Money	2,500 to 150,000	5-28 %	Bills and micro- financial needs	Maturity (must be an adult)	4 to 26 wks.
2.	Migo Kwikmoney	Maximum of 500,000	5-15 %	Unexpecte d cash needs	Proof of steady income	2 to 4 wks.
3.	Lidya	150,000 and above	3.5 %	Individual needs & SME financing	Proof of steady income	4 to 8 wks.
4.	Kiakia	50,000 and above	3.5 %	Unexpecte d cash needs	Verified source of income	2 to 4 wks.
5.	Aella Credit	1,500 to 700,000	4-29%	Electricity bills, health insurance	Proof of employment	4 to 8 wks.
6.	Branch Loan	1,000 to 200,000	15- 34%.	Unexpecte d cash needs	Verified source of income	4 to 40 wks.
7.	Carbon (Paylater)	1,000 to 20,000	5-15%	Airtime, bills and fund transfer	Maturity (must be an adult)	Not specific
8.	Renmoney	Max. of 4,000,000	2.8%	Micro and SME financing	Healthy financial statements	Not specific
9.	QuickChec k	10,000- 500,000	Not specific	Bills and SME financing	Verified source of income	4 wks.

10	C24 Loan	Not specific	Not specific	Bills and SME financing	Lagos resident with regular income and good credit history	Not specific
11	Fint Loan	Not specific	Not specific	Rent, medical bills, school fees	Registered salary earners of Flint employment model	Not specific
12	Jumia Loan	Not specific	3.5 %	Unexpected cash needs and purchase financing	Jumia user with Jumiapay android app	Not specific
13	Specta Loan	Max. of 5,000,000	Not specific	Unexpected cash needs and SME financing	Verified source of income	Not specific

**Source:** Authors' Compilation from relevant Online Articles (2023)

Given the conceptual assertions and underlying assumption of the study, the hypotheses of the study are stated in the null form as follows:

Ho<sub>1</sub>: The increasing use and patronage of point-of-sale terminals does not adversely affect the profitability of Nigerian deposit money banks.

Ho<sub>2</sub>: The flexibility and increasing preference for online loan facilities do not adversely affect the profit-profitability of Nigerian deposit money banks.

Ho<sub>3</sub>: The increasing use and patronage of point-of-sale terminals does not adversely affect the turnover of Nigerian deposit money banks.

Ho<sub>4</sub>: The flexibility of and increasing preference for online loan facilities do not adversely affect the turnover of Nigerian deposit money banks.

### **Theoretical Framework and Empirical Review**

Theoretically, the study is underpinned by the non-bank-led theory, which was popularized by Hogan (1991). It proposes and justifies the possibility of financial transactions and undertakings by non-banking firms like mobile network operators and prepaid cash issuers. It therefore, envisages a situation where financial customers neither maintain any bank account nor deal with any deposit money bank, and advocates for a cashless-like-digital scenario where financial customers exchange their cash for e-money account with technology based and driven non-banking firms via the internet. Thus, the non-bank led theory argues that rather than opening and operating a conventional bank account with traditional deposit money banks, financial customers can secure an electronic money account in the server of a non-bank agent, and seamlessly make financial transactions via the internet. Although, the modus operandi of this theory has been severally adjudged the riskiest form of electronic payment for lack of guiding-regulatory framework it still presents a better alternative to the traditional banking system that is slow, inflexible, bureaucratic and expensive to operate. Accordingly, the theory vehemently supports the increased use and patronage of POS in the payment and receipt of money for financial transactions and undertakings. It further describes the flexibility of and supports the increasing preference and patronage for OLLs in Nigeria and other emerging economies.

The relevance of this theory, regardless of the nature of effect is evident in the empirical findings and positions of related studies on POS and bank performance conducted in West Africa. Firstly, Ugbede et al., (2019) conducted an ex-post facto study on the effect of electronic payment on financial performance of deposit money banks in Nigeria and found that, the increasing use of POS significantly and positively increase the profit of deposit money banks in Nigeria. This was revealed by multiple regression test results from desirable secondary data obtained from annual accounts and reports of selected DMBs sourced from the Statistical Bulletins of the Central Bank of Nigeria. Secondly, Nwakoby et al., (2020) carried out an ex-post facto study on the relationship between electronic banking and deposit money bank profitability in Nigeria and discovered that the use of POS positively but insignificantly affects the profitability of deposit money banks in Nigeria. This was revealed from E-View 9.0 regression test analyses on desirable and relevant items in the annual reports and accounts of 9 DBMs listed on the Nigerian Exchange Group, obtained from Statistical Bulletins of the Central Bank of Nigeria. Thirdly, Le and Ngo (2020) did a cross-country study on the determinants of bank profitability with a generalized method of moments estimator and found that

number of bank cards issued and point of sale terminals improve bank profitability. This was discovered from regression test results from unbalanced secondary data obtained from payment systems, world development indicators and financial soundness indicators across different countries. However, an ex-post facto study by Okonkwo & Ekwueme (2022) titled, “effect of electronic payment on financial performance of Nigerian deposit money banks” conversely revealed a negative insignificant effect of the use of POS on the return on assets of 13 quoted deposit money banks in Nigeria. This was discovered from E-Views 9.0 descriptive and regression test analyses on relevant data in the annual reports and accounts of the selected DMBs, covering 2009 to 2019.

The non-bank-led theory is further germane to this study from the following empirical findings on online loans and bank performance. First, Sari & Novrianto (2020) conducted a study titled, “analyzing several factors that influence people to make loans online”, and found from Smart PLS 3.0 test on primary data obtained from a sample of 100 people that culture and psychology significantly influence peoples’ choice and preference for online loans in Indonesia. Relatively, this indicates that the lending culture of traditional banks has a psychological implication and explanation for individuals’ attitude and preference for online loans. Furthermore, Dongi, et. al., (2020) carried out an empirical study on the impact of internet finance on the performance of commercial banks in China. The study both static and dynamic models to examine state-owned commercial banks and city commercial banks guide using a theoretical influence mechanism. Findings from descriptive and inferential statistical results revealed that while internet finance (online loans) had a positive impact on the profitability, security and growth of commercial banks, they negatively impact the liquidity of commercial banks in China. Moreover, Orina and Sporta (2021) also adopted a descriptive research design to examine the effect of mobile banking loans on operational efficiency of commercial banks in Kenya, and found from descriptive and inferential analyses on secondary data tested with STATA software that mobile banking loans had a positive significant effect on the operational efficiency of commercial banks in Kenya.

### **3. Methodology**

This study adopted the ex-post facto research design to ascertain the cause-effect relationship the dependent variable and the independent variables, as it can analyze past and existing events and occurrences, to disclose the effect of digital non-banking financial services on the annual profits and turnover of deposit money

banks in Nigeria (Kothari & Garg, 2014). This study conducted a census on all the quoted deposit money banks in Nigeria as at January 1, 2020. These include: Accordingly, relevant and desirable secondary data were sourced from the annual bulletins and reports of the Central Bank of Nigeria (CBN) and E-Payment Statistics Platforms, and were obtained from the annual accounts and reports of all the 15 quoted deposit money banks in Nigeria as at January 1, 2020, to examine the variables of the study as estimated and specified in the following model:

$$PT = f(\text{Digital non-banking financial services})$$

$$PAC_{it} = \beta_1 POS_{it} + \beta_2 OLL_{it} + \varepsilon$$

Whereas:

PT = Profitability and Turnover (proxied by profit-after-tax and cheque value)

PAC<sub>it</sub> = Profit-after-Tax @ t period and Cheque Value @ t period (as proxies for Profitability and Turnover);

POS<sub>it</sub> = Point of Sale @ t period;

OLL<sub>it</sub> = Online Loans @ t period;

it = 2012 ..... 2020;

$\beta_0$  = Constant to be estimated by the model;

$\beta_1, \beta_2$  = Coefficient indicating influence of independent variables on the dependent variable.

Data obtained include aggregate annual transactional volumes and values of profit-after-tax and cheques of deposit money banks, and aggregate annual transactional volumes and values of point of sale and online loans, from 2012 to 2020. Data were analyzed using descriptive and inferential statistics derived from E-Views 9.0 statistical software, at 95% confidence interval (Aiken & West, 1991). Pearson Moment Correlation and Linear Regression were used to analyze time series data. The two null hypotheses were tested at a predetermined alpha value of 0.05. Accordingly, the decision rule was to reject null hypothesis (for the alternate) if the p-value of the test statistic is greater than the predetermined alpha value of 0.05; and to accept null hypothesis if the p-value of the test statistic is less than the predetermined alpha value of 0.05:

Reject Ho1, Ho2, Ho3 and Ho4, if:  $P > 0.05$ ;

Accept Ho1, Ho2, Ho3 and Ho4, if:  $P < 0.05$ .

#### **4. Data Analyses, Test of Hypotheses and Discussion of Findings**

The secondary data obtained are presented in Tables 1 and 2, and the Pearson Moment Correlation and Linear Regression test results and findings are displayed in Tables 3, 4 and 5, to test the degree and direction of association of the variables and the two hypotheses of the study, for analytical-empirical discussion.

**Table 2: Total Annual Profit-after-Tax & Cheque Volume and Values**

S	Year	DMBs Annual Cheque Volume and Value		
		PAT ₦'000,000	Volume '000,000	Value ₦'000,000,000
1	2012	419	12	7,487
2	2013	359	14	7,708
3	2014	456	15	7,269
4	2015	387	13	6,195
5	2016	461	11	5,829
6	2017	544	10	5,381
7	2018	590	9	5,033
8	2019	660	7	4,481
9	2020	729	11	9,113

**Source:** Author's Compilation from Annual Accounts and Reports of DMBs and CBN Bulletins (2023).

Table 1 shows the total annual profit-after-tax and cheque volume and values of Deposit Money Banks in Nigeria. It reveals an irregular and fluctuating earning pattern from 2012 to 2020. Similarly, the total annual bank turnover and transactional details (proxied by total cheques) are not regularly progressive.

**Table 3: Total Annual POS & Online Loan Volume**

S / N	Year	Annual POS Volume and Value		Annual OLL Value
		Volume '000,000	Value ₦'000,000,000	Value ₦'000,000,000
1	2012	2	48	31
2	2013	9	161	47
3	2014	26	312	74
4	2015	33	448	91
5	2016	433	755	132
6	2017	295	1,409	184
7	2018	295	2,383	404
8	2019	438	3,204	478
9	2020	382	2,806	235,617

Source: www.cbn.gov.ng, 2023.

Table 2 shows the total annual POS volume and values of deposit money banks in Nigeria. It also displays the total annual values of online loans from 2012 to 2020. Comparatively, unlike the annual totals of Profit-after-Tax and annual total cheque volume and amounts of deposit money banks in Table 1, the annual totals of POS and OLL in Table 2 show a relatively steady progressive and even geometric increase in some years, except the POS figures of 2019.

**Table 4: Pearson Product Moment Correlation Matrix**

	PAT	POS	OLL
PAT	1	0.946	0.643
POS	0.946	1	0.470
OLL	0.643	0.470	1

Source: E-Views 9.0 Statistical Software (2023).

Profit-after-Tax positively correlates with POS (0.946) and OLL (0.643). This implies a positive significant association between the dependent variable (PAT) and the independent variables (POS and OLL).



**Table 5: Pearson Product Moment Correlation Matrix**

	CHQ	POS	OLL
CHQ	1	-0.299	0.645
POS	-0.299	1	0.470
OLL	0.645	0.470	1

Source: E-Views 9.0 Statistical Software (2023)

Total cheque values (turnover) of DMBs correlates negatively with POS (-0.299), but positively with OLL (0.645). This implies a negative association between CHQ and POS, and a positive association between CHQ and OLL.

**Table 6: Linear Regression Analysis showing the Effect of the increasing use and Patronage of POS on the Profitability (PAT) of Deposit Money Banks in Nigeria**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	$\beta$	Std. Error	Beta		
1 (Constant)	386119624.577	21896711.577		17.634	0.000
POS	9.844E-005	0.000	0.946	7.745	0.000

a. Dependent Variable: Profit after tax;  $R = 0.946$ ;  $R^2 = 0.895$ ; Adjusted  $R^2 = 0.881$

Source: E-Views 9.0 Statistical Software (2023).

The P-Value in Table 5 is 0.000 and is less than the alpha value of 0.05 (P-value =  $0.000 < 0.05$ ). Therefore,  $H_0$  is accepted, and this implies that: the increasing use and patronage of point of sale terminal does not adversely affect the profitability of Nigerian deposit money banks.

**Table 7: Linear Regression Analysis showing the Effect of the Flexibility and increasing Preference for OLL on the Profitability (PAT) of Nigerian Deposit Money Banks.**

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	$\beta$	Std. Error			
1 (Constant)	484828635.387	36832794.108		13.163	0.000
OLL	1.040E-006	0.000	0.643	2.219	0.062

a. Dependent Variable: PAT;  $R = 0.643$ ;  $R^2 = 0.413$ ; Adjusted  $R^2 = 0.329$   
 Source: E-Views 9.0 Statistical Software (2023).

The P-Value in Table 6 is 0.062 and is greater than the alpha value of 0.05 (P-value = 0.062 > 0.05). Therefore, Ho2 is rejected for the alternate, and this implies that: the flexibility and increasing preference for online loans adversely affect the profitability of Nigerian deposit money banks.

**Table 8: Linear Regression Analysis showing the Effect of the increasing use and Patronage of POS on the Turnover (Cheques) of Nigerian Deposit Money Banks.**

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	$\beta$	Std. Error			
2 (Constant)	6968674828203.561	760268324455.259		9.166	0.000
POS	-0.366	0.441	-0.299	-0.825	0.435

a. Dependent Variable: CHQ;  $R = 0.299$ ;  $R^2 = 0.089$ ; Adjusted  $R^2 = 0.041$   
 Source: E-Views 9.0 Statistical Software (2023)

The P-Value in Table 7 is 0.435 and is greater than the alpha value of 0.05 (P-value = 0.435 > 0.05). Therefore, Ho3 is rejected (for the alternate), and this implies that: the increasing use and patronage of point of sale terminals adversely affect the turnover of Nigerian deposit money banks.

**Table 9: Linear Regression Analysis showing the Effect of the Flexibility of and increasing Patronage of OLL on the Turnover (Cheques) of Nigerian Deposit Money Banks.**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	$\beta$	Std. Error			
2 (Constant)	617180826488	42758407756		14.4	0.0
	8.361	8.897		34	00
	OLL	0.012	0.005	0.654	2.28
				9	43

a. Dependent Variable: CHQ; R = 0.654; R<sup>2</sup> = 0.428; Adjusted R<sup>2</sup> = 0.346

Source: E-Views 9.0 Statistical Software (2023)

The P-Value in Table 8 is 0.043 and is less than the alpha value of 0.05 (P-value = 0.043 < 0.05). Therefore, Ho4 is accepted, and this implies that: the flexibility of and increasing preference for online loans does not adversely affect the turnover of Nigerian deposit money banks.

It can be inferred from the tables above that the emergence of digital non-banking financial services positively and negatively affects the profitability and turnover of Nigerian deposit money banks. For instance, the inferential statistics in Table 5 indicates that the use and increasing patronage of POS terminals has a positive-significant effect on the profitability of Nigerian DMBs and contributes about 89.5% in the increase in their PAT. This perhaps is because POS terminals use ATM cards which are mostly issued by and are connected with DMBs. Besides, apart from few individuals that have online account with some digital non-banking financial service providers, most users of POS terminals have accounts with DMBs. This implies that almost all POS transactions financially contribute to the PAT of DMBs. This further implies that, the increasing use and patronage of POS terminals might not affect the going concern of DMBs, but is a potential threat to the job

security of bankers because POS terminals are simple to operate and are seamlessly operated outside the banking hall by less educated and even under-age people. This is in agreement with the empirical findings of Ugbede, et al. (2019), Nwakoby, et al. (2020) and Le & Ngo (2020) which congruently adduced that the use of POS positively contributes to the profitability of banks in Nigeria, but is contrary to the finding of Okonkwo & Ekwueme (2022) who discovered otherwise. However, the  $R^2$  in Table 6 (0.413) indicates that the flexibility of and increasing preference for OLL though not statistically significant, has a 41% adverse effect on the PAT of Nigerian DMBs. This is probably because OLL, though mostly received by beneficiaries through DMBs at a cost, the associated interest is solely earned by digital non-banking financial institutions. This supports the empirical finding of Sari & Novrianto (2020) which insinuates that the lending culture of conventional deposit money banks has a psychological implication and effect on individuals' choice of borrowing.

Furthermore, the outcome of Table 7 indicates that, though statistically insignificant, the increasing use and patronage of POS terminals has about 9% adverse effect on the cheque values (turnover) of Nigerian DMBs. This is possibly because, just as cheques are means of withdrawal and payment, the POS terminal, at the insertion of an ATM card seamlessly does the work of the cheque in split seconds. The low  $R^2$  value (0.089) and negative Beta coefficient (-0.299) in Table 7 further indicates that, every POS transaction insignificantly reduces cheque transaction by 0.299. Unequivocally, unlike the ATM card, cheque is rarely issued and used by DMBs and bank account holders in contemporary time. Finally, the results in Table 8 indicate that the flexibility of and increasing preference for OLL positively affect and improves the turnover (cheque values) of Nigerian deposit money banks. The  $R^2$  value (0.428) and positive Beta coefficient (0.654) in Table 8 implies that, each OLL facility granted and received insignificantly results to a 0.65 increase in cheque transaction. Remarkably, this study could not regrettably capture relevant extant empirical findings on bank turnover that are germane to the validation of its findings.

## **5. Conclusion and Recommendations**

Drawing from the empirical findings on profitability and turnover of DMBs in Nigeria, based on the Pearson product moment correlation and linear regression analyses the PAT values, cheque values, POS value and OLL values, this study summarily concludes that, while the increasing use and patronage of POS terminals positively and significantly improves the profitability of deposit money banks, it

adversely affects the turnover of deposit money banks in Nigeria in an insignificant manner. It further concludes that, while the flexibility of and increasing preference for online loans adversely affect the profitability of deposit money banks in a statistically insignificant manner, it insignificantly improves the turnover of deposit money banks in Nigeria. Consequently, the study recommends that DMBs should be operationally flexible and competitive, and fully automate their financial products and services.

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