



FINANCIAL TECHNOLOGY ADOPTION AND PROFITABILITY DEPOSIT MONEY BANKS IN NIGERIA

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Abstract

This study investigates the effect of financial technology (FinTech) adoption on the profitability of Deposit Money Banks (DMBs) in Nigeria, anchored on the Technology Acceptance Model (TAM) and Financial Intermediation Theory. Annual data covering the period 2015–2024 were sourced from the World Bank Data, Central Bank of Nigeria (CBN) Statistical Bulletin, and the Nigeria Interbank Settlement System (NIBSS). The study employs the Ordinary Least Squares (OLS) regression technique to evaluate the influence of mobile banking (LMB), point-of-sale transactions (LPOS), and Automated Teller Machine (LATM) on the logarithm of return on assets (LROA), a proxy for bank profitability. Descriptive statistics reveal that LROA remained relatively stable over the study period (Mean 0.3119, SD 0.1058), while LATM exhibited the highest variability (Mean 5.5238, SD 1.5683). Regression results indicate that the model explains 64% of the variation in profitability (R^2 0.640, Adjusted R^2 0.460), with the overall model significant at the 10% level (p 0.0871). Individually, LATM had a negative and marginally significant effect on profitability (p 0.0965), while LMB and LPOS recorded statistically insignificant impacts. The findings suggest that although FinTech adoption collectively influences bank profitability in Nigeria, the effectiveness of individual FinTech channels depends on operational efficiency and strategic alignment. The study recommends that Nigerian DMBs optimize FinTech investments, enhance customer engagement, and balance asset utilization to maximize profitability gains.

Keywords: Financial Technology (FINTECH), Deposit Money Banks (DMBS), Profitability and Return on Assets.

Introduction



Financial Technology is also refers as fintech, has become a transformative strength in the Nigeria's Banking industry, reforming the financial activities Over the years, fintech revolutions like digital payments, mobile banking and online platforms have gained tremendous grip because the large population of citizen that are not banking in Nigerian and huge number of people that using smartphone The invention of notable fintech companies that merged in Nigeria made their activities invisible, accessible, and less time consuming this made the use of paystack, pampay and piggyvest to double in Nigeria considering the convenient and accessible financial solution nature

Despite the merit of the fintech in our contemporary society especially Nigeria, there are other challenges for such as not be knowledgeable on the operation on fintech consideration the facts that a lot in Nigeria are scare of using online banking activities usage Although research has shown that adoption of digital banking such as mobile banking, internet banking and automated teller machines (ATMs) improves banks' financial performance, Research carried out by Alagbe and Yinus (2025) proves that positive relationship between digital banking adoption and return on assets (RoA), in the way southwest Nigeria supported that the use of mobile banking and internet banking enhances bank return on equity and net income On the other hand, financial sectors have strengthened competition by rendering services with affordable fees and greater expediency, enticing a considerable customer base. Notwithstanding this competition, Nigerian banks have established pliability. In 2023 from the result of total deposits in the banking sector improved by 63% to ₦115 trillion, sparkly growing public trust in outmoded banks. The appearance of fintech has meaningfully changed Nigeria's financial sector, yet it has also introduced intricate challenges for Deposit Money Banks (DMBs). Traditional banks are facing strong competition from agile fintech startups that offer faster, cheaper, and more convenient services. While fintech adoption can enhance operational efficiency and profitability, it often requires momentous outlay in technology, cybersecurity, and staff drilling. Furthermore, numerous banks scuffle to assimilate fintech solutions effectively, leading to underutilization of technology and missed opportunities for growth. There is also worry that as more customers move to digital platforms, banks' traditional income streams from charges may decline. In spite of these challenges, empirical studies on the detailed relationship between fintech and the profitability of Nigerian DMBs remain limited. This

gap underlines the need for a inclusive examination of how fintech influences financial performance and strategies banks should be to sustain profitability in the digital era. Therefore the study investigates the effect of Fintech adoption on profitability of Nigerian Deposit Money banks in Nigeria. Specifically, the study objectives are to:

- 1 . Evaluate the effect of mobile banking on return on assets of deposit money banks in Nigeria
- 2 . Assess the effect of Point of Sale on return on assets of deposit money banks in Nigeria.
- 3 Ascertain the effect of Automated Teller Machine on return on assets of deposit money banks in Nigeria

The study therefore hypothesizes that:

H₀₁: There exists no significant effect of mobile banking on return on assets of deposit money banks in Nigeria

H₀₂: Point of Sale (POS) has no significant effect on return on assets of deposit money banks in Nigeria.

H₀₃: There exists no significant effect of Automated Teller Machine on return on net interest margin money banks in Nigeria

Concept of Fintech

Financial Technology, commonly referred to as fintech, is the integration of technology into financial services to enhance and automate the delivery and use of financial services. It encompasses a broad spectrum of applications, including digital payments, mobile banking, peer-to-peer lending, blockchain technologies, and insurance technology (InsurTech) Fintech aims to streamline, innovate, and democratize financial services, making them more accessible, efficient,

and user-friendly (Onuorah, Oboro, and Ofanson, (2022 by leveraging technologies such as artificial intelligence, machine learning, and blockchain, fintech companies are transforming how consumers and businesses manage their finances .IBM In Nigeria, fintech has significantly impacted the financial industries by providing innovative solutions to address challenges such as limited access to banking services, high transaction costs, and financial exclusion. Companies like Paystack, Flutterwave, and PiggyVest have emerged as key players, offering services that range from digital payments to investment platforms, thereby contributing to the growth and modernization of the Nigerian financial sector. The rapid adoption of fintech is reshaping the competitive dynamics among Deposit Money Banks (DMBs) in Nigeria. While fintech presents opportunities for innovation and market expansion, it also poses challenges to traditional banking models, necessitating a strategic response from DMBs to maintain profitability and relevance in an increasingly digital financial ecosystem.

Mobile Banking

Mobile banking, commonly referred to as m-banking, is a wireless application that combines internet technology and mobile phone communication to facilitate banking activities. This innovation allows customers to access a variety of services, including SMS banking, which provides instant notifications of transactions, enabling users to monitor their accounts in real-time. In addition to transaction alerts, customers can perform other banking activities such as checking account balances, requesting cheque books, and recharging mobile phone credits all from the convenience of their mobile devices.

Point of Sale (POS) System

Point of sale is the device or system where a payment is made for goods or services. POS system is combination of hardware and software that records sales, process payments and manages inventory. In Nigeria, we record numerous persons operating POS machine to provide services like transfer, cash, withdraw, deposit. According to Ibekwe (2021) refers POS as digital payment procedure that enables customers to make payments for goods and services directly from their

bank accounts using debit or credit cards at retail locations. The method adopt the use of digital transfer of funds from the customer's account to the merchant's account in real-time without following the traditional method of cash transactions. This method is effectively entrenched in point of sale (POS) operating procedures. The POS operates by allowing customer to insert their card, immediately the terminal communicates with the bank's network to verify the transaction to ascertain whether the customer is legible for transaction. If the system ascertains authenticity of the transaction then payment is made. Once payment is completed instantly, and a receipt is generated for both the customer and the merchant as prove that transaction has taking place..

Automated Teller Machine

ATMs are the most regularly used financial technology for transaction in recent times in Nigeria. Every deposit money banks in Nigeria made facility available for their customers. ATM is a self-operating banking device Onuorah, Oboro and Ofanson, (2022) that allows customers to perform basic financial transactions without a human cashier or bank teller rather the steps of the operation in simply spelled out. Basically, customers operates ATM card which contains a magnetic stripe or chip storing account details that contains a unique card number and some security data, such as cessation date and personal identification number (PIN). Once the card is attained, it performs its inserted commands..

Concept of Profitability

Profitability in banking refers to the bank's ability to earn returns on its assets, equity, and capital employed over a given period. It is commonly measured using financial ratios such as Return on Assets (ROA), Return on Equity (ROE), Net Interest Margin (NIM), and Earnings per Share (EPS). ROA assesses how efficiently a bank uses its assets to generate profit, while ROE evaluates the return earned on shareholders' equity Ibekwe (2021)). The return on assets is a tool for measuring profit and assets efficiency of any company.

The profitability of DMBs is influenced by multiple factors, including interest income, non-interest income, operational efficiency, cost management, and risk exposure. A bank that can balance these factors effectively is likely to maintain high profitability and long-term stability. For instance, the ability to manage credit risk and operational costs can significantly affect net income, which in turn influences overall profitability. Despite the growth opportunities, DMBs face challenges that can constrain profitability. The rise of fintech companies has introduced intense competition, especially in payment systems and digital banking services. Customers increasingly demand low-cost, fast, and convenient services, pressuring traditional banks to invest heavily in technology and infrastructure. These investments, while necessary, often increase operational costs in the short term.

Furthermore, high levels of non-performing loans (NPLs) can erode profitability, as banks may need to write off bad debts, reducing net income. Operational inefficiencies, poor risk management, and inadequate adoption of technology also pose significant threats. In Nigeria, the volatility of the financial sector, combined with regulatory and macroeconomic pressures, requires banks to strategically manage resources to sustain profitability.

Concept Deposit Money Banks

Deposit Money Banks (DMBs) are financial institutions that play a central role in the economic and financial system of Nigeria. They are licensed by the Central Bank of Nigeria (CBN) to accept deposits from the public and provide a wide range of banking services, including lending, investment, and payment facilitation. As intermediaries between savers and borrowers, DMBs mobilize funds from surplus units in the economy and channel them to deficit units, thereby promoting economic growth, investment, and development. In Nigeria, DMBs are governed by the Banks and Other Financial Institutions Act (BOFIA) 2020, which outlines the licensing, operations, and supervisory requirements for banks. The Central Bank of Nigeria (CBN) oversees these institutions to ensure stability, soundness, and efficiency in the banking sector. Additionally, the Nigeria Deposit Insurance Corporation (NDIC, 2024) safeguards depositor by providing

insurance coverage for bank deposits, reinforcing public confidence in the banking system. According to the CBN, a Deposit Money Bank is any institution licensed to accept deposits from the public, provide loan facilities, and offer other financial services such as foreign exchange transactions, electronic banking, and investment products (cbn.gov.ng).

DMBs significantly impact Nigeria's economic growth and development. They promote investment, facilitate trade, and provide employment opportunities. The availability of credit and financial services stimulates entrepreneurship, industrialization, and infrastructural development. Furthermore, DMBs contribute to government revenue through taxes and support public policy initiatives via developmental loans and financing program. Empirical studies indicate that the efficiency, stability, and profitability of DMBs are closely linked to macroeconomic performance.

Fintech and Profitability of Deposit Money Banks

The rise of Financial Technology (Fintech) has transformed the global financial landscape, creating both opportunities and challenges for traditional banking institutions. Fintech refers to the use of innovative technologies to deliver financial services more efficiently, cost-effectively, and conveniently. It encompasses a wide range of solutions, including digital payments, mobile banking, peer-to-peer lending, online investment platforms, blockchain applications, and artificial intelligence-driven financial services (Nwankwo and Okolio 2023).

For Deposit Money Banks (DMBs), fintech has become a strategic tool in enhancing profitability, streamlining operations, and improving customer satisfaction. Profitability, in this context, is measured through indicators such as Return on Assets (ROA), Return on Equity (ROE), Net Interest Margin (NIM), and overall cost-to-income ratios. Fintech enables banks to create new revenue streams beyond traditional interest income. Digital platforms allow banks to offer value-added services, such as online investment products, automated wealth management, and cross-selling of insurance and advisory services. These non-interest income sources contribute significantly to profitability by diversifying bank revenue and reducing dependency on traditional lending. Fintech helps to reduce operational costs by automating routine processes, minimizing



paperwork, and optimizing staffing requirements. For example, mobile banking and online loan applications lower transaction costs and improve processing speed. Digital banking platforms allow DMBs to reach underserved or previously unbanked populations. By providing convenient, accessible, and user-friendly services, banks can expand their customer base, increase deposits, and enhance lending activities all of which positively influence profitability.

Fintech powered by artificial intelligence and big data analytics enhance banks' ability to assess credit risk and predict loan defaults. Efficient risk management reduces non-performing loans (NPLs) and strengthens the overall financial health of banks, thereby boosting profitability Onuorah, Oboro & Ofanson, (2022).

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The incorporation of fintech innovations helps banks remain competitive in an evolving market. Customers increasingly expect seamless digital experiences; banks that adopt fintech solutions can retain clients, attract new customers, and maintain profitability despite competition from digital-first financial startups. Despite the benefits of fintech Alagbe and Yinus, 2025 identified some challenges that may affect profitability. On the aspect of digital banking platforms are vulnerable to cyberattacks, fraud, and data breaches, which can result in financial losses and reputational damage. Again competition from fintech startups offering low-cost, agile services can reduce banks' market share and pressure traditional revenue streams.

Theoretical Review

Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM), propounded by Davis (1989), explains how users come to accept and use a new technology. The model posits that perceived usefulness and perceived ease of use determine an individual's intention to adopt technology, which subsequently influences actual usage. In the banking sectors, TAM can be applied to understand how both banks and customers adopt fintech innovations. For Deposit Money Banks in Nigeria, the perceived usefulness of digital solutions (e.g., mobile banking, online lending, and payment platforms) directly influences the adoption rate. Banks that integrate fintech efficiently are likely to enhance operational efficiency, reduce costs, and improve customer satisfaction, which in turn positively affects profitability. TAM helps explain why the adoption of fintech solutions by DMBs can impact their profitability, as acceptance of technology is a critical step in leveraging digital tools to improve financial performance.

Financial Intermediation Theory

Financial Intermediation Theory was propounded by Keynes, Gurley & Shaw, 1960. This theory concentration was on the role of financial institutions, particularly banks, as intermediaries between savers and borrowers. The theory posits that banks mobilize funds from savers and allocate them to borrowers, this action facilitating capital accumulation and economic growth. In modern banking, fintech enhances the traditional role of financial intermediation by improving the speed, efficiency, and reach of banks' services. For example, digital transactions platforms allow banks to assess and disburse cash transactions faster, and the platforms increase access to financial services for previously unbanked populations. This increase of financial intermediation enhances the banks' asset utilization and revenue generation capacity, thereby boosting profitability. This theory extensively discusses how fintech adoption helps technological tools to strengthen banks' intermediation roles; loan provision, deposit mobilization, and overall financial performance.

Review of Empirical Literature

Adiga, Adigwe, Okonkwo and Ogbonna (2022) examined financial technology and banking sector performance in Nigeria. The specific objectives are to examine the effect of financial technology on return on assets (ROA), return on equity (ROE), interest income (II) and noninterest income (NII) of Deposit Money Banks (DMBs) in Nigeria. Secondary data was used which was gotten from Central Bank of Nigeria (CBN) statistical bulletin and Nigeria Deposit Insurance Corporation (NDIC) report of various years. The data gotten were subjected to Auto Regressive Distributed Lag (ARDL) technique to test the interaction between independent variables namely payment system, automated clearing services and remittance services with the dependent components in return on asset, return on equity, interest income and non-interest income at 5% level of significance. The findings show that financial technology significantly explained the variation in ROA, ROE and noninterest income DMBs in Nigeria except the variation in interest income. The study concludes that financial technology significantly explained the variation in banking sector performance components in ROA, ROE, and non-interest income.

Nwankwo B. C. and Okoli O. C (2023) evaluates the effect of financial technology on the profitability of Deposit Money Banks in Nigeria from 2010 to 2021. The secondary data covering the period of the study were sourced from the CBN statistical Bulletin (2021) and CBN Financial stability Report (2010-2021). The research design adopted in this study is ex -post facto. The Granger Causality Test was utilized to investigate the causal flow between the independent and dependent variables. Rhombus Least Square (RLS) regression model was applied in estimating the regression coefficients. This research work is anchored on Technology Acceptance Model. The finding reveals Internet banking has a positive and significant effect on the profitability of DMBs in Nigeria, Automated teller machine has a positive but non-significant effect on the profitability of DMBs in Nigeria, Mobile banking has a negative but non-significant effect on the profitability of DMBs in Nigeria, POS operations have a negative but non-significant effect on the profitability of DMBs in Nigeria. The study's findings suggest that DMBs in Nigeria can significantly have better returns from the adoption of internet banking. This electronic banking channel can reduce



operating costs, attract tech-savvy customers, and increase revenue for DMBs. The findings also suggest that while ATMs can provide benefits to DMBs, their effect on profitability may not be statistically significant. Finally, the study found that the adoption of mobile banking and POS operations may not provide significant benefits to DMBs in terms of increased revenue and reduced costs.

Onuorah, Oboro and Ofanson, (2022) investigated on impact of Fin Tech advancements on Nigerian banking performance in Nigeria. The variables used are the annual transaction volumes from digital payment platforms, digital banking platforms, digital lending and loans platforms, and digital investment and crowd contributory platforms. The study used secondary data from annual report all deposit money banks in Nigeria was used to calculate profitability (DMBs) from 2010 to 2020 were used in this study. The study employed ordinary least square (OLS) regression estimation method was used for data analysis. The result reveals that the FinTechs has significantly increased banks' profit. The study suggests that banks should reach out to the unbanked and use financial innovations to increase their profitability.

Wang, Mohamed, Norhuda, and Zariyawati (2024) assesses the transformative impact of financial technology (fintech) on the profitability of Chinese commercial banks, with a focus on addressing the challenge of endogeneity in financial data analysis. The study uses the systematic generalized method of moments (GMM) to compare the results with those from fixed-effects models in order to make the findings more reliable. The results reveal that fintech significantly impacts bank profitability, predominantly in a negative manner. The study suggest that banks should not only invest in research and development within fintech but also tailor strategic responses according to bank types and establish a comprehensive financial services ecosystem to bolster their competitive edge and profitability. The findings are critical for bank executives and policymakers aiming to navigate the challenges posed by fintech innovations.

Methodology

The study used the ex-post factor design which is a research design that is devoid of manipulation because the data is already published. The data on Financial technology (Fintech) which was the proxy for Mobile banking , Point of Sale (POS) and Automated Teller Machine while data on profitability proxy for return on assets were obtained from annual report of deposit money banks published with central banks statistical bulletin in Nigeria from 2015 to 2024. The a priori expectation of the study is that the selected independent variables will have significant effects on the dependent variable. The data analysed using panel data Least Square regression. This regression is essential because it combines the strengths of both cross sectional and time series data, allowing for more robust and insightful results. The E-views 13 Statistical Software was used to conduct the statistical computations.

Model specification

Based on the objectives of the study, the effect of financial technology adoption on the profitability of deposit money banks is represented as follows. The functional model indicates that the profitability of deposit money banks in Nigeria is a function of the explanatory variables of the study.

Where:

ROA = Return on assets MB = Mobile Banking, ATM = Automated Teller Machine POS = Point of Sales

In line with objectives of this study, the effect of fintech on the profitability of deposit money banks in Nigeria is represented in equations below. The functional model indicates that the profitability of deposit money banks in Nigeria is a function of the explanatory variables of the study. The functional model for this study was adapted from the study by Shehu, Aliyu and Musa (2013). The model is stated as follows:

ROA = Return on assets



MB = Mobile Banking

ATM = Automated Teller Machine

POS = Point of Sales

The modified model is stated below in equation

$$ROA = \beta_0 + \beta_1 MB + \beta_2 POS + \beta_3 ATM + \mu \quad \text{.....equation 1}$$

Where: ROA = Return of Asset

MB = Mobile Banking

POS = Point of Sales

ATM = Automated Teller Machine

Decision

The rule of thumb in this study stated that the null hypothesis if the p-value greater than 0.10 accept the Null and accept the alternative that there is significant relationship between independent variables and dependent variable of the study.

YEAR	MB	POS	ATM	ROA
2015	442354	448513	3971651	2.50
2016	75899	7590	298813	2.12
2017	110120	141000	6480086	1.82
2018	183070	238310	1200462	2.12
2019	508962	320000	6512612	2.12
2020	623470	2806304	12004068	1.73
2021	1780000	2445416	21230935	1.32

2022	1940000	890000	3265	2.19
2023	4660000	1075	2820	2.19
2024	795000	1815	1221	3.3

Source: CBN Statistical Bulletin (2024), World ROA Date (2024) and Banking Industry Report(2024)

Descriptive Statistics

	LROA	LMB	LPOS	LATM
Mean	0.311913	5.543897	4.963919	5.523780
Median	0.326336	5.657078	5.412386	6.203959
Maximum	0.518514	6.287802	6.388353	7.079328
Minimum	0.120574	4.880236	3.031408	3.086716
Std. Dev.	0.105759	0.511385	1.155731	1.568276
Skewness	0.171077	0.069937	-0.677153	-0.653663
Kurtosis	3.226706	1.797447	2.022819	1.700200
Jarque-Bera	0.070193	0.610708	1.162095	1.416077
Probability	0.965512	0.736863	0.559312	0.492610
Sum	3.119125	55.43897	49.63919	55.23780
Sum Sq. Dev.	0.100665	2.353635	12.02143	22.13542
Observations	10	10	10	10

Descriptive Statistics Analysis

Table X summarizes the descriptive statistics for LROA, LMB, LPOS, and LATM covering the 2015–2024 observation of 10.

The descriptive statistical result shows that LROA is relatively stable with low variability as it shows in the standard deviation output value of 0.1058, while LATM exhibits the widest fluctuations range 3.9926; standard deviation of 1.5683. LMB and LROA are nearly symmetric in distribution, whereas LPOS and LATM show moderate negative skewness. All variables are approximately normally distributed according to the Jarque–Bera test, satisfying regression assumptions.

Ordinary Least Square

Dependent Variable: LROA
Method: Least Squares
Date: 08/15/25 Time: 16:20
Sample: 2015 2024
Included observations: 10

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.206004	0.370803	3.252410	0.0174
LMB	-0.131061	0.079983	-1.638619	0.1524
LPOS	0.022161	0.044855	0.494065	0.6388
LATM	-0.050239	0.025521	-1.968539	0.0965
R-squared	0.640052	Mean dependent var		0.311913
Adjusted R-squared	0.460078	S.D. dependent var		0.105759
S.E. of regression	0.077711	Akaike info criterion		-1.982465
Sum squared resid	0.036234	Schwarz criterion		-1.861431
Log likelihood	13.91233	Hannan-Quinn criter.		-2.115239
F-statistic	3.556360	Durbin-Watson stat		1.895965
Prob(F-statistic)	0.087069			

Source: Eview 13 output

The regression results indicate that the independent variables collectively explain 64% of the variation in LROA (Adjusted $R^2 = 0.4601$). The overall model is marginally significant at the 10% level (F-statistic $p = 0.0871$). Among the predictors, LATM exhibits a negative relationship with LROA ($\beta = -0.0502$, $p = 0.0965$), significant at the 10% level, implying that higher asset turnover metrics may be associated with reduced returns on assets in the sample. LMB shows a negative but statistically insignificant association ($\beta = -0.1311$, $p = 0.1524$), while LPOS has a small positive but non-significant effect ($\beta = 0.0222$, $p = 0.6388$). The Durbin-Watson statistic (1.896) suggests no severe autocorrelation, and the relatively low standard error of regression (0.0777) indicates reasonable predictive accuracy.

Hypothesis Testing

coefficient value $t = -1.639$, probability value 0.152 . The Decision fail to reject H_0 at $\alpha = 0.05$ and $\alpha = 0.10$ and the study concludes that LMB's effect on LROA is negative but statistically insignificant. LPOS has no effect on LROA. with coefficient value $t = 0.494$, probability value 0.639 . LPOS concludes a weak, non-significant positive association with LROA. Finally, LATM has no effect on LROA with values $t = -1.969$, $p = 0.097$. The study decision shows fail to reject H_0 at $\alpha = 0.05$, but reject at $\alpha = 0.10$. LATM has a marginally significant negative effect on LROA at the 10% level.

Summary of Findings

This study investigated the effect of selected FinTech-related variables LMB, LPOS, and LATM on the profitability of Deposit Money Banks (DMBs) in Nigeria, measured by the logarithm of return on assets (LROA). The analysis covered the period 2015–2024, with 10 annual observations. Empirical studies were reviewed on difference results of the study. Descriptive statistics indicated that profitability (LROA) remained relatively stable over the period (Mean 0.3119 , SD 0.1058), while LATM (a proxy for asset turnover efficiency) showed the highest variability (Mean 5.5238 , SD 11.5683). All variables passed the Jarque–Bera normality test, confirming suitability for OLS regression.

The regression results revealed that the model explained 64% of the variation in LROA ($R^2 = 0.640$; Adjusted $R^2 = 0.460$). The overall model was statistically significant at the 10% level (F-statistic $p = 0.0871$), implying that FinTech-related measures collectively influence bank profitability. The findings shows that Automated teller Machine had a negative and marginally significant relationship with profitability with coefficient value of -0.0502 , and probability value of 0.0965 , suggesting that higher turnover levels may not necessarily lead to higher returns. While mobile banking usage had a negative but insignificant effect with coefficient value -0.1311 and

probability value of 0.1524. Finally the study shoes that POS (point-of-sale transactions) had a small positive but insignificant impact ($\beta = 0.0222$, $p = 0.6388$).

Conclusion

The findings suggest that while FinTech adoption in Nigerian Deposit Money Banks measured through mobile banking, POS usage, and asset turnover has a collective influence on profitability, individual effects vary. The negative relationship between LATM and profitability may indicate operational inefficiencies or over-utilization of assets in the drive to expand technology-driven transactions. Mobile banking and POS transactions, although expected to enhance efficiency and outreach, did not significantly improve profitability within the period under review. This indicates that the profitability benefits of FinTech adoption in Nigerian DMBs may take longer to materialize or may depend on complementary factors such as cost efficiency, customer acquisition, and digital literacy.

Recommendations

1. Banks should focus not only on expanding digital channels but also on ensuring these platforms operate efficiently, with reduced operational costs and improved service delivery. It implies that optimization of the transaction should highly prioritized.
2. Banks and other financial institution should engage in education awareness. It can enhance adoption rates and transaction volumes on mobile banking and POS platforms, increasing the profitability impact.
3. The study recommended that Automated Teller Machine beyond expanding transactions, banks should monitor asset (ATM) efficiency to avoid overextension and ensure investments yield proportional returns.



4. Regulators should create enabling policies that encourage innovation while safeguarding against operational risks in FinTech deployment.
5. Constant review and future studies should include a larger dataset, more variables such as internet banking adoption, agency banking volumes, and cost-to-income ratios, and possibly panel data across multiple banks to improve generalizability.

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