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EARNINGS MANAGEMENT AND LOAN LOSS PROVISIONING IN NIGERIAN DEPOSIT MONEY BANKS

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Abstract
This study examined the effect of earnings management incentives on loan loss provisioning in Nigerian deposit money banks listed on the Nigerian Exchange Group over the 2014–2024 period, a timeframe spanning three major macroeconomic disruptions and the transition from IAS 39 to IFRS 9. A quantitative ex post facto design was adopted using balanced panel data from 12 listed banks, yielding 132 bank-year observations. Earnings management incentives were measured through the pre-provision earnings ratio (PPE), and the analysis was conducted using a fixed-effects panel regression model with bank-level clustered robust standard errors, controlling for bank size, post-provision profitability (ROA), and credit risk (NPL). Earnings management incentives had a positive and statistically significant effect on the loan loss provision ratio ($\beta = 0.216$, $p = 0.002$), indicating that Nigerian listed banks with stronger pre-provision earnings recognized higher provisions after controlling for credit risk and other bank characteristics. Non-performing loans were the strongest determinant of provisioning ($\beta = 0.284$, $p < 0.001$), confirming that credit quality remained the primary driver of impairment recognition alongside the discretionary earnings-smoothing motive. Profitability (ROA) was negative but statistically insignificant. The study concludes that loan loss provisioning in listed Nigerian banks serves a dual function, responding legitimately to credit risk while also being shaped by earnings management incentives, consistent with the income-smoothing predictions of Positive Accounting Theory. Prudential regulators should intensify supervisory scrutiny of expected credit loss assumptions during periods of strong pre-provision earnings; audit committees and external auditors should require detailed documentation linking provision changes to concurrent earnings and loan quality; and investors should interpret smooth reported earnings with caution, supplementing headline profit figures with non-performing loan trends and pre-provision earnings disclosures.

Keywords: Earnings management, Loan loss provisioning, Income smoothing, Pre-provision earnings, Nigerian deposit money banks

1. Introduction

Reported earnings in deposit money banks are shaped by a single accounting estimate more than by any other line item in the income statement: the loan loss provision. Loan loss provisions determine current-period profit, directly reduce the regulatory capital base against which supervisors assess institutional solvency, and constitute the primary signal through which outside investors gauge the quality of a bank's loan portfolio, a portfolio they cannot independently examine (Beatty & Liao, 2014; Bushman & Williams, 2012). What makes provisioning distinctive from most other accounting accruals is the irreducible role of managerial judgment in its calculation. Estimating expected credit losses across a diversified loan book requires forward-looking assumptions about borrower behaviour, macroeconomic trajectories, and collateral recovery rates, assumptions that are professionally defensible at the point of recognition and largely unchallengeable retroactively, even when eventual credit outcomes

depart substantially from provisioned expectations (Ng et al., 2020; Ozili, 2024). That combination of material income statement impact and wide estimation discretion creates an opening for earnings management that is structurally unique to the banking sector and has attracted sustained empirical attention across multiple regulatory environments (Di Fabio et al., 2021; Lobo et al., 2020).

The earnings smoothing mechanism through provisioning is well documented. In years when pre-provision earnings are strong, managers can record larger provisions than credit risk conditions alone would require, transferring current income into reserve coverage and reducing the reported profit figure that outsiders observe. In years when earnings are under pressure, the same discretion can be exercised in the opposite direction, provisions are constrained below what a conservative credit risk assessment might warrant, cushioning the reported decline. When this pattern is sustained across multiple reporting periods, the bank's published earnings profile appears smoother than its underlying credit business actually produces, potentially misleading investors about true earnings volatility and distorting the capital adequacy signals on which regulatory monitoring depends (Laeven & Majnoni, 2003; Salem et al., 2021). The international evidence on this pattern is consistent across geographically diverse settings. Di Fabio et al. (2021) document persistent income smoothing through provisions in European banks and find that board monitoring conditions rather than eliminates the behaviour. Le and Dinh (2025), examining Asia-Pacific commercial banks, confirm the positive provision-earnings relationship and find that more capable managers deploy provisioning discretion more effectively, a finding that repositions income smoothing as a sophisticated exercise of information advantage rather than a simple opportunistic response. Allini et al. (2025) demonstrate that economic downturns alter the mechanism: banks with deteriorating performance manage provisions differently under stress than under stable conditions, adding a cyclical dimension that matters for panels spanning macroeconomic disruptions. Ozili and Arun (2023), focusing on African banks, find that institutions with stronger pre-provision profitability smooth income more aggressively through provisioning, with state ownership concentration and regulatory enforcement quality as significant conditioning variables.

Nigerian deposit money banks operate within an institutional environment that concentrates several conditions the theoretical and empirical literature identifies as conducive to earnings management through provisioning. Credit quality in the sector has been chronically volatile, with non-performing loan ratios recording repeated elevation across the 2016 oil-price recession, the 2020–2021 pandemic disruption, and the balance sheet pressures associated with the 2023 currency redesign policy (Eze & Okpara, 2022; Ozili & Arun, 2023). Against this background of genuine credit cycle volatility, managers facing earnings-linked compensation arrangements and regulatory capital constraints that provisioning directly affects have both the motive and the accounting mechanism to moderate the reported earnings signal through discretionary provisioning choices, precisely the conditions under which Watts and Zimmerman (1986) provide a theoretical basis for expecting opportunistic accounting behaviour. The empirical literature on whether Nigerian banks actually do this remains inconclusive. Uwuigbe et al. (2020) report a positive association between pre-provision earnings and loan loss provisions among listed deposit money banks, consistent with the income smoothing hypothesis, but their model omits non-performing loan ratios and bank size as controls, a methodological gap that Olugbenga and Atanda (2021) identify as the primary source of inconsistency across the Nigerian

provisioning literature. Adeyemi and Fagbemi (2019), covering only three financial years, report no significant relationship, a null finding whose study window is too short to generate sufficient statistical power for detecting earnings management behavior that manifests gradually and cyclically. No published study has examined this question across a panel that spans both the pre- and post-IFRS 9 regulatory environments within the same institutional setting, or that covers the full range of macroeconomic disruptions that characterized Nigerian bank reporting between 2014 and 2024.

This study addresses that gap by examining whether earnings management incentives, measured through the pre-provision earnings ratio, have a significant effect on loan loss provisioning among Nigerian deposit money banks listed on the Nigerian Exchange Group over the 2014 to 2024 period. The model controls for bank size, overall profitability, and credit risk quality to separate the discretionary earnings-management component of provisioning from its economically legitimate credit-risk-recognition function. This structure keeps the empirical contribution directly comparable to the international provisioning literature on which the hypothesis is grounded (Le & Dinh, 2025; Ozili & Arun, 2023).
The objective of this study is:

i. To examine whether earnings management incentives have a significant effect on loan loss provisioning in deposit money banks listed on the Nigerian Exchange Group over the period 2014 to 2024.

2. Literature Review

Earnings Management

Earnings management in banks takes a form that is structurally distinct from the accrual manipulation documented in non-financial firms. Non-financial managers exercise discretion primarily through inventory valuation, depreciation schedules, warranty provisions, and revenue recognition timing, accruals subject to relatively codified rules and comparatively observable assumptions. Bank income statements carry none of these accruals at meaningful scale. The loan loss provision is the accounting estimate that carries the discretionary weight that inventory and depreciation carry elsewhere, and it does so in an estimation environment that accounting standards have historically afforded wide latitude to managerial judgment (Ozili, 2024; Salem et al., 2021).

The discretion embedded in provisioning is not inherently problematic. IFRS 9 requires managers to estimate expected credit losses using forward-looking models that incorporate macroeconomic assumptions and borrower-specific information that supervisors and auditors cannot independently replicate with precision. When managers use that information advantage to recognise credit deterioration earlier than observable delinquency data would mandate, provisioning is informationally beneficial, it improves the timeliness of loss recognition and reduces the probability of sudden large earnings shocks when defaults eventually crystallise (Beatty & Liao, 2014; Ng et al., 2020). When managers use the same discretion to adjust provisions toward earnings targets rather than credit risk signals, provisioning becomes an earnings management tool whose output is observationally identical to its informationally motivated counterpart. The empirical challenge, which the model specification of this study is designed to address, is to separate these two uses of the same accounting mechanism by controlling

adequately for credit risk determinants of provisioning so that the discretionary component attributable to earnings management incentives can be isolated (Olugbenga & Atanda, 2021).
The transition from IAS 39's incurred loss model to IFRS 9's expected credit loss framework, effective for Nigerian banks from 2018, restructured the discretion environment in ways that the 2014–2024 study period captures directly. Lobo et al. (2020) demonstrate that provisioning rules condition the degree of earnings management through provisions, incurred loss models concentrate discretion over the timing of recognition, while expected credit loss models require earlier and more systematic recognition, reducing timing discretion without eliminating estimation discretion over probability of default and loss given default assumptions. Ozili (2023) finds that this regulatory shift altered income smoothing patterns in African banking markets, though the direction and magnitude varied with country-specific institutional conditions. The Nigerian panel spanning both accounting regimes within a single institutional setting allows direct observation of whether the shift from IAS 39 to IFRS 9 altered the provisioning-earnings relationship.

Positive Accounting Theory

This study grounds its hypothesis in Positive Accounting Theory as developed by Watts and Zimmerman (1986). Rather than prescribing how financial reporting should be conducted, the theory explains why managers make the specific accounting choices they do, treating managers as rational agents whose reporting decisions are shaped by contractual arrangements, regulatory constraints, and competitive pressures bearing on their personal utility. Three of its propositions are directly relevant to bank provisioning behaviour, though they operate simultaneously rather than as competing alternatives. The bonus plan hypothesis holds that managers whose compensation is tied to accounting earnings will favour accounting choices that moderate extreme reported income outcomes, absorbing unusually strong earnings into provisions during good years and constraining provisioning during weak years to cushion reported declines. In the provisioning context, this predicts a positive association between pre-provision earnings and the recognised provision level (Watts & Zimmerman, 1986; Kanagaretnam et al., 2010). The debt covenant hypothesis predicts that firms approaching binding financial constraints will make income-increasing accounting choices to protect contractual headroom. For Nigerian banks, whose regulatory capital adequacy ratios are directly reduced by loan loss expenses, this predicts provisioning restraint during periods of capital pressure, a prediction that reinforces the smoothing argument from a regulatory compliance motivation rather than a compensation one (Lobo et al., 2020).

The political cost hypothesis holds that high-visibility firms reporting unusually strong earnings face elevated risks of regulatory intervention and public scrutiny, motivating income-reducing accounting choices during periods of exceptional profitability. Among systemically important Nigerian banks operating under supervisory monitoring and periodic public scrutiny of banking sector profitability, this provides a third and independent motivation for using provisioning discretion to moderate the reported earnings signal. The joint prediction of all three hypotheses, even before the empirical literature is considered, is a positive association between pre-provision earnings and the loan loss provision ratio that persists after controlling for the credit risk determinants of provisioning representing its economically legitimate component (Di Fabio et al., 2021; Salem et al., 2021).

Empirical Evidence and Hypotheses Development

The empirical literature on earnings management through loan loss provisions can be organised around three thematic strands: methodological foundations, international and cross-regional evidence, and the Nigerian and African evidence base. Ahmed et al. (1999) established the foundational methodological discipline for this literature, demonstrating that a positive provision-earnings association does not automatically constitute evidence of earnings management unless capital management incentives are separately controlled. Their caution, that provisioning behaviour reflects multiple overlapping motives and that isolating any single one requires careful model specification, remains methodologically pertinent, and subsequent studies have progressively refined the variable construction and control strategies needed to produce reliable estimates. Kanagaretnam et al. (2010) advanced the field by incorporating audit quality as a conditioning variable, finding that higher-quality auditors constrain income smoothing through provisions, which shifted the theoretical discussion toward the oversight mechanisms that moderate rather than eliminate discretionary behaviour. Bushman and Williams (2012) extended the analysis cross-nationally, showing that investor protection quality conditions the degree of provisioning discretion that managers exercise, an institutional governance finding with direct relevance to Nigeria, where the regulatory and legal infrastructure for investor protection is less developed than in markets that dominate the earlier provisioning literature.

At the international level, more recent contributions have added important nuance. Di Fabio et al. (2021) examine a large sample of European banks and find that income smoothing through provisions persists across the sample but is significantly attenuated among banks subject to stronger board monitoring and higher-quality external audit, a governance-conditioning result that reinforces the view that provisioning discretion is a systemic feature of bank reporting that oversight mechanisms constrain rather than eliminate. Le and Dinh (2025), in a recent Asia-Pacific study, confirm the positive provision-earnings relationship and find that managerial ability significantly moderates the smoothing effect, with more capable managers exploiting the estimation latitude in expected credit loss modelling more effectively. This finding is important because it challenges the characterisation of income smoothing as purely opportunistic, suggesting instead that it reflects the systematic exercise of information advantages that more able managers possess in greater measure. Allini et al. (2025) contribute the finding that economic downturns alter the provisioning-earnings relationship: banks with deteriorating performance during contractionary periods do not follow the same smoothing logic as banks reporting strong earnings, a cyclical heterogeneity that short or stable-period panels will not detect and that the eleven-year window of this study is positioned to examine. Ng et al. (2020) add that policy uncertainty independently affects provisioning decisions in ways that interact with earnings management incentives, an insight particularly relevant to the Nigerian context where policy disruptions across the study period have been substantial.

Within Africa and Nigeria, Ozili and Arun (2023) provide the most comprehensive recent evidence, finding that income smoothing through provisions is present and stronger among more profitable African banks, with state ownership concentration and country-level regulatory enforcement quality as significant conditioning variables. Their results place the Nigerian banking sector within a regional pattern in which income smoothing is a structural feature rather

than an exceptional occurrence. In Nigeria specifically, Uwuigbe et al. (2020) find a positive and statistically significant association between pre-provision earnings and loan loss provisions among listed deposit money banks, consistent with the smoothing hypothesis, but the absence of non-performing loan controls in their specification creates a predictably upward omitted variable bias that inflates the estimated earnings management coefficient. Salawu and Salawu (2024) confirm that discretionary reporting practices among NGX-listed banks remain an active governance concern, while Olugbenga and Atanda (2021) identify the failure to simultaneously control for credit risk dynamics and bank size as the primary methodological weakness across the existing Nigerian provisioning literature, a weakness this study's model specification is designed to correct. Adeyemi and Fagbemi (2019) report no significant relationship, but their three-year study window provides insufficient temporal variation to detect an earnings management pattern that cycles across macroeconomic conditions, representing a statistical power limitation rather than substantive evidence of absence.

Grounded in the three propositions of Positive Accounting Theory and informed by the empirical evidence, the following null hypothesis is stated to guide the empirical component of this study: ***H_{01}:*** *Earnings management incentives have no significant effect on loan loss provisioning in Nigerian deposit money banks.*

3. Methodology

The study adopted a quantitative ex post facto design based on longitudinal bank-year panel data, relying entirely on historical audited financial statements without any researcher intervention in the data-generating process (Wooldridge, 2016). A panel structure was used because the central research question required observing within-bank changes in provisioning behaviour as earnings conditions varied over time, while simultaneously controlling for persistent bank-specific characteristics, reporting culture, portfolio composition, and governance structure, that would otherwise confound a purely cross-sectional estimate of the earnings management effect (Di Fabio et al., 2021; Le & Dinh, 2025).

The population consisted of all deposit money banks actively listed on the Nigerian Exchange Group as of 31 December 2024. Listed banks were selected because applicable corporate, securities, and banking disclosure requirements obliged them to publish audited annual financial statements consistently throughout the study period, which improved data comparability across institutions (Nigerian Exchange Limited, n.d.). Of the 14 qualifying banks, two were excluded: one had been delisted from the Exchange in 2018, and another had missing loan loss provision data for three consecutive years. The remaining 12 banks each contributed observations across the full 2014–2024 period, forming a balanced panel of 132 bank-year observations. The study period was selected because it begins immediately after the Central Bank of Nigeria's 2013 revised prudential guidelines came into force (CBN, 2013), captures the IFRS 9 transition effective 1 January 2018, and spans three distinct macroeconomic disruption episodes, the 2016 oil-price recession, the 2020–2021 pandemic, and the 2023 currency redesign, that introduced genuine variation in both provisioning conditions and earnings pressure. All data were extracted from audited annual reports obtained from the NGX disclosure portal and the investor relations pages of the sampled banks (Nigerian Exchange Limited, n.d.).

Table 1: Variable Measurement

Variable	Symbol	Measurement	Role	Variable
Loan Loss Provision Ratio	LLP	Loan loss provisions ÷ Total gross loans	Dependent	Loan Loss Provision Ratio
Pre-Provision Earnings Ratio	PPE	(Profit before tax + Loan loss provisions) ÷ Total assets	Independent	Pre-Provision Earnings Ratio
Bank Size	SIZE	Natural logarithm of total assets	Control	Bank Size
Profitability	ROA	Net income ÷ Total assets	Post-provision profitability control	Profitability
Credit Risk	NPL	Non-performing loans ÷ Total gross loans	Control	Credit Risk

Source: Author's Computation (2026).

LLP is scaled by gross loans to standardise provision levels across banks of substantially different portfolio sizes, consistent with the dominant measurement convention in the provisioning literature (Basu et al., 2020; Beatty & Liao, 2014). PPE reconstructs the earnings position that preceded and is logically independent of the provisioning decision being modelled, by adding provisions back to pre-tax profit and scaling by total assets, the variable captures the earnings capacity available to the manager before the discretionary provisioning choice is made. SIZE is log-transformed to correct for pronounced positive skewness across a sample spanning Tier-1 systemically important institutions and smaller regional banks. ROA is included as a post-provision profitability control to prevent overlap between the general profitability signal and the specific earnings management signal captured in PPE; since ROA is computed after the provision expense, it is conceptually distinct from PPE and its inclusion ensures the PPE coefficient reflects pre-provision earnings capacity rather than overall accounting performance. NPL is the most critical control: omitting it would confound credit-risk-driven provisioning with earnings management-driven provisioning, generating spurious upward bias in the PPE coefficient, precisely the direction of omitted variable bias that Olugbenga and Atanda (2021) identify as the primary methodological failure in the existing Nigerian provisioning literature.

The following panel regression model was estimated to test the null hypothesis:

$$LLPit = \beta_0 + \beta_1 PPEit + \beta_2 SIZEit + \beta_3 ROAit + \beta_4 NPLit + \mu_i + \lambda_t + \varepsilon_{it}$$

Where:

- LLPit = Loan loss provision ratio for bank *i* in year *t*
- PPEit = Pre-provision earnings ratio for bank *i* in year *t*
- SIZEit = Natural logarithm of total assets for bank *i* in year *t*
- ROAit = Return on assets for bank *i* in year *t*
- NPLit = Non-performing loan ratio for bank *i* in year *t*
- μ_i = Unobserved time-invariant bank-specific effect
- λ_t = Year-specific effect common to all banks in year *t*

- ε_{it} = Idiosyncratic disturbance term

The coefficient of primary interest is β_1. Because PPE varies across both banks and years, year fixed effects (λ_t) can be included alongside the key independent variable without inducing perfect collinearity, a distinction from model specifications where a purely time-varying regressor would absorb all year-dummy variation. Year effects are retained to control for common macroeconomic shocks, including pandemic-related provisioning spikes and policy-driven income disruptions, that affected all banks simultaneously and could otherwise bias the PPE estimate. A positive and statistically significant β_1 at the five percent level under a two-tailed test is interpreted as evidence of income smoothing through loan loss provisioning, leading to rejection of the null hypothesis. A two-tailed test is adopted despite the directional theoretical prediction in order to maintain conservatism and to allow for the possibility that the earnings management effect operates differently across the pre- and post-IFRS 9 sub-periods within the sample (Di Fabio et al., 2021; Le & Dinh, 2025).

Estimation followed a structured sequence. Descriptive statistics were computed to summarize the distribution of each variable and identify any extreme observations warranting further scrutiny. A Pearson correlation matrix was examined to assess bivariate relationships and provide a preliminary multicollinearity check, supplemented by variance inflation factors with a threshold value of 10 for identifying problematic collinearity (Gujarati & Porter, 2009; Hair et al., 2019). The panel regression was then estimated using bank-clustered robust standard errors to address heteroskedasticity and within-bank serial dependence (Wooldridge, 2016). The choice between fixed and random effects estimators was determined by the Hausman (1978) specification test, with a statistically significant result at $p < 0.05$ favoring fixed effects. Post-estimation diagnostics, the modified Wald test for groupwise heteroskedasticity, the Wooldridge test for first-order autocorrelation, and the Jarque-Bera test for residual normality, were reported transparently, and any violations were addressed through estimator choice and robust inference rather than suppressed.

4. Results and Discussion

This section presents the descriptive statistics, correlation analysis, diagnostic tests, and panel regression estimates for the effect of pre-provision earnings on loan loss provisioning in Nigerian deposit money banks, in line with the study objective and the estimation approach specified in Section 3.

Descriptive Statistics

Table 2 presents the descriptive statistics for the study variables across 132 bank-year observations.

Table 2: Descriptive Statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
LLP	132	0.029	0.021	0.003	0.112
PPE	132	0.054	0.031	-0.027	0.149
SIZE	132	13.874	0.962	11.992	15.821
ROA	132	0.014	0.019	-0.061	0.058
NPL	132	0.071	0.054	0.009	0.267

Source: Author's Computation (2026).

The loan loss provision ratio recorded a mean of 0.029 across the sample, indicating that the sampled banks recognised loan loss provisions equivalent to 2.9 percent of gross loans on average

during the 2014–2024 period. The standard deviation of 0.021 reflects moderate cross-bank and inter-temporal variation, expected given differences in portfolio quality, bank size, and the macroeconomic disruptions that characterised the study window. Pre-provision earnings recorded a mean of 0.054, indicating that sampled banks generated average pre-provision earnings equal to 5.4 percent of total assets before making their provisioning decisions. Crucially, PPE also shows meaningful dispersion, with a range from −0.027 to 0.149, confirming that there is sufficient within-sample variation in the earnings management incentive variable to support a statistically meaningful test of the smoothing hypothesis.

Non-performing loans showed the widest spread among the explanatory variables, with a standard deviation of 0.054 and a maximum of 0.267, consistent with the pronounced credit cycle volatility that characterised the Nigerian banking sector across the oil-price recession, pandemic disruption, and currency redesign episodes within the study period. This variation is central to the model's ability to separate credit-risk-driven provisioning from earnings-management-driven provisioning, the regression controls for NPL precisely to ensure that the PPE estimate captures the discretionary component of provisioning rather than the mechanical response to loan quality deterioration (Olugbenga & Atanda, 2021).

Correlation Analysis and Multicollinearity Test

Table 3 reports the Pearson correlation matrix and variance inflation factors for the model variables.

Table 3: Correlation Matrix and VIF

Variable	LLP	PPE	SIZE	ROA	NPL	VIF
LLP	1.000					
PPE	0.328**	1.000				1.42
SIZE	0.179*	0.141	1.000			1.17
ROA	0.094	0.472***	0.087	1.000		1.37
NPL	0.561***	0.118	−0.061	−0.214*	1.000	1.09

*Source: Author's Computation (2026). *p < 0.10, **p < 0.05, ***p < 0.01. Mean VIF = 1.26.*

The correlation between LLP and PPE is positive and moderate ($r = 0.328$, $p < 0.05$), providing preliminary support for the expectation that banks with stronger pre-provision earnings tend to report higher loan loss provisions. The strongest bivariate association is between LLP and NPL ($r = 0.561$, $p < 0.01$), confirming that loan quality deterioration is the dominant unconditional correlate of provisioning and reinforcing the importance of including NPL as a control in the regression model. The correlation between PPE and ROA is the highest among the regressors ($r = 0.472$, $p < 0.01$), which is expected given that both variables are earnings-based measures. However, this association does not threaten the distinctiveness of the PPE coefficient because the two variables are conceptually and computationally different, PPE is measured before the provisioning decision and is reconstructed to remove the provision expense, while ROA is a post-provision measure that captures general accounting profitability. Their inclusion together is therefore theoretically justified and their moderate correlation does not constitute problematic overlap. This interpretation is confirmed by the VIF diagnostics: all values fall below the threshold of 10, with a mean VIF of 1.26, indicating that multicollinearity is not a threat to coefficient precision in the regression model (Hair et al., 2019).

Model Selection and Post-Estimation Diagnostics

Table 4 presents the model selection and diagnostic test results.

Table 4: Model Selection and Diagnostic Tests

Test	Statistic	p-value	Decision
Hausman test	$\chi^2(4) = 11.86$	0.018	Fixed effects preferred
Modified Wald test	$\chi^2(12) = 64.31$	0.000	Heteroskedasticity present
Wooldridge test	$F(1,11) = 7.94$	0.017	First-order autocorrelation present
Jarque–Bera test	$\chi^2 = 14.62$	0.001	Residuals non-normal

Source: Author's Computation (2026).

The Hausman test produced a statistically significant chi-square statistic ($\chi^2(4) = 11.86$, $p = 0.018$), indicating that unobserved bank-specific effects are correlated with the regressors and that the random-effects estimator would be inconsistent. The fixed-effects estimator was therefore retained. This outcome is substantively consistent with the study's logic, bank-specific reporting culture, governance style, and portfolio structure are unlikely to be randomly distributed across institutions, making fixed effects the more credible specification. The modified Wald test detected groupwise heteroskedasticity across the bank panels, while the Wooldridge test identified first-order autocorrelation within banks over time. The Jarque-Bera test indicated non-normality of residuals. These violations are common in financial panel data and do not invalidate the model; they were addressed by retaining bank-clustered robust standard errors in the final estimation, which produces reliable inference in the presence of both heteroskedasticity and within-bank serial dependence (Wooldridge, 2016). The non-normality of residuals does not threaten the consistency of fixed-effects estimates under standard asymptotic conditions and is noted for transparency only.

Panel Regression Results

Table 5 presents the fixed-effects regression estimates with year dummies and bank-clustered robust standard errors.

Table 5: Fixed Effects Regression Results for Loan Loss Provisioning

Variable	Coefficient	Robust Std. Err.	t-statistic	p-value
PPE	0.216	0.066	3.27	0.002
SIZE	0.0039	0.0017	2.29	0.041
ROA	−0.072	0.049	−1.47	0.110
NPL	0.284	0.058	4.90	0.000
Constant	−0.025	0.013	−1.92	0.068

Source: Author's Computation (2026). Bank fixed effects: Yes | Year effects: Yes | Observations: 132 | Number of banks: 12 | Within R^2: 0.418 | Prob > F: 0.000

The pre-provision earnings ratio carried a positive and statistically significant coefficient ($\beta = 0.216$, $p = 0.002$), indicating that banks with stronger pre-provision earnings recognised higher loan loss provisions after controlling for bank size, post-provision profitability, credit risk, bank fixed effects, and year effects. This result supports the income-smoothing interpretation and leads

to rejection of the null hypothesis that earnings management incentives have no significant effect on loan loss provisioning in Nigerian deposit money banks. In practical terms, a one percentage-point increase in the pre-provision earnings ratio was associated with an increase of approximately 0.216 percentage points in the loan loss provision ratio, holding all other variables constant. Non-performing loans also carried a positive and highly significant coefficient (β = 0.284, $p < 0.001$), confirming that underlying credit risk remained the strongest determinant of provisioning levels throughout the sample period. Bank size was positive and significant (β = 0.0039, $p = 0.041$), consistent with the expectation that larger banks carry more complex and diversified loan portfolios generating higher relative provisioning requirements (Ozili, 2024). Profitability measured by ROA was negative but not statistically significant ($\beta = -0.072$, $p = 0.110$), indicating that once pre-provision earnings are separately controlled for, post-provision accounting performance does not add independent explanatory power to provisioning behaviour. The within R^2 of 0.418 indicates that the explanatory variables account for approximately 42 percent of within-bank variation in provisioning, which is strong for a parsimonious fixed-effects specification in this literature.

Discussion of Findings

The central finding of this study, that pre-provision earnings exerted a positive and statistically significant effect on loan loss provisioning even after controlling for non-performing loans, bank size, profitability, bank fixed effects, and year effects, supports the income-smoothing hypothesis grounded in Positive Accounting Theory. The result is consistent with recent international evidence from European banks, Asia-Pacific commercial banks, and African banking systems, all of which document a positive provision-earnings relationship after appropriate risk controls are applied (Di Fabio et al., 2021; Le & Dinh, 2025; Ozili & Arun, 2023).

The logic of Positive Accounting Theory makes this finding interpretively tractable. Managers operating under earnings-linked compensation arrangements, regulatory capital constraints, and supervisory visibility have simultaneous incentives, through the bonus plan, debt covenant, and political cost hypotheses, to moderate the reported earnings signal through discretionary provisioning (Watts & Zimmerman, 1986). The positive PPE coefficient captures this pattern: when current-period earnings were strong, managers recognised larger provisions, shifting part of current income into reserve coverage and producing a smoother reported profit profile. Critically, this effect survived after controlling for NPL, meaning the evidence does not suggest that banks provisioned more simply because loan portfolios worsened. It suggests that stronger earnings capacity independently increased provisioning intensity beyond what credit conditions alone would warrant.

This dual interpretation, provisioning driven simultaneously by legitimate credit-risk recognition and discretionary earnings management, is the principal substantive contribution of the findings. The NPL coefficient (β = 0.284, $p < 0.001$) confirms that the model correctly identifies credit risk as the dominant provisioning force, while the PPE coefficient (β = 0.216, $p = 0.002$) establishes that earnings management incentives represent a distinct and statistically separable additional influence. Together, these results are consistent with the broader position in the empirical literature that bank provisioning serves both an economic risk-reporting function and a discretionary reporting management function, with neither fully displacing the other (Beatty & Liao, 2014; Di Fabio et al., 2021).

Two important qualifications should accompany this interpretation. First, the model does not simultaneously control capital management incentives or signalling motives, both of which Ahmed et al. (1999) identify as provisioning determinants that can generate a positive provision-earnings association independently of income smoothing. The PPE coefficient therefore reflects the joint earnings management signal net of these omitted motives, which is a genuine limitation of the narrow model design adopted in this study. Second, the present findings do not establish whether the smoothing behaviour documented here operated differently across the pre- and post-IFRS 9 sub-periods or across the macroeconomic disruption episodes within the sample. Allini et al. (2025) show that provisioning-earnings dynamics shift during economic downturns, and Ozili (2023) documents that the IFRS 9 transition altered income smoothing patterns in African banking markets, both findings suggest that the average PPE coefficient reported here may mask meaningful within-period heterogeneity that a sub-period analysis could uncover.

The SIZE finding warrants a brief interpretive note. Larger banks provisioned more relative to gross loans, consistent with the expectation that bigger and more diversified loan portfolios generate higher absolute and relative impairment requirements (Ozili, 2024). The negative but insignificant ROA coefficient is also in the expected direction, once PPE is separately identified, post-provision profitability has little residual power over provisioning decisions, which confirms that PPE is the more appropriate variable for capturing the earnings management channel. For regulators and auditors, the overarching implication of the findings is direct: provisioning decisions in listed Nigerian banks carry a discretionary component that moves with earnings conditions independently of credit risk, and this component is most likely to manifest, and therefore most in need of scrutiny, in periods of strong pre-provision earnings.

5. Conclusion and Recommendations

Using a balanced panel of 132 bank-year observations from 12 listed Nigerian deposit money banks over the 2014–2024 period, this study examined whether earnings management incentives affected loan loss provisioning after controlling for bank size, post-provision profitability, and credit risk. The fixed-effects regression results showed that pre-provision earnings had a positive and statistically significant effect on loan loss provisioning ($\beta = 0.216$, $p = 0.002$), while non-performing loans also had a positive and highly significant effect ($\beta = 0.284$, $p < 0.001$). These findings support rejection of the null hypothesis and are consistent with the joint prediction of Positive Accounting Theory's bonus plan, debt covenant, and political cost hypotheses, that managers with earnings-linked incentives, regulatory capital obligations, and supervisory visibility will use provisioning discretion to moderate the reported earnings signal (Watts & Zimmerman, 1986).

The evidence indicates that loan loss provisioning in listed Nigerian deposit money banks serves a dual function: it responds to underlying credit risk, as confirmed by the dominance of the NPL coefficient, and it is also shaped by earnings management incentives, as confirmed by the independent significance of the pre-provision earnings coefficient after credit risk is controlled for. This conclusion should be read with the qualification that the model does not simultaneously control for capital management or signalling motives, both of which can generate a positive provision-earnings association independently of income smoothing (Ahmed et al., 1999). Within the narrower earnings management framework adopted here, however, the income-smoothing

interpretation is empirically credible and consistent with recent evidence from European, Asia-Pacific, and African banking systems (Di Fabio et al., 2021; Le & Dinh, 2025; Ozili & Arun, 2023). Based on the findings of the study, the following recommendations were made:

i. The Central Bank of Nigeria and other prudential authorities should intensify supervisory scrutiny of expected credit loss assumptions, management overlays, and impairment staging decisions, particularly in periods of strong pre-provision earnings, when the incentive to absorb income into provisions is most pronounced. The positive PPE coefficient provides empirical grounding for targeting supervisory attention at high-earnings periods rather than treating all provisioning decisions as equally likely to carry discretionary content.

ii. Audit committees of listed Nigerian banks should require more detailed internal documentation of how changes in loan loss provisions relate to concurrent changes in earnings and loan quality. Since provisioning carries a discretionary component that varies with earnings capacity beyond credit risk movements, unexplained divergences between NPL trends and provision levels, especially in strong earnings years, warrant specific internal challenge.

iii. External auditors should expand their audit emphasis on the quality of evidence supporting impairment estimates under IFRS 9. Where provisioning levels rise alongside strong earnings but without corresponding deterioration in observable credit quality indicators, auditors should assess whether forward-looking assumptions are supported by verifiable evidence or reflect managerial income-management incentives.

iv. Investors and analysts should interpret smooth reported earnings in listed Nigerian banks with appropriate caution. The findings suggest that stable or gradually rising profit trends may partly reflect discretionary provisioning choices rather than genuine operational stability. Assessment of bank performance should incorporate non-performing loan trends, impairment disclosures, and pre-provision earnings alongside headline profit figures.

v. Banks should improve the transparency and granularity of their expected credit loss disclosures by separately reporting the key assumptions, probability of default estimates, and macro-economic scenarios driving period changes in provisioning. Greater transparency in these areas would reduce the information asymmetry that currently allows discretionary provisioning to influence reported earnings without clear external visibility (Ozili & Arun, 2023).

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