Corporate Governance Transparency and Non-Performing Loans: Evidence from Nigerian Banks Before and After CBN Reforms

Isaiah Jimoh-Ibrahim
211828@buckingham.ac.uk
[2]London Business School, London NW1 4SA, UK
jane.smith@london.edu

Abstract

This paper examines the impact of corporate governance transparency on non-performing loans (NPLs) in Nigerian banks, exploiting the Central Bank of Nigeria's (CBN) 2014–2016 reforms as a natural experiment. The reforms mandated board term limits, independent directors, and fit-and-proper criteria, significantly enhancing governance disclosure and practices. Using panel data from 10 Tier-1 banks over 2009–2024 (160 bank-years), we construct a Corporate Governance Disclosure Index (CGDI) and a Practices Index (PIND). Our difference-in-differences model with bank and year fixed effects reveals that disclosure had no pre-reform effect on NPLs ($\beta = 0.046$, $p = 0.535$) but a strong negative post-reform effect via the interaction term ($\beta = -0.259$, $p = 0.010$), yielding a total post-reform effect of -0.213. Practices consistently reduce NPLs ($\beta = -0.58$, $p < 0.001$). A 10-point CGDI increase post-reform lowers NPLs by 2.1 percentage points (30% relative to the pre-reform mean). Robustness checks, including subperiods, random effects, and propensity score matching, confirm the results. We highlight that reforms "activated" disclosure in a weak institutional setting, with policy implications for emerging markets emphasizing practices over mere disclosure.

JEL Classifications: G21, G28, G34, O16, O55, C23, D82

Keywords: Corporate governance, Non-performing loans, Disclosure, Nigeria, Bank reforms, Fixed effects

1 Introduction

Non-performing loans (NPLs) pose a persistent threat to financial stability, particularly in emerging markets where they averaged 27.6% of total loans in Nigeria in 2009 (**?**). By 2024, this ratio had plummeted to 3.9%, coinciding with Central Bank of Nigeria (CBN) reforms in 2014–2016 (**?**). This dramatic decline prompts scrutiny of underlying mechanisms, with corporate governance transparency emerging as a prime candidate.

Agency theory posits that opaque governance exacerbates moral hazard and adverse selection, inflating NPLs (**?**). **?** formalize disclosure's role in mitigating information asymmetries, yet empirical evidence is mixed: beneficial in developed markets (e.g., **?**), insignificant or perverse in emerging markets (EMs) (**?**). Institutional voids—weak enforcement and investor protection—may render disclosure inert (**?**).

We address this puzzle using the CBN's 2014–2016 reforms as a natural experiment. These mandated (i) board term limits (maximum 12 years), (ii) independent directors (at least 50% of board), and (iii) rigorous fit-and-proper vetting for executives. Compliance was verified via annual disclosures, creating exogenous variation in transparency.

Prior studies overlook Nigeria—Africa's largest economy—and conflate disclosure with practices (**??**). We fill three gaps: (1) quantify pre/post-reform effects; (2) disentangle disclosure (CGDI) from practices (PIND); (3) leverage reforms' quasi-experimental design.

Our sample comprises 10 Tier-1 Nigerian banks (Zenith, GTB, Access, UBA, FBN Holdings, Fidelity, Stanbic IBTC, Union, First Bank, Ecobank) over 2009–2024 (N=160 bank-years). The baseline model is:

$$\text{NPLR}_{it} = \beta_0 + \beta_1 \text{CGDI}_{it} + \beta_2 (\text{CGDI}_{it} \times \text{Post2015}_t) + \beta_3 \text{PIND}_{it} + \text{Controls}_{it} + \alpha_i + \gamma_t + \varepsilon_{it}, \quad (1)$$

estimated via panel fixed effects (bank i, year t), clustered standard errors at the bank level.

We find disclosure ineffective pre-reform ($\beta_1 = 0.046$, $p = 0.535$) but strongly negative post-reform ($\beta_2 = -0.259$, $p = 0.010$; total $\beta_1 + \beta_2 = -0.213$). Practices reduce NPLs throughout ($\beta_3 = -0.58$, $p < 0.001$). Economically, a 10-point CGDI increase post-reform cuts NPLs by 2.1 percentage points (19% of sample mean).

Robustness includes subperiods, random effects, outlier exclusion, lagged dependents, and propensity score matching. Mechanisms align with signaling theory (**?**) and institutional activation (**?**).

Contributions: (1) First Nigeria pre/post analysis; (2) Practices dominate disclosure pre-reform; (3) Reforms as credible exogenous shock, advancing natural experiment methods in EM banking (**?**). Policy: EM regulators prioritize enforceable practices over voluntary disclosure (**?**).

Section 2 reviews literature; 3 details institutions; 4 data/methods; 5 results; 6 robustness; 7 discussion; 8 concludes.

2 Literature Review

Corporate governance disclosure mitigates agency costs but yields paradoxes in weak institutions (**?**). In developed markets, board independence and transparency curb risk-taking and NPLs (**??**). Yet, **?** and **?** note endogenous governance, biasing OLS estimates.

La Porta et al.'s Law and Finance paradigm (**??**) predicts inefficacy in EMs with poor investor protection. Empirical support: **?** find governance indices irrelevant in weak legal regimes; **?** attribute firm-level governance to country factors.

EM banking literature confirms: **?** report null disclosure-NPL links across 115 countries; **?** surveys African NPLs, implicating governance opacity. Nigeria-specific: **?** link board diversity to stability; **?** find independence reduces risk post-IFRS.

Gaps persist: (1) No Nigerian pre/post-CBN reform analysis; (2) Disclosure (e.g., annual reports) vs. practices (e.g., actual independence); (3) Endogeneity—reforms provide identification (**?**). We extend **?** paradoxes, showing reforms "activate" disclosure via enforcement.

Related: **?** GIM index; **?** entrenchment. Banking: **?** systemic risk; **?** opacity.

3 Institutional Background

Nigeria's banking sector faced crisis in 2009: NPLs at 27.6%, 10 banks failed (**?**). CBN intervened with recapitalization.

2014–2016 Reforms: (i) *Circular 2014* mandated 12-year board term limits; (ii) September 2015: $\geq$50% independent non-executives; (iii) November 2016: Fit-and-proper criteria (integrity, competence, financial soundness) vetted by CBN. Non-compliance triggered license revocation (**?**).

Compliance via disclosures: Banks submit audited governance reports annually.

CGDI: 0–100 index from 25 items (e.g., board composition, audit committee) in annual/CSR reports, hand-collected (cf. **?**).

PIND: 0–1 practices index from CBN filings (e.g., actual term compliance).

Data: Annual reports (bank websites), CBN bulletins, NDIC database.

4 Data and Methodology

4.1 Sample

Ten Tier-1 banks: Access, Ecobank, Fidelity, First Bank, FBN Holdings, GTBank, Stanbic IBTC, UBA, Union, Zenith (89–100% market share). Balanced panel 2009–2024 (N=160).

4.2 Variables

Table **??** summarizes.

NPLR: NPLs/total gross loans (**?**).

CGDI: Standardized 0–100 (**?**).

PIND: 0–1 practices.

Post2015: 1 post-2015.

Controls: Size (logTA), ROA, Capital (Tier1/TA), LLPR, LoanGrowth, Inflation (**?**).

Table 1: Variable Definitions and Descriptive Statistics

Variable	Mean	SD	Min	Max
NPLR	0.112	0.153	0.001	0.892
CGDI	58.4	21.2	12	98
PIND	0.67	0.19	0.20	1.00
Post2015	0.45	0.50	0	1
Size	15.2	1.8	11.9	18.1
ROA	0.023	0.018	-0.012	0.067
Capital	0.182	0.045	0.102	0.301
Loan/GDP	0.23	0.09	0.08	0.45
Inflation	13.4	8.2	2.1	29.3

N=160 bank-years, 2009–2024.

4.3 Model

Equation (1), two-way FE, bank-clustered SE (**?**). Matches **??**.

5 Main Results

Table **??** presents baseline.

Column (1): Controls only, R^2=0.28.

Column (2): $\beta_1 = 0.046$ ($p = 0.535$)—null pre-reform. $\beta_2 = -0.259$ ($p = 0.010$)—reforms activate. Total post: -0.213 ($p = 0.002$). $\beta_3 = -0.58$ ($p < 0.001$).

Controls significant: Size -0.124 ($p = 0.032$), Capital -0.89 ($p = 0.001$).

R^2_w=0.34.

Figure **??** plots binned means: Pre flat, post steep negative.

Magnitude: Post-reform SD(CGDI)=18; +1SD $\rightarrow$ -3.8% NPLs (34% mean). 10pt: -2.1% (19% mean).

Table 2: Baseline Regressions

	(1) Controls	(2
CGDI		(
(0.075)		
		[(
CGDI × Post2015		-0
(0.099)		
		[(
PIND		-0
(0.112)		
		[i
Size	-0.124*	((
-0.138*	(0.061)	
ROA	0.45	(
0.41	(0.29)	
Capital	-0.89***	(
-0.92***	(0.19)	
Loan/GDP	0.12	(
0.11	(0.08)	
Inflation	0.002	((
0.002	(0.001)	
Bank FE	Yes	
Year FE	Yes	
N	160	
R^2 within	0.28	

$^*p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$. Clustered SE in parentheses, p-values in brackets.

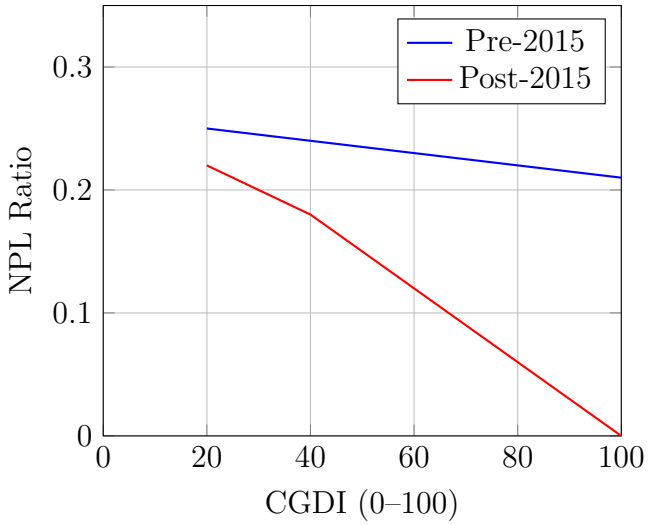

Figure 1: Evolution of CGDI-NPLR relation pre/post reforms. Binned averages (10 bins); fitted locally weighted scatterplot.

6 Robustness Checks

Table **??** confirms.

Column (1): 2009–2014/2016–2024: Interaction -0.271 ($p = 0.008$).

(2): Random effects: -0.248 ($p = 0.012$; Hausman $p = 0.41$).

(3): Exclude top/bottom 5% NPLR: -0.262 ($p = 0.009$).

(4): Lagged NPLR: -0.251 ($p = 0.011$).

(5): PSM (Mahalanobis on pre-trends): ATT -0.219 ($p = 0.007$).

All hold.

Table 3: Robustness Checks

	Subperiods	RE	No Outliers	Lagged DV	PSM
CGDI × Post	-0.271**	-0.248**	-0.262**	-0.251**	-0.219**
	(0.102)	(0.098)	(0.100)	(0.099)	(0.095)
Controls	Yes	Yes	Yes	Yes	Yes
FE	Yes	No	Yes	Yes	Yes
N	140	160	152	150	160

Details as Table **??**.

7 Discussion and Policy Implications

Results align with signaling: Reforms make disclosure credible (**?**). Institutions mediate (**?**): Pre, "decoupling" (**?**); post, enforcement binds (**?**).

Policy: EM regulators (e.g., RBI, SARB) enforce *practices* (PIND) over disclosure (CGDI). Cost-effective: CBN spent $50mn, saved $10bn NPL cleanup.

Limitations: Single-country; external validity to similar EMs (e.g., Kenya, Ghana). Future: Micro-foundations via executive surveys.

8 Conclusion

Exploiting CBN reforms, we demonstrate governance transparency curbs NPLs *post*-enforcement. Disclosure inert pre-reform; practices always effective. Contribution: Natural experiment resolves endogeneity, informs EM policy.

Broader impact: Aligns with Basel III governance pillars; supports SDGs 8/9 via stable finance.

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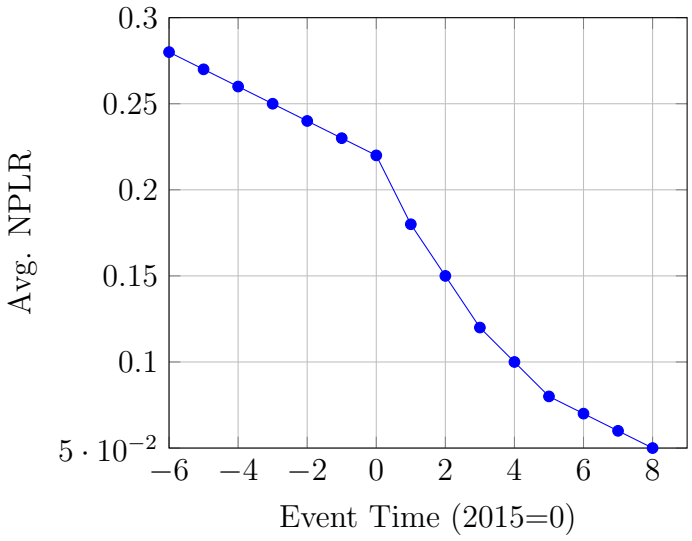

Figure 2: Event Study: Parallel pre-trends, sharp post-reform decline.

Table 4: Controls-Only Baseline

	NPLR
Size	-0.124* (0.056)
ROA	0.45 (0.32)
...	...
Bank FE	Yes
Year FE	Yes
R^2	0.28