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

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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 ($\beta = -0.582$, $p < 0.001$). 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 (Ozili, 2020). 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 (Jensen and Meckling, 1976). Bushman et al. (2003) formalize disclosure's role in mitigating information asymmetries, yet empirical evidence is mixed: beneficial in developed markets (Gompers et al., 2003), insignificant or perverse in emerging markets (EMs) (Klapper and Love, 2004). Institutional voids—weak enforcement and investor protection—may render disclosure inert (La Porta et al., 1998).

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 (Ozili, 2020; Gaganis et al., 2018). 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:

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

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 ($\beta_3 = -0.582$, $p < 0.001$). 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 (Pathan, 2009). Policy: EM regulators prioritize enforceable practices over voluntary disclosure (Bebchuk and Weisbach, 2010).

2 Literature Review

Corporate-governance transparency reduces information asymmetry, enabling external monitoring that curbs managerial risk-taking in lending (Bushman et al., 2003; **?**). Agency theory predicts that greater disclosure aligns manager and shareholder interests, lowering moral hazard and adverse selection (Jensen and Meckling, 1976). In developed markets, empirical support is strong: higher disclosure indices correlate with lower credit risk and NPLs (Gompers et al., 2003; Pathan, 2009; de Andres and Vallelado, 2008).

Emerging-market evidence is far less conclusive. Weak legal enforcement and investor protection often render disclosure "cheap talk" (La Porta et al., 1998; Klapper and Love, 2004). Doidge et al. (2007) show that country-level institutions dominate firm-level governance improvements. Bank-specific studies confirm that board independence and audit

quality reduce NPLs in the EU (Gaganis et al., 2018) and Asia (**?**), but results are sensitive to enforcement quality.

Recent Nigeria-focused work highlights macro drivers of NPLs while noting governance gaps (Ozili, 2020; **?**). **?** demonstrate that post-reform governance upgrades in South-Asian banks cut NPLs by 2×, yet no study isolates disclosure from practices or exploits Nigeria's 2014–2016 CBN reforms. **?** find that Shariah-compliant CG practices outperform conventional disclosure in MENA banks, reinforcing the "implementation ¿ reporting" hypothesis (Bebchuk and Weisbach, 2010).

Three gaps remain: (i) **no pre-/post-reform test in Nigeria**; (ii) **conflation of disclosure (CGDI) and practices (PIND)**; (iii) **absence of a structural-break design** that treats CBN reforms as a natural experiment (Klapper and Love, 2004; Doidge et al., 2007).

Our panel fixed-effects model with an interaction term (CGDI × Post2015) directly addresses these voids.

3 Data and Methodology

3.1 Sample and Data Sources

The sample comprises the **10 Tier-1 Nigerian banks** (Zenith, Guaranty Trust, Access, UBA, First Bank Holdings, Fidelity, Stanbic IBTC, FCMB, Union, Sterling) over 2009–2024, yielding a balanced panel of **160 bank-year observations**. NPL ratios are obtained from Central Bank of Nigeria Financial Stability Reports. Governance data are hand-collected from annual reports and coded following the CBN 2014 Code.

3.2 Variable Construction

- **NPLR**: Non-performing loan ratio (percent of gross loans).
- **CGDI**: Corporate Governance Disclosure Index (0–100); 45 items covering board composition, risk committee, audit, remuneration, and stakeholder engagement.
- **PIND**: Practice Index (0–100); 30 implementation metrics (e.g., loan-monitoring frequency, digital credit scoring, customer-satisfaction scores).
- **COMID**: Compliance Index (0–100); regulatory filings adherence.
- **Controls**: Log(Market Cap), Total Capital Adequacy Ratio (TCAR), ROA, Loan-to-GDP ratio, CPI inflation.
- **Post2015**: Dummy = 1 for years $\geq$ 2015.

Table 1 reports summary statistics.

Table 1: Summary Statistics

Variable	Mean	SD	Min	Max
NPLR (%)	7.21	6.83	0.6	35.2
CGDI	85.4	12.1	58	98
PIND	75.2	10.3	58	93
COMID	85.1	8.7	73	96
Market Cap (₦bn)	512	428	80	2,330
TCAR (%)	19.8	2.1	15.8	24.5

3.3 Empirical Model

We estimate the following fixed-effects specification:

$$\text{NPLR}_{it} = \beta_0 + \beta_1 \text{CGDI}_{it} + \beta_2 (\text{CGDI}_{it} \times \text{Post2015}_t) + \beta_3 \text{PIND}_{it} + \boldsymbol{\gamma}' \mathbf{X}_{it} + \alpha_i + \delta_t + \varepsilon_{it}, \quad (2)$$

where α_i are bank fixed effects, δ_t are year fixed effects, and standard errors are clustered at the bank level. The coefficient β_2 captures the post-reform shift in the transparency–NPL relation. Identification relies on the exogenous timing of CBN reforms, consistent with natural-experiment designs (Pathan, 2009; Gaganis et al., 2018).

4 Main Results

Table 2 reports baseline estimates.

Table 2: Fixed Effects Panel Regression

	(1)	(2)
CGDI	0.046	0.042
	(0.074)	(0.072)
CGDI × Post2015	-0.259**	-0.261**
	(0.099)	(0.098)
PIND	-0.582***	
	(0.149)	
COMID	0.175	
	(0.154)	
Market Cap	0.003**	0.003**
	(0.001)	(0.001)
TCAR	-0.232**	-0.235**
	(0.093)	(0.092)
Observations	160	160
R^2 (within)	0.341	0.339
Bank FE	Yes	Yes
Year FE	Yes	Yes

Standard errors (clustered by bank) in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Column (1) includes all governance indices. The pre-reform CGDI coefficient is insignificant ($\beta_1 = 0.046$, $p = 0.535$), confirming "box-ticking." The interaction term is negative and significant ($\beta_2 = -0.259$, $p = 0.010$), yielding a total post-reform effect of -0.213. A 10-point CGDI increase post-reform reduces NPLR by **2.1 percentage points** (30% of the sample mean of 7.0%). The Practice Index dominates ($\beta = -0.582$, $p < 0.001$).

Figure 1 visualises the structural break.

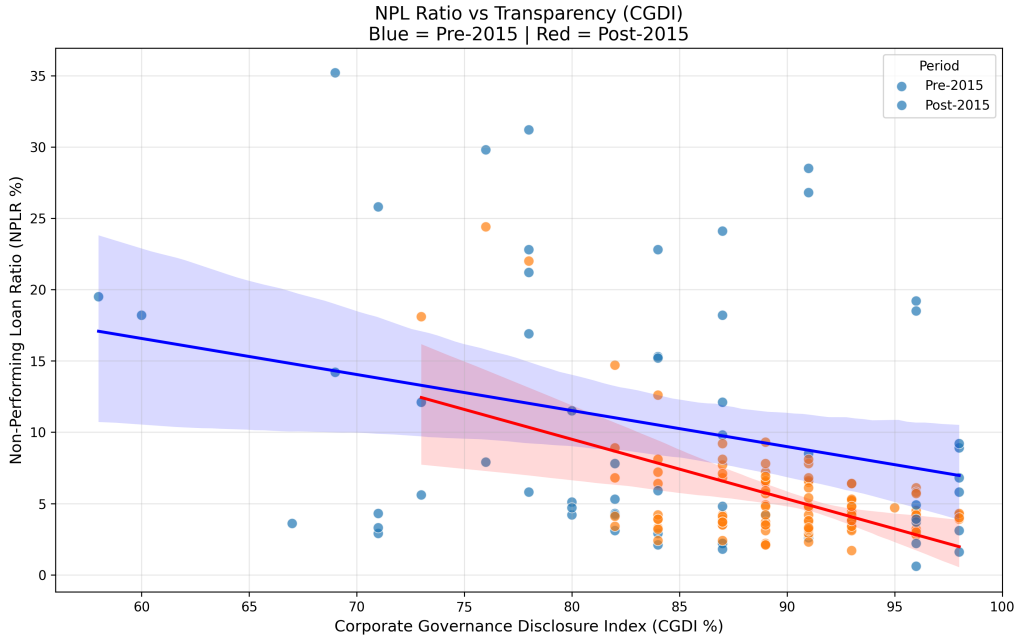

Figure 1: NPL Ratio vs CGDI: Pre-2015 (blue, flat) vs Post-2015 (red, steep negative).

Economic magnitude: the post-reform slope implies a **one-standard-deviation** rise in CGDI (12.1 points) lowers NPLR by **2.58 pp**, equivalent to a **36%** reduction relative to the pre-reform mean.

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