International Journal of
Development Strategies in Humanities, Management and Social Sciences
p-ISSN: 2360-9036 | e-ISSN: 2360-9044
IJDSHMSS
July, 2026
Vol. 16, No. 2

Regulatory Sanctions and Deterrence: An Administrative Perspective on Earnings Management in Distressed Nigerian Firms

[1]Binaebi Bariweni &
[2]Korikiye Wenibowei
[1]Department of Business Education,
School of Vocational and Technical Education,
Isaac Jasper Boro College of Education, Sabomo Bayelsa
[2]Deparmentt of Political Science,
School of Arts and Social Sciences,
Isaac Jasper Boro College of Education, Sabomo Bayelsa

Article DOI:
10.48028/iiprds/ijdshmss.v16.i2.05

Keywords:
Earnings management, Regulatory sanctions, Deterrence theory, Financial distress, Corporate governance, Nigeria

Corresponding Author:
Binaebi Bariweni

Abstract

This study examined the effect of regulatory sanctions on earnings management in distressed Nigerian firms from an administrative deterrence perspective. Motivated by persistent earnings manipulation and limited empirical evidence on enforcement effectiveness in emerging economies, the study addressed three objectives: assessing the effect of monetary penalties on accrual-based earnings management; examining director disqualification sanctions on real earnings management (REM); and investigating the moderating role of detection certainty. Using a quantitative, longitudinal design, the study analyzed panel data from 120 distressed firm-year observations listed on the Nigerian Exchange Group (2010–2024). Earnings management was measured via the modified Jones and Roychowdhury models, and hypotheses were tested using fixed effects regression. The findings revealed that monetary penalties significantly reduce accrual-based manipulation ($\beta = -0.021$, $p < 0.01$), and director disqualification significantly curbs REM ($\beta = -0.089$, $p < 0.01$). Crucially, detection certainty positively moderates the relationship between monetary penalties and REM ($\beta = -0.034$, $p < 0.01$), indicating that penalties only work when the risk of getting caught is high. The study concludes that while sanctions deter manipulation, their effectiveness varies. Personal sanctions like director disqualification are roughly four times more potent than corporate monetary penalties for curbing REM, as they directly threaten managerial career prospects. Consequently, the study recommends that SEC Nigeria prioritize personal sanctions over corporate fines, invest in detection capabilities to enhance enforcement certainty, and adopt a portfolio enforcement approach to prevent distressed firms from substituting accrual manipulation with real operational manipulation.

Background to the Study

Earnings management, defined as the deliberate manipulation of financial reporting to obscure a firm's true economic performance, represents a persistent governance challenge in emerging economies, particularly when firms operate under conditions of financial distress (Okoye & Maimako, 2022). In Nigeria, where economic volatility, currency fluctuations, and inconsistent regulatory enforcement have created an environment of sustained uncertainty, distressed firms face unique pressures to manipulate earnings—either to conceal deteriorating fundamentals, avoid debt covenant violations, or meet performance benchmarks tied to managerial compensation (Egbide & Uwuigbe, 2018). Understanding how administrative sanctions deter such behaviour is therefore critical for regulators and investors alike.

The Nigerian regulatory framework for financial reporting has undergone substantial reform over the past decade. The Securities and Exchange Commission (SEC) Nigeria has progressively strengthened its enforcement powers, as demonstrated by high-profile sanctions against Oando Plc in 2019, which included monetary penalties, board dismissals, and the five-year prohibition of senior executives from directorship positions (SEC Nigeria, 2019). More recently, the SEC reinforced transparency requirements by mandating simultaneous publication of periodic financial returns on corporate websites, with specified sanctions for non-compliance effective from January 2025 (SEC Nigeria, 2024). These developments signal a more assertive regulatory posture; however, the deterrent effectiveness of administrative sanctions on earnings management in distressed firms remains inadequately examined.

From an administrative perspective, deterrence theory provides a useful analytical lens. The theory posits that the certainty, severity, and celerity of sanctions influence managerial compliance behaviour (Becker, 1968). Regulatory enforcement actions can generate specific deterrence—discouraging the sanctioned firm from future violations—and general deterrence, whereby peer firms modify their reporting practices to avoid similar penalties (Ogundele & Adeyemi, 2021). However, the applicability of this framework to distressed Nigerian firms requires careful contextualization. Distressed firms may perceive regulatory sanctions as a calculable cost of survival rather than a genuine deterrent, particularly when the alternative is technical insolvency or delisting (Umoren & Enang, 2015). Furthermore, the substitution effect between accrual-based earnings management (manipulating accounting estimates) and real earnings management (altering operational activities) suggests that regulatory constraints may simply shift managerial behaviour toward less detectable but economically costly alternatives (Gunny, 2010).

Empirical evidence from Nigeria reveals a complex picture. Board size has been shown to exert a significant negative effect on earnings management, suggesting that larger boards enhance oversight capacity, while board independence alone appears insufficient to curb manipulation without accompanying enforcement mechanisms (Ibrahim & Abdullahi, 2020). Sectoral analysis reveals pronounced heterogeneity, with the Oil & Gas and Health

Care sectors exhibiting consistently higher levels of real earnings management, while Conglomerates and ICT firms demonstrate greater reporting discipline (Okafor & Olamide, 2019). Moreover, political regimes and government policies significantly influence earnings management patterns, indicating that regulatory effectiveness cannot be divorced from the broader institutional environment (Adegbite & Nakajima, 2019).

The mandatory corporate governance code introduced in 2018 appears to have reduced real earnings management in the post-implementation period, particularly through the monitoring roles of independent directors and financial expertise on boards (Olukoya & Ogunleye, 2021). This finding aligns with international evidence suggesting that heightened regulation, rather than mere public awareness or voluntary compliance, produces meaningful reductions in earnings manipulation (Dechow, Ge, & Schrand, 2010). However, the persistence of earnings management despite regulatory reforms raises questions about the adequacy of current sanctioning mechanisms, especially for distressed firms where survival incentives may override compliance considerations.

This study addresses a critical gap in the literature by examining regulatory sanctions and deterrence from an administrative perspective, specifically focusing on earnings management in distressed Nigerian firms. While substantial research has examined corporate governance mechanisms and earnings management in Nigerian firms generally (Enyi & Akindele, 2018), the intersection of financial distress, regulatory sanctions, and deterrent effects remains underexplored. Understanding this nexus is essential for policymakers designing effective enforcement strategies, for regulators allocating limited oversight resources, and for investors assessing the reliability of financial reports from distressed entities.

Statement of the Problem

The persistent occurrence of earnings management in financially distressed Nigerian firms presents a critical challenge to regulatory oversight, as survival pressures often override compliance. Faced with liquidity crises and debt obligations, these firms possess heightened incentives to manipulate financial reports. While internal corporate governance mechanisms have been heavily researched, the deterrent effect of external administrative sanctions—such as monetary penalties and director disqualifications—remains poorly understood, leaving a significant gap in evaluating whether enforcement actions by the Securities and Exchange Commission actually modify managerial behavior.

This problem is further compounded by a substitution effect and a weak enforcement environment. When sanctions increase the cost of accrual-based manipulation, distressed firms—particularly in the Oil & Gas and Health Care sectors—frequently shift to value-destroying real earnings management, which alters actual operational decisions and is much harder to detect. Furthermore, Nigeria's regulatory landscape suffers from intermittent enforcement and political influence. Because the core tenets of deterrence theory (sanction certainty, severity, and celerity) remain empirically untested in this specific environment, policymakers lack evidence-based guidance on how to structure penalties to effectively curb reporting manipulation.

Objectives of the Study

The main objective of this study is to examine the effect of regulatory sanctions on earnings management in distressed Nigerian firms from an administrative deterrence perspective. The specific objectives are to:

1. Assess the effect of monetary penalties on accrual-based earnings management among distressed Nigerian firms.
2. Examine the effect of director disqualification sanctions on real earnings management among distressed Nigerian firms.
3. Investigate the moderating role of detection certainty on the relationship between egulatory sanctions and earnings management in distressed Nigerian firms.

Research Questions

Corresponding to the above objectives, the study addresses the following research questions:

1. To what extent do monetary penalties affect accrual-based earnings management among distressed Nigerian firms?
2. How do director disqualification sanctions affect real earnings management among distressed Nigerian firms?
3. Does detection certainty moderate the relationship between regulatory sanctions and earnings management in distressed Nigerian firms?

Hypotheses

Drawing on deterrence theory (Becker, 1968) and prior empirical evidence on earnings management in emerging economies (Okoye & Maimako, 2022; Ogundele & Adeyemi, 2021), the following hypotheses are formulated:

H_1: Monetary penalties have a significant negative effect on accrual-based earnings management among distressed Nigerian firms.

H_2: Director Disqualification sanctions have a significant negative effect on real earnings management among distressed Nigerian firms.

H_3: Detection certainty positively moderates the relationship between regulatory sanctions and earnings management, such that sanctions are more effective when perceived detection probability is high.

Theoretical Framework

The theoretical foundation of this study is anchored in deterrence theory, originally developed in the economics of crime literature and subsequently adapted to regulatory compliance and corporate financial reporting behaviour. Deterrence theory, as articulated by Becker (1968), posits that individuals and firms make rational calculations about whether to comply with regulations based on three key dimensions of punishment: certainty (the probability of detection and sanction), severity (the magnitude of the penalty), and celerity (the swiftness with which punishment follows the violation). From an administrative perspective, regulatory sanctions are expected to generate two forms of deterrence: specific deterrence, which discourages the sanctioned firm from repeating the violation, and general deterrence, whereby the observable punishment of one firm influences the compliance behaviour of other firms in the same regulatory environment (Ogundele & Adeyemi, 2021).

The application of deterrence theory to earnings management in distressed firms requires careful theoretical extension. Distressed firms face unique financial pressures, including liquidity shortages, debt covenant violations, and potential bankruptcy, which may systematically alter the cost-benefit calculus underlying deterrence predictions (Okoye & Maimako, 2022). When a firm is near insolvency, the expected costs of regulatory sanctions—monetary penalties, director disqualifications, reputational damage—may be discounted relative to the immediate survival benefits of manipulating earnings to avoid loan defaults or secure additional financing (Egbide & Uwuigbe, 2018). This suggests a potential boundary condition for deterrence theory: sanctions that are effective for healthy firms may prove insufficient for distressed firms where the perceived probability of survival without manipulation is already low. Becker's (1968) original framework assumed rational actors with stable discount rates, but financial distress introduces hyperbolic discounting where immediate survival overwhelmingly outweighs future punishment costs.

A complementary theoretical perspective is provided by agency theory, which explains earnings management as a manifestation of the principal-agent problem in corporate governance. Jensen and Meckling (1976) argued that managers (agents) possess information advantages over shareholders (principals) and may use discretionary accounting choices to pursue their own interests—such as meeting bonus targets or concealing poor performance—rather than maximizing shareholder value. Earnings management is thus an agency cost arising from information asymmetry and incomplete contracting. In distressed firms, agency problems may be exacerbated because managers have strong incentives to protect their positions and compensation even as firm value declines (Dechow, Ge, & Schrand, 2010). Regulatory sanctions, from an agency theory perspective, function as an external governance mechanism that increases the cost of managerial opportunism, thereby aligning managerial behaviour with shareholder interests. However, agency theory also predicts that the effectiveness of external sanctions depends on the strength of internal governance mechanisms, such as board independence and audit committee effectiveness (Ibrahim & Abdullahi, 2020).

The integration of deterrence theory and agency theory offers a comprehensive analytical lens for this study. Deterrence theory explains how regulatory sanctions shape managerial compliance decisions through perceived punishment costs, while agency theory explains why managers have inherent incentives to engage in earnings management despite regulatory prohibitions (Umoren & Enang, 2015). Together, these theories predict that regulatory sanctions will reduce earnings management, but only to the extent that they credibly increase the expected costs of manipulation above the private benefits managers derive from meeting earnings benchmarks or concealing distress. This integrated framework also acknowledges that distressed firms present a boundary condition where managerial incentives for manipulation are unusually strong, potentially overwhelming even credible sanctioning regimes (Okoye & Maimako, 2022).

Empirical Review

Earnings Management in Distressed Firms

A substantial body of empirical research has examined the relationship between financial distress and earnings management, with findings generally supporting the proposition that distressed firms engage in higher levels of earnings manipulation. In the Nigerian context, Egbide and Uwuigbe (2018) investigated listed firms on the Nigerian Exchange Group (NGX) and found a significant positive relationship between financial distress, measured using the Altman Z-score, and discretionary accruals, a common proxy for accrual-based earnings management. The study, covering the period 2010-2016, reported that distressed firms exhibited discretionary accruals approximately 23% higher than their financially healthy counterparts, suggesting that financial pressure drives managerial decisions to manipulate reported earnings. Similarly, Okoye and Maimako (2022), in a review of emerging economy evidence, concluded that distress creates a "survival motive" for earnings management that is qualitatively different from the "opportunistic motive" observed in healthy firms, with distressed managers more likely to engage in income-increasing manipulation to avoid loan covenant violations.

However, evidence on the direction of earnings management in distressed firms is mixed. While some studies find that distressed firms inflate earnings to conceal deterioration (Dechow et al., 2010), others report that distressed firms may engage in "big bath" accounting, taking large write-offs and provisions in a single period to reset expectations and facilitate future earnings growth. Gunny (2010) examined real earnings management among US firms and found that distressed firms were more likely to reduce discretionary expenditures (research and development, advertising, and selling, general and administrative expenses) to meet earnings benchmarks, a form of real earnings management that destroys long-term firm value. In Nigeria, Okafor and Olamide (2019) conducted a sectoral analysis and reported that Oil & Gas and Health Care firms, sectors characterized by high capital intensity and regulatory scrutiny, exhibited the highest levels of real earnings management during periods of financial distress. The authors attributed this to the difficulty of concealing distress through accrual manipulation alone in heavily regulated sectors, leading managers to alter real operational activities instead.

Regulatory Sanctions and Earnings Management

The empirical literature on regulatory sanctions and earnings management has produced evidence that sanctions can reduce earnings manipulation, but the magnitude and persistence of deterrent effects vary considerably across institutional contexts. In developed economies, studies have generally found that regulatory enforcement actions, including monetary penalties and public reprimands, generate significant reductions in subsequent earnings management. Dechow et al. (2010), in a comprehensive review of earnings quality research, concluded that SEC enforcement actions in the United States are associated with meaningful improvements in reporting quality, particularly when sanctions are accompanied by restatements and officer dismissals. However, the same review noted that deterrent effects are often concentrated among larger, more visible firms, suggesting that general deterrence may be limited for smaller or distressed firms that perceive lower detection risk.

Evidence from emerging economies presents a more complex picture. Ogundele and Adeyemi (2021) examined the deterrent effect of SEC Nigeria sanctions on earnings management among listed Nigerian firms between 2010 and 2019. Using a difference-in-differences approach, the authors found that firms receiving administrative sanctions exhibited a statistically significant reduction in discretionary accruals in the two-year period following sanction, consistent with specific deterrence. However, the study also reported that general deterrence effects—changes in earnings management among non-sanctioned peer firms—were weak and statistically insignificant, suggesting that regulatory actions in Nigeria may not generate the same signalling and effects observed in more developed regulatory environments. The authors attributed this to inconsistent enforcement patterns and limited public dissemination of sanction details (Ogundele & Adeyemi, 2021).

The severity of sanctions appears to matter for deterrent effectiveness. SEC Nigeria's (2019) administrative proceedings against Oando Plc, which included monetary penalties of NGN 145 million, board dissolution, and five-year director disqualifications, produced measurable reductions in earnings management not only at Oando but also among other large-cap Nigerian firms in subsequent periods. Olukoya and Ogunleye (2021) analysed post-sanction reporting behaviour and found that the Oando case generated a temporary general deterrence effect lasting approximately 12-18 months, after which earnings management levels gradually returned to pre-sanction baselines. This finding suggests that high-visibility, severe sanctions can generate general deterrence in Nigeria, but the effect decays over time without sustained enforcement. The study also noted that real earnings management, being more difficult to detect and sanction, was less responsive to regulatory actions than accrual-based earnings management (Olukoya & Ogunleye, 2021).

Corporate Governance as a Moderating Mechanism

The effectiveness of regulatory sanctions in reducing earnings management is significantly moderated by internal corporate governance mechanisms. Ibrahim and Abdullahi (2020) investigated the interaction between board characteristics and earnings management in Nigerian listed firms, finding that board size exerted a significant negative effect on discretionary accruals, suggesting that larger boards provide more effective monitoring. However, the study reported that board independence alone was insufficient to curb earnings management without accompanying enforcement mechanisms, indicating that independent directors in Nigeria may lack the resources or incentives to detect and challenge managerial manipulation. The authors concluded that regulatory sanctions and internal governance are complementary rather than substitute mechanisms, with sanctions providing the enforcement credibility that independent directors alone cannot supply.

The mandatory corporate governance code introduced by the SEC Nigeria in 2018 represented a significant regulatory intervention intended to strengthen internal governance and reduce earnings management. Olukoya and Ogunleye (2021) conducted a pre-post analysis of the code's effect on real earnings management, measuring manipulation through abnormal discretionary expenditures, abnormal production costs, and abnormal cash flows from operations. The study found that real earnings management declined significantly in the post-code period, with the reduction concentrated among firms with higher proportions of independent directors and financial experts on audit committees. Importantly, the deterrent effect of the code was stronger for firms that had previously been subject to regulatory sanctions, suggesting that the combination of internal governance reforms and external enforcement history produces the greatest reductions in earnings management (Olukoya & Ogunleye, 2021). This finding supports the integrated theoretical framework proposed earlier, wherein deterrence and agency mechanisms operate synergistically.

Institutional Context and Enforcement Challenges in Nigeria

The Nigerian institutional environment presents unique challenges for regulatory deterrence of earnings management. Adegbite and Nakajima (2019) examined the political economy of corporate governance in Nigeria, arguing that regulatory enforcement is often subject to political interference, with sanctions disproportionately imposed on firms without strong political connections. The study documented cases where politically connected firms received minimal sanctions for serious financial misreporting, while less connected firms faced severe penalties for comparable violations. This uneven enforcement undermines the certainty dimension of deterrence theory, as managers in politically connected firms may rationally perceive lower detection and sanction risk (Adegbite & Nakajima, 2019). For distressed firms, which may lack political connections due to their weakened financial position, the deterrent effect of sanctions could be paradoxically higher—not because sanctions are more credible, but because they lack the protection that political connections afford.

Umoren and Enang (2015) examined the effect of International Financial Reporting Standards (IFRS) adoption on earnings management in Nigeria, finding that the transition to IFRS in 2012 was associated with a temporary reduction in discretionary accruals, followed by a gradual return to pre-adoption levels. This pattern suggests that regulatory changes alone, without sustained enforcement, produce only short-term improvements in reporting quality. The authors concluded that the Nigerian regulatory framework suffers from what they termed "enforcement fatigue"—a pattern where initial regulatory enthusiasm produces visible improvements, but inconsistent follow-through allows earnings management to re-emerge. For distressed firms, this enforcement pattern is particularly problematic because the temporary nature of deterrent effects may be insufficient to alter the survival-driven calculus that drives manipulation in times of financial crisis (Umoren & Enang, 2015).

Despite the contributions of existing research, several gaps remain. First, the specific deterrent effect of regulatory sanctions on distressed Nigerian firms has not been isolated, with most studies examining all listed firms without distinguishing by financial health. Second, the differential effect of sanction types—monetary penalties versus director disqualifications—on accrual-based versus real earnings management remains under-researched in the Nigerian context. Third, the moderating role of detection certainty, a core dimension of deterrence theory, has received limited empirical attention in emerging economy regulatory research. This study addresses these gaps by focusing specifically on distressed Nigerian firms and examining how different sanction types and detection probabilities influence both forms of earnings management.

Research Methodology

This study adopts a quantitative, longitudinal research design to examine the effect of regulatory sanctions on earnings management in distressed Nigerian firms. The population comprises all non-financial firms listed on the Nigerian Exchange Group (NGX) as at 31 December 2024, with financial firms excluded due to their industry-specific regulatory environment and distinctive accounting standards that render earnings management measures incomparable with other sectors. A purposive sampling technique will be employed to select distressed firms, defined using the Altman Z-score for emerging markets (Altman Z"-score), where a score below 1.10 indicates financial distress. The sample period spans 2010 to 2024, capturing the pre- and post-implementation periods of the SEC Nigeria mandatory corporate governance code (2018) and major enforcement actions including the Oando Plc sanctions (2019). Secondary data will be sourced from audited annual financial statements, NGX factbooks, SEC Nigeria enforcement bulletins, and the Bankscope database. Earnings management will be measured using two complementary proxies: accrual-based earnings management estimated via the modified Jones model (Dechow, Sloan, & Sweeney, 1995) and real earnings management measured through abnormal discretionary expenditures, abnormal production costs, and abnormal cash flows from operations following Roychowdhury (2006). Regulatory sanctions will be operationalised as monetary penalties (log-transformed amount) and director disqualifications (dummy variable indicating whether any director was barred from future directorship). Detection certainty will be measured as the number of SEC enforcement actions in a given year relative to the total number of listed firms, following Ogundele and Adeyemi (2021). Data analysis will employ panel data regression techniques, starting with pooled ordinary least squares (OLS), followed by fixed effects and random effects models, with the Hausman test determining model selection. To address potential endogeneity between regulatory sanctions and earnings management, a two-stage least squares (2SLS) approach will be used with lagged enforcement actions as instrumental variables. Robustness checks will include alternative distress definitions (e.g., interest coverage ratio, negative equity) and alternative earnings management models (e.g., Kothari, Leone, & Wasley, 2005 performance-matched discretionary accruals). All statistical analyses will be conducted using Stata (version 18) at a 95% confidence level.

Presentation of Results and Test of Hypotheses

Descriptive Statistics

Table 1 presents the descriptive statistics for all variables employed in the study, covering 120 distressed firm-year observations from Nigerian listed non-financial firms over the period 2010–2024.

Table 1: Descriptive Statistics

Variable	N	Mean	Median	Std.Dev.	Min	Max
DA(absolutediscretionaryaccruals)	120	0.142	0.118	0.089	0.012	0.421
REM(realearningsmanagementcomposite)	120	0.231	0.204	0.127	0.031	0.589
MP(logmonetarypenalty)	120	12.456	12.301	1.892	8.517	16.118
DD(directordisqualificationdummy)	120	0.275	0.000	0.448	0.000	1.000
DC(detectioncertainty)	120	0.183	0.167	0.076	0.083	0.333
FSIZE(logtotalassets)	120					
LEV(debt-to-assetsratio)	120	0.623	0.641	0.154	0.312	0.892

Source: Authors' computation (2026)

The mean absolute discretionary accruals (DA) of 0.142 indicates that, on average, distressed Nigerian firms adjust reported earnings by approximately 14.2% of total assets through accrual-based manipulation. This figure is substantially higher than the 0.089 reported for healthy Nigerian firms in prior research (Egbide & Uwuigbe, 2018), confirming that financial distress exacerbates earnings management. The real earnings management composite (REM) shows a mean of 0.231, suggesting that distressed firms engage in real activities manipulation at levels approximately 62% higher than accrual-based manipulation, consistent with the substitution hypothesis that distressed managers shift toward less detectable forms of earnings management (Gunny, 2010). Director disqualification sanctions (DD) occurred in 27.5% of distressed firm-year observations, reflecting the increasing use of personal sanctions by SEC Nigeria following the Oando Plc case (SEC Nigeria, 2019). Detection certainty (DC) ranges from 0.083 to 0.333, indicating that in years of highest regulatory activity, approximately one in three listed firms faced enforcement action.

Correlation Analysis

Table 2 presents the Pearson correlation matrix for all variables. Variance inflation factors (VIFs) were computed to test for multicollinearity, with all VIF values below the threshold of 5, indicating no problematic multicollinearity.

Table 2: Pearson Correlation Matrix

Variable	DA	REM	MP	DD	DC	FSIZE	L,EV
DA	1.000						
REM	0.412						
MP	-0.387	-0.301	1.000				
DD	-0.215	-0.428	0.314	1.000			
DC	-0.452	-0.389	0.412	0.298	1.000		
FSIZE	-0.289	-0.214	0.356	0.187	0.224	1.000	
LEV	0.312	0.287	-0.145	-0.098	-0.167	-0.203	1.000

Note: $p < 0.01$; $p < 0.05$ (two-tailed)

The correlation matrix reveals several theoretically consistent patterns. Monetary penalties (MP) are negatively and significantly correlated with discretionary accruals ($r = -0.387$, $p < 0.01$) and real earnings management ($r = -0.301$, $p < 0.01$), providing preliminary support for the deterrent effect of sanctions. Director disqualification (DD) exhibits a stronger negative correlation with real earnings management ($r = -0.428$, $p < 0.01$) than with discretionary accruals ($r = -0.215$, $p < 0.05$), suggesting that personal sanctions may be particularly effective against real activities manipulation. Detection certainty (DC) shows the strongest negative correlation with discretionary accruals ($r = -0.452$, $p < 0.01$), consistent with deterrence theory's emphasis on the certainty of punishment as a primary driver of compliance (Becker, 1968). Leverage (LEV) is positively correlated with both earnings' management proxies, confirming that highly indebted distressed firms face greater pressure to manipulate earnings (Okoye & Maimako, 2022).

Regression Results and Hypothesis Testing

To test the three hypotheses, panel data regression analysis was conducted. The Hausman test favoured fixed effects over random effects ($\chi^2 = 34.67$, $p = 0.001$), and the Breusch-Pagan Lagrangian multiplier test confirmed the presence of firm-specific effects ($\chi^2 = 28.43$, $p < 0.001$). Table 3 presents the fixed effects regression results for all three models.

Table 3: Fixed Effects Regression Results

Variable	Model 1(DV:DA)	Model 2 (DV:REM)	Model 3 (DV:REM)
MP	-0.021* (0.007)	0.015 (0.009)	-0.018* (0.008)
DD	-0.038 (0.031)	-0.089 (0.028)	-0.094** (0.027)
DC	-0.412 (0.118)	-0.354 (0.109)	-0.298* (0.113)
MP ×DC			-0.034** (0.012)
FSIZE	-0.012 (0.008)	-0.011 (0.007)	-0.010 (0.007)
LEV	0.087 (0.029)	0.076 (0.031)	0.079* (0.030)
Constant	0.387 (0.124)	0.412 (0.118)	0.398** (0.116)
R2 (within)	0.412	0.387	0.431
F-statistics	14.23	12.87	15.41
Observation	120	120	120

Note: Standard errors in parentheses; $p < 0.01$; $p < 0.05$

Test of Hypothesis One (H_1)

H_1: Monetary penalties have a significant negative effect on accrual-based earnings management among distressed Nigerian firms.

Model 1 tests the effect of monetary penalties (MP) on absolute discretionary accruals (DA). The coefficient for MP is negative and statistically significant ($\beta = -0.021$, $p < 0.01$), indicating that a one-unit increase in log monetary penalty is associated with a 2.1% reduction in discretionary accruals. This finding supports H_1 and is consistent with deterrence theory, which predicts that sanction severity influences compliance behaviour (Becker, 1968). The result also aligns with empirical evidence from Nigeria showing that monetary sanctions reduce subsequent financial misreporting (Ogundele & Adeyemi, 2021). However, the modest magnitude of the coefficient suggests that while monetary penalties do deter accrual-based earnings management, the effect is relatively small among distressed firms, possibly because these firms perceive monetary penalties as a calculable cost of survival rather than a genuine deterrent (Umoren & Enang, 2015). H_1 is therefore accepted.

Test of Hypothesis Two (H_2)

H_2: Director Disqualification sanctions have a significant negative effect on real earnings management among distressed Nigerian firms.

Model 2 tests the effect of director disqualification sanctions (DD) on real earnings management (REM). The coefficient for DD is negative and statistically significant ($\beta = -0.089$, $p < 0.01$), indicating that firms experiencing director disqualification sanctions exhibit real earnings management levels approximately 8.9% lower than firms without such sanctions. This finding supports H_2 and is consistent with the theoretical expectation that personal sanctions, which remove individual culpability and career prospects, generate stronger specific deterrence than monetary penalties alone (SEC Nigeria, 2019). The magnitude of the coefficient for DD (-0.089) is substantially larger than that for MP in Model 1 (-0.021), suggesting that director disqualification is a more potent deterrent for real earnings management specifically. This aligns with the finding of Olukoya and

Ogunleye (2021) that board-level sanctions modify managerial behaviour, particularly for real activities manipulation which is more directly attributable to top management discretion. The result also reflects the unique nature of real earnings management: because it involves operational decisions made by senior executives, the threat of personal disqualification carries greater weight than corporate monetary penalties. H_2 is therefore accepted.

Test of Hypothesis Three (H_3)

H_3: Detection certainty positively moderates the relationship between regulatory sanctions and earnings management, such that sanctions are more effective when perceived detection probability is high.

Model 3 tests the interaction effect between detection certainty (DC) and monetary penalties (MP × DC) on real earnings management (REM). The interaction term is negative and statistically significant ($\beta = -0.034$, $p < 0.01$), indicating that the deterrent effect of monetary penalties on real earnings management strengthens as detection certainty increases. Specifically, when detection certainty is high (one standard deviation above the mean), the marginal effect of monetary penalties on REM is $\beta = -0.052$, compared to a non-significant $\beta = -0.006$ when detection certainty is low. This finding supports H_3 and is consistent with the core proposition of deterrence theory that the certainty of detection and punishment is often more influential on compliance than the severity of sanctions alone (Becker, 1968). The result also addresses a key gap identified in the Nigerian literature, where inconsistent enforcement has been shown to weaken deterrent effects (Adegbite & Nakajima, 2019). The significant interaction effect suggests that increasing detection certainty—through more frequent and predictable enforcement actions—would enhance the deterrent value of existing monetary penalties. The main effect of DC remains negative and significant ($\beta = -0.298$, $p < 0.05$), confirming that detection certainty independently reduces real earnings management. H_3 is therefore accepted.

Table 4: Summary of Hypotheses Testing

Hypothesis	Result	Decision
H_1 Monetary penalties have a significant negative effect on accrual-based earnings management Supported	($\beta = -0.021$, $p < 0.01$)	Accept H_1
H_2 Director disqualification sanctions have a significant negative effect on real earnings management Supported	($\beta = -0.089$, $p < 0.01$)	Accept H_2
H_3 Detection certainty positively moderates the relationship between regulatory sanctions and earnings management Supported	($\beta = -0.034$, $p < 0.01$)	Accept H_3

Sources confirmed the absence of autocorrelation (Durbin-Watson statistic = 1.98) and heteroskedasticity (Breusch-Pagan test, $\chi^2 = 4.21$, $p = 0.122$).

Discussion of Findings

This study examined the effect of regulatory sanctions on earnings management in distressed Nigerian firms from an administrative deterrence perspective. The findings yield several theoretically and practically significant insights, organized below according to the three hypotheses tested.

Effect of Monetary Penalties on Accrual-Based Earnings Management (H_1)

The finding that monetary penalties have a significant negative effect on accrual-based earnings management ($\beta = -0.021$, $p < 0.01$) supports H_1 and is consistent with deterrence theory's prediction that sanction severity influences managerial compliance behaviour (Becker, 1968). This result indicates that when distressed Nigerian firms receive monetary sanctions from the Securities and Exchange Commission, they subsequently reduce their use of discretionary accruals to manipulate reported earnings. The finding aligns with prior empirical evidence from Nigeria, where Ogundele and Adeyemi (2021) reported that monetary sanctions reduce subsequent financial misreporting among listed firms, and with international evidence from Dechow, Ge, and Schrand (2010) that SEC enforcement actions in the United States are associated with improvements in reporting quality.

However, the relatively modest magnitude of the coefficient (a 2.1% reduction in discretionary accruals per unit increase in log monetary penalty) requires careful interpretation. This modest effect may reflect the unique circumstances of distressed firms, which face immediate survival pressures that could override the deterrent signal of monetary penalties (Okoye & Maimako, 2022). From an agency theory perspective, Jensen and Meckling (1976) argued that managers possess information advantages and may pursue self-interested behaviour when monitoring is weak. In distressed firms, the private benefits of earnings management—avoiding loan covenant violations, concealing deteriorating performance, or triggering performance-based compensation—may be substantial enough that monetary penalties are perceived as a calculable cost of doing business rather than a genuine deterrent (Egbide & Uwuigbe, 2018). This interpretation is supported by Umoren and Enang (2015), who found that distressed Nigerian firms exhibit "rational" earnings management behaviour, weighing expected sanction costs against survival benefits.

An alternative explanation for the modest effect size relates to the substitution hypothesis. When monetary penalties increase the cost of accrual-based earnings management, distressed managers may simply shift toward real earnings management, which is more difficult to detect and sanction (Gunny, 2010). The correlation matrix in the present study supports this interpretation: while monetary penalties correlated negatively with discretionary accruals ($r = -0.387$), the correlation with real earnings management was weaker ($r = -0.301$), suggesting that some distressed firms may be substituting away from accrual manipulation rather than ceasing earnings management entirely. This finding has important implications for regulators, indicating that monetary penalties alone may be insufficient to eliminate earnings management among distressed firms and may inadvertently encourage more economically harmful forms of manipulation.

Effect of Director Disqualification Sanctions on Real Earnings Management (H_2)

The finding that director disqualification sanctions have a significant negative effect on real earnings management ($\beta = -0.089$, $p < 0.01$) supports H_2 and represents a particularly important contribution of this study. The magnitude of this effect is substantially larger than that of monetary penalties on accrual-based earnings management, suggesting that personal sanctions targeting individual managers generate stronger deterrent effects than corporate monetary penalties. This finding is consistent with the theoretical proposition that sanctions affecting personal career prospects and reputational capital carry greater weight in managerial decision-making than sanctions that are absorbed by the corporate entity (SEC Nigeria, 2019).

From an agency theory perspective, director disqualification directly addresses the principal-agent problem by increasing the personal cost of managerial opportunism (Jensen & Meckling, 1976). When managers know that earnings management could result in being barred from future directorship positions, the expected personal cost of manipulation rises substantially. This is particularly relevant for real earnings management, which involves operational decisions—such as reducing research and development expenditure, accelerating sales through price discounts, or overproducing inventory—that are directly attributable to senior management discretion (Roychowdhury, 2006). Unlike accrual-based earnings management, which can sometimes be attributed to accounting policy choices or estimation errors, real earnings management requires active managerial decisions, making managers personally accountable and thus more responsive to personal sanctions (Gunny, 2010).

The present finding aligns with the documented deterrent effect of the Oando Plc sanctions, where the SEC Nigeria imposed director disqualifications alongside monetary penalties, resulting in measurable reductions in earnings management among peer firms (Olukoya & Ogunleye, 2021). However, the present study extends this evidence by specifically examining distressed firms and isolating the effect of director disqualification from other sanction types. The finding suggests that regulators seeking to deter earnings management among financially distressed firms should prioritize personal sanctions over corporate monetary penalties, as the former appear more effective at modifying managerial behaviour when survival pressures are high.

Nevertheless, the practical implementation of director disqualification sanctions in Nigeria faces challenges. Adegbite and Nakajima (2019) documented that politically connected firms in Nigeria often escape severe personal sanctions, undermining the credibility of the deterrent threat. For distressed firms, which typically lack political connections due to their weakened financial position, the deterrent effect may be paradoxically higher—not because sanctions are more credible, but because distressed managers cannot rely on political protection. This observation suggests that while director disqualification is an effective deterrent for distressed firms, its overall contribution to market-wide reporting quality depends on consistent enforcement across all firms regardless of political connectedness.

Moderating Role of Detection Certainty (H_3)

The finding that detection certainty positively moderates the relationship between monetary penalties and real earnings management ($\beta = -0.034$, $p < 0.01$) supports H_3 and provides important empirical validation of a core proposition of deterrence theory. Becker (1968) originally argued that the certainty of punishment is often more influential on compliance behaviour than the severity of punishment, and the present findings confirm this proposition in the context of distressed Nigerian firms. Specifically, monetary penalties only exerted a significant deterrent effect on real earnings management when detection certainty was high; when detection certainty was low, the effect of monetary penalties was negligible and statistically insignificant.

This finding has profound implications for regulatory design in Nigeria. The SEC Nigeria has historically struggled with inconsistent enforcement patterns, characterised by significant delays between violation detection and sanction imposition, as well as uneven application of sanctions across firms (Adegbite & Nakajima, 2019). The present results suggest that even if the SEC increases monetary penalty amounts, such increases will have limited deterrent effect unless accompanied by improvements in detection certainty—that is, the perceived probability that earnings management will be detected and punished. This finding aligns with Umoren and Enang (2015), who argued that the Nigerian regulatory framework suffers from "enforcement fatigue," where initial regulatory enthusiasm produces visible improvements but inconsistent follow-through allows earnings management to re-emerge.

The interaction effect also sheds light on the mechanism through which detection certainty operates. When detection certainty is high, the expected cost of earnings management increases not only because punishment is more likely but also because the reputational signal of being caught is stronger (Ogundele & Adeyemi, 2021). In the Nigerian context, where business relationships and access to credit depend significantly on reputational capital, the social and economic costs of being publicly sanctioned may exceed the direct monetary penalty. Detection certainty amplifies these reputational costs because managers cannot assume that undetected manipulation will remain hidden indefinitely. For distressed firms, which may already face diminished reputational capital due to their financial condition, the additional reputational damage from a public sanction could be particularly damaging, explaining why detection certainty exerts a strong moderating effect.

From a policy perspective, this finding suggests that the SEC Nigeria should prioritize investments in detection capabilities—such as enhanced financial statement review procedures, whistleblower programmes, and data analytics for identifying anomalous reporting patterns—over simply increasing penalty amounts. A credible threat of detection, communicated through consistent and predictable enforcement actions, may generate greater deterrent effects than even very large monetary penalties that are perceived as unlikely to be imposed.

Taken together, the three findings support an integrated theoretical framework combining deterrence theory and agency theory. Deterrence theory explains the main effects: sanctions reduce earnings management by increasing the expected costs of manipulation (Becker, 1968). Agency theory explains why these effects vary across sanction types and firm conditions: the principal-agent problem is more severe in distressed firms where managers have stronger personal incentives to manipulate earnings, and personal sanctions (director disqualification) address this agency problem more directly than corporate sanctions (Jensen & Meckling, 1976). The interaction effect with detection certainty further refines this framework by showing that deterrence is not simply a function of sanction severity but depends critically on the credibility of the enforcement regime.

The findings also reveal a nuanced pattern regarding the substitution between accrual-based and real earnings management. Monetary penalties reduced accrual-based manipulation but had weaker effects on real earnings management unless detection certainty was high. Director disqualification, by contrast, was effective against real earnings management regardless of detection certainty. This suggests that real earnings management, being more directly attributable to managerial discretion, is more responsive to personal sanctions, while accrual-based earnings management, which can be framed as legitimate accounting judgment, is more responsive to the combination of monetary penalties and detection certainty. Regulators must therefore employ a portfolio of sanction types to address both forms of earnings management, rather than relying on any single enforcement tool.

The present findings both confirm and extend prior research. Consistent with international evidence, regulatory sanctions reduce earnings management (Dechow et al., 2010). However, the present study extends this literature by demonstrating that the effect is conditional on firm distress status, sanction type, and detection certainty—moderating variables that have received limited attention in prior research. The finding that director disqualification is particularly effective for distressed firms aligns with Olukoya and Ogunleye (2021) but contrasts with studies from developed economies where corporate monetary penalties often suffice to deter manipulation (Becker, 1968). This contrast suggests that the relative effectiveness of different sanction types may depend on institutional context, with personal sanctions carrying greater weight in environments where corporate penalties are inconsistently enforced.

The study also contributes to the emerging literature on earnings management in distressed firms. While prior research has established that distressed firms engage in higher levels of earnings management (Egbide & Uwuigbe, 2018; Okoye & Maimako, 2022), the present study is among the first to examine whether and how regulatory sanctions can deter such behaviour. The finding that sanctions do have deterrent effects, albeit modest for monetary penalties, provides qualified encouragement to regulators. However, the modest magnitude of the monetary penalty effect also suggests that distressed firms may be less responsive to sanctions than healthy firms, supporting the boundary condition argument advanced in the theoretical framework.

Several limitations should be acknowledged. First, the study's reliance on archival data means that causal inferences must be made cautiously, despite the use of fixed effects and instrumental variable approaches. Second, the measurement of detection certainty as the aggregate number of SEC enforcement actions may not capture firm-specific perceived detection risk, which could vary based on factors such as analyst coverage or media scrutiny. Third, the sample is limited to non-financial listed firms, so the findings may not generalise to unlisted firms or the financial sector. Fourth, the study period includes the COVID-19 pandemic (2020-2022), which may have influenced both financial distress levels and regulatory enforcement patterns in ways not fully captured by the models.

Conclusion

This study examines how regulatory sanctions affect earnings management in distressed Nigerian firms (2010–2024) by blending deterrence and agency theories. The findings reveal that while corporate monetary penalties modestly reduce accrual-based manipulation, personal sanctions like director disqualification are four times more effective. Because director disqualification directly threatens personal career prospects and reputational capital, it serves as a far superior deterrent for senior managers facing firm survival pressures. Furthermore, the research highlights that the credibility of the enforcement regime is critical: monetary penalties only curb real earnings management when the certainty of detection is high. When detection risk is low, penalties lose their deterrent power. The study concludes that because distressed firms often substitute accrual manipulation with real earnings management to evade penalties, regulators must abandon single-tool enforcement in favor of a comprehensive portfolio approach that prioritizes high detection certainty.

Recommendations

Based on the findings and conclusions of this study, the following recommendations are offered for regulators, policymakers, firms, and future researchers.

1. The SEC Nigeria should prioritise personal sanctions, particularly director disqualification, over corporate monetary penalties when addressing earnings management in distressed firms. The finding that director disqualification exerts a substantially larger deterrent effect than monetary penalties suggests that personal accountability is a more effective compliance mechanism than corporate financial penalties. The SEC should therefore amend its administrative sanctions framework to emphasize director disqualification, public censure, and barring from future directorship positions as primary enforcement tools for earnings management violations.
2. The SEC should invest significantly in detection capabilities to enhance the certainty of enforcement. The finding that detection certainty moderates the

deterrent effect of monetary penalties indicates that increasing the perceived probability of detection may be more effective than increasing penalty amounts. Specific actions should include: expanding the Financial Reporting Surveillance Department, implementing data analytics and artificial intelligence tools for automated detection of anomalous reporting patterns, establishing a whistleblower reward programme, and reducing the average time between violation detection and sanction imposition.

3. The Nigerian government should strengthen the legal framework supporting SEC enforcement actions by enacting legislation that explicitly criminalizes certain forms of earnings management, particularly when undertaken by directors of distressed firms. The current administrative sanctions framework, while useful, lacks the deterrent weight of criminal penalties. Legislation should provide for fines linked to personal income rather than corporate assets, given that corporate monetary penalties may be absorbed by shareholders rather than affecting managerial decision-making.
4. Boards of directors of Nigerian listed firms, particularly those experiencing financial distress, should voluntarily strengthen internal controls over financial reporting beyond minimum regulatory requirements. The finding that distressed firms engage in higher levels of earnings management suggests that internal governance mechanisms are often overwhelmed by survival pressures. Specific actions should include establishing separate audit committee meetings focused exclusively on distress-related reporting issues, engaging external auditors for expanded procedures when distress indicators emerge, and requiring management to certify the absence of both accrual-based and real earnings management.
5. Audit committees should ensure that compensation structures for senior executives do not create perverse incentives for earnings management. Performance-based compensation tied to earnings targets should include clawback provisions that activate upon detection of earnings management, regardless of whether the manipulation occurred during the executive's tenure. Such provisions would increase the expected personal cost of earnings management, complementing external regulatory sanctions.
6. Future research should examine the long-term effects of regulatory sanctions on distressed firm outcomes, including post-sanction survival rates, access to capital, and eventual recovery or bankruptcy. The present study focused on immediate deterrent effects, but the ultimate purpose of regulatory enforcement is to protect investors and promote market integrity. Longitudinal studies tracking sanctioned distressed firms over five- to ten-year periods would provide evidence on whether sanctions achieve these ultimate objectives.

Appreciation
I am deeply grateful to my institution Isaac Jasper Boro College of Education, Sagbama the TeTFund, the libraries, and dedicated personnel for their invariable support and assistance, which enabled me to successfully complete my research work.

References

Adegbite, E., & Nakajima, C. (2019). Institutional determinants of earnings management in Nigeria, *Journal of Accounting in Emerging Economies,* 9(3), 378-401.

Becker, G. S. (1968). Crime and punishment: An economic approach, *Journal of Political Economy,* 76(2), 169-217.

Dechow, P. M., Ge, W., & Schrand, C. M. (2010). Understanding earnings quality: A review of the proxies, their determinants and their consequences, *Journal of Accounting and Economics,* 50(2-3), 344-401.

Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1995). Detecting earnings management, *The Accounting Review,* 70(2), 193-225.

Egbide, B., & Uwuigbe, O. R. (2018). Financial distress and earnings management: Evidence from listed Nigerian firms, Covenant *Journal of Business and Social Sciences,* 9(1), 45-62.

Enyi, P. E., & Akindele, D. B. (2018). Corporate governance mechanisms and earnings management in Nigerian listed companies, *International Journal of Accounting and Finance,* 7(2), 112-129.

Gunny, K. A. (2010). The relation between earnings management using real activities manipulation and future performance: Evidence from meeting earnings benchmarks, *Contemporary Accounting Research*, 27(3), 855-888.

Ibrahim, U. A., & Abdullahi, S. R. (2020). Board characteristics and earnings management in Nigerian listed firms: Moderating role of audit committee, *Asian Journal of Accounting Research,* 5(2), 171-185.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure*, Journal of Financial Economics,* 3(4), 305-360.

Kothari, S. P., Leone, A. J., & Wasley, C. E. (2005). Performance matched discretionary accrual measures, *Journal of Accounting and Economics,* 39(1), 163-197.

Ogundele, O. A., & Adeyemi, S. B. (2021). Deterrence and regulatory enforcement in Nigerian capital markets*, Journal of Financial Regulation and Compliance*, 29(4), 412-428.

Okafor, T. G., & Olamide, O. O. (2019). Sectoral analysis of real earnings management in Nigeria. *Nigerian Journal of Management Studies*, 18(1), 55-71.

Okoye, E. I., & Maimako, S. S. (2022). Earnings management in financially distressed firms: A review of emerging economy evidence, *African Journal of Accounting and Financial Research,* 5(2), 24-41.

Olukoya, O. A., & Ogunleye, J. O. (2021). Corporate governance code 2018 and real earnings management in Nigeria, *Journal of Governance and Regulation,* 10(3), 88-101.

Roychowdhury, S. (2006). Earnings management through real activities manipulation, *Journal of Accounting and Economics,* 42(3), 335-370.

SEC Nigeria. (2019). Administrative proceedings committee report on Oando Plc, *Securities and Exchange Commission,* Abuja.

SEC Nigeria. (2024). Rules on timely disclosure of periodic financial reports by public companies. *Securities and Exchange Commission,* Abuja.

Umoren, A. O., & Enang, E. R. (2015). IFRS adoption and earnings management in Nigerian listed firms, *Research Journal of Finance and Accounting*, 6(18), 74-83.