EARNINGS MANAGEMENT AND BANKRUPTCY RISK OF LISTED COMPANIES IN NIGERIA

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Abstract

This study investigated the influence of earnings management on the likelihood of bankruptcy among publicly traded firms in Nigeria. Secondary data from 30 quoted non-financial firms between 2015 and 2022 were used, by means of purposive sampling procedures and an ex-post-facto design was employed. Multiple regression analysis (OLS) was espoused as analytical technique. The research showed a strong positive bearing, demonstrating that a company's vulnerability to insolvency increases significantly as it increases its involvement in earnings management tactics. Companies must therefore, prioritise the cultivation of an atmosphere that promotes ethical financial reporting, placing greater importance on long-term sustainability rather than immediate profits.

Keywords: Earnings management, Bankruptcy risk, Debt covenant, Fraud theory, dilution of control, information asymmetry

Introduction

Debt financing is beneficial, for companies as it provides them with time to repay their debts and safeguards their ownership from being diluted. However, having debt can lead to instability especially if the company's cash flow and profitability are insufficient to cover repayment costs. This introduces the element of risk in debt financing. Corporate firms face risks, which can arise from capital losses and potentially lead to bankruptcy. The concept of bankruptcy risk has long been explored in finance and commerce making it a deliberate theme in accounting and financial literature. In Nigeria, bankruptcy laws (Bankruptcy Act, Cap 30, LFN 1990) apply to both individuals and businesses to ensure protection, from creditors. A company may be a separate legal entity in the sense that business is different from ownership, and a company may not be an individual. When bankruptcy risk threatens a business's going concern, aggressive earnings management may result. The term "earnings management" has been used multiple times in various literature over the years, as it takes many forms, from aggressive revenue recognition to deferrals, asset write downs and accounting reserves manipulation. While some types of earnings management are legal (e.g., tax planning), others are fraudulent (Dechow and Skinner, 2000). Some types of earnings management employ acceptable accounting policies and procedures as well as avoidance of business practices to achieve desired outcomes (Ochuko, 2021).

All in all, the literature on earnings management indicates that it has significant consequences for stakeholders, such as investors, creditors, and regulators. When a company is in danger of bankruptcy, earnings management can be used to postpone the inevitable or prevent the triggering of restrictive covenants in the debt agreement. For instance, if a company is struggling to make its debt payments, earnings management may involve accelerating revenue recognition or delaying expenses to improve its earnings. When managers manipulate financial statements, they can create a misrepresentation of a company's financial situation and performance, which can lead to poor valuation

and poor investment decisions by stakeholders, which can increase the risk of bankruptcy. This is usually depicted in financial statements which provide a quick summary of a company's financial health, including activities, profitability, cash flow, etc. Financial statements are important for shareholders and investors because they provide a wealth of information about a company's revenue, profitability, and debt load, as well as its ability to meet its short- and long-term financial obligations.

Previous research has shown that senior executives have a strong incentive to manipulate earnings (Iatridis and Kadorinis, 2009; Jaggi and Lee, 2002; Sweeney, 1994). Manipulating a company's financial statement is tantamount to deceiving a potential investor into committing to a financial obligation with the company. The investor would have made an investment decision based on a falsified financial statement from the company. Bankrupt enterprises often exhibit a common pattern where their previous years' financial statements show high levels of profitability which can make them attractive to stakeholders. This is because, unlike financially healthy firms, they often manipulate profit as a way to remove negative signs of financial stress. Several studies have shown this to be the case (Iatridis and Kadorinis, 2009; Jaggi and Lee, 2002; Sweeney, 1994). There is a concern that the financial statement may be manipulated, which may lead to long-term financial difficulties (Nwobia et al., 2019).

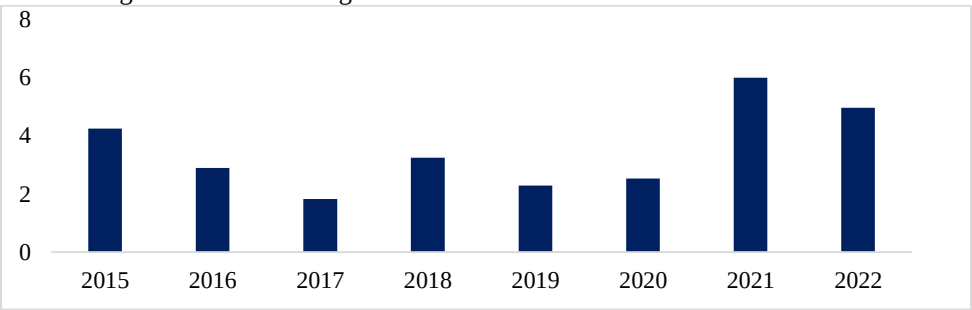


Figure1: Graphical representation on the trend of earnings management practices
Source: Authors' Design, 2023

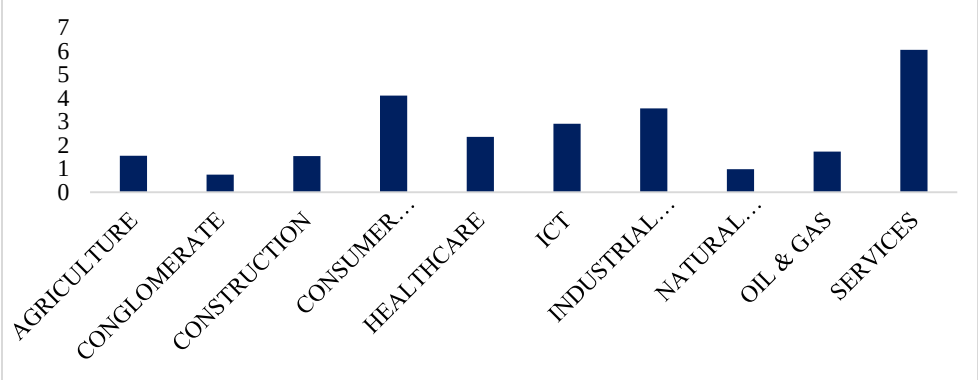


Figure 2: Earnings management practices based on industries
Source: Authors' Design, 2023

The trend analysis shows the extent of earnings management practices on the financial reporting of selected non-financial companies in Nigeria as shown in figures 1&2. The dataset ranges from 2015 to 2022. As observed from the figure, and it declines in 2017. Such as, Year 2018 further experienced

a significant rise in the practices. With the appropriate measures and a more stable business environment, the practice reduced at a low rate of 17 percent in 2022. This study further analyses the practice in relation to industries in Nigeria. With an overview of the pandemic era in this study, the services sector suffered more challenges, such as, reduced demand, increase in costs. The conglomerate sector has the least engagement in earnings management. Hence, earnings management practices can distort a company's true financial condition, potentially increasing its bankruptcy risk by misleading stakeholders and creditors (Iatridis & Kadorinis, 2009; Jaggi & Lee, 2002; Sweeney, 1994). Bankrupt firms often exhibit a pattern of overstating profitability in prior years to conceal financial distress (Iatridis & Kadorinis, 2009). Investigating the impact of earnings management on bankruptcy risk among listed Nigerian firms is crucial, as manipulated financial statements can undermine investor confidence, hamper accurate valuation, and lead to poor investment decisions, ultimately threatening the overall stability of the capital market (Nwobia et al., 2019). This study aims to provide insights into this critical issue, which has far-reaching implications for corporate governance, regulatory oversight, and economic growth.

2. Literature Review

Conceptual Analysis

Earnings Management

Earnings refer to a firm's financial profits or benefits accrued from operations over a specific period, serving as a key statistic for investors and analysts to evaluate financial performance (Anjum et al., 2012, as cited in Ochuko, 2021). Companies strive to present attractive financial statements, as investors rely on reported earnings to assess anticipated future performance (Okoye & Nwobi, 2019). Earnings management involves the deliberate manipulation of financial reporting within the bounds of accepted accounting practices to achieve desired earnings levels (Davidson et al., 1987; Schipper, 1989). It encompasses accounting manipulations and judgments to alter the initial earnings depiction (Beattie et al., 1994). Rahman et al. (2013) defined it as the utilization of accounting techniques by management to ensure earnings meet stakeholder expectations through redirecting earnings using operational and discretionary accounting methods. Matsuura (2008) classified earnings management into accruals earnings management and real earnings management. Accruals earnings management involves adjustments to recognize income or expenses generated but not recorded, categorized as discretionary (cash flow adjustments by management) or non-discretionary (accounting adjustments specified by standard setters) (Omar et al., 2014). Real earnings management directly impacts a company's cash flows or operational activities by deviating from typical procedures to achieve immediate financial targets (Roychowdhury, 2006).

Various earnings management techniques are frequently used by financially troubled companies. Income smoothing reduces variations in reported earnings over time by deliberately misusing accounting policies to decrease earnings during high-profit periods and increase earnings during low-profit periods (Ronen & Yaari, 2008; Nwabuisi et al., 2019). Big bath accounting intentionally generates substantial non-recurring costs or deductions to artificially reduce current earnings, establishing a larger profit cushion for future quarters (Quang, 2023). Earnings management can be legal (e.g., tax planning) or illegal if it conflicts with Generally Accepted Accounting Principles (GAAPs). Dechow (2000) found that firms practicing earnings management are more likely to be investigated by the Securities and Exchange Commission (SEC). Burgstahler et al. (1997) revealed that earnings management companies are also more likely to experience stock price declines after earnings announcements, as investors digest the company's true financial performance. Healy and Wahlen (1999) identified three incentives for earnings manipulation: contracting motivation, capital market motivation, and regulatory motivation. Contracting motivation

arises when managers manipulate earnings to fulfill contractual obligations, such as debt covenants and bonus contracts (Rahman et al., 2013; Jiang, 2020). Capital market motivation stems from managers' desire to align reported earnings with investor or analyst expectations, as failure to meet earnings targets can lead to dissatisfaction and lower returns (Arkan, 2015; Jiang, 2020; Nia et al., 2015). Regulatory motivation involves earnings manipulation to evade regulatory scrutiny, gain favorable treatment, or for tax planning purposes (Jiang, 2020; Arkan, 2015).

Earnings management prediction models, such as the Beneish M-Score model (1997), the Dechow and Dichev Model (1976), and the Modified Jones Model (1995), are utilized to assess the likelihood of earnings manipulation within corporations. This study employed the Modified Jones Model (Dechow et al., 1995), which uses discretionary accruals to evaluate earnings manipulation. Dechow et al. (1995) adjusted the original Jones model by incorporating receivables to obtain a more precise outcome, as managers can use credit sales to manipulate profitability, and the change in net receivables indicates this behavior. The Modified Jones Model exhibited a lower type II error rate than other models, making it preferable for assessing earnings management (Healy, 1985; DeAngelo, 1986; Jones, 1991). Prior research has established that high discretionary accruals indicate potential earnings manipulations and should be associated with a higher likelihood of qualified audit reports (Mishra & Malhotra, 2016). The model is widely used to examine the effectiveness of audit committees in limiting financial statement manipulation (Mishra & Malhotra, 2016).

Bankruptcy risk

Bankruptcy is a legal process that provides relief to insolvent individuals, businesses, or organizations unable to pay their debts, aiming to balance the interests of borrowers and lenders through a systematic settlement of financial challenges (Njemanze & Amaramiro, 2019). Bankruptcy risk refers to the probability of a corporation or individual becoming insolvent and incapable of fulfilling their financial obligations, quantifying the level of financial distress and likelihood of failing to repay debts (Oliver, 2000; Okoye & Nwobi, 2019). It implies that financial suffering precedes bankruptcy. Both internal factors, such as a company's financial health, profitability, leverage, liquidity, and management efficiency, and external factors, including macroeconomic conditions, industry patterns, competitive challenges, and regulatory changes, influence the likelihood of bankruptcy (Ochuko, 2019). Assessing bankruptcy risk is crucial for stakeholders like investors, lenders, and suppliers to evaluate the financial reliability of borrowers, establish appropriate interest rates or credit terms, and make informed investment decisions to minimize potential losses and safeguard their financial interests (Sun et al., 2014).

Theorical Evaluation

The signaling theory was introduced by Michael Spence in 1973 in his paper, "job signaling market". Signaling theory is a theory used in the accounting, finance and management literature that explains how asymmetric information between parties can be overcome through signals. Signaling refers to actions taken by individuals or firms to convey information to others about their characteristics, abilities, or intentions. Signaling theory is useful for describing behavior when two parties (individuals or organizations) have access to different information (Connelly et al., 2011). To this effect, management has access to vital information on the financial performance and stability of the business than other stakeholders, such as the creditors, investors and so on. Thus, management is identified to be the perpetrators of changing the financial statements and reports to appeal their audiences. Signaling theory is a widely studied concept in the field of finance, and it suggests that companies engage in earnings management to signal their financial health to external stakeholders such as investors and creditors. This theory suggests that companies may engage in earnings management to meet

or exceed market expectations for earnings, as meeting these expectations can signal the company's health to stakeholders. Companies that are struggling financially may engage in more aggressive earnings management to maintain the appearance of financial stability, even if it means taking on additional risk that could increase the likelihood of bankruptcy.

However, according to agency theory, principals and agents might not always share the same interests (Fama and Jensen, 1983). Over shareholders, managers may choose job security or personal wealth. "Agency costs," such as managing agents or preventing conflicts, may result from imbalanced incentives. In agency theory, principal-agent incentives impact the management of earnings and the danger of bankruptcy. In order to maintain their positions, managers may manipulate profits to appease shareholders (Jensen and Meckling, 1976). Dechow and Skinner (2000) note that investors may be concerned about the veracity of income and the influence of management on financial success for personal advantage. If managers' priorities don't align with those of shareholders, they could end up bankrupt from taking unnecessary risks (Fama and Jensen, 1983). Safeguards can be put in place. Debt covenant is one approach. The debt covenant reduces agency costs associated with bankruptcy by limiting management operations.

Drawing on fraud theory principles researchers have explored aspects related to financial management practices and bankruptcy risks within organizations

Empirical Review

Several studies have explored the relationship between earnings management and bankruptcy risk. Staw et al. (1983) utilized pre-bankruptcy financial distress as an independent variable and found a positive correlation with real activities management and accrual manipulation. Muranda (2006) examined corporate governance deficiencies and financial distress in the Zimbabwean banking sector, revealing that disproportionate power of the CEO or board chairman is prevalent in distressed banks. Kangarzadehlouei (2009) found that managers of firms listed on the Tehran Stock Exchange use income smoothing to improve their company's financial position, regardless of financial distress, to maximize capital market positioning. Li et al. (2011) investigated earnings management and earnings quality of Chinese firms, concluding that bankrupt enterprises adopt more efficient earnings management than non-bankrupt firms. Dastgir et al. (2012) discovered that firms with greater financial difficulties manage earnings through real activity manipulation, while normal firms use accruals manipulation. Amoa-Gyarteng (2014) analyzed Anglogold Ashanti, a Ghanaian firm, using the Modified Altman and Beneish models, finding little evidence of earnings manipulation despite potential bankruptcy. Ahn et al. (2016) and Gupta et al. (2018) utilized the fraud triangle framework, revealing that distressed companies are more likely to engage in earnings management and exhibit elements of the fraud triangle. Mulford and Comiskey (2002) also employed the fraud diamond model to examine financial statement fraud in public firms.

Soliman et al. (2016) found that financial leverage has a strong positive link with earnings management in Egyptian listed companies, while firm size, age, and audit quality have little effect. Hassanpour and Ardakan (2017) studied how pre-bankruptcy financial distress affects earnings management tools in Iranian firms. Egbunike and Igbinovia (2018) examined the impact of bankruptcy risk on earnings manipulation in Nigerian banks, concluding that they can manipulate profits upward regardless of bankruptcy risk, suggesting other motivations beyond insolvency avoidance. Nwabuisi et al. (2019) found that earnings management can harm Nigerian manufacturing firms, but corporate governance reduces its impact. Ogiriki and Iweias (2020) revealed that Nigerian manufacturing firms use all three earnings management strategies, with financial leverage having positive but weak associations with the dependent variables. Dian et al. (2020) found no correlation between earnings management

and bankruptcy risk in Indonesian firms, but cost leadership or differentiation strategies significantly reduce bankruptcy risk. Kovacova et al. (2021) showed that earnings management negatively impacts bankruptcy prediction models' accuracy due to stakeholders' scrutiny of financial statements and cautious approach to risky companies. Okoye and Nwobi (2021) concluded that income smoothing does not affect bankruptcy risk in Nigerian listed deposit money banks. Nwaobia et al. (2022) found that earnings management can harm Nigerian manufacturing firms, but corporate governance mitigates its impact. Quang (2023) demonstrated that manipulating discretionary accruals increases financial distress risk in Vietnamese firms, while real earnings management and competitive business strategies reduce financial distress.

3. Methodology

This work adopted ex-post-facto design and utilized data from 30 listed non-financial companies in Nigeria for the period of 2015 to 2022, using purposive sampling technique. The companies were selected based availability of data and the existence of the companies throughout the study period. The data of the companies were sourced from the audited annual reports and accounts of the respective firms. Based on fraud theory, the econometrics model was specified as follows:

$$Bankruptcy\ Risk = \int (Earnings\ Management, Control\ Variables, e) \quad (1)$$

In order to address the issues of endogeneity, problems of omitted variables and heteroscedasticity in the estimation process, as observed by Both *et. Al* (2001), Frank and Goyal (2009), Apanisile and Akinlo (2014), Apanisile and Olayiwola (2019), Olayiwola and Okoro (2021), equation (1) was re-specified as a dynamic model:

$$Y_{it} = \theta Y_{it-1} + \sum_{i=1}^{n} \beta X'_{it} + \sum_{i=1}^{n} \delta Q'_{it} + \mu_{it} \quad (2)$$

Where $X'_{.}$ is the vector of earnings management; $Q'_{.}$ is the vector of control variables. $Y_{.}$ is the regressand, a measure of bankruptcy risk.

Decomposing $Z'_{.}$, we have

$$Q'_{it} = Perf_{it} + OCF_{it} + Lev_{it} + Size_{it} + gr_{it} \quad (3)$$

Where Perf. is performance, OCF is the operating cashflow, Lev is the financial leverage, size is the firms' size and gr. is the firms' growth. Specifying the model explicitly, equation (2) then becomes:

$$\mathbb{Z}_{it} = \beta_1 \mathbb{Z}_{i(t-1)} + \beta_2 EM_{it} + \beta_3 Perf_{it} + \beta_4 OCF_{it} + \beta_5 Lev_{it} + \beta_6 Size_{it} + \beta_7 gr_{it} + \mu_{it} \quad (4)$$

a-priori expectations are:

$\beta_1, \beta_2, \beta_3, \ldots\ldots\ldots\ldots\ldots\ldots\ldots \beta_7 = -/+$

The objective of this study was therefore be achieved by estimating the model in equation (4) using multiple regression analysis (OLS).

Table 1: Measurement of Variables

Variables	Proxy	Measurement	Sources
Earnings management	Discretionary accruals	Modified jones model (Dechow et Al, 1995)	Annual financial statement
Bankruptcy risk	Measure of financial distress	Altman Z-score (Altman 2006)	Annual financial statement
Performance	Return on assets (ROA)	Income before extraordinary items / total assets	Annual financial statement
Operating cash flows	OCF	Log of operating cashflows	Annual financial statement
Financial leverage	Debt to equity ratio	Total debts/Equity	Annual financial statement
The firm size	Total revenue	Log of total revenue	Annual financial statement
Growth	Annual change in total assets from year t-1 to year t	Total assetst-Total assetst-1/total assets	Annual financial statement

Source: Authors' Design, 2023

4. Results and Discussion of Findings

Descriptive Statistics

The research examines the descriptive statistics of the variables of interest, with a special emphasis on factors pertaining to earnings management and bankruptcy risk. The table 2 provides descriptive statistics such as the mean, median, standard deviation, skewness, and kurtosis. The study reveals that, on average, the sampled businesses have Z-scores that are positive, indicating that they are positioned above the "grey zone" in terms of bankruptcy risk. Conversely, earnings management is observed in the majority of organisations, with most maintaining consistent outcomes, while a few engage in assertive manipulation. Most firms are successful, as evidenced by positive PERF ratings, however a few experience losses. Operating cash flow (OCF) indicates that the majority of firms earn profits, while there are exceptions with lower cash flow. Most organisations have a higher amount of debt compared to equity, however there are few cases when this is not true. The sales data reveals a considerable level of total revenues, however with a notable disparity in the sizes of the companies. While negative sales growth is a typical occurrence, there are certain organisations that demonstrate positive growth, suggesting a varied performance within the sample.

Correlation Analysis

The relationships between a number of variables (Z-SCORE, EM, PERF, OCF, FINLEV, SIZE, GROWTH) are examined in Table 3 of the research. The objective is to ascertain the orientation of these connections and detect strong correlations that may suggest the presence of multicollinearity. The most robust positive connection is shown between the variable FIRM_SIZE and OCF, indicating that larger enterprises often exhibit greater levels of operational cash flows. The most pronounced negative association exists between PERF and GROWTH, suggesting that organisations with superior performance tend to have lower rates of growth. The correlation between FINLEV and GROWTH is quite poor, indicating a minimal linear association between financial leverage and growth. The Z_SCORE has positive associations with EM, PERF, and OCF while displaying a negative association with GROWTH, indicating that greater Z_SCORE values are linked to superior financial performance and cash flow creation. EM has a positive correlation with Z-SCORE, OCF, and GROWTH, while displaying a negative correlation with PERF. This suggests that higher EM values are associated with increased cash flow manipulation, growth potential, unfavourable financial health, and diminished performance. Significantly, the analysis identifies no instances of strong correlation among the

variables, thereby resolving concerns over multicollinearity. It is important to use caution when evaluating correlation data, as they only reflect the degree of linear relationships and not causality.

Table 2: Descriptive Statistics of the study variables

	Z_SCORE	EM	PERF	OCF	FINLEV	SIZE	GROWTH
Mean	4.864	0.002	0.070	6.304	-30.633	7.192	-0.168
Median	5.688	-0.051	0.065	6.205	1.535	7.014	0.048
Maximum	21.663	1.933	0.991	8.109	105.604	8.741	0.939
Minimum	-70.297	-0.487	-1.606	2.982	-8396.481	3.733	-12.008
Std. Dev.	7.429	0.233	0.201	0.887	542.374	0.927	1.551
Skewness	-6.022	4.726	-2.101	-0.029	-15.386	-0.722	-6.118
Kurtosis	55.586	32.427	29.854	2.914	237.827	4.462	41.122
Observations	240	240	240	240	240	240	240

Source: Authors' Computation, 2023

Table 3: Correlation Matrix

Variables	Z-SCORE	EM	PERF	OCF	FINLEV	FIRM_SIZE	GROWTH
Z-SCORE	1						
EM	0.225944	1					
PERF	0.742479	-0.22268	1				
OCF	0.333067	0.232121	0.308719	1			
FINLEV	0.046457	0.001353	0.039516	0.039365	1		
SIZE	0.280251	0.165215	0.18603	0.794962	0.210166	1	
GROWTH	-0.118202	0.057688	-0.146272	-0.062378	-0.002879	-0.068578	1

Source: Authors' Computation, 2023

Multicollinearity Test

The multicollinearity analysis reveals the variance inflation factors of the variables. A VIF value below 10 demonstrates the absence of multicollinearity issues among the variables. Similarly, the I/VIF column, representing the tolerance levels of the variables, shows values above the benchmark of 0.2, further confirming the absence of multicollinearity.

Table 4: Variance Inflation Factor

Variable	VIF	1/VIF
EM	1.106	0.904
PERF	1.2	0.833
OCF	2.136	0.468
FINLEV	1.09	0.918
SIZE	2.143	0.467
GROWTH	1.033	0.968

Source: Authors' Computation, 2023

The impact of earnings management on bankruptcy risk

Using regression analysis, this study statistically investigated the connection between the regressand and the regressors. Forecasting outcomes, providing context, and measuring the impact of explanatory variables can all benefit from this method. Table 5 displays the results of the regression analysis. It was revealed that at the 5% level, EM, PERF, SIZE, and Z_SCORE (-1) are all significantly different. The likelihood of insolvency is positively and statistically correlated with earnings management. Firms that manipulate their results are more likely to experience financial difficulties or perhaps go bankrupt as a result. An enormous effect, as indicated by the coefficient of 4.33, is at work here; the Z-score rises 4.33 units for every one-unit improvement in earnings management, as assessed by discretionary accruals. The t-statistic of 4.12 and the p-value of 0.00 demonstrate that earnings management has a statistically significant influence on the likelihood of bankruptcy. A lower bankruptcy risk is associated with better performing corporations (PERF), larger organisations are more financially stable (SIZE), and Z_SCORE (-1), an indication of previous financial health, is a good signal of present financial health (Z_SCORE). All of these factors have positive impacts. Given their lack of statistical significance, we are unable to reject the null hypothesis that OCF, FINLEV, and GROWTH do not influence the likelihood of bankruptcy.

As shown by the R-squared value of 0.45, the model accounts for approximately 45% of the variation in Z-SCORE. The model only explains 44% of the variation in bankruptcy risk, as shown by the modified R-squared value of 0.44 after accounting for the degrees of freedom. Overall, the model is statistically significant with an F-statistic of 122 at the 5% level of significance. There appears to be no issue with autocorrelation in the model, as indicated by the Durbin-Watson value of 1.737. Objective 2's findings indicate a positive and statistically significant correlation between profits management and the likelihood of insolvency. The results showed that earnings management has a t-value of 4.12, which is statistically significant at 0.00. The link is significant and positive, since the p-value of 0.00 is less than the 5% level of significance.

Also, just one model was used to accomplish the goals of the study. To determine how earnings management affects the likelihood of insolvency, the model controlled for factors such as performance, operational cash flows, financial leverage, company size, and growth. The study found that earnings management had a substantial detrimental effect on the finances of distressed companies. Some of the control variables were found to be significant, while others were not.

Table 5 Regression results

Variable	Coefficient	Std. Error	t-Statistic	Prob
Z_SCORE (-1)	0.48	0.03	14.84	0.00
EM	4.33	1.05	4.12	0.00
PERF	21.36	1.29	16.5	0.00
OCF	0.23	0.46	0.49	0.62
FINLEV	-0.001	0.006	-0.31	0.76
SIZE	1.23	0.59	2.08	0.04
GROWTH	-0.06	0.15	-0.41	0.68
R-squared	0.45			
Adjusted R-squared	0.44			
S.E. of regression	3.49			
Sum squared resid	2807.87			
Log likelihood	-633.54			
Durbin-Watson	1.73			
F-statistic	122			
Prob(F-statistic)	0.000			

Source: Authors' Computation, 2023

5. Conclusion and Policy Recommendations

This study examines the strong link between earnings management and the likelihood of corporations going bankrupt, a subject of great interest in both academic and practical spheres. After conducting a comprehensive examination, the findings indicate a substantial positive correlation, indicating that as a company expands its engagement in profits management strategies, its susceptibility to bankruptcy risk also grows dramatically. Based on the findings in this work, the suggestions for improvement are as follows:

a) Promote ethical financial reporting: Companies should prioritize cultivating an environment that promotes ethical financial reporting practices. This can be achieved through robust corporate governance mechanisms, strong internal controls, and fostering a culture of transparency and accountability. Ethical financial reporting can help mitigate the risks associated with aggressive earnings management and enhance stakeholder confidence.

b) Emphasize long-term sustainability over short-term profits: The study highlights the potential adverse consequences of earnings management on a company's financial stability and bankruptcy risk. Companies should shift their focus from short-term profit maximization through aggressive earnings management tactics to long-term sustainable growth strategies. This can help maintain investor confidence, improve valuation accuracy, and reduce the likelihood of financial distress.

c) Strengthen regulatory oversight and enforcement: Regulatory bodies should enhance their oversight and enforcement mechanisms to detect and deter earnings management practices. This could involve stricter auditing standards, more stringent reporting requirements, and tougher

penalties for financial misrepresentation. Effective regulatory oversight can help maintain the integrity of financial reporting and protect stakeholder interests.

d) Enhance corporate governance and audit committee effectiveness: The study suggests that strong corporate governance practices and effective audit committees can mitigate the impact of earnings management on bankruptcy risk. Companies should ensure that their audit committees are independent, competent, and empowered to scrutinize financial reporting processes. Additionally, implementing robust risk management frameworks and promoting ethical leadership can contribute to better financial reporting practices and reduce the likelihood of financial distress.

6. Limitation and Suggestions for Further Studies

This study offers valuable insights but is limited to 30 non-financial Nigerian firms from 2015-2022, potentially constraining generalizability across sectors and periods. Future research should expand the firm sample size and scope, encompassing diverse industries and company types to assess whether findings hold true across contexts. Notably, the deliberate exclusion of financial firms presents an opportunity for subsequent studies to examine this critical segment's dynamics. Moreover, investigating how corporate governance mechanisms like board composition, audit committee effectiveness, and other practices moderate the earnings management-bankruptcy risk relationship could provide actionable guidance for strengthening governance frameworks and enhancing financial resilience. Addressing these limitations through comprehensive, multi-dimensional analyses could deepen understanding of this intricate nexus.

References

Ahn, J., Jang, S. S., Kim, J., & Lee, S. (2016). An analysis of the likelihood of financial distress using the fraud triangle. *Journal of Business Research, 69*(11), 5118-5123.

Altman, E. I. (1968). Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy. *The Journal of Finance, 23*(4), 589-609.

Apanisile, O., & Taiwo, A. (2014). Relationship between Insurance and Economic Growth in Sub-Saharan African: A Panel Data Analysis. Modern Economy, 5(1), 120-127.

Apanisile, O. T. & Olayiwola, J. A., (2019). "Macroeconomic and institutional determinants of firms'choices of capital structure in Nigeria: a system-GMM approach," International Journal of Business and Emerging Markets, Inderscience Enterprises Ltd, 11(1), 89-107.

American Bankruptcy Institute. (n.d.). What is Bankruptcy? Retrieved from https://www.abi.org/about-abi/bankruptcy-basics/

Amoa-Gyarteng, K. (2014). Analyzing a listed firm in Ghana for early warning signs of bankruptcy and financial statement fraud: An empirical investigation of AngloGold Ashanti. European *Journal of Business and Management, 6*(5).

Anjum, H., Saif, M. I., Malik, Q. A., & Hassan, S. (2012). Earnings management and firms' profitability: Evidence from Pakistan. *European Journal of Economics, Finance & Administrative Sciences, 47*, 13-18.

Arzu, D., Gloria, S.D. & Mantovani, G.M. (2017). Forecasting bankruptcy: A European Analysis. International University of Monaco; Ca`Foscari working paper, 1-26.

Australian Financial Security Authority. (n.d.). About Bankruptcy. Retrieved from https://www.afsa.gov.au/insolvency/bankruptcy/about-bankruptcy

Bankruptcy Canada. (n.d.). Bankruptcy Basics. Retrieved from https://bankruptcy-canada.com/bankruptcy-basics/

Beasley, M. S. (1996). An empirical analysis of the relation between the board of director composition and financial statement fraud. *Accounting review, 71*(4), 443-465.

Beattie, V.; Brown, S.; Ewers, D.; Brian, J.; Manson, S.; Thomas, D. & Turner, M. (1994). Extraordinary items and income smoothing: a positive accounting approach. *Journal of Business Finance & Accounting, 21*(6), pp. 791-811.

Beaver, W. H. (1966). Financial Ratios as Predictors of Failure. Journal of Accounting Research, 4(3), 71-111. doi: 10.2307/2490171

Burgstahler, D., & Dichev, I. D. (1997). Earnings management to avoid earnings decreases and losses. *Journal of accounting and economics, 24*(1), 99-126.

Campa, D., Miñano, C. (2015), The impact of SME's pre-bankruptcy financial distress on earnings management tools. *International Review of Financial Analysis, 42*(4), 222-234.

Cohen, D., Dey, A., and Lys, T. (2008). Real and accrual-based earnings management in the pre and post Sarbanes-Oxley periods. *The Accounting Reviews 83*, 757-787.

Conelly, L.B., Certo, T., Ireland, D.R. & Reutzel, C.R. (2011). Signally theory: A review and assessment. *Journal of Management, 37*(1), 39-67.

Dabor, A.O., & Dabor, E.L. (2015). Audit committee characteristics, board characteristics and financial reporting quality in Nigeria. *International Journal of Economics, Commerce and Management 3*(11), 1292-1304.

Dastgir, M., Hoseinzadeh, A., Khodadi, V., Vaez, A. (2012), Earnings quality in distressed companies. *Financial Accounting Research, 4*(1), 1-16.

Davidson, S.; Stickney, C.P. & Weil, R.L. (1987). Accounting: The language of business. Sun Lakes, Ariz: T. Horton.

Dechow, P.M., & Skinner, D.J. (2000). Earnings management: Reconciling the views of accounting academics, practitioners, and regulators. *Accounting Horizons, 14*(2), 235-250.

Egbunike P.A. & Igbinovia, I.M. (2018). Threat of bankruptcy and earnings management in Nigerian listed Banks, Acta Universitatis Danubius, *14*(3).

Fama, E.F. (1980). Agency problems and the theory of the firm. Journal of political economy, *88*(2), 288-307.

Frank, M. Z., & Goyal, V. K. (2009). Capital Structure Decisions: Which Factors Are Reliably Important? Financial Management Association International, 38(1), 1-37.

Gerritsen, P. (2015). Accuracy rate of bankruptcy prediction models for the dutch professional football industry, Master thesis, University of Twente, the Netherlands

GOV.UK. (n.d.). Bankruptcy. Retrieved from https://www.gov.uk/bankruptcy

Gupta, A., Jain, R., & Sharma, R. (2018). Earnings management and bankruptcy risk: A study of Indian firms. Journal of Applied Accounting Research, *19*(3), 333-350.

Hassanpour, S., & Ardakani, M. N. (2017). The effect of pre-bankruptcy financial distress on earnings management tool. *International Review of Management & Marketing, 7*(3), 213-219.

Healy, P. M., & Wahlen, J. M. (1999). A review of the earnings management literature and its implications for standard setting. *Accounting horizons, 13*(4), 365-383.

Hribar, P., & Collins, D. W. (2002). Errors in estimating accruals: Implications for empirical research. *Journal of Accounting Research, 40*(1), 105-134.

Jensen, M.C., & Meckling, W.H. (1976). Theory of the firm: Managerial behaviour, agency costs and ownership

structure. *Journal of financial economics, 3*(4), 305-360.

Kalunki, J.P. and Martikainen, T. (1999), 'Financial failure and managers 'accounting responses: Finnish evidence,' *Journal of Multinational Financial Management 9*, 15–26.

Kovacova, M., Lacny, M., & Gonos, J. (2021). Impact of earnings management on bankruptcy prediction. *Globalization and its Socio-Economic Consequences 12*(9), 1-7.

LaFond, R., Fran cis, J., O'Connor, P., and Wang, D. (2008). Earnings Management and the risk of bankruptcy. *The Accounting Review, 83*(4), 957-986.

Li, S., & Richie, N (2016). Income smoothing and the cost of debt. *China Journal of Accounting Research, 9*(3), 175-190.

Lukason, O., & Camacho-Miñano, M.-D.-M. (2019). Bankruptcy risk, its financial determinants and reporting delays: *Do managers have anything to hide? Risks, 7(*3), 1-15. Available at: https://doi.org/10.3390/risks7030077.

Merton, R. C. (1974). On the Pricing of Corporate Debt: The Risk Structure of Interest Rates. *The Journal of Finance, 29*(2), 449-470.

Mulford, C. W., & Comiskey, E. E. (2002). The financial numbers game: Detecting creative accounting practices. John Wiley & Sons.

Munzel, M. (2016). Bankruptcy: A Brief Introduction. *Berkeley Journal of International Law, 34*(2), 464-469. Retrieved from https://scholarship.law.berkeley.edu/bjil/vol34/iss2/6/

Nazir, M.S. Tabassum, N. & Kaleem, A. (2015). Real earnings management and future performance. Global Busineess Review, 16(1), 21-34.

Njemanze, L.O., & Amaramiro, N.F. (2019). Impact of bank consolidation on Economic Growth: A case of Nigeria. *International journal of sustainable development 12*(2), 28-37.

Nwaobia, A.N., Kwarbai, J.A., & Fregene, O.O. (2019). Earnings management and corporate survival of listed manufacturing companies in Nigeria. *International Journal of Development and Sustainability*. *8*(2), 97-115.

Ochuko, B.M. (2021). Determinants of earnings management: the study of Nigeria non-financial companies. *Original scientific paper*, *23*(2), 139 – 155.

Ohlson, J. A. (1980). Financial Ratios and the Probabilistic Prediction of Bankruptcy. Journal of Accounting Research, 18(1), 109-131. doi: 10.2307/2490395

Okoye, I.E., & Nwobi, E.G. (2019). Earnings management and bankruptcy risk among Nigeria listed deposit money banks: moderator effect of bank size and age (2006-2018). *International Journal of Advanced Academic Research*. *5*(11), 37-41.

Olayiwola, J & Okoro, S (2021): Tax Planning, Corporate Governance and Financial Performance of Selected Quoted Non-Financial Companiesin Nigeria (2007–2018) Organizations and Markets in Emergin g Economies, 12(2) Vilniaus Universit etas, Lituania Disponible, https://www.redalyc.org/articulo.oa?id =692372872004

Palmrose, Z. V. (1988). An analysis of auditor litigation and audit service quality. *Journal of accounting research, 26*(1),

Quang, L.T. (2023). Impact of earning management and business strategy on financial distress risk of Vietnamese companies. *Cogent Economics & Finance 11*(1), 1-21. https://doi.org/10.1080/23322039.2023 .2183657

Rahman, M., Moniruzzaman, M. & Sharif, J. (2013). Techniques, Motives and Controls of Earnings Management, *1*(1) 22- 34.

Richardson, V. J., Tuna, I., & Wysocki, P. D. (1999). Accounting for taste: Board member preferences and stock

dividends. *Journal of accounting research, 37*, 199-228.

Rosner, R.L. (2003), Earning manipulation in failing firms. *Contemporary Accounting Research, 20*(2), 361-408.

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

Schipper, K. (1989). Commentary on Earnings Management. *Accounting Horizons, 3*(4), pp. 91-102

Schrand, C.M., & Zechman, S.L. (2012). Executive overconfidence and the slippery slope to financial misreporting. *Journal of Accounting and Economics*, *53*(1-2), 311-329.

Soliman, M.M., Bassiouny, S.W. & Ragab, A. (2016). The impact of firm characteristics on earnings management: An empirical study on the listed firms in Egypt. The Business and Management Review 7(2), February 2016. International Conference on Globalization, Entrepreneurship & Emerging Economies, Egypt 91.

Staw, B.M., McKechnie, P.I., Puffer, S.M. (1983). The justification of organizational performance. *Administrative Science Quarterly, 28*(4), 582-600.

Taffler, R. J. (1983). Forecasting Company Failure in the UK Using Discriminant Analysis and Financial Ratio Data. *Journal of the Royal Statistical Society: Series C (Applied Statistics), 32*(2), 147-159.

United States Courts. (n.d.). Bankruptcy Basics. Retrieved from https://www.uscourts.gov/services-forms/bankruptcy/bankruptcy-basics

Zmijewski, M. E. (1984). Methodological Issues Related to the Estimation of Financial Distress Prediction Models. *Journal of Accounting Research, 22*, 59-82.

APPENDIX
List of companies sampled

1	Livestock feeds plc	**16**	E-tranzact international plc
2	Cadbury Nigeria plc	**17**	Courtville business solutions plc
3	Transnational corporation of Nigeria plc	**18**	Nestle Nigeria Plc
4	SCOA Nigeria plc	**19**	NCR Nigeria plc
5	Dangote Cement plc	**20**	Multiverse mining and exploration plc
6	Julius berger	**21**	Conoil Nigeria plc
7	Beta Glass plc	**22**	Seplat Energy Plc
8	Arbico plc	**23**	Ikeja hotel plc
9	May and baker Nigeria plc	**24**	MRS Oil Nigeria Plc
10	Fidson healthcare plc	**25**	Total Energies Marketing Nigeria Plc
11	Academy press plc	**26**	Capital hotel plc
12	Chemical Allied Products Plc	**27**	Unilever Nigeria Plc
13	Guiness Nigeria Plc	**28**	Tantalizers plc
14	Nigeria Breweries plc	**29**	Associated bus company plc
15	Lafarge Africa Plc	**30**	Berger Paints