

## EFFECT OF INSTITUTIONAL OWNERSHIP ON BANKRUPTCY RISK IN NIGERIAN BANKS

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### **Abstract**

*This study determined the effect of institutional ownership on bankruptcy risk in Nigerian banks. Ex Post Facto research design was adopted for the study. Nine deposit money banks were used and data were generated from the annual reports and audited accounts of the banks under assessment. Altman's model was used to extract data and the formulated hypotheses were tested with regression analysis with aid of E-View 9.0. The study revealed that institutional ownership has a positive significant effect on bankruptcy risk of commercial banks in Nigeria. Based on the findings, the study recommended that there is a need to consolidate on the free-riding incentive of institutional investors in the field of monitoring activities. This group of investors should not be willing to direct supervision by themselves; thus, these investors may force corporations to increase dividends rather than direct observation.*

**Keywords:** Institutional ownership, Bankruptcy risk and Nigerian banks

## **Introduction**

Nigeria's banking sector is extremely important to the country's socioeconomic development and significantly contributes to the nation's GDP (Ighoroje & Egedi, 2015). According to Olaniyi (2007), the sector is the nerve center of any modern economy, the repository of the people's wealth, and the supplier of credits that lubricates the engine of growth of the entire economic system. However, the sector has seen turbulence and, in some cases, failure over the years. According to NDIC (2020), the Central Bank of Nigeria (CBN) revoked the licenses of eight failed banks between 2009 and 2019. The federal high court issued orders for their liquidation and appointed the Nigeria Deposit Insurance Corporation (NDIC) as the banks' liquidator. The Central Bank of Nigeria in these periods, withdrew the banking licenses of some of these banks and the NDIC stepped in, creating bridge banks (temporary banks) to acquire the assets of the banks so as to continue operations on a fresh note (Wurim, 2013).

Bankruptcy has been widely debated and investigated in recent years. While there has been interest in corporate bankruptcy in the accounting and finance literature, the emphasis has primarily been on predicting bankruptcy based on financial data (Beaver, 1966; Altman, 1986). Despite the fact that this phenomenon has already been observed in recent high-profile bankruptcy events, and that some studies on corporate governance and bankruptcy risk have been conducted, it remains an open empirical question how the relationship of corporate governance to the likelihood of bankruptcy works.

According to Fich and Slezak (2008), corporate governance has two potential effects on the likelihood of bankruptcy. The first reason is that it has become clear that financial and accounting data can be manipulated in order to conceal poor performance. Second, because the governance structure of a firm is a nexus of incentive contracts, the efficacy of management response to distress will be determined by the governance structure of the firm. Although it may be difficult to avoid bankruptcy, the greater the bankruptcy, the more likely management will respond to a given level of distress, which may depend on the firm's governance structure.

Furthermore, all previous studies pertain to a specific time period, and given the dynamic nature of the Nigerian banking sector, there is a continuing need for additional research. In addition, previous studies did not include corporate governance to determine the extent to which the Altman model can predict bankruptcy in Nigerian banks. To effectively forecast the direction of the national economy, it is therefore sufficient to predict statistically and prospectively possible distress or insolvency in the banking industry. Following the recent economic recession experienced by the economy, using current data to investigate the effect of institutional ownership on bankruptcy risk in deposit money banks in Nigeria.

## **Literature Review**

### **Institutional Ownership**

Hashim (2008) defined institutional ownership as the percentage of shares owned by the largest corporate investors in relation to the total number of shares issued. Manos (2002) investigated India's dividend policy, which is an emerging economy. The findings revealed a positive relationship between institutional ownership and the firms' payout ratio. Cook and Jeon (2006) discovered that institutional investors had little influence over a company's dividend policy. A similar study was conducted by Obema, El-Masry, and Elsegini (2008) with a sample of top Egyptian listed companies. Only institutional ownership was found to be significantly related to dividend policy, while the others were statistically insignificant. As a result, institutional owners may disagree with management's incentives based on further cash

flow accumulation and, using their voting power, compel managers to pay dividends. These investors are typically willing to be provided with accurate and timely information about the firm, as well as to continuously examine companies to provide accurate future profits. They examine information about share values that are not reflected in the current year's profit and factor it into their share prices (active monitoring hypothesis). Kouki and Guizani (2009) investigated the impact of shareholder ownership diversity on dividend policy. The findings revealed a significantly negative relationship between institutional ownership and the level of dividend distributed to shareholders. Miko and Kamardin (2015) investigated the impact of corporate dividend policy on ownership structure. For the study, which spanned the years 2001 to 2010, an aggregate sample of eight companies totaling 80 firms was used. The findings revealed a positive relationship between dividend payout, institutional ownership, and block holder ownership, but a negative relationship between managerial ownership and dividend pay-out. According to the signaling theory, managers with more understanding and information than the market signal their expectations about the company's future profits through dividend payments to the market. It could be argued that dividend payments and institutional investors are another way of signaling. The presence of large shareholders may reduce the need to use dividends as a performance indicator.

### **Bankruptcy Risk**

The term "risk" is derived from Arabic and refers to an unexpected event. Risk is typically defined as something indefinite and unstable that is related to the course of a phenomenon and disrupts its behavior. Lowrance (1976); oti'c and Raji'c (2015) introduced a key definition of risk, stating that "risk is the measure of probability and the weight of unfavorable consequences." Cunderlk (2004) defines risk as "the expression of the degree of uncertainty in various forms." Risk is defined as a state of imperfect knowledge in which the decision-maker is aware of the various possible consequences of his decision and can estimate the degree of probability that this or that result will occur (Bugarová & Hudáková 2012). Businesses must deal with risks, whether financial, commercial, or otherwise. One of the most important constraints that define the scope of financial decision-making is risk (Marinic 2008). Long-term financial decisions should be approached with caution. Risk is defined as the possibility of achieving an above-average return on investment (Klucka 2006). Tranchard (2018) provided the following risk definition: "Risk is the effect of uncertainty on goals." The probability is risk.

Bankruptcy risks indicate the possibility of financial losses as a result of failing to meet financial targets. Financial risks associated with a business's financial operation can take many forms, including market risks caused by changes in the prices of commodities, stocks, and other financial instruments, foreign exchange risks, interest rate risks, credit risks, financing risks, liquidity risks, cash flow risk, and bankruptcy risk. These financial risks are not necessarily independent of one another, and managers recognize this interdependence when designing risk management systems (Woods and Dowd 2008). The importance of these risks will differ from one firm to the next depending on the firms' sector of activity, firm size, development of international transactions, and so on.

### **Empirical Studies**

Ayoola and Obokoh (2018) examined the discriminatory power of corporate governance mechanisms such as the board, audit committee, executive management, and auditor in one model for financial distress prediction. The study relied on secondary data obtained from annual financial statements of twenty banks between 2005 and 2015. The descriptive statistics and generalized quantile regression model were used to analyze the data. The study's empirical evidence suggests that financially distressed banks have large boards with members

who may not be well versed in banking complexities, as well as chairmen and CEOs with significant shareholdings both individually and collectively. Furthermore, despite their increased size, distressed banks experience a significant decline in customer deposits. The study concludes that poor corporate governance mechanisms can lead to financial distress. Mwawughanga and Ochiri (2017) investigated the financial health of Kenyan banks that are and are not listed on the Nairobi Stock Exchange. The independent variables in the model were the ratios of working capital to total assets and retained earnings to total assets. Altman 2005's Multivariate Discriminant Statistical techniques were used in the analysis. According to the findings, a high percentage of Kenyan banks were in the grey zone during the study period. Conclusions were reached that the Altman model was an average tool that should only be used in conjunction with other tools. From 2007 to 2012, Masoumeh (2016) investigated the relationship between earnings management and earnings quality for bankrupt and non-bankrupt firms listed on the Tehran Stock Exchange. The study examined the relationship between discretionary accruals as a measure of earnings management, being opportunistic or efficient earnings management, by testing the relationship between discretionary accruals as a measure of earnings management, being opportunistic or efficient earnings management. Furthermore, each of the three variables, future change in earnings, future cash flow from operations, and future non-discretionary earnings, was used to calculate future profitability. The results of estimating unbalanced panel data technique for 55 firms subjected to Altman's model bankruptcy and 198 non-bankrupt firms show that bankrupt firms use opportunistic earnings management, and the non-bankrupt firms do not. Gnyana (2015) concluded in his research on the prediction of financial distress using the Altman Z score for selected companies in India that the Z score is a popular and effective model and that all investors should analyze the Z score of a company before making an investment decision to avoid financial loss due to financial failure. Ezejiolor, Nzewi, and Okoye (2014) investigated the extent to which the Altman Model can be used to predict the possibility of corporate bankruptcy/failure in the Nigerian banking sector. Data were gathered from annual reports and bank accounts. The Altman prediction was used. The results show that the Model was capable of accurately predicting the failure potential of sound and healthy banks. The findings also show that the Altman bankruptcy prediction Model could have successfully predicted the failure of the Nigerian banks that actually failed. The implication of this finding is that regulatory authorities' standard rating system for predicting the extent of failure in Nigerian banks is still low; as a result, Nigeria has had numerous bank failures in the past, which could have been avoided if they had used a model similar to Altman's z-score. Based on this, the researcher recommends that regulatory authorities and financial sector agencies work to domesticate Altman's model for result-oriented monitoring of bank health. Again, there is a need to control the financial system and make it fit for the service and interests of depositors and shareholders. In Zimbabwe, Ncube (2014) recommended using Altman's Z score for non-manufacturing firms and financial institutions listed on the Zimbabwe stock exchange in predicting corporate failure in the financial services and banking sector. Despite the fact that Altman's model is old and has limitations, it is still the most widely used model in the world. Although different equations exist, they all follow the concepts of the original one developed by Professor Altman in 1968. Pam (2013) conducted research in the Nigerian banking sector and discovered that liquidity, profitability, operating efficiency, and total assets turnover are key variables of the Altman's Z score as an important tool in determining a bank's strength. The study concentrated on two failed banks and two very strong banks. Wurim (2013) investigated the effectiveness of the Multiple Discriminant Analysis Model (Altman, 1968) in determining the health of these banks. Within a five-year period, the study sample includes two 'failed' and two non-failed banks (as determined by the Central Bank of Nigeria) (1999-2003). In contrast to regulatory agencies' expectations, the Z Scores of the

two non-failed banks were found to be less than 1.80, indicating poor health. The study also confirms a bank's ill health (whose license has since been revoked), while the Z Scores of the second bank, previously classified as a "failed bank," are found to be greater than 3.00. It was concluded that the MDA model is still a powerful tool for predicting the likelihood of failure; the key variables in Altman's model are positive indicators in the analysis; and regulatory agencies have not been honest in implementing the results of the analysis. Farinde (2013) assessed the susceptibility of Nigerian banks to failure in order to identify ratios and financial data that are sensitive to the bank's solvency. In addition, a predictive model is created to guide all industry stakeholders. Thirty publicly traded banks that had published Annual Reports in the year preceding the consolidation, i.e. 2004, were chosen. The Multilayer Perceptron Neural Network Analysis was used in the study to look for signs of distress. The model was used to analyze additional reforms implemented by the Central Bank of Nigeria using published Annual Reports from twenty publicly traded banks between 2008 and 2011. As a result, the model can be used to forecast future failures in the Nigerian banking system.

## Methodology

### Research Design

*Ex Post Facto* research design was adopted. The study analyzed the audited accounts of banks. This involves use of financial accounts of the banks under assessment for the period, 2009-2020 to generate the financial ratios that discriminated the most in prediction of healthy banks using Altman Model.

### Population and Sample Size

This study's population consists of the nine deposit money banks listed on the Nigerian Stock Exchange. The study examined these banks' annual reports and accounts from 2009 to 2020. As a result of this, the "purposive sampling technique" was used (Non-random sample). The sample is chosen in this method based on what the researcher believes is appropriate for the study. The banks with international authorization were chosen, with a total of nine (9) out of the twenty-two (22) deposit money banks inevitably excluded during the data collection process due to incomplete data, so the majority of the other banks are those that either emerged or acquired without international authorization during the study period.

### Data Analysis and Model Specification

To achieve the objectives of this study, the researcher used Altman's original model for public companies to extract data and the formulated hypotheses were tested with regression analysis with aid of E-View 9.0. The data required were those of the dependent variable that include: Altman prediction model (working capital, retained earnings, earnings before interest and tax, equity as well as total assets and total book debts) and independent variables; institutional ownership. The study used Altman Model given as Zeta "Z"

$$Z=1.2X_1 + 1.4X_2 + 3.3X_3 + 0.6X_4 + 1.0 X_5,$$

Where:

- $X_1$  = Working capital to total assets
- $X_2$  = Retained earnings to total assets
- $X_3$  = Earnings before interest and taxes to total asset
- $X_4$  = Value of equity to total book debt
- $X_5$  = Gross earnings to total assets

The decision rule is that:

- (i). For  $Z < 1.81$  Bankruptcy region
- (ii). For  $1.81 < Z < 2.675$  High bankruptcy potential
- (iii). For  $2.675 < Z < 2.99$  Low bankruptcy potential

(iv). For  $Z > 2.99$  Strong (No sign of bankruptcy at all).

The Altman Model will be modified thus to incorporate corporate governance:

$$ATMN_{it} = a_0 + \beta_1 ACI + \beta_2 ACD_{it} + \beta_3 MGO_{it} + \beta_4 ISO_{it} + it_{urt} \dots \dots \dots (i)$$

Where;

ATMN= Altman Prediction Model

ISO = Institutional ownership

## Data Analysis and Results

**Table 4.1: Descriptive Analysis**

	ATMN	ISO
Mean	2.770944	0.157500
Median	2.400000	0.130000
Maximum	6.577000	0.210000
Minimum	0.399000	0.110000
Std. Dev.	2.221299	0.046928
Skewness	0.358557	0.263565
Kurtosis	1.641691	1.164518
Jarque-Bera	1.179627	1.823430
Probability	0.554431	0.401834
Sum	33.25133	1.890000
Sum Sq. Dev.	54.27585	0.024225
Observations	12	12

Table 1 displays the mean (average) for each variable, as well as their maximum and minimum values, standard deviation, and Jarque-Bera (JB) statistics (normality test). Table 1 results provided some insight into the nature of the Nigerian banks used in this study. It was discovered that, on average, over the twelve (12) year period (2009-2020), the sampled banks in Nigeria were characterized by a positive Altman bankruptcy prediction Model (2.770944); additionally, the large difference between the maximum and minimum value of institutional ownership (ISO) demonstrates that the sampled banks in this study are not dominated by banks with more bankruptcy.

## Test of Hypothesis

$H_{01}$ : Institutional ownership has no significant effect on bankruptcy risk of commercial banks in Nigeria.

**Table 2: Regression analysis between Altman predicting model and Institutional ownership**

Dependent Variable: ATMN

Method: Least Squares

Date: 11/19/22 Time: 23:11

Sample: 2009 2020

Included observations: 12

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.113776	1.709743	4.745613	0.0008
ISO	-33.92274	10.43905	-3.249601	0.0087

R-squared	0.513616	Mean dependent var	2.770944
Adjusted R-squared	0.464978	S.D. dependent var	2.221299
S.E. of regression	1.624773	Akaike info criterion	3.959625
Sum squared resid	26.39888	Schwarz criterion	4.040443
Log likelihood	-21.75775	Hannan-Quinn criter.	3.929704
F-statistic	10.55991	Durbin-Watson stat	1.314823
Prob(F-statistic)	0.008726		

Table 2 shows the results of a simple least square regression analysis to test the relationship between institutional ownership (ISO) and the Altman bankruptcy predicting model (ATMN). The Adjusted R-squared is a coefficient of determination that tells us how the dependent variable changes as a result of changes in the independent variable. According to the findings in table 2, the value of adjusted R squared was 0.465, indicating that there was a 47% variation in ATMN due to changes in ISO. This means that ISO could account for only 47% of changes in the economy's ATMN, while the remaining 53% was explained by unknown variables not included in the model. The probability of the slope coefficients indicate that;  $P(0.01 < 0.05)$ . The co-efficient value of;  $\beta_1 = -33.92274$  implies that ISO is negatively related to ATMN, and this is not statistically significant at 5%.

The Durbin-Watson Statistic of 1.314823 which is less than 2 suggests that the model does not contain serial correlation. The F-statistic of the ATMN regression is equal to 10.55991 and the associated probability F-statistic is equal to 0.008726, so the null hypothesis was rejected and the alternative hypothesis was accepted.

### Decision

Since the Prob (F-statistic) of 0.008726 is less than the critical value of 5% (0.05), then, it would be upheld that institutional ownership has significant effect on bankruptcy risk of commercial banks in Nigeria.

### CONCLUSION AND RECOMMENDATION

The purpose of this study was to determine the impact of institutional ownership on the risk of bankruptcy in Nigerian commercial banks. Data were gathered from the annual reports and audited accounts of the banks being evaluated. The Altman's model was used to extract data, and the hypotheses were tested using regression analysis with the help of E-View 9.0. The study discovered that institutional ownership has a significant positive effect on the bankruptcy risk of commercial banks in Nigeria.

Based on the findings, the study recommended that the free-riding incentive of institutional investors in the field of monitoring activities requires that a group of investors be unwilling to direct supervision by themselves; thus, these investors may force corporations to increase dividends rather than direct observation.

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