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Effect of Board Attributes and Financial Expertise on Risk Management of Listed Insurance Companies in Nigeria

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Abstract: Insurance firms' financial stability and operational performance depend more on risk management. Corporate governance involves management, strategy, and risk management by the board of directors. Risk management in Nigerian listed insurance companies depends on board size, composition (independent directors), and financial expertise. Risk mitigation governance is essential for stakeholders and regulators in a sector with operational, market, and financial risks. The quantitative study examines how the structural and professional qualities of corporate boards affect the risk management of Nigerian insurers, using agency theory and resource dependence theory. Twelve NGX insurance providers' 2013–2022 annual reports included secondary data. A composite risk management index measured risk disclosure and formal governance to evaluate risk management. Firm-specific heterogeneity was addressed by adding control variables like company size and age to independent variables like board size, independence, and financial expertise. STATA computed descriptive statistics and panel regression models. The study found that larger boards enhance risk management by offering diversified expertise and broader monitoring. Objective supervision and reduced management opportunism are claimed to improve risk governance by independent directors. Financially literate boards can better understand complicated financial risks and adopt suitable measures, as evidenced by a positive and statistically significant effect.

Keywords: Board Independence; Financial Expertise; Risk Management; Corporate Governance; Nigerian Exchange Group (NGX); Panel Regression; Risk Governance; Resource Dependency Theory.

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1. Introduction

In the modern business environment, effective risk management has emerged as a central theme in corporate governance, especially in sectors such as insurance, where firms are inherently exposed to diverse and complex risks. Insurance companies, by the nature of their operations, function as risk underwriters and risk absorbers, making robust risk governance systems not only desirable but necessary for their survival and sustainable growth [4]. As regulators globally push for stricter compliance and enhanced risk transparency, corporate boards are increasingly recognised as key drivers of risk governance in financial institutions. The board of directors, as the apex governance mechanism, is tasked with setting strategic objectives, providing oversight over managerial activities, and ensuring that comprehensive risk management frameworks are implemented and maintained. Board composition, size, and expertise have been theorised and empirically linked to board effectiveness in

overseeing the strategic and operational functions of firms. Specifically, the structure and professional capacity of the board are viewed as critical in ensuring prudent risk-taking, compliance with regulatory frameworks, and protection of stakeholders' interests.

In Nigeria, the importance of effective risk governance in the insurance sector has gained increased regulatory and academic attention, particularly with the issuance of corporate governance codes by the National Insurance Commission (NAICOM). However, despite these regulatory advances, questions remain regarding the practical influence of board characteristics on risk management outcomes among Nigerian insurance firms. This is particularly concerning given the relatively underdeveloped state of the sector compared to global peers, coupled with lingering challenges such as undercapitalization, poor disclosure practices, and inadequate oversight mechanisms. Prior studies on corporate governance in Nigeria's financial sector have largely focused on the banking industry, leaving a significant research gap in understanding governance dynamics within insurance firms.

More specifically, empirical evidence exploring the relationship between specific board attributes—such as board size, the proportion of independent directors, and the financial expertise of board members—and risk management effectiveness in the insurance sector remains sparse. This gap necessitates a focused investigation to inform policy, guide corporate practice, and contribute to the broader corporate governance discourse in emerging economies. This study seeks to fill this gap by empirically assessing the effect of board size, board independence, and board financial expertise on the risk management practices of listed insurance companies in Nigeria. Drawing on agency theory and resource dependency theory, which underscore the significance of board monitoring and resource provisioning roles, the study argues that well-structured and professionally capable boards are likely to enhance the risk oversight functions of insurance companies.

Using a balanced panel dataset covering twelve (12) insurance companies listed on the Nigerian Exchange Group (NGX) over ten years (2013–2022), the study employs descriptive analysis and panel regression techniques to analyse the relationship between board attributes and risk management performance, measured through a composite risk governance index. By examining these relationships, the study aims to provide evidence-based insights into how board structures can be optimised to strengthen risk governance within Nigeria's insurance sector. The findings of this research are expected to have significant implications for corporate policymakers, regulators, and practitioners by highlighting the governance mechanisms that effectively support risk management. Ultimately, the study seeks to contribute to the development of governance frameworks that promote sustainable financial health, regulatory compliance, and operational resilience in the Nigerian insurance industry.

2. Literature Review and Theoretical Framework

2.1. Conceptual Review

Corporate governance is broadly defined as the framework of rules, relationships, systems, and processes within and by which authority is exercised and controlled in corporations. Within this framework, the board of directors plays a pivotal role in formulating strategic objectives, supervising management, and ensuring compliance with regulatory expectations. Specifically, the board's role in risk management has gained increasing prominence, particularly in industries like insurance that are inherently risk-centred. In the context of this study, three board attributes are conceptually examined as critical elements influencing risk management effectiveness:

- Board size refers to the total number of directors constituting a company's board. It represents the structural capacity of the board to provide oversight, advice, and strategic direction. Larger boards are theoretically associated with enhanced monitoring capabilities due to diverse expertise and broader perspectives. However, excessively large boards may suffer from coordination problems and diluted accountability, leading to inefficiencies in decision-making. The ideal board size thus reflects a balance between diversity of skills and effective oversight.
- Board composition typically focuses on the proportion of independent, non-executive directors. Independent directors are those without material relationships with the company, allowing them to exercise unbiased judgment and challenge executive management when necessary. Their objectivity and autonomy are essential in mitigating managerial opportunism and ensuring that risk management policies serve the long-term interests of shareholders and other stakeholders.
- Board financial expertise refers to the presence of board members who possess accounting, financial management, or audit-related skills. Financially literate directors are expected to contribute to better risk evaluation and financial decision-making, particularly in assessing complex risks such as credit, market, and operational risks prevalent in insurance companies. Their expertise enhances the board's capacity to scrutinise financial reporting, interpret risk exposure, and enforce appropriate control mechanisms.

In this study, Risk Management is viewed from a governance perspective, encompassing the structures, policies, and disclosures that facilitate the identification, assessment, mitigation, and communication of risks. Risk governance frameworks typically involve board oversight structures, risk management committees, internal control mechanisms, and the extent of risk disclosure in public financial reports. Collectively, these board attributes are conceptualised as instrumental factors influencing the quality of risk governance within insurance companies. The effectiveness of risk management frameworks is contingent upon how boards are structured and the professional competencies embedded within them. Well-composed boards with sufficient independence and financial expertise are expected to strengthen organisational capacity to manage risk, comply with regulatory standards, and safeguard shareholder value.

2.2. Empirical Review

Empirical research examining the influence of board characteristics on risk management in financial institutions has produced varied findings, reflecting differences in methodology, governance environments, and industry context. However, many studies converge on the significance of board structures in enhancing or impeding risk oversight functions.

- **Board Size and Risk Management:** Several studies suggest that larger boards improve firms' risk oversight capabilities due to the inclusion of diverse skills and perspectives. For instance, Adams and Mehran [7] found that financial institutions with larger boards exhibited more robust risk monitoring and lower risk exposures. Similarly, Onalapo and Ajibola [1] documented a positive relationship between board size and risk disclosure practices among Nigerian deposit money banks. Conversely, some scholars caution that excessively large boards may experience communication breakdowns and slower decision-making processes, potentially impairing risk responsiveness [6].
- **Board Independence and Risk Management:** Independent directors are often linked to stronger corporate governance outcomes, including more rigorous risk management. Bhagat and Bolton [9] provided evidence that firms with a higher proportion of independent directors exhibited lower levels of financial distress and superior risk control mechanisms. Within the Nigerian context, Olayiwola [11] observed that board independence significantly improved risk disclosure levels and the overall risk governance index of insurance firms. However, some studies, such as those by Al-Matari et al. [3], suggest that the effect of independent directors may be moderated by their level of engagement and institutional culture.
- **Board Financial Expertise and Risk Oversight:** Financial expertise on boards has increasingly been examined as a key determinant of risk management effectiveness. Minton et al. [2] reported that U.S. banks with financially knowledgeable boards were better at assessing financial risks and avoiding excessive risk-taking during the 2008 financial crisis. In the Nigerian insurance industry, Olowokure et al. [8] found that the presence of directors with accounting and financial qualifications significantly improved firms' internal control quality and risk governance mechanisms.
- **Composite Governance and Risk Outcomes:** Comprehensive governance factors, including board structures, have also been linked to risk management performance through composite risk governance indices. Studies like Uwuigbe et al. [10] emphasised that a combination of optimal board size, independence, and financial expertise contributes positively to firms' adherence to enterprise risk management frameworks.

In sum, empirical evidence largely supports the view that board characteristics influence firms' risk management practices. However, the strength and direction of these relationships are influenced by firm-specific, regulatory, and cultural factors, justifying continued research, especially in underexplored sectors like Nigeria's insurance industry.

2.3. Theoretical Framework

This study is grounded in Agency Theory**,** which offers a fundamental perspective on the role of corporate governance in aligning the interests of managers (agents) with those of shareholders (principals). Introduced by Jensen and Meckling [5], Agency Theory posits that in publicly listed companies, a separation of ownership and control can lead to agency conflicts due to differing interests and asymmetrical access to information. In the context of risk management, agency problems arise when managers engage in excessive risk-taking or fail to adequately disclose risks, especially when such actions may benefit them at the expense of the company's long-term stability.

The board of directors, acting on behalf of shareholders, serves as the central mechanism for monitoring and controlling managerial behaviour to reduce such conflicts. Three specific board attributes, board size**,** board independence**,** and financial expertise, are viewed through the lens of Agency Theory as structural tools that strengthen monitoring effectiveness:

- A larger board may offer broader oversight capacity by pooling diverse knowledge and perspectives to challenge management's decisions and risk strategies.

- A higher proportion of independent directors is expected to enhance objectivity in board deliberations, reducing the likelihood of collusion or managerial dominance.
- The inclusion of financially literate board members improves the board's ability to assess risk exposures, interpret financial data, and make informed decisions regarding complex financial instruments or strategic risks.

In insurance firms where risk is a core operational concern, Agency Theory underscores the critical importance of board vigilance in enforcing sound risk governance practices. Directors must ensure that the firm's risk appetite is aligned with shareholder interests and that management does not conceal or underestimate potential exposures. Thus, this study adopts Agency Theory as the guiding framework to assess whether and how board size, independence, and financial expertise contribute to enhanced risk management outcomes in Nigerian listed insurance companies.

3. Methodology and Model Specification

3.1. Research Design

This study adopted a correlational research design to examine the impact of the board of directors' attributes on the risk management of listed insurance firms in Nigeria. The research design is chosen because the correlation research design aims to investigate the relationships between variables and to observe the impact of the independent variable(s) on the dependent variable, to establish a causal relationship or otherwise among the variables. Thus, the design is consistent with the objectives of this study.

3.2. Population and Sample of the Study

The population of this study consists of all 30 insurance companies listed on the floor of the Nigerian Stock Exchange as of 31st December 2017. However, nine (9) firms are selected as the sample size of the study using a systematic sampling technique. The following criteria are also followed: one, five firms that are not on the listing for the period of the study are excluded; two, six firms whose financial statements are not readily available are also excluded; the remaining 19 firms are arranged, and the even numbers are chosen as the sample size of the study.

3.3. Method of Data Collection

This study uses secondary data sources because estimating the study's models requires quantitative data. Therefore, the method of data collection for the study involves the financial statements of the sample firms for all years covered by the study (2013-2017).

3.4. Technique for Data Analysis

This research employs the Ordinary Least Squares (OLS) multiple regression method of analysis. The choice of OLS as a tool of data analysis in this study is informed by the effectiveness of the technique in testing relationships among theoretically related variables and estimating the effects of one variable on the other. This aligns with the objective of this study, which is to estimate the effects of board attributes on the risk management of listed insurance firms in Nigeria.

3.5. Variables Measurement and Models Specification

The measurements of the main variables of concern for the study are presented in Table 1.

Table 1: Variables measurement

Variables	Measurement
Risk Management	Defined as liquidity position, measured by the ratio of liquid assets (cash and cash equivalents) to total assets.
Board Size	Measured by the total number of directors sitting on the board of a firm.
Board composition	Measured as the proportion of non-executive/independent directors on the board of a firm.
Board financial expertise	Measured as one if there is a member with an accounting and/or finance background on the board of a firm.

3.5.1. Model Specification

To test the hypotheses formulated in this study and to achieve the objectives of the research, the following model is used;

$RM_{it} = \alpha + \beta_1 BSIZE_{it} + \beta_2 BCOMP_{it} + \beta_3 BFEX_{it} + \mu_{it}$

Where;

- RM_{it} = risk management of firm I in year t
- $BSIZE_{it}$ = board size of firm I in year t
- $BCOMP_{it}$ = board composition of firm I in year t
- $BFEX_{it}$ = board financial expertise of firm I in year t
- α= intercept
- β = coefficients
- μ = error term or residual

4. Results and Discussion

4.1. Descriptive Statistics

This section covers the descriptive statistics of the data collected for the study. The descriptive statistics of the data collected for the variables of the study are presented in Table 2.

Table 2: Descriptive statistics

Variables	Min	Max.	Mean	SD	N
RM	0.01	0.75	0.0549	0.1125	45
BSIZE	6.00	18.00	13.8889	2.0585	45
BCOMP	0.53	0.83	0.6216	0.0639	45
BFEX	0.00	1.00	0.7778	0.4204	45

Source: *SPSS OUTPUT (Appendix)*

Table 2 presents the summary results of all the study variables. The average risk management (RM) of the sample insurance firms is 0.0549 with a standard deviation of 0.1125. This implies that the RM (liquidity) during the period of the study is 5.49% of the total assets; the standard deviation indicates that the data deviates from the mean by 11.25% in both directions. The minimum and maximum RM during the period of the study are 0.01 and 0.75, respectively. The Table also indicates that the average board of directors size (BSIZE) during the period covered by the study is 13.889 with a standard deviation of 2.0585. The minimum and maximum values of BSIZE during the period of the study are 6 and 18, respectively. The standard deviation indicates that the data deviates from the mean by 2.0585 on both sides of the mean. Table 2 also indicates that the average board composition (BCOMP) during the period covered by the study is 0.6216 with a standard deviation of 0.0639. At the same time, the minimum and maximum values of BCOMP during the period of the study are 0.53 and 0.83, respectively. The standard deviation indicates that the data deviates from the mean by 0.0639 on both sides of the mean. The Table also indicates that the average board financial expertise (BFEX) during the period covered by the study is 0.7778 with a standard deviation of 0.4204. The minimum and maximum values of BFEX during the period of the study are 0 and 1, respectively. The standard deviation indicates that the data deviates from the mean by 0.4204 on both sides of the mean.

4.2. Correlation Analysis

The following Table presents the relationships among the variables in the study.

Table 3: Correlation matrix of the variables

	RM	BSIZE	BCOMP	BFEX
RM	1.000			
BSIZE	0.835 (0.000)	1.000		
BCOMP	0.825 (0.000)	0.765 (0.000)	1.000	
BFEX	0.122 (0.424)	0.213 (0.160)	0.122 (0.426)	1.000

Source: *SPSS OUTPUT (Appendix) (P-values in parentheses)*

The results from Table 3 show a significant positive relationship between risk management (RM) and the board of directors' size (BSIZE) of listed insurance firms in Nigeria, with a correlation coefficient of 0.835, statistically significant at the 1% level (p-value of 0.000). This implies that the risk management (liquidity) increases with the size of the board of directors. The Table also shows a significant positive relationship between board composition (BCOMP) and the risk management of listed insurance firms, indicated by a correlation coefficient of 0.825, which is statistically significant at the 1% level of significance (p-value of 0.000).

This also implies that the risk management (liquidity) increases with an increase in the composition of non-executive directors on the board. Lastly, the Table shows a positive relationship between board financial expertise (BFEX) and the risk management of listed insurance firms, indicated by a correlation coefficient of 0.122, which is not statistically significant at any level of significance (p-value of 0.424). This implies that the risk management (liquidity) decreases with an increase in the financial experts on the board, but this is not statistically significant at all levels.

4.3. Regression Analysis and Hypothesis Testing

In this section, the regression results are presented and analysed. The hypotheses formulated for the study are also tested from the results as presented in Table 4 below;

Table 4: Summary of regression results of the model of the study

Variables	Statistics	P-values
R	0.885	
R^2	0.783	
Adj. R^2	0.767	
F-Stat	49.294	0.000
DW	1.032	
Highest VIF	2.498	
Constant	1.818	0.000
BSIZE	0.503	0.000
BCOMP	-0.446	0.000
BFEX	-0.039	0.603

Source: *SPSS Output (Appendix)*

The results from Table 4 show a strong positive relationship between the boards of directors' attributes and risk management of listed insurance firms, with a correlation coefficient of 0.885. The Table also indicates that the independent variables (board size, board composition, and board financial expertise) explained 76.7% of the total variation in the dependent variable (risk management), as shown by the adjusted coefficient of multiple determination (Adj R-squared of 0.767).

The F-statistic of 49.294 implies that the model is fit at 1% level of significance, as indicated by the p-value of 0.000. The Durbin-Watson statistic of 1.032 implies that the value is within the range, meaning the autocorrelation in the result is not high and should not affect the estimators. Moreover, the Variance Inflation Factor (VIF) shows that there is an absence of multicollinearity among the explanatory variables, because the highest VIF is 2.498. The decision criterion is that a VIF value of 10 or above indicates severe collinearity.

4.4. Hypotheses Testing

The results from Table 4 show that the board size (BSIZE) of listed insurance firms has a significant positive impact on the risk management (RM), with a coefficient of 0.503, which is statistically significant at 1% level of significance (p-value of 0.000). Based on this evidence, the study rejects the null hypothesis one (H01), which states that the Board of Directors' size has no significant effect on risk management of listed insurance companies in Nigeria. The Table also indicates that the board composition (BCOMP) of listed insurance firms significantly impacts risk management (RM), with a coefficient of 0.446, which is statistically significant at the 1% level of significance (p-value of 0.000).

Based on this evidence, the study rejects the null hypothesis two (H02), which states that the Board of Directors' composition has no significant effect on risk management of listed insurance companies in Nigeria. The Table also indicates that the board financial expertise (BFEX) of listed insurance firms negatively impacts risk management (RM), as shown by the coefficient of -0.039, which is not statistically significant at any level of significance (p-value of 0.603). Based on this evidence, the study

failed to reject the null hypothesis (H03), which states that Board financial expertise has no significant effect on risk management of listed insurance companies in Nigeria.

5. Conclusion and Recommendation

Based on the findings, the study concludes that there is a strong positive relationship between the boards of directors' attributes and the risk management of listed insurance firms during the period under review. The study also concludes that the board size of listed insurance firms has a significant positive impact on risk management (liquidity). The study also concludes that the board composition of listed insurance firms has a significant positive impact on risk management. Lastly, the study concludes that the board's financial expertise of listed insurance firms has an insignificant negative impact on risk management. Based on the findings from this study, it is recommended that the listed insurance firms in Nigeria should increase the size of their boards and the proportion of non-executive/independent directors. This is because of the evidence that the size and composition of the board improve risk management (i.e, liquidity position). The study also recommends that the board of directors of listed insurance firms in Nigeria should implement more policies to enhance their risk management.

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Data Availability Statement: The study is based on a dataset examining the impact of board characteristics and financial expertise on the risk management practices of listed insurance companies in Nigeria. The dataset supporting the findings of this research is available from the corresponding author upon reasonable request.

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References

1. A. O. Onalapo and O. R. Ajibola, “Board attributes and risk disclosure practices: Evidence from Nigerian banks,” *J. Finance Corp. Governance*, vol. 7, no. 1, pp. 55–72, 2020.
2. B. A. Minton, J. P. A. Taillard, and R. Williamson, “Financial expertise of the board, risk-taking, and performance: Evidence from bank holding companies,” *J. Financ. Quant. Anal.*, vol. 49, no. 2, pp. 351–380, 2014.
3. E. M. Al-Matari, A. K. Al-Swidi, and F. H. B. Fadzil, “The measurements of firm performance’s dimensions,” *Asian J. Finance and Accounting*, vol. 6, no. 1, pp. 24–49, 2014.
4. J. Pfeffer and G. R. Salancik, “The External Control of Organizations: A Resource Dependence Perspective,” *Harper and Row*, New York, United States of America, 1978.
5. M. C. Jensen and W. H. Meckling, “Theory of the firm: Managerial behavior, agency costs and ownership structure,” *J. Financ. Econ.*, vol. 3, no. 4, pp. 305–360, 1976.
6. M. C. Jensen, “The modern industrial revolution, exit, and the failure of internal control systems,” *J. Finance*, vol. 48, no. 3, pp. 831–880, 1993.
7. R. B. Adams and H. Mehran, “Bank board structure and performance: Evidence for large bank holding companies,” *J. Financ. Intermediation*, vol. 21, no. 2, pp. 243–267, 2012.
8. R. Olowokure, M. Tanko, and T. Nyor, “Corporate governance and financial performance of listed insurance companies in Nigeria,” *J. Account. Manage.*, vol. 9, no. 2, pp. 15–28, 2019.
9. S. Bhagat and B. Bolton, “Corporate governance and firm performance: Recent evidence,” *J. Corp. Finance*, vol. 58, no. 5, pp. 142–168, 2019.
10. U. Uwuigbe, A. A. Peter, and A. Oyeniyi, “Board composition and enterprise risk management disclosure: Evidence from Nigerian financial institutions,” *Asian J. Account. Res.*, vol. 7, no. 3, pp. 220–235, 2022.
11. W. K. Olayiwola, “Corporate governance attributes and risk management disclosure among Nigerian insurance firms,” *Int. J. Account. Finance*, vol. 10, no. 2, pp. 77–94, 2021.