Moderating Effect of Internal Control Activities on Risk Assessment and Performance of Insurance Companies in Nigeria

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Abstract

This study seeks to determine whether internal control activities moderate the effect of risk assessment on the performance of insurance companies in Nigeria. The study uses a cross-sectional research design to collect quantitative data. Primary data were collected from 232 employees of insurance companies in Nigeria through an online questionnaire using a random sampling method. The two hypotheses were tested using Smart PLS 3 software and partial least squares – structural equation modelling (PLS-SEM). The result shows that there is a positive and significant effect of risk assessment on the performance of insurance companies in Nigeria. Furthermore, the findings show that internal control significantly moderates the relationship between risk assessment and performance in Nigerian insurance companies. The study recommends that internal control should be considered by Nigerian insurance companies when implementing risk assessment programs. This may be achieved through adequate supervision and employment of risk assessment officers.

Keywords: Internal control quality, firm performance, risk assessment

1.0 Introduction

Insurance business like any other businesses that engage in financial services has gained economic importance, because they provide financial stability and soundness within the financial markets by absorbing and managing risks professionally. Sales of insurance policies can raise a huge amount of funds in form of premiums for insurance companies as a sign of improved firm performance. Therefore, in measuring the financial health of Nigerian insurance companies, their performance is an important indicator, especially in the volatile economic environment in which insurance companies operate in Nigeria.

Despite being a risk management company, insurers are also not immune from risks that pose a threat to their performance (Chepkoech & Rotich, 2017). Risk assessment continuously evaluates risks that have the potential to affect the goals of the organization (Abbaszadeh, Salehi &Faiz, 2019). A sound risk assessment framework allows the organization to protect itself from unfavourable consequences otherwise referred to as downside risks and allows the company to explore opportunities inherent in prudent risk management (up-side risks) (Yvan, 2018). Therefore, monitoring the performance of insurance companies in Nigeria through an effective risk assessment strategy has been argued to be highly important to sustain the continued growth of the insurance business (Ebenezer, Islam, Yusofff & Shamsuddin, 2018).

A growing body of risk management literature has examined the association between risk assessment and organizational performance, with some suggesting that risk assessment has a significant effect on performance (Ayimpoya, Akolgo, Mbilla & Gbegble, 2020; Benjamin, Adegbite & Dada, 2021), while some found an insignificant effect (Alawattegama, 2018; Yakob, Bam, Yakob & Raziff, 2020; Adedayo, Sylvester & Amiolemen, 2020). It is quite apparent from the analyses of previous studies that a number of other reasons also account for their inconsistent outcomes (Ndungu, Wanjau, Gichira & Mwangi, 2018; Hamour, Massadeh & Bshayreh, 2021). For example, Hamour et al. (2021) findings revealed that risk assessment and financial performance is moderated by board independence. Furthermore, only a few previous researches have taken into account the impact of internal control when examining the effect of risk assessment (Bett &Memba, 2017; Ayimpoya et al., 2020; Atieno & Kiganda, 2020), they have mostly done so by investigating the direct effect of internal control on firm performance without considering any potential interactions that may exist between risk assessment and internal control quality. This means that if an organization expects compliance with relevant policies and procedures to contribute to the fulfillment of risk assessment objectives, the level of internal control could be adjusted to guarantee that the benefits of risk assessment outweigh the cost of the assessment.

Insurance companies' risk management systems are in some ways reliant on their internal control activities. Internal control activities serve as a baseline for insurance companies to assess and improve their enterprise risk management systems (Pang & Li, 2013). Risks are inherent in the operations of insurance companies, but with the right risk management approach, they may be reduced to a bare minimum (Kaya, 2018; Liu & Chen, 2021). However, regardless of the degree of risk management, risk cannot be properly assessed and managed without appropriate internal control activities. Internal control actions are designed to help members of the institution in carrying out their tasks effectively. Risk management should, in this sense, be compatible with the risk-indemnifying industry's beliefs and values, policies, and managerial control, as well as day-to-day operations (Tranchard, 2018). Therefore, examining the interaction between risk assessment and internal control quality in a developing country like Nigeria may provide new insights into this relationship.

Given the foregoing, the fundamental questions in this study are: how significant is a risk assessment on insurance companies' performance in Nigeria; and to what extent do internal control activities moderate the relationship between risk assessment and insurance companies' performance in Nigeria? Thus, the primary objective of this research is to determine whether risk assessment has a significant impact on insurance companies' performance in Nigeria and to determine whether internal control activities moderate the relationship between risk assessment and the performance of insurance companies in Nigeria. The following hypotheses were tested:

H_1: Risk assessment significantly affects insurance companies' performance in Nigeria

H_2: Internal control activities significantly moderate the effect of risk assessment on the performance of insurance companies in Nigeria.

2.0 Review of Literature and Hypotheses Development

2.1 Risk Assessment and Firm Performance

The achievement of the goal of a certain activity or occupation as measured by the standard is referred to as performance. Firm performance, therefore, according to Ahmed and Manab (2016) and Wilden, Gudergan, Nielsen and Lings (2013) refers to performance as a company's capacity to meet sales and profit goals, as well as non-financial perspectives on the competition. Other scholars, including Muslih, Sugianti, Simanjuntak and Rahadi (2020) referred to the firm performance as a measure of its efficiency and productivity which is the ability of management to use existing resources to provide value to the shareholder company. As noted by Rehman and Anwar (2019) firms need to improve their performance by maximizing shareholder wealth. As a result, in order to obtain a competitive advantage, firms try to imitate their competitors' systematic techniques and processes. One of the strategic approaches to high performance for competitive advantage is effective risk assessment. According to Wang, Ong, Wood, Zou and Abdul-Rahman (2020), 'risk assessment is the determination of the qualitative or quantitative value of risk in relation to the attainment of firm objectives. Risk assessment is a dynamic and interactive technique for assessing risks associated with achieving objectives with respect to defined risk tolerances (Wali & Masmoudi, 2020). Yvan (2018) argues that a sound risk assessment framework allows the organization to protect itself from unfavourable consequences otherwise referred to as downside risks and allow the company to explore opportunities inherent in prudent risk management. This study adopted the definition of Abbaszadeh et al. (2019) which states that risk assessment is a dynamic and continuous process for evaluating risks that arise along the path to achieving objectives; it deals with a wide range of strategic financial and information risks, particularly those related to automation systems and the cost-benefit analysis of establishing an internal control system.

The relationship between risk assessment and the performance of firms has been studied empirically. For example, Alawattegama (2018) focused on providing evidence on how risk assessment practices impact the performance of firms in Colombia. The secondary data sourced were analyzed using multivariate regression analysis. The study findings revealed that risk assessment, risk response and information and communication have a favourable but insignificant relationship with firm performance. This study was carried out in Colombia; therefore, the findings may not be relevant to Nigerian contexts, due to economic and cultural differences. In addition, Abdi and Cheluget (2018) conducted a study on ERM dimensions and the effectiveness of performance using multiple regression analysis. The study's findings revealed that risk assessment has a positive and significant effect on performance. However, the study was limited to the relationship between ERM dimensions and performance in community banks. The study did not investigate the moderating role of internal control quality which is the main focus of this current study. Furthermore, Ayimpoya *et al*. (2020) tested the impact of the control environment, Internal Control activities and risks assessment on the magnitude of performance. The study surveyed employees from commercial banks resident in Ghana. This study was carried out in Ghana; therefore, the findings may not be relevant to Nigerian contexts due to economic and cultural differences. In addition, the study uses descriptive and regression analysis. However, our study used PLS-SEM a more robust statistics technique.

Hamour *et al*. (2021) investigated the role of COSO components in affecting financial performance, with this relationship moderated by the impact of board independence. Results indicated that risk assessment, monitoring and information and communication have a significantly positive association with financial performance. The study's investigation was limited to the relationship between COSO components and the performance of financial institutions. Kizza (2019) examined the effect of credit risk management on salary loan performance in

Stanbic Bank Uganda Limited (SBUL). The study adopted a case study design with a population of 60 respondents from which purposive sampling and simple random sampling methods were used to select a sample of 51. Data were collected from staff and loan providers using self-administered questionnaires and an interview guide. The study findings indicated that; there was a positive significant relationship between credit risk identification, credit risk assessment, credit risk monitoring & control and salary loan performance. Benjamin *et al* (2021) examined the effect of risk assessment by the internal auditor on the effectiveness of listed companies in Nigeria. The study adopted a survey research design. The population of the study consisted of 24 companies selected from the eleven industrial sub-sectors of the 161 listed companies on the Nigerian Stock Exchange. A structured questionnaire with a five-point Likert – scale was administered. A random sampling technique was adopted in the selection of the 24 companies with each chosen company representing each sector. The result indicated that risk assessment by internal auditors has a positive effect on the effectiveness of listed companies in Nigeria.

Adedayo, Sylvester and Amiolemen (2020) examined the effect of enterprise risk management on the accounting quality of selected listed firms in the Nigerian financial sector.In attaining the proposed objectives, the study employed the panel Generalized Method of Moments estimator to test the hypotheses and find out the relationship between the variables. The study observed from the findings that there is no significant association between enterprise risk management and accounting quality during the pre-enterprise risk management period. The study was limited to enterprise risk management as unidimensional contrast which is just one aspect of enterprise risk management. It did not assess the impact of dimensions of risk identification, risk assessment & measurement, risk mitigation and risk monitoring dimensions of enterprise risk management.

2.2 Moderating effect of Internal Control

Internal control is a system devised and implemented by an entity's management to provide reasonable assurance that the firm's objectives will be met, while assuring the quality and effectiveness of its operations (Esther, Mubaraq, Ademola & Daudu, 2020). The definition above shows clearly that internal control is all about making provisions that would aid in the attainment of objectives (Bett & Memba, 2017). An effective internal control system, for this study, refers to the effective control measures put in place by an organization to safeguard its assets, ensure the accuracy of financial and non-financial records, and ensure compliance with relevant policies and procedures that will lead to the achievement of organizational goals. Berry, Stölzle and Xu (2018) investigated whether the adoption of the enterprise risk management approach affects firms' cost of equity capital. Analysis was restricted to the U.S. insurance industry to control for unobservable differences in business models and risk exposures across industries. The study finds that enterprise risk management adoption significantly reduces a firm's cost of capital. In order to implement an effective enterprise risk management system, the fundamental prerogative is to assess the plurality of random events that affect your organization. In essence, a systematic assessment of those things could prevent each objective from being attained. In other words, it's an analysis of what could go wrong (Saeidi *et al*., 2019).

2.3 Theoretical Framework

Agency Theory

Agency theory is rooted in the economic principles created by Alchian and Demsetz (1972). According to the agency theory, a firm's primary goal is to increase the wealth of its investors. Agency theory shows the association between the principals, who have been cited as shareholders and the agents, the firm executives as well as managers, it broadens the scope of the firm to include ownership separation and organizational control activities. This relationship is documented to have originated from the situation where shareholders hire the agents as the individuals running the daily activities of the organization. The agency theory, features in the context of the ownership separation and the controls categorized in the operational part of the organization (Haq, Liang, Gu, Du & Zhao, 2018).

According to Gatzert and Martin (2015) there exist two influential factors in the agency theory, the first is that it reduces the business into two applicants, the shareholders and the administrators while the second portion of the theory is represented by the suggestion of self-interests on the corporation's managers (Gatzert & Martin, 2015). According to Nocco and Stulz (2014), managers can be risk-averse to the detriment of shareholders by misusing resources through hedging diversifiable risks. Managers can also be shortsighted since they are compensated on short-term financial results. These conflicts between managers and shareholders can be minimized by creating compensation plans that are linked to stock performance and giving executives stock options to ensure managers have a vested interest in the stocks thus reducing the likelihood of action detrimental to shareholders (Haq et al., 2018). Shareholders and managers have diverse interests in the company, and risk management goals are varied for each stakeholder. While shareholders may demand high-risk, high-reward investments, management prefers low-risk, high-reward investments.

The theory indicated the need for the process of risk assessment to coordinate the interest of various internal and external stakeholders in contributing to the performance of the firm (Nocco & Stulz, 2014). Nocco and Stulz (2014) argued that management teams are contracted to work for the benefit of shareholders and hence, they ought to concentrate more on putting in place mechanisms to maximize return on investment for its owners even at the expense of their interest. They have a predisposition to minimize risk to decrease the unpredictability of business returns.

Through the use of agency theory in this study, the role of risk assessment and Internal Control activities in guiding the relationship between shareholders of insurance companies in Nigeria and firms' top management is assessed. The theory helped in determining how shareholders of insurance companies in Nigeria can use their knowledge of risk assessment and internal control activities to seal the various loopholes militating against firm performance.

2.4 Conceptual Framework

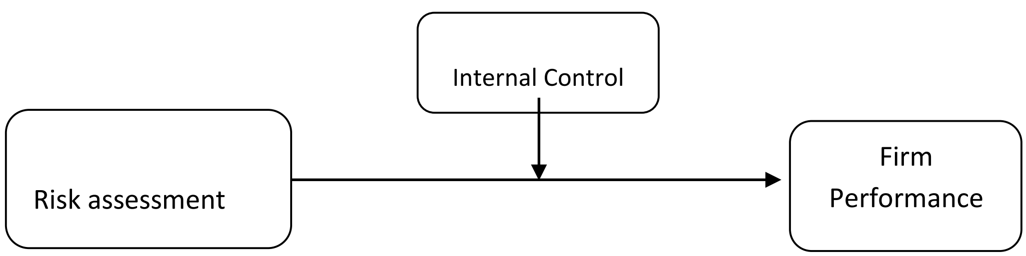

Figure 2.1: Conceptual model showing the relationships amongst the independent variable (risk assessment) moderating (internal control activities) and dependent variable (firm performance).

3.0 Research Methodology

A cross-sectional research design was used in this study. Using a random sampling technique, primary data were collected from 232 employees of insurance companies in Nigeria using an online questionnaire. A random sampling technique was adopted because this study has a sampling frame. Consequently, this sample was drawn from a population of 6,033 employees of insurance companies in

Nigeria as of 2019 (Nigeria Insurers Association, 2019) using the Taro Yamane sample generation formula. However, this study focused on the popular designations in an insurance company such as Managing Director, Executive Director Technical, Head of Technical Underwriting, Head of Reinsurance, Chief Financial Officer, Head of Audit, Head of ERM, Chief Risk Officer (CRO) (Risk and Compliance) and Head of Human Resource/Admin. Consequently, a total of 375 copies of the questionnaire were administered, but the final questionnaire returned was 232, reflecting a 61.87% response rate.

The independent variable, which is risk assessment, has four items that were adapted from Brustbauer (2014). Also, the moderating variable is internal control activities which are measured by seven items were adopted from Collins (2014). Lastly, the six items for firm performance was adapted from Ramesh and Sarmah (2020). The two hypotheses produced using these three variables were tested using Partial Least Square – Structural Equation Modelling (PLS-SEM) with the aid of Smart PLS 3 software. For non-normal data or limited sample size, the PLS-SEM technique is appropriate (Hair, Sarstedt, Hopkins, & Kuppelwieser, 2014).

4.0 Results and Discussions

4.1 Measurement Model

Before evaluating the path coefficient, Structural Equation Modelling (SEM) was used in Smart PLS 3.0 to test the adequacy of the measurement model. Therefore, the measurement model evaluations with their various results are displayed in Figure 1 and Table 1 below.

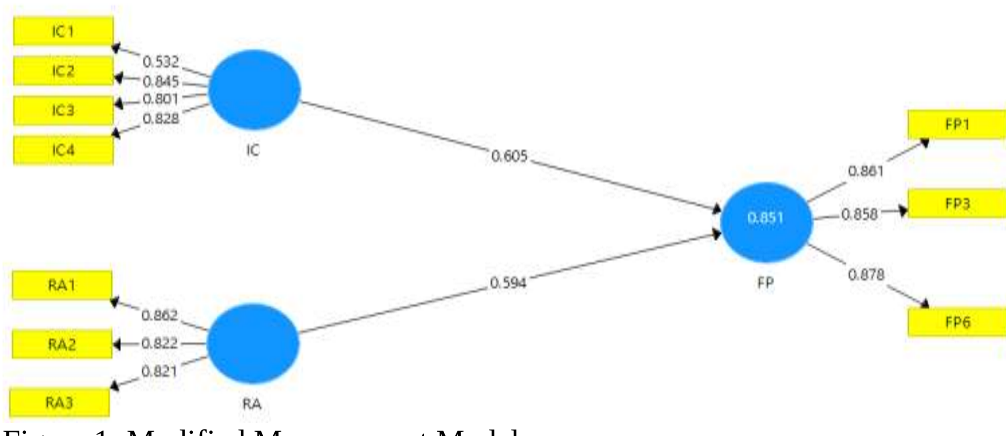

Figure 1: Modified Measurement Model

Table 1: Measurement Model Results

Latent variable and indicator	**Standardized loadings**	**CR**	**AVE**
Risk Assessment			
RA1	0.862	0.874	0.698
RA2	0.822		
RA3	0.821		
Internal Control			
IC1	0.532	0.843	0.581
IC2	0.845		
IC3	0.801		
IC4	0.828		
Firm performance			
FP1	0.861	0.900	0.750
FP3	0.858		
FP6	0.878		

Source: SmartPLS 3 output, 2021

The measurement model output using SmartPls in Table 1 above confirmed that the outer loadings, composite reliability (CR) and Average Variance Extracted (AVE) percentages are above the suggested cut-off of 70% and 40% respectively, indicating satisfactory convergent validity for the constructs.

Table 2: Discriminant Validity result using Fornell-Larcker Criterion

	FP	IC	RA
Firm performance (FP)	**0.866**		
Internal Control (IC)	0.714	**0.762**	
Risk Assessment (RA)	0.705	0.183	**0.835**

Source: Smart PLS 3 output, 2021

Table 3: Discriminant validity result using Heterotrait-Monotrait (HTMT) ratio

	FP	IC
Firm performance (FP)		
Internal Control (IC)	0.891	
Risk Assessment (RA)	0.869	0.220

Source: SmartPLS 3 output, 2021

In line with Fornell and Larcker (1981), the Fornell-Larcker measure and Heterotrait-Monotrait (HTMT) test were employed to further assess the discriminant validity. The test result is obtainable in Tables 3 and 4. First, the Fornell-Larcker criterion test in Table 3 shows that because the outer loading for each indicator for the relevant construct is confirmed to be larger than any of its cross-loadings on other constructs, the overall quality of the measurement model is acceptable. Second, HTMT lower than 90 percent signal strong validity of the obtained results as advocated by Henseler, Ringle and Sarstedt (2015).

4.3 Structural Model

4.3.1 Direct Effect

The direct effect in the structural model was also examined, having satisfied the requirement of the measurement model. The path coefficient result using bootstrapping is presented in Table 4 below.

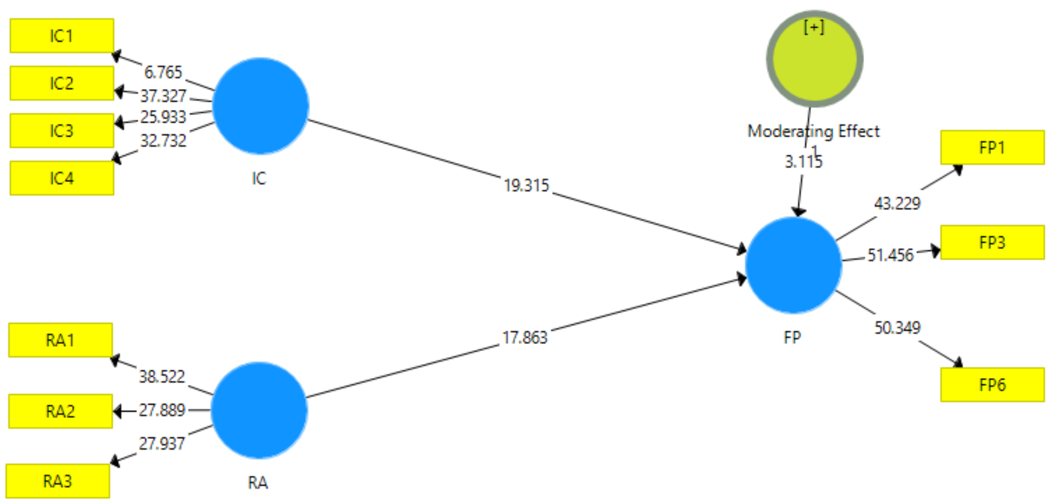

Figure 2: Structural Model

Table 4: Structural Model (Hypothesis testing)

Hypothesis	Relationship	Beta	Standard error	t-statistics	Findings	Decision
H_1	RA -> FP	0.607	0.035	17.863	0.000	Supported
H_2	RA*IC -> FP	0.148	0.056	3.115	0.002	Supported

Note: RA= Risk assessment, FP= Firm performance, IC= Internal Control

The direct effect of the path coefficient in Table 4 shows that risk assessment (RA) has a positive and significant (β=0.607, t-statistics=17.863, p=0.000) on the firm performance (FP). This implies that risk assessment significantly affects insurance companies' performance in Nigeria, which led to hypothesis one being supported. Furthermore, there was a significant interaction effect between risk assessment and internal control activities (β=0.14, t-statistic=0.056, p=0.002). In other words, internal control activities significantly moderate the effect of risk assessment on the performance of insurance companies in Nigeria. Thus, the second hypothesis was supported too.

Table 5: Coefficient of Determination (R Square)

	R Square	R Square Adjusted
Firm Performance	0.880	0.878

R-Square for the firm performance was 0.880. Thus, the impact of risk assessment and internal control on firm performance was 88%; while the remaining 12% was influenced by other factors.

4.3.2 Moderating Effect

This study used a product-indicator approach to test hypothesis two which states that internal control activities significantly moderate the effect of risk assessment on the performance of insurance companies in Nigeria. As indicated in Table 4, there was a significant interaction effect between risk assessment and internal control activities (β: 0.14, t: 0.056, P = 0.002). In other words, internal control activities significantly moderate the effect of risk assessment on the performance of insurance companies in Nigeria. Thus, the study's second hypothesis was supported based on this evidence. In addition, Figure 3 depicts the form of interaction between risk assessment and internal control activities, it illustrates that in insurance companies in Nigeria, risk assessment strategy is stronger when internal control activities are higher, and the higher the internal control activities, the more likely firm performance would be boosted. Based on the SmartPls output, the moderating effect size for this is 0.238, therefore, signifying the effect size is a substantial medium when using Cohen's (1988) criterion.

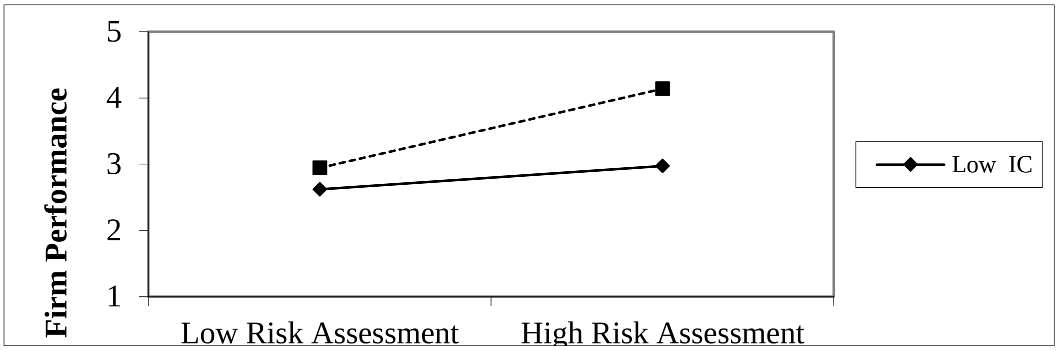

Figure 3: The interaction between risk assessment and internal control activities in predicting firm performance. - Note: PB = Perceived

4.4 Discussion of Findings

The results of test hypothesis one using PLS-SEM reveal that risk assessment has a positive and significant effect on the performance of insurance companies in Nigeria, which led to the support of hypothesis one. This result implies that an effective risk assessment strategy could be highly important to sustain the performance of insurance businesses in Nigeria. Similarly, Yvan (2018) argument that a sound risk assessment framework allows the organization to protect itself from unfavourable consequences otherwise referred to as downside risks and allow the company to explore opportunities inherent in prudent risk management. This confirms Rehman and Anwar (2019) argument that firms need to improve their performance through effective risk assessment, which is a dynamic and interactive technique for assessing risks associated with achieving objectives with respect to defined risk tolerances (Wali & Masmoudi, 2020). The result is in agreement with the study of Abdi and Cheluget (2018), Kizza (2019), Abdi and Cheluget (2018), Ayimpoya et al. (2020) and Benjamin et al. (2021) who all found that a sound risk assessment has a positive and strong impact on the effectiveness of an organization. The finding of hypothesis one, on the other hand, contradicts studies such as those by Alawattegama (2018) and Adedayo et al. (2020), which found no link between risk assessment and firm performance.

The result also reveals that internal control activities significantly moderate the relationship between risk assessment and the performance of insurance companies in Nigeria. Thus, these findings support the argument that risk assessment depends on the level of internal control quality (Berry *et al*., 2018). In line with resource-based theory, Saeidi, *et al*. (2020) asserted that the value of the organization's resources (risk assessment effectiveness) could increase with the existence of other complementary resources (control activities). Therefore, the effort to improve organizational performance through proper risk assessment could be affected by the rate of internal control activities.

5.0 Conclusion and Recommendations

This study found that risk assessment has a positive and significant effect on the performance of insurance companies in Nigeria. Therefore, this study concludes that an effective risk assessment strategy could be highly important to sustain the performance of insurance businesses in Nigeria. The study also found that internal control activities significantly moderate the effect of risk assessment on insurance company performance in Nigeria. Therefore, the study concludes that risk assessment and internal control activities are more effective for organizations that have high internal control compared to organizations that have low internal control.

Based on the general findings from this study, additional empirical evidence on the growing body of knowledge relating to the moderating role of internal control activities on risk assessment and performance of insurance companies in Nigeria have been provided and the results from this research study have provided significant theoretical suggestions. In terms of theory, the findings from this study have shown that agency costs can be minimized through effective internal control activities that ensure management integrity are reinforced throughout the organization.

This study recommends that insurance companies should place priority on implementing an effective risk assessment strategy backed by quality internal control activities that can lead to an increase in firm performance. Furthermore, Insurance companies in Nigeria should come up with an effective risk program capable of early detecting the product decline phase that tends to affect their company’s performance. When a serious risk assessment is completed, it should always be followed by the second level of review and evaluation by someone who is not involved in the process. Furthermore, doing a self-evaluation of internal controls can assist in identifying potential flaws before issues develop, resulting in the deployment of more effective control measures. A "walk-through," which is essentially the process of tracking a transaction through organizational records and procedures, may often be used to undertake this self-evaluation.

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