ENTERPRISE RISK MANAGEMENT OBJECTIVES AND PERFORMANCE OF LISTED INSURANCE FIRMS IN NIGERIA

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ABSTRACT

This study examined the ERM COSO objectives on performance of insurance firms in Nigerian. The study used panel and correlational designs in investigating the effect of ERM objectives measured by strategic and operational objectives on performance of insurance companies measured by Tobin's Q. Secondary data obtained from annual financial statements of insurance firms for the periods of 2018-2022 was used in the analysis. The study used panel data regression model to estimate the relationship, and found the existence of positive significant effect of strategic ERM objectives on performance of insurance companies in Nigeria. However, a negative significant effect of operational ERM objective on performance of insurance companies in Nigeria was observed. The study recommends that insurance firms in Nigeria should ensure full conformity to the provision of COSO ERM components while carrying out their operations. They should also (re)strategize and monitor their performance outcomes in line with their established objectives, so as to attain strategic ERM objectives in the overall business operations.
Keywords: Enterprise risk management, firm performance, strategic ERM objective, operational ERM objective

INTRODUCTION

Performance has generally been regarded as key to achieving firm's strategic goals. High level of performance supports corporate entities in streamlining the pattern of resource allocation for sustained business survival. An important aspect of every economy is the efficient performance in the realm of the financial sector (Prasad, 2021). Globally, firm performance has become a phenomenon that attract the attention of academic researchers, strategic managers, investors, and regulators. This is mainly due to the important role it play in supporting individuals and corporate entities to overcome economic uncertainty, and attracting both local and international investment (Salim 2023; Choi et al., 2019) amidst the uncertainties and risks that characterize the world of business.

Generally, individuals and businesses (large and small) all face different types and levels of risks; and this is the reason different insurance products are subscribed to reduce or eliminate the cost or impact of loss caused by different types of risks (NAICOM, 2019; Gupta et al., 2023). In addition to protecting individuals and businesses from a variety of risks, the insurance industry also makes a significant contribution to overall

economic growth of a country by providing stability for business operations and generating long-term financial resources for industrial projects (Eladly, 2022; NAICOM, 2018).

However, the performance of the insurance industry in Nigeria has been depraved, as the industry lags behind its peers in terms of penetration and density of key indicators (NAICOM, 2020). In 2017, insurance premiums increased by 15.5%, a 5-year high. However, the industry continues to lag behind its peers in terms of penetration density which 0.5% compared to South Africa (12.9%), Kenya (2.8%), Angola (0.8%) and Egypt (0.6%) respectively (Daniel, 2020). Nigerian insurance industry stood as US$6.2, which is still weaker than South Africa (US$762.5), Kenya (US$40.5), Angola (US$30.5) and Egypt (US$22.8).

It is observed that Nigerian insurance firms have poor market valuations, with price-to-book ratio of 0.43%, while South Africa (1.99%), Egypt (1.65%) and Kenya (0.64%) (Kanu, 2021). Thus, this variation raises some important questions among scholars in Nigeria. The slow growth rate in the performance of Nigerian insurance firms was attributed to problems of poor enterprise risk management (ERM) practices (NAICOM, 2020).

Sound risk management is a prerequisite to improved performance of firms. However, there is scarcity of empirical evidence of the role of risk management objectives on the performance and of insurance firms in Nigeria. Thus, this study opts to examine the effect of risk management objectives on performance and value of Nigerian insurance firms. The study specifically, probed the effect of strategic objectives and operational objectives on the performance of listed Insurance firms in Nigeria. Although previous studies have examined the value relevance of ERM in developed economies, there are few empirical studies on ERM and performance in developing economies such as Nigeria. The study of risk management and performance of listed insurance firms using the COSO ERM objectives is a relatively new area of research in Nigeria.

To achieve the stated objectives, the following hypotheses are formulated in the null form:

Ho_1: Strategic ERM objectives have no significant effect on performance of listed insurance firms in Nigeria.

Ho_2: Operational ERM objectives have no significant effect on the performance of listed insurance firms in Nigeria.

REVIEW OF RELATED LITERATURE

Concept of Firm Performance

Firm performance is one of the most important variables in management research and arguably the most important indicator of organizational position. By its nature, performance measurement is a diverse subject. While some have represented ex post analysis to reveal performance, others have represented ex ante analysis. Moreover, there are several definitions, selections and categorization of appropriate performance employed by researchers to study the performance of financial institutions (see Salim, 2023; Eladly, 2022; Kim & Rasia, 2001; Sarita et al., 2012; Sufian, 2008; Brissimis et al., 2008; Vshih et al., 2006; Micco et al., 2004). Scholars are of the view that performance in an organization can be measured in terms of market share, efficiency, ownership and human resource management.

Concept of Enterprise Risk Management (ERM) Objectives

ERM is a process of strategically managing risk. ERM can be interpreted in different ways from one profession to another, based on the needs and priorities in managing different types and magnitudes of risks. Standard and Poor (2023) defined ERM as a holistic risk management process that adequately controls unexpected losses within the framework of cost-benefit optimization analysis. Based on this definition, the goal of ERM is to minimize risk as much as possible to the extent of maximizing benefits. The definition recognizes that fact that often in the minimizing cost, there is high tendency of foregoing benefits (risk-

return trade-off), hence the corporate objective is to have a holistic risk management strategy that optimizes that trade-off (cost-benefit).

Strategic ERM Objective and Firm Performance

Strategy is viewed from the competitive advantages a firm has over its competitors. In this regard, Mzoughi et al. (2008) studied the effect of competitive advantage on organizational performance in different industries in Tunisia. They measured competitive advantage by the dimensions of price, quality, and time to market, innovation, and reliability of delivery. In addition, financial performance and market performance were measuring elements for organizational performance. The findings show that, from the aspects of competitive capability, only time to market has a positive effect on financial performance.

Using a sample of 664 publicly traded micro and nanotechnology firms in the United States of America (USA) surveyed from the fall of 2003 through the spring of 2004, Newbert (2008) found that corporate strategy that triggers competitive advantage is related to firm value. The study used an ordinary least square regression as the technique of analysis. The findings of this study may not apply to the Nigerian insurance sector for at least two reasons. First, the insurance industry faces a different risk exposure that requires examination in the industry context. Second, the study used primary data based on responses of the senior executives of the sample firms, and ERM strategy is a long term strategy that needs studying over time.

Operational ERM Objective and Firm Performance

The literature that explored the relationship between operational efficiency and firm performance and value are scanty too. Below are some of the empirical review from the previous studies that investigated the effect of operational efficiency and firm performance and value. Grace et al. (2010) used survey data from insurers that have ERM programs to perform an efficiency analysis on firm profitability. The paper used samples of 1567, 1616, and 1606 companies in 1989, 1990, and 1991, respectively, which was analyzed using multivariate logistic regression. The study found evidence that ERM leads to lower expenses and an increase in profitability. The findings of the study may lack retention into the present day analysis, because it is overtaken by events. In addition, the period covered was the time when ERM implementation and the extent to which its programs implemented were optional, which means that the result could be spurious.

Gill et al. (2014) examined the impact of operational efficiency on the future performance of Indian manufacturing firms. Pearson's bivariate correlation analysis and multiple regression techniques were employed to analyze data from a sample of 244 manufacturing firms listed on the floor of Bombay stock exchange for the period 2008 to 2012. Operational efficiency was measured by cash conversion cycle, operating expenses, operating cash floor, and asset turnover. The findings showed that long cash conversion cycle negatively affects future performance, operating expenses to sales revenue also adversely affects future performance, operating cash flow positively impacts future performance, and asset turnover also has a positive impact on future performance.

Theoretical Framework

This study adopted Modern Portfolio Theory (Markowitz, 1952, 1959) as its foundation. Modern Portfolio Theory formulated the portfolio problem as a choice of the mean and variance of a portfolio of assets. The theory can be connected to ERM because ERM holds a portfolio view of risks, and considers the interactions between risks. Modern portfolio theory can be theorized beyond just financial risks to include risks of all kinds, namely beyond a portfolio of investments to the entire collection of risks that an organization faces (CAS, 2003). An enterprise can be thought of as a collection of risky activities with each activity having risk and expected return. Therefore, "investments" in the modern portfolio theory are treated as equal to "risky activities" in an enterprise.

An enterprise risk manager should always assume and operate like a "fund manager" and set portfolio targets as well as risk limits. This will ensure proper portfolio diversification and optimal returns (Lam,

2003). Also, Lam (2003) opined that one of the seven ERM components is considered portfolio management. The portfolio management accumulates exposure of risk, incorporates the diversification effects, and monitors the concentrations of risks against risk limits (Zhao, 2014). The study adopted modern portfolio theory because it presents a comprehensive platform that explains the adoption of ERM and its potential impact on the value of the firm.

METHODOLOGY

This study adopted a correlational approach and collected data relating to ERM objectives and performance from 2018-2022. The choice of correlational design was necessitated by the fact that the study sought to establish the nature of relationships, associations, and interdependence between variables of study (Punch, 2008). Therefore, the design provide a platform that enables the study to establish the direction and magnitude of relationship between ERM practice and performance of listed insurance firms in Nigeria.

The population of the study consists 27 insurance companies listed on the Nigerian Exchange Group (NGX) as at 31st December 2022. The study employed 19 listed Insurance Companies that meet the filter criteria as its sample. Relevant information were collected from Annual Reports of the 19 insurance firms submitted to the Nigerian Exchange Group, which has the evidence of ERM implementation. The model that examines the hypothesis of the study is specified as follows:

$$\mathbf{FP_{it}=\alpha_{it}+\beta_1 ST_{it}+\beta_2 OP_{it}+\mu_{it}}$$

Where:

FP	Firm Performance
ST	ERM Strategic Objective
OP	ERM Operational Objective
μ	Error term
α	Intercept
$\beta_1$to β_5	Parameters to be estimated for the various explanatory and control variables in the model
it	i- represents the individual firm and t-represents the time

Table 1: Measurement of Variables

Variable	Acronym & Type	Measurement	Source
Firm Performance/ Tobin's Q	FP Dependent	To be calculated as (market value of equity + book value of liabilities) / (book value of assets)	Hoyt, Moore and Liebenberg (2008), Hoyt and Liebenberg (2009)
Strategic ERM Objective	ST Independent	To be calculated as the turnover of firm i less average industry turnover divided by the standard deviation of turnover of all firms in the same industry.	Tseng (2007), Gordon *et al.,* (2009)
Operational ERM Objective	OP Independent	To be calculated as Turnover divided by Total Asset.	Tseng (2007), Gordon *et al.,* (2009)

Source: Author's Compilations, 2023

RESULTS AND DISCUSSION OF FINDINGS

Table 2: Correlation Matrix

	Firm Value	Strategic ERM Objective	Operational ERM Objective
Firm Performance	1		
Strategic ERM Objective	0.0156	1	
Operational ERM Objective	0.0016	0.7651	1

Source: Researcher's Compilations from Eviews output, 2023

Table 4 depicts that the correlation between ERM objectives and firm performance. The table indicates that the correlation between strategic ERM objective and firm performance is 0.0156. This shows a weak positive association between firm performance and strategic ERM objective. The table also indicates a positive weak correlation of 0.0016 between firm performance and operational ERM objective. Moreover, the table indicates that strategic ERM objective maintained a positive strong correlation of 0.7651 with operational ERM objective, revealing that increase in strategic ERM objective leads to increase in operational ERM objective, vice versa.

Descriptive Statistics of Dependent Variable and Panel Regressors

This study performed the descriptive analysis of the regressors in the panel relationship estimated by the study. Table 3 presents the descriptive statistics analysis of the variables as follows:

Table 3: Descriptive Statistics of Dependent Variable and Panel Regressors

	Firm Performance	Strategic ERM Objective	Operational ERM Objective
Mean	64.432	0.430	0.754
Std. Dev.	639.764	1.785	1.002
Maximum	5568.472	7.576	7.492
Minimum	-3534.461	-2.436	0.8108
Skewness	6.732	3.490	8.339
Kurtosis	65.857	14.535	74.585
Jarque-Bera	13758.37***	681.438***	17822.01***
Observations	95	95	95

*, **and*** imply significance at the 10%, 5% and 1% levels respectively.

Source: Eviews output, 2023

It can be observed from Table 3 that the mean of firm performance measured by Tobin's q within the period of the study stood at approximately 64. However, the standard deviation revealed at approximately 639.76 indicating that there is a high dispersion of individual insurance firm performance within the period of study. The existing dispersion is justified by the wide variability between the minimum Tobin's of -3534.46 and the maximum of 5568.47. The skewness of 6.73 implies that the distribution of Tobin's q has a longer right tail and is thus positively skewed. The kurtosis of 65.86 shows that the observation displays leptokurtosis of peakedness at the surface around the mean of the distribution. The Jarque-Bera value of 13758.37 which is strongly significant at the 1% level indicates that the observation of firm value in the insurance industry in Nigeria is not normally distributed.

Table 3 also reveals that strategic ERM objective has a mean value of approximately 0.4 over the period, indicating that, on the average, the insurance companies are fairly successful in their strategic objective over the period of the study since a measure of whether or not a firm had a success in its strategy is the number of standard deviations its turnover deviates from the industry turnover. This further stresses the importance of considering other sources of turnover outside premium. On the other hand, the standard deviation of approximately 1.79 reveals the presence of relatively high dispersion in the individual insurance firm observation of turnover around the average insurance industry turnover. Additionally, the minimum value for strategic ERM objective of approximately -2.44 and the maximum of 7.58 also support the presence of variation in the observation. The respective skewness and excess kurtosis values of 3.49 and 14.54 are symbolic of positive skewness and sharp peakedness at the surface of the distribution of strategic ERM objective respectively. The Jarque-Bera value of 681.00 which is strongly and statistically significant at the 1% level implies that the observation of strategic ERM objective does not follow a normal distribution.

It can also be observed from Table 3 that the mean value of operational ERM objective stood at approximately 0.75 during the period of the study. This signifies that on the average, the industry lacks

operational efficiency due to the fact that the output-input ratio value is below 1. Additionally, the standard deviation is approximately 1.002, indicating a relatively low level of dispersion of the individual insurance companies in operational efficiency around the average industry operations. The difference between the minimum value of 0.7108 and a maximum of approximately 8.339 revealed a small variability in the distribution. The skewness of 8.34 shows that the distribution has a longer right tail and hence, positively skewed, while the kurtosis of 74.585 signifies that the distribution exhibits peakedness at the surface of the distribution. The Jarque-Bera value of 17822.01 which is strongly significant at the 1% level shows that the observation is not normally distributed.

Table 4: Panel Regression Results for Effect of ERM Objectives on Company Performance

Variable	Coefficient	t-statistics
Constant	-40843.25	-13.4713***
ERM Strategic Objective	314.21	3.5142**
ERM Operational Objective	-202.53	-3.1527**
R-squared	0.6228	
Adjusted R-squared	0.5724	
Durbin-Watson	1.7251	
F-statistics	7.8341***	

*,**and*** imply significance at the 10%, 5% and 1% levels respectively.
Source: Eviews output, 2023

From Table 4 above, it can be observed that the constant, measured by the average value of the dependent variable, is approximately -40843.25 with a corresponding t-statistics of -13.4713 which is strongly significant at the 1% level. It can also be seen from the table that strategic ERM objective has a coefficient of approximately 314.21 and a corresponding t-statistics of 3.5142 which is significant at 5% level. This result revealed that strategy as a risk management technique has a positive effect on performance. This suggests that a percentage increase in strategic ERM objective will result in approximately 314.21 increase in performance of insurance companies in Nigeria. Also, the significance of the coefficient of strategic ERM objective suggests that the observed effect of strategic ERM objective on the performance of insurance companies in Nigeria is statistically realistic.

Additionally, Table indicates that the coefficient of operational ERM objective is -202.53, and a t-statistics of -3.1527 which is statistically significant at the 5% level. This suggests that operational ERM objective has a negative effect on the performance of insurance companies in Nigeria. It also shows that a percentage increase in the ratio of output relative to the input will results to a -202.53 decrease in the performance of insurance companies in Nigeria. Similarly, the significance of the coefficient reveals the importance of operational ERM objective as a determinant of firm performance in Nigeria's insurance industry. Though, this is contrary to apriori expectation and the reason could be as a result of high operational cost in the insurance industry.

The adjusted R^2 value of approximately 57.24% reveals the explanatory power of adding more regressors in the model, that is, the control variable. Similarly, the Durbin-Watson statistics of 1.7251 is not far away from the value of two as to create room for suspecting the possibility of positive autocorrelation in the residuals of the estimated model. Similarly, the F-statistics of 7.8341 which is strongly significant at the 1% level is reveals the fitness of the model, and does not suffer from any form of misspecification.

Table 5: Summary of Hypotheses

Hypothesis	Variables	Coefficient	t-Statistic	Findings
Ho_1	ERM Strategic Objective	314.21	3.5142**	Supported
Ho_2	ERM Operational Objective	-202.53	-3.1527**	Not Supported

*,**and*** imply significance at the 10%, 5% and 1% levels respectively.
Source: Eviews output, 2023

Strategic ERM Objective and Performance of Insurance Companies in Nigeria
The first hypothesis of this study states that strategic ERM objective has no significant effect on the performance of insurance companies in Nigeria. It can be seen from table 4.5 that ERM strategic objective has a coefficient of approximately 314.21 and a corresponding t-statistics of 3.5142 is significant at the 5% level. The significance of the coefficient suggests the rejection of the null hypothesis. Therefore, the test of hypothesis suggests that strategic ERM objective has a significant effect on the performance of insurance companies in Nigeria.

Operational ERM Objective and Performance of Insurance Companies in Nigeria
The second hypothesis of this study states that operational ERM objective has no significant effect on the performance of insurance companies in Nigeria. The table 4.5 above exposed that the coefficient value of -202.53, and a t-statistics of -3.1527 for operational ERM objective were revealed to be statistically significant at 5% level. This necessitates the rejection of the null hypothesis that ERM operational objective has no significant effect on the performance of insurance companies in Nigeria. However, given the negative sign of the coefficient which contradicts the apriori expectation established by theory, the hypothesis will be accepted, suggesting that operational ERM objective has no significant effect on the performance of insurance companies in Nigeria.

CONCLUSION AND RECOMMENDATIONS

This study investigated the effect of ERM on the firm performance of the insurance companies in Nigeria. Based on the results from the tested hypotheses, the study concludes that strategic ERM objective has a significant positive effect on the performance of insurance companies in Nigeria. This affirms the existence of a significant positive effect of strategic ERM objective on performance of insurance companies in Nigeria accepting the fact that insurance companies in Nigeria are putting significant efforts in the efficient application of their available resources through the best utilization of risk management strategies within and outside their business domain.

The study also concludes that the existence of a negative effect of operational ERM objective on the performance of insurance companies in Nigeria. Nevertheless, this may be attributed largely due to the fact that insurance companies in Nigeria have not been reaping the full advantage of the readily insurance market available to them; in addition to the high rate operational cost incurred which might results in the negativity in the causal effect.

Based on the findings, the Nigerian insurance companies should ensure full conformity to the provision of COSO ERM components while carrying out their business operation. They should as well re-strategize and monitor their performance outcomes in line with their established objectives, as this can only be attained through holistic application of strategic ERM objectives in the overall business operations. Additionally, insurance companies should ensure continuous advancement of new products that will serve the teeming population in the country. Through the economics of large scale output, cost are expected to be minimized.

Future studies should consider the replication of same studies in other critical sectors in Nigeria as modern businesses cannot do without the activities of insurance businesses, similar studies should be carry out to

examine the extent of the application of ERM COSO objective variables lead improve performance firms in the manufacturing sector.

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