

Effect of Risk Management Committee Characteristics on the Value of Listed Oil and Gas Companies in Nigeria

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Abstract

This study investigates the effect of risk management committee characteristics on value of listed oil and gas companies in Nigeria. The study uses correlational research design. The study utilizes secondary data extracted from the annual report and accounts of the listed firms for a period of 5 years, from 2016 to 2020. Ordinary least square regression was employed in analyzing the data. Findings from the study reveal that risk management committee size has significant negative effect on the value of listed oil and gas companies in Nigeria. On the contrary, risk management committee independence has significant positive effect on the value of the firms. Furthermore, risk management committee diligence does not significantly have effect on the value of the firms. The study therefore recommends that the board of directors of Nigerian oil and gas companies should strive to increase firm value by maintaining a reasonable size of risk management committee so as to hasten decision making in areas affecting the value of a firm. The board should also ensure that the committee is made up of a sizeable number of non-executive directors in order to provide more independent decision regarding risk management issues.

Keywords: Risk management, Value, Independence, Diligence, Oil and Gas.

Introduction

Maximizing firm value is one of the long-term goals of a company; hence its importance in the success of a company cannot be over emphasized. Firm value represents the worth of a business at a particular date (Ishaku *et al.*, 2020). The board of directors is responsible for putting in place measure that will ensure that the firm value is maximized. However, companies are faced with diverse challenges that deter the ability of a firm to achieve this goal (Lamidi *et al.*, 2022). One of such challenges is risk management, as poorly functioning risk management policies and practices would result in losses for a company thereby affecting the value of the firm. On the contrary, effective risk management can result to a higher quality internal monitoring of a firm's risk profile with sufficient and relevant information relating to risk which subsequently reduces any risks associated with investors' valuation of the firm (Subramaniam *et al.*, 2009; Odubuasi *et al.*, 2022). Hence, a sound risk management policies and practices assist in improving the value of a firm.

The task of managing the risk of a company usually lies on risk management committee (Kallamu, 2015). The committee is formed by the board of directors of a company to assess the significant risk exposure of a company and evaluates management actions to mitigate

the exposures in a timely manner. Kakanda *et al.* (2018) noted that the revised code of corporate governance issued by the Nigerian Stock Exchange (NSE) in 2011 has required all publicly trading companies in Nigeria to establish a risk management framework for the purpose of managing risk. It is therefore expected that investors will give higher value to companies with effective risk management committee.

Statement of the Problem

The relationship between risk management committee characteristics and firm value has attracted the attention of researchers to conduct a good number of studies on the effect of risk committee characteristics on firm value both within and outside Nigeria (Lamidi *et al.*, 2022; Malik *et al.*, 2021; Rustiarini & Suryandari, 2021; Yahaya & Ogwiji, 2021; Bhuiyan *et al.*, 2020; Boudiab & Ishak, 2020; Kakanda *et al.*, 2018; Yasin, 2017; Kallamu, 2015). However, findings from the studies have been mixed and therefore inconclusive. These controversies could be associated to different domain, methodology or economic development. This therefore calls for more studies in the area. Also, most of the previous studies were conducted in the financial services sector, mostly the banking industry. Consequently, other sectors need to be explored given their importance to the economic development of any country. Thus, this study focuses on the oil and gas industry. The choice of the industry is motivated due the fact that it is considered the most strategic of all industries all over the world.

Research Objectives

The main objective of this study is to examine the effect of risk committee characteristics on the value of listed oil and gas companies in Nigeria. The Specific objectives are however to examine:

- The effect of risk management committee size on the value of listed oil and gas companies in Nigeria.
- The effect of risk management committee diligence on the value of listed oil and gas companies in Nigeria.
- The effect of risk management committee independence on the value of listed oil and gas companies in Nigeria.

Findings from this study are expected to benefit various stakeholders in the oil and gas industry. For instance, board of directors will be assisted by the outcome of this study in the selection of risk committee members with traits most suited to enhancing firm value. Regulatory authorities may also find this study useful in formulating policies and programs that will benefit the industry. Moreover, the study will add to the extant literature on the subject matter which will serve as reference materials for further research. The remainder of the paper is organized as follows: section 2 presents the literature review, section 3 describes the methodology used in conducting the study, section 4 discusses the results and section 5 concludes the study.

Literature Review

Several studies have been conducted on the relationship between risk committee characteristics and firm value in different sectors, industries and periods. Some of these studies are reviewed as follows:

Risk Management Committee Size and Firm Value

Lamidi *et al.* (2022) examined the impact of risk management committee characteristics on performance of listed Deposit Money Banks in Nigeria for the period of ten years, from 2010 to 2019. Data were collected from annual report and accounts of the banks and analyzed using regression technique. Findings of the study revealed that risk management committee size has an insignificant negative impact on share price of the firms. In a similar study, using the same banking industry, Yahaya and Ogwiji (2021) investigated the effect of risk management committee characteristics on performance from 2010 to 2019. Data were collected from annual report and accounts of the banks and used regression technique in analyzing the data. Results from the study revealed that risk management committee size has an insignificant negative effect on tobin's q. Each of the two studies was able to cover a reasonable time frame of 10 years which allows justifiable conclusion to be reached. In a different study, Malik *et al.* (2021) examined the influence of risk management committee on market value of listed non-financial firms in Malaysia for the period of three years, from 2015 to 2017. Data were obtained from annual report and accounts of the firms and analyzed using regression technique. The study found out that risk management committee size has a significant negative influence on market value of the firms. The study was able to cover listed non financial firm, nonetheless, it has a weakness of covering inadequate time frame for it only covered a period of three years making it difficult to reached valid conclusion. In another study, Kakanda *et al.* (2018) examined the impact of risk management committee characteristics on market performance of listed financial service firms in Nigeria. The study was conducted between the periods 2012 to 2016 and data were collected from annual report and accounts of the firms. Regression technique was used in analyzing the data. The study found out that risk management committee size has a significance negative impact on market performance of the firms. The major strength of this study is its ability to cover all financial services industry in Nigeria.

Risk Management Committee Diligence and Firm Value

The study conducted by Lamidi *et al.* (2022) on the impact of risk management committee characteristics on performance of listed Deposit Money Banks in Nigeria documented that risk management committee meeting has significant positive impact on the performance of the firms measured with share price. Conversely, the study of Yahaya and Ogwiji (2021) on the effect of risk management committee characteristics on the performance of Deposit Money Banks in Nigeria uncovered an insignificant negative effect of risk committee meetings on the performance of the banks measured with tobin's q. In another study, Boudiab and Ishak (2020) examined the influence of risk management committee

attributes on performance of non-financial listed firms in Malaysia from 2016 to 2018. Data were collected from annual report and accounts of the banks and analyzed using regression technique. The study found out that risk management committee diligence has a significant negative influence on the performance of the firms. In a study on the impact of risk management committee characteristics on market performance of listed financial service firms in Nigeria conducted by Kakanda *et al.* (2018) found out that risk management committee meeting has a significance positive impact on the market performance of the firms.

Risk Management Committee Independence and Firm Value

The study conducted by Lamidi *et al.* (2022) found out that risk management committee independence has significant negative impact on the performance of the firms. However, the study by Malik *et al.* (2021) uncovered that risk management committee independence has a significant negative influence on market value of the firm. Findings from the study of Yahaya and Ogwiji (2021) showed that risk committee independence has an insignificant negative effect on the tobin's q of the firms. In the study conducted by Kakanda *et al.* (2018), findings revealed that risk management committee independence has a significance positive impact on market performance of the firms. In a similar study, Kallamu (2015) examined the impact of risk management committee attributes on the performance of listed finance companies in Malaysia from 2007 to 2011. Results of the study showed that risk management committee independence has significant positive impact on firm value.

Research Methodology

This study uses correlational research design. The research design is justified because the study examines the effect of one variable on another. The population of the study consists of all the ten (10) oil and gas companies listed on the Nigeria Stock Exchange (NSE) as at 31st December, 2021. Given the smaller size of the population therefore, census sampling technique was applied. However, three (3) companies namely, Fortel Oil Plc, Rak Unity Petroleum Company Plc and Oando Plc were excluded due to non availability of data related to this study. Secondary data were collected from annual reports and accounts of the sample firms for a period of five (5) years, from 2016 to 2020. Data were analyzed using Ordinary Least Square (OLS) regression technique. STATA software was used in the analysis.

Two sets of variables are used in this study, namely, dependent and explanatory variables. The dependent variable is firm value proxied by Tobin's q. The explanatory variables consist of independent and control variables. The independent variable is risk committee characteristics proxied by risk committee size, diligence and independence whereas, the control variables are leverage and firm age. Table 1 provides the summary of the variables of the study and their measurement.

Table 1: Variables of the Study and their Measurement

Variables	Abbreviation	Measurement	Source(s)
Dependent Variables			
Tobin's q		Market value of shares divided by book value of shares	Ishaku <i>et al.</i> (2020)
Independent Variables			
Risk management committee size	RMCS	The number of members in the risk Management committee.	Lamidi <i>et al.</i> (2022)
Risk management committee diligence	RMCD	Number of meetings attendance by the risk committee members in a year.	Yahaya and Ogwiji (2021)
Risk management committee independence	RMCI	The proportion of non-executive directors to total number of directors in the risk management committee.	Odubuasi <i>et al.</i> (2022)
Control Variables			
Leverage	LEV	Total liabilities divided by total assets.	Boudiab and Ishak (2020)
Firm age	FAGE	Number of years passed since incorporation of a firm.	Boudiab and Ishak (2020)

Source: Generated by the Researchers from literature

The econometric model of the study is stated as follows:

$$\text{Tobin's } q_{it} = \beta_0 + \beta_1 \text{RMCS}_{it} + \beta_2 \text{RMCD}_{it} + \beta_3 \text{RMCI}_{it} + \beta_4 \text{LEV}_{it} + \beta_5 \text{FAGE}_{it} + e_{it}$$

Where,

RMCS = Risk management committee size

RMCD = Risk management committee diligence

RMCI = Risk management committee independence

LEV= Leverage

FAGE= Firm age

β_0 = intercept

$\beta_1 - \beta_5$ = Coefficients of the explanatory variables

e = Standard error

i = Firm

t = time

Results and Discussion

Descriptive Statistics

Table 2 presents the descriptive statistics of the variables of the study.

Table 2: Descriptive Statistics

Variable	Obs.	Mean	Min.	Max.
TOBIN'S Q	35	51.1439	0.0001	469.0715
RMCS	35	4.0000	0.0000	7.0000
RMCD	35	10.0286	0.0000	25.0000
RMCI	35	0.6203	0.0000	1.0000
LEV	35	0.7188	0.3664	2.4785
FAGE	35	42.5714	7.0000	69.0000

Source: Authors' computation from annual reports of the companies using STATA

From Table 2, it can be seen that the number of observations for each variable is 35. This is in line with the number of the sampled companies, which is 7, with the study period of 5 years. Tobin's q shows a mean value of 51.1439, minimum 0.0001 and maximum of 469.0715. These imply that the average value of listed oil and gas companies in Nigeria during the period is 51.1439 with minimum and maximum values of 0.0001 and 469.0715 respectively. The mean value of risk management committee size of 4 means that, the average members of risk management committee of listed oil and gas companies in Nigeria is 4 and the maximum number of members is 7. Risk management committee diligence has a mean value of 10.0286, minimum of 0.0000 and maximum 25. These mean that the average meetings attendance by risk committee members of listed oil and gas companies in Nigeria is 10 and the maximum attendance is 25. The mean value of risk management committee independence is 0.6203. Meaning that, on the average, there is 62% non-executive directors of the total number of directors in the risk management committee members of listed oil and gas companies in Nigeria. Leverage has a mean value of 0.7188. This implies that the average liability per every Naira of asset of listed oil and gas companies in Nigeria is about No.72 with minimum and maximum values of No.37 and N2.4 respectively. From Table 2 also, the mean value of 42.5714 for firm age means that, on the average, listed oil and gas companies in Nigeria were incorporated about 43 years ago. The minimum and maximum number of years since incorporation stood at 7 and 69 respectively.

Correlation Result

Table 3 presents the correlation matrix of the variables of the study.

Table 3: Correlation Matrix of the Variables

Variables	TOBIN'S Q	RMCS	RMCD	RMCI	LEV	FAGE
TOBIN'S Q	1.0000					
RMCS	-0.1575	1.0000				
RMCD	0.1211	0.7983	1.0000			
RMCI	0.4864	0.5252	0.5682	1.0000		
LEV	-0.3139	0.2036	0.2271	-0.1267	1.0000	
FAGE	-0.6419	-0.3278	-0.3965	-0.4760	-0.0551	1.0000

Source: Authors' computation from annual reports of the companies using STATA

The correlation result in Table 3 shows how the dependent variable relates with explanatory variables as well as how the explanatory variables relate among themselves. The values of the correlation range from -1 to 1. The sign of the correlation indicates the direction of the relationship (positive or negative). The correlations on the main diagonal are 1.0, because each variable has a perfect positive linear relationship with itself. Two of the explanatory variables, namely, risk management committee diligence and risk management committee independence are positively related with the dependent variable, while other explanatory variables related negatively with the dependent variable. Moreover, the correlation coefficients reveal that there are no high correlations between the dependent and the explanatory variables as well as among the explanatory variables themselves. This is in line with the suggestion of Gujarati (2003) that all variables with less than 0.80 correlation coefficients are not highly correlated and therefore considered safe for inclusion in the same regression model.

Table 4: Regression Results

TOBIN'S Q	Coef.	Std. Err.	T	P>t
RMCS	-48.70329	9.493517	-5.13	0.000
RMCD	6.966921	3.583783	1.94	0.062
RMCI	165.8643	51.29456	3.23	0.003
LEV	-68.63095	33.70974	-2.04	0.051
FAGE	-3.637245	0.638472	-5.70	0.000
Constant	275.0525	56.46455	4.87	0.000
Adj. R-sqd	0.1969			
Prob>F	0.0000			
VIF	0.31-3.20			
Hettest	0.0392			

Source: Authors' computation from annual reports of the companies using STATA

Table 3 presents the ordinary least square regression results of the study. However, robustness tests of the model of the study were first presented. These are multicollinearity

test and heteroskedasticity test. Multicollinearity test was conducted to ensure that there is no linear relationship between two or more independent variables. When multicollinearity exists, it will be difficult to differentiate the individual effects of explanatory variables. The commonly used technique of determining the presence of multicollinearity is Variance Inflation Factor (VIF). The VIF in excess of 10 is seen as an indication of multicollinearity (Gujarati, 2003). The results of the tests conducted revealed absence of multicollinearity as the VIF values ranges from 0.31 to 3.20. Heteroskedasticity test was also carried out to ensure that regression fits all the values of the independent variables. A p-value of greater than 0.05 (5%) indicates absence of heteroskedasticity (Gujarati 2003). The result of the test conducted shows a p-value of 0.0392, (3.92%), thus suggests presence of heteroskedasticity. Consequently, robust regression was conducted to correct the problem.

From the model's summary shown in Table 4, the adjusted R-squared, also called the coefficient of determinations explains the extent to which the independent variables affect the dependent variable. The adjusted R-squared value of 0.1969 implies that 19.69% variation of the dependent variable is caused by the explanatory variables captured by the model. The remaining changes are as a result of other variables not addressed by the models. Moreover, the overall fitness of the model has also being determined using its P-value. A model with a p-value of less than 0.05 (5%) is regarded as fit. Results from Table 4 show a P-value of 0.0000 signifying that the model is fit.

From Table 4, results show that risk management committee size (RMCS) has significant negative effect on the value of listed oil and gas companies in Nigeria. This implies that the higher the number of members in the risk management committee, the lower the value of a firm. The likely reason for this relationship is that having many members in the risk committee may delay decision making in areas affecting the value of a firm. This finding supports the results obtained by Malik *et al.* (2021) using non-financial services companies in Malaysia and that of Kakanda *et al.* (2018) using Nigerian financial services firms. Conversely, risk management committee diligence (RMCD) shows a positive but insignificant effect on the value of listed oil and gas companies in Nigeria. Meaning that number of meetings attendance by the risk committee members help in raising the value of a firm, although, not significant. The possible cause of the positive relationship is that the more members attend meetings, the better the suggestion proffered on matters concerning risk management. This finding opposes the result of Yahaya and Ogwiji (2021) using Deposit Money Banks in Nigeria who recorded an insignificant negative effect of risk management committee diligence on tobin's q. Similarly, risk management committee independence (RMCI) reveals a significant positive effect on the value of listed oil and gas companies in Nigeria. This means that the higher the number of non-executive directors in a risk committee, the better the value of a firm. The probable reason for this finding is that having many non-executive directors in the risk committee brings a lot of independent judgment regarding risk management that will enhances the value of the firm. This finding is in line with the results of Kakanda *et al.* (2018) and Kallamu (2015) and

opposes the findings of Lamidi *et al.* (2022) and Malik *et al.* (2021) who documented a significant negative effect of risk management committee independence on firm value. Leverage has an insignificant negative effect on the value of listed oil and gas companies in Nigeria. This implies that the value of listed oil and gas companies in Nigeria were not significantly affected by the higher level of leverage. Similarly, firm age has a significant negative effect on the value of listed oil and gas companies in Nigeria. Meaning that, as a firm gets older, its value reduces.

Conclusion

This study examines the effect of risk management committee characteristics on the value of listed oil and gas companies in Nigeria. In line with the findings of the study, it is concluded that the value of oil and gas firms in Nigeria decreases with an increase in the size of risk management committee. On the contrary, improved firm value is achieved with an increase in the number of non-executive directors in the committee. Moreover, number of meetings attendance by risk committee members does not significantly affect the value of the firms.

Recommendations

Based on the findings and conclusion of the study, the following recommendations were proffered:

- Board of directors of every company should strive to increase firm value by maintaining a reasonable size of risk management committee so as to hasten decision making in areas affecting the value of a firm.
- The board should also ensure that the committee is made up of a sizeable number of non-executive directors in other to provide more independent decision regarding risk management issues.
- Risk management committee members should be encouraged to be attending meetings regularly so as to offer good quality suggestions on matters concerning risk management.

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