

ENTERPRISE RISK MANAGEMENT COMMITTEE, FIRM SIZE AND PERFORMANCE OF LISTED DEPOSIT MONEY BANKS (DMBS) IN NIGERIA

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Abstract

The objective of this study was to examine the effect of the Enterprise Risk Management Committee (ERMC) on the performance of Deposit Money Banks (DMBs) in Nigeria, with firm size as a mediating variable. Specifically, the study investigated the mediating effect of firm size on the relationship between ERMC size, ERMC activism, ERMC composition, ERMC gender diversity, and ERMC expertise, and firm performance, measured by return on capital employed (ROCE). An ex-post facto research design was adopted, as the study did not involve the manipulation of variables but aimed to establish effects and mediation. The population comprised listed DMBs in Nigeria, and a purposive sample of ten (10) banks was selected based on the availability of annual reports over an 11-year period (2012–2022), which defined the time scope of the study. Data were analyzed using Structural Equation Modeling (SEM). The results revealed that firm size did not significantly mediate the relationship between ERMC size, ERMC activism, and ERMC gender diversity and firm performance. However, firm size significantly mediated the effect of ERMC composition and ERMC expertise on the performance of DMBs in Nigeria. Based on these findings, the study recommends that banks, regardless of their size, should maintain a moderately sized ERMC in compliance with existing regulations. While considering their unique contexts, banks should adhere to regulatory guidelines on ERMC meeting frequency, as excessively frequent meetings may increase operational costs. Banks are also encouraged to include more non-executive members in the ERMC. Additionally, smaller banks should seek to expand in order to benefit from the positive mediating effect of firm size on the relationship between ERMC composition and expertise and firm performance. The gender composition of the ERMC should not be a major concern, regardless of the bank's size. Lastly, banks should ensure that their ERMCs include more non-executive members with strong accounting expertise.

Keywords: Enterprise Risk Management Committee, Firm Size, Financial Performance

1.0 INTRODUCTION

There are many different risks and potential hazards that modern enterprises must deal with. Companies use to manage their risk exposures in a traditional manner. This conventional method of risk management has depended on each business unit assessing and managing its own risk before reporting back to the CEO. Numerous businesses, including Enron, Acen, Amicable, Baico, Olympus, WorldCom, Satyam, Parmalat, Oceanic, and Intercontinental Bank, collapsed as a result of the 1997 Asian financial crisis and the 2008 global financial crisis, which exposed flaws in the conventional approach to organizational risk management (Ibrahim, Okika, Yunusa & Janada, 2020). In addition, the forces of globalization, technological development, the speed of financial transactions, changes in commodities and currency markets, and intense competition have all contributed to the complexity of corporate risks throughout time.

These and other causes increased the need for managers of businesses to adopt a more comprehensive approach to risk management. Thus, enterprise risk management (ERM), a method that approaches risk management strategically from the viewpoint of the entire company or organization, was adopted. It is a top-down approach that seeks to recognize, evaluate, and get ready for possible losses, risks, hazards, and other potential negative outcomes that could impede an organization's goals and operations or result in losses. Instead of managing risks in silos or piecemeal fashion, enterprise risk management requires businesses to identify all of the risks they face and determine which risks to actively manage.

Businesses that use Enterprise Risk Management (ERM) usually have a specific enterprise risk management team called the Enterprise Risk Management Committee (ERMC) that controls the operations of the company since risk judgments made by top management may appear to be at odds with local assessments on the ground.

The company's worldwide operations risk management policies are primarily and solely the responsibility of ERMC, an independent board of directors committee that also supervises the organization's global risk management system's execution. Regarding the company's risk tolerance, risk control, and enforcement procedures, the committee assists the board of directors in fulfilling its regulatory responsibilities. The quantity and kind of risk that a business can and is willing to accept in its market activities and risks, in spite of its stakeholder obligations and corporate priorities, is known as its risk tolerance. In their study on the relationship

between risk committees and bank performance in China and India, Battaglia, Gallo, and Graziano (2014) suggested the creation of an independent risk management committee to specifically regulate the enterprise's complex risk nature and establish the firm's risk appetite and limit.

As a result, practitioners and scholars are unsure if the ERM framework and ERMC established by Nigerian companies have contributed to the reduction of enterprise risks. Due to the dearth of research on the topic, it is unclear if the establishment of a distinct ERMC has contributed to reducing business risks, which would inevitably enhance the financial performance of such businesses.

Odubuasi, Ofor, and Ilechukwu (2022) analysed the impact of enterprise risk management (ERM) and risk committee on African banks' earning capacity; Ogiriki and Empere (2022) investigated the relationship between risk committees and the corporate performance of quoted insurance firms in Nigeria; Ugwu, Ekwochi, and Ogbu (2021) investigated the impact of corporate risk management committees on the performance of Nigerian firms; and Odubuasi, Obi, and Osuagwu (2021) looked at the combined effect of risk management committees and ERM on the performance of Nigerian banks. Previous research has not examined a mediating influence study. Understanding the process by which an independent variable influences a dependent variable is the justification for adding a mediating variable. By determining the underlying process or mechanism that connects the independent and dependent variables, mediating variables aid in the explanation of the relationship between them. They shed light on how and why particular factors affect the desired result. In outcome studies, mediating variables are crucial because they produce useful data regarding interventions. They can aid in the development of successful solutions and expand the quantity of data gleaned from outcome studies. Consequently, firm size—the scale on which a business functions—is considered a suitable mediating variable.

Additionally, it becomes imperative to understand the characteristics of the risk committee, such as its size, gender diversity, composition, expertise, and meeting frequency, in order to accomplish the ERMC's goal of reducing risk exposure through the effective and efficient formulation and administration of the organization's risk policies.

Because of their high level of risk exposure and the important role they typically play in the economy, the Nigerian banking industry was chosen as the study's site. Because the financial sector acts as a financial mediator and an auxiliary in boosting economic growth, failure in this sector may spread to other areas of the economy (IMF, 2009). Therefore, financial institutions are considered as the key economic players of every nation. On this note, the study investigated the mediating effect of firm size on enterprise risk management committee and performance of Deposit Money Banks (DMBs) listed in Nigerian Exchange Group (NGX).

1.1 Objectives of the Study

The main objective of this study was to examine the mediating effect of firm size on enterprise risk management committee and performance of listed Deposit Money Banks in Nigeria. In specific terms, the study examined:

1. The mediating effect of firm size on enterprise risk management committee size and performance of Deposit Money Banks in Nigeria.
2. The mediating effect of firm size on enterprise risk management committee activism and performance of Deposit Money Banks in Nigeria.
3. The mediating effect of firm size on enterprise risk management committee composition and performance of Deposit Money Banks in Nigeria.
4. The mediating effect of firm size on enterprise risk management committee gender and performance of Deposit Money Banks in Nigeria.
5. The mediating effect of firm size on enterprise risk management committee expertise and performance of Deposit Money Banks in Nigeria.

1.3 Research Hypotheses

The following null hypotheses were tested in the study:

1. **H₀:** Firm size does not significantly mediate the relationship between enterprise risk management committee size and performance of Deposit Money Banks in Nigeria.
2. **H₀:** Firm size does not significantly mediate the relationship between enterprise risk management committee activism and performance of Deposit Money Banks in Nigeria.
3. **H₀:** Firm size does not significantly mediate the relationship between enterprise risk management committee composition and performance of Deposit Money Banks in Nigeria.
4. **H₀:** Firm size does not significantly mediate the relationship between enterprise risk management committee gender and performance of Deposit Money Banks in Nigeria.
5. **H₀:** Firm size does not significantly mediate the relationship between enterprise risk management committee expertise and performance of Deposit Money Banks in Nigeria.

2.0 LITERATURE REVIEW

2.1 Enterprise Risk Management Committee Size

The number of directors appointed by the Board of Directors to serve on the risk management committee at any given moment is known as the Enterprise Risk Management Committee Size (ERMCS). The corporate governance code makes no mention of the number of directors nominated to the committee. However, based on their degree of risk management investment, the Board of Directors is left to make that decision. The size of a risk management committee can be used as a stand-in for a company's readiness to devote resources to raise the committee's standing and influence in corporate risk reduction (Khalik & Md. Sum, 2019). Risk committee size presents a good metric of board effectiveness (Ugwu, Ekwochi & Ogbu, 2021). A big committee size, according to researchers like Rashid, Ibrahim, and Othman (2012), would enable more abilities, extensive experiences, and diverse expertise in controlling the enterprise wide-ranging hazards. Similar to the size of the board, a larger committee can provide management with greater counsel, improve a company's comprehension and response to a variety of stakeholders, and be more difficult to influence than a smaller board. When the risk management committee has a large number of members, it will have more opportunities to perform oversight functions and bring a variety of skills and knowledge to the table.

However, other people believe that smaller boards work better because they allow for shorter communication between the smaller members, which eventually improves the board's decision-making efficiency (Sanda, Garba & Milailo, 2011). Smaller committees are more active in monitoring management practices, according to Abdullah and Ismail (2015), but larger boards are more challenging to manage and may cause issues with organization and communication, perhaps leading to factions that could compromise company goals. According to Khalik and Md. Sam (2019), the risk management committee, which served as a board of directors' representative, provided superior control of risk management, hence improving business performance. According to Kakanda et al. (2017), a company's performance is negatively impacted by having a large number of directors on its risk management committee. More directors on the committee will ensure more efficient risk monitoring and oversight, which will raise the company's worth, according to Husaini and Saiful (2017). Dalton et al. (1999), however, contended that a large committee size could result in a lack of focus and a tendency for the members to be less active. According to Sanda, Garba, and Mikailu (2011), small boards have a stronger positive correlation with firm performance than large boards.

2.2 Enterprise Risk Management Committee Activism

In the view of Elamer and Benyazid (2018), risk committee activism is the frequency with which the directors nominated to the risk management committee meet to debate and resolve pertinent issues pertaining to the companies, particularly those involving risks. The main goal of setting up a risk management committee is to prevent delays in the risk management process and to guarantee that risks are regularly and diligently analyzed, evaluated, managed, and reported. The tenacity, diligence, and resolve exhibited toward their task—which is gauged by the quantity of meetings attended—are the activism component of committee effectiveness. According to Chou and Buchdadi (2017) and Abdullah and Ismail (2015), the more the risk management committee, which represents the principal, conducts meetings, the more they will guarantee activism and vigilance. According to Abbott and Parker (2000), when committee activism is done well, it improves the faithful and pertinent disclosure of conflicts and compelling concerns that are outside the shareholders' risk tolerance. Committees must meet on a regular basis because infrequent meetings might result in inefficiency (Abbott & Parker, 2000). Board meetings are used to discuss a variety of company concerns, and the more frequently a board meets, the better the company's performance will be (Kakanda, Slim & Chandren, 2018). The risk management committee will be able to guarantee management checks and balances thanks to the frequency of meetings. Frequent committee meetings are essential since they provide a forum for knowledge and information sharing and the creation of a pool of experts to improve high-quality risk information (Allegrial & Greco, 2013).

According to Abdullah and Ismail (2015), a risk committee can demonstrate their degree of competence by holding more meetings and doing so more frequently throughout the year. This will also demonstrate the amount of work that is being done to complete the obligations and responsibilities (Sori, Ramadili & Karbhari, 2009). Ntim and Osei (2011) discovered a favorable correlation between business value and the frequency of board meetings. According to Abbott and Parker (2000), the more meetings there are, the less likely it is that false reporting and activities would occur, which will improve corporate performance. Meetings of the risk management committee are favorably correlated with the performance of the company, according to Battaglia and Gallo (2015). According to Kakanda et al. (2018), holding more meetings will raise commitment to the oversight process and boost value generation. Ferrero, Izgulendo, and Terres (2012) discovered that the frequency of board meetings has a detrimental impact on the firm's performance during expansionary periods and is only effective at times of crisis. According to Tong, Junarsin, and Davidson (2013), regular meetings are favorably correlated with company

performance, particularly when there is a dearth of management and supervisory experience. However, Elamer and Benyazid (2018) discovered a negative correlation between business performance and the frequency of risk management committee meetings. Chou and Buchdadi (2017) found that risk committee meetings have negative relationship with Return on Assets of banks in Indonesia; while Hoque, Islam, and Azam (2013) found no association.

2.3 Enterprise Risk Management Committee Composition

The percentage of non-executive or outside directors among all the directors appointed and serving on the business's risk management committee is known as the composition of the enterprise risk management committee. The 2011 Corporate Governance Code mandates that board committees of Nigerian publicly traded firms be presided over by a non-executive director to ensure the board's independence and consist of a majority of non-executive directors. According to research, independent directors strengthen corporate governance procedures and boost overall business success (Dionne & Triki, 2005; Tao & Hutchinson, 2012). Once more, Dionne & Triki (2005) confirmed that outside directors can make judgments more effectively without worrying about their careers being jeopardized because they are not tied to the company. Independent directors can withstand any pressure from management and obtain all the information needed for effective risk mitigation and control (Protiviti, 2011).

Previous studies have indicated a positive correlation between business performance and the makeup of the risk committee (Yeh, Chung & Liu, 2011; Olusola & Abiodun, 2013; Coles, Daniel & Naveen, 2012). Ng, Chong, and Ismail (2012) discovered a negative correlation between the makeup of the risk management committee and the underwriting risk of Malaysian insurance companies. A large proportion of independent directors on the committee will raise the firm's worth (Husaini & Saiful, 2017). According to Kakanda, Salim, and Chandren (2017), organizations perform better when they have more independent directors on their risk management committee. Additional research revealed that while risk management committee independence has a beneficial impact on market returns, it has an adverse effect on accounting performance reporting (Kallamu, 2015). According to Chou and Buchdadi (2017), independent board members have a favorable effect on large banks' net interest margins. Elamer and Benyazid (2018) demonstrated a negative correlation between the financial performance of UK enterprises and the independent director on the risk committee, while in the same vein, the work of Cavaci, Crifo, Reberioux and Roudaut (2017) reported that independent board is negatively correlated with operating performance.

2.4 Enterprise risk management committee gender

The Enterprise Risk Management Committee Gender (ERMCG) study examines how the gender balance of the committee—both male and female—affects the organization's performance. Typically, males make up the majority of the Board of Directors of most companies, including DMBs, with very few or no females included. However, the majority of academics have viewed this as a shortcoming and have alternated between analyzing the potential impact of female executives or members of the Board on the success of companies. Utilizing the various qualities and abilities that both men and women possess that could be advantageous to the company is the process of gender diversity (Onatuyeh & Proso, 2019). Various nations have implemented a variety of measures, such as laws and quotas, to guarantee that more women hold senior management and board roles. For instance, the governments of a number of European nations have ordered European companies to create strategies aimed at boosting the proportion of female directors (Collier, 2008). The most well-known example is the gender quota system in Norway, where a 40% female quota was implemented for both state-owned and public companies as early as 2003 (Hoel, 2008). Later, similar laws were proposed in Iceland, France, Spain, and the Netherlands (Marinova et al., 2010). Though the Vision 2020 national technical working committee on corporate governance highlighted greater female involvement in corporate governance matters without providing specifics, Nigeria does not have such regulations. Therefore, it is still not unexpected that a relatively small number of Nigerian women have attained corporate executive positions in comparison to their male counterparts (Abiola, 2004). As shown in the independent research conducted by Obi (2001) and Omotola (2007), one potential explanation for this discrepancy is that women have been marginalized in the political, economic, and social spheres because they are perceived as the weaker sex. Women face many obstacles on their path to become top executives in different companies, from overcoming cultural barriers to managing work and family obligations.

In the current real-world situation, the number of women pursuing career in managerial position are increasing. However, the percentage of women representation on board are relatively low (Omar & Davidson, 1989 in Tarigan, *et al.* 2018). According to Equal Opportunity for Women in Workspace Agency, in 2009 the percentage of women on board in developed country such as Canada, United States, United Kingdom, and New Zealand are respectively 14%, 15.2%, 9%, and 8.7%. These data are showing an increase in general compared to the preceding year's data for the same countries, 13%, 14.8%, 8.5%, and 7.1%. Even if the data shows increase in women participation on board in general, the survey conducted by Stuart (2016) showed that almost 75% of the respondent

deny to support the boardroom diversity quota. This resolved that the gender diversity on board should not be mandatory but voluntarily.

However, there are numerous studies that support and refute the idea that women's positive traits foster sound corporate governance. According to research by Campbell and Mingues-Vera (2008) and Farrell and Hersch (2005), having female directors may improve the performance of the company and its market value. According to Nielsen and Huse's (2010) research, the presence of female directors on corporate boards lowers the level of conflict. To increase board effectiveness, they employ development activities such work instructions, assessments, and development programs. Furthermore, women are careful, risk-averse, adept in accounting and finance, and capable of making sound decisions, according to Azmi and Barrett (2013). According to Choi and Yoo (2007), women are respected in their environment because they are seen as tough. According to Tarigan et al. (2018), women prioritize harmony since they are thought to have a distinct cognitive style. Furthermore, it is thought that women can help spread knowledge as part of their behavior (Earley & Mosakowski, 2000).

On the other hand, there are a number of reasons why a gender-mixed board and board committees are undesirable, including the prolonged decision-making process (Hambrick et al., 1996), the disparity in risk response (Jianakoplos & Bernasek, 1998), and the increased likelihood of conflict (Joshi et al., 2006). Women's high absenteeism and turnover also raise company expenses (Cox and Blake, 1991). Additionally, a varied group will be less likely to cooperate and more likely to have conflict (Earley & Mosakowski, 2000). They are also less likely to communicate more frequently and to hold similar opinions (Williams and O'Reilly, 1998). As a result, it may be said that the results of earlier studies on the effects on the company are not entirely consistent.

2.5 Enterprise risk management committee expertise

Enterprise risk committee expertise measures the qualification in terms of education of directors that serve on the risk management committee. Directors with accounting or finance knowledge have added advantage to understanding risks in their various disguise. Kallama (2015) asserted that competence of committee members in accounting will determine their ability to detect and manage risk of a company for enhanced performance. And more argument exists in literature that risk management committee with expert directors will perform better in risk monitoring and risk management because of their background and experience (Yatim, 2009; Akhtaruddin & Haron, 2010; Ismail & Rahman, 2011). Knowledge of risk and its forms is a powerful tool that directors with such tool cannot be equated with directors without it in risk identification (Ugwu, Ekwochi & Ogbu, 2021). The only way to effectively supervise management's strategic choices and operations for better business performance is through the experience and knowledge of the directors. Board committees with strong financial knowledge enhance the caliber of financial reporting, according to Md. Yusof (2010).

A previous study by Diome and Triki (2005) discovered a strong correlation between directors' capacity to manage a company's risk and their degree of financial understanding. Given this background, it is anticipated that having a director with experience in finance or accounting will enhance the company's success. Nonetheless, the percentage of directors who possess accounting or financial competence relative to the total number of directors is used to gauge the financial expertise of the directors. Given their educational background or experience, risk management committees with expert directors will be more equipped to monitor, assess, identify, detect, and manage the risk and risk policies of enterprises, (Yatim & Kallamu, 2018).

According to Akhtanddin and Haron (2010), directors' knowledge can lessen information asymmetry. The degree of financial experience of the directors on the risk committee and their capacity to control the firm's risk were found to be significantly positively correlated by Diome and Triki (2003). According to Md. Yusof (2010), having a larger percentage of directors with financial experience on the committee can improve the quality of financial reporting. According to Gendron and Bedard (2006), when managers and external auditors assess the efficacy of audit and risk management committees, they primarily emphasize the expertise of the committee members. On the other hand, Husaini and Saiful (2017) discovered a negligible and inverse relationship between audit/risk committee skills and the value of companies in the Indonesian market.

3.0 METHODOLOGY

This study employed an **ex-post facto research design**, which involves repeated observations of the same units (in this case, companies) over a period of time (2012 to 2022). The ex-post facto design is also appropriate for determining the cause-and-effect relationships between dependent and independent variables. This method was chosen because the study investigated what has been documented in the past by looking at the annual report of the selected financial institutions that cannot be manipulated. The ex-post facto research design was adopted on the basis that the researcher does not have control over the variables mainly because the event has already occurred and cannot be changed by the researcher. The population of the study consisted of **thirteen (13)** DMBs currently listed on the Nigeria Exchange Group. They

include; Access Bank Nigeria PLC, ECO Bank Nigeria PLC, Fidelity Bank Nigeria PLC, First Bank Nigeria PLC, First City Monument Bank Nigeria PLC, Guaranty Trust Bank Nigeria PLC, Polaris Bank Nigeria PLC, Stanbic IBTC Bank, Sterling Bank Nigeria PLC, Union Bank Nigeria PLC, United Bank for Africa PLC, Wema Bank PLC, and Zenith Bank Nigeria PLC. All the quoted Deposit Money Banks in Nigeria with complete availability of data were selected. The banks included in the sample were selected using purposive sampling method. Purposive sampling is a research technique used to select a specific group of individuals or units for analysis; the participants were chosen on purpose, not randomly. The sample size for this study consist of ten (10) banks which are as follows; Access Bank, Eco Bank, Fidelity Bank, GT. Bank, Sterling Bank, Union Bank, UBA, Unity Bank, Wema Bank and Zenith Bank.

The study first employed descriptive statistics to compute statistics such as the mean, median, standard deviation, minimum, maximum values statistics. This was used to describe the nature of data and also aid data visualization. The study employed structural equation modelling in validating the hypotheses. The model adapted for this study was the model of Ibrahim, Okika, Yunusa and Janada (2020) stated as:

$$ROA_{it} = \beta_0 + \beta_1 RMCSZ_{it} + \beta_2 RMCINDP_{it} + \beta_3 RMCEXP_{it} + \beta_4 FSIZE_{it} + \beta_5 LEV_{it} + \epsilon_{it}$$

Where:

ROA = Return on Assets.

RMCSZ = Risk Management Committee Size

RMCINDP = Risk Management Committee Independence

RMCEXP = Risk Management Committee Expertise

FSIZE = Firm Size

LEV= Leverage

ϵ = Error term

i = Firm Script (i=24)

t = Firm Script (t=7)

β_0 = is the intercept

$\beta_1 - \beta_5$ = are the parameters to be estimated in the equation

The model was modified by the researcher and restated in functional form as follows:

$$ROCE = ERMCS*FSIZE + ERMCA*FSIZE + ERMCC*FSIZE + ERMCG*FSIZE + ERMCE*FSIZE + \dots\dots\dots(1)$$

The econometric form of the regression model is presented by introducing the error term, firm scripts and intercept, the model is thus restated below as:

$$ROCE_{it} = \beta_0 + \beta_1 ERMCS*FSIZE_{it} + \beta_2 ERMCA*FSIZE_{it} + \beta_3 ERMCC*FSIZE_{it} + \beta_4 ERMCG*FSIZE_{it} + \beta_5 ERMCE*FSIZE_{it} + \epsilon_{it} \dots\dots\dots(2)$$

Where:

ROCE = Return on Capital Employed

ERMCS = Enterprise Risk Management Committee Size

ERMCA = Enterprise Risk Management Committee Activism

ERMCC = Enterprise Risk Management Committee Composition

ERMCG = Enterprise Risk Management Committee Gender

ERMCE = Enterprise Risk Management Committee Expertise

FSIZE = Firm Size

ϵ = Error term

i = Firm Script (cross sectional)

t = Firm Script (time)

β_0 = is the intercept

$\beta_1 - \beta_5$ = are the parameters to be estimated in the equation

Table 3.1 Definition of Variables/Proxies

VARIABLES	DEFINITION	SOURCE
Dependent Variables		
Return on Capital Employed (ROCE)	Earnings before Interest and Tax (EBIT)	Fali,Philomena, Ibrahim and Amos (2020)

	Capital Employed (Net Asset)	
Independent Variables		
Enterprise Risk Management Committee Size	Total number of Directors in the ERMC	Ibrahim, Okika, Yunusa and Janada (2020)
Enterprise Risk Management Committee Activism	Total number of meeting held by the ERMC in a year	Ronald, Cong and FeiXie, (2012)
Enterprise Risk Management Committee Composition	Proportion of independent and non- executive directors to the total number of ERMC	Elamer and Benyazid, (2018), Malik, (2017) and Kakande, Salim and Chandren (2017)
Enterprise Risk Management Committee Gender	Proportion of female directors to the total number of EMRC	Elamer and Benyazid, (2018), Malik, (2017)
Enterprise Risk Management Committee Expertise	Percentage of Directors in the committee with Accounting/Financ e Knowledge/experti se	Ibrahim, Okika, Yunusa and Janada (2020)
Mediating Variables		
Firm Size	The natural log of total assets	Elamer and Benyazid, (2018),

4.0 DATA ANALYSIS

4.1 Descriptive Statistics

The descriptive statistics of the independent, dependent and mediator variables utilized in the study are presented in Table 4.1 below; the table shows the number of observations, mean, standard deviation, minimum and maximum values of the variables. The description helps in showing the nature of the data.

Table 4.1: Summary statistics of variables

Variable	Obs	Mean	Std. Dev.	Min	Max
ERMCS	110	7.381818	1.76605	3	13
ERMCA	110	4.272727	1.240813	1	11
ERMCC	110	.6067364	.1748791	.125	1
ERMCG	110	.2161182	.1480618	0	.5
ERMCE	110	.5109773	.1603662	.143	.857
Fsize	110	2.771418	2.803875	.157	13.374
ROCE	110	.0433058	.0568369	-.2453175	.2178005

Source: STATA 15 Outputs, 2024

The Obs. column (i.e., observations) shows the number of observations included in the analysis of the independent variables of the study as one hundred and ten (110). The Mean is a measure of central tendency which calculates the average of a set of observations; while, the Standard Deviation (SD) is a measure of the average distance between the values of the data in the set and the mean. A low SD indicates that the data points tend to be very close to the mean; a high SD indicates that the data points are spread out over a large range of values.

The mean value for ROCE which is the dependent variable is 0.04, with a SD of 0.57 that shows that the values are spread out over a small range of values, a minimum value of -0.245 and a maximum value of 0.218. The mean value for FSIZE which is the mediator variable is 2.77, with a SD of 2.80 which shows that the values are spread out over a large range of values, a minimum value of 0.157 and a maximum value of 13.374. The mean value for ERMCS is 7.38, with a SD of 1.77 which shows that the values are spread out over a small range of values, a minimum value of 3 and a maximum value of 13. The mean value for ERMCA is 4.27, with a SD of 1.24 which shows that the values are spread out over a small range of values, a minimum value of 1 and a maximum value of 11. The mean value for ERMCC is 0.61, with a SD of 0.17 which shows that the values are spread out over a small range of values, a minimum value of 0.125 and a maximum value of 1. The mean value for ERMCG is 0.22, with a SD of 0.15 which shows that the values are spread out over a very small range of values, a minimum value of 0 and a maximum value of 0.5. The mean value for ERMCE is 0.51, with a SD of 2.80 which shows that the values are spread out over a small range of values, a minimum value of 0.143 and a maximum value of 0.857.

4.3 Model Building and Hypotheses Testing

Figure 4.1 SEM Model Building

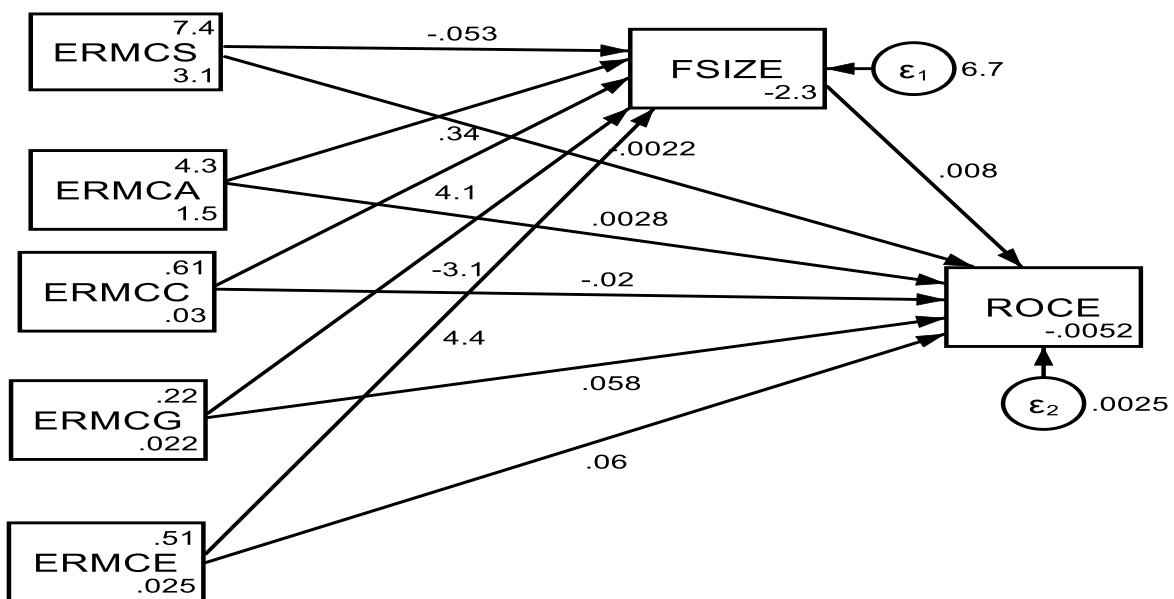


Figure 4.1 shows the path analysis diagram of structural equation model for the independent, mediator and dependent variables.

Firstly, the figure shows that the ERMCS to FSIZE paths in the diagram has a coefficient of -0.053 and variance of 6.7. It also shows the ERMCS to ROCE path that has a coefficient of 0.0022 and a variance of 0.0025, and the FSIZE to ROCE path that has a coefficient of 0.008 and variance of 0.0025. The indirect path which is the mediating path shown as ERMCS to FSIZE multiplied by FIZE to ROCE has a coefficient of -0.000424 (-0.053 x 0.008), and a variance of 0.01675 (6.7 x 0.0025).

Secondly, the figure shows that the ERMCA to FSIZE paths in the diagram has a coefficient of 0.34 and variance of 6.7. It also shows the ERMCA to ROCE path that has a coefficient of 0.0028 and a variance of 0.0025, and the FSIZE to ROCE path that has a coefficient of 0.008 and variance of 0.0025. The indirect path which is the mediating path shown as ERMCA to FSIZE multiplied by FIZE to ROCE has a coefficient of 0.00272 (0.34 x 0.008), and a variance of 0.01675 (6.7 x 0.0025).

Table 4.2 shows the direct effect of the independent variables on the dependent variable. The values are same with the result in Figure 4.1 except that it includes the number of iterations done to have a converge and also produced the log likelihood. It also showed the p-value of the various paths. The iteration was only once and had a log likelihood of -332.46737. The p-value for the various path are; 0.424 for ERMCS to ROCE, 0.511 for ERMCA to ROCE, 0.519 for ERMCC to ROCE, 0.085 for ERMCG to ROCE and 0.058 for ERMCE to ROCE. These p-values showed that the whole independent variable have statistically insignificant effect on the financial performance of Deposit Money Banks in Nigeria. The p-value of the indirect path which is the mediating path will be determined from the indirect effect model.

Table 4.3: Structural Equation Model Indirect Effect Analysis

Indirect effects						
	Coef.	OIM Std. Err.	z	P> z	[95% Conf. Interval]	
Structural						
FSIZE						
ERMCS	0	(no path)				
ERMCA	0	(no path)				
ERMCC	0	(no path)				
ERMCG	0	(no path)				
ERMCE	0	(no path)				
ROCE						
FSIZE	0	(no path)				
ERMCS	-.0004206	.0011587	-0.36	0.717	-.0026916	.0018503
ERMCA	.0026739	.0018505	1.45	0.148	-.0009529	.0063008
ERMCC	.0325028	.0146056	2.23	0.026	.0038764	.0611292
ERMCG	-.0244654	.0148051	-1.65	0.098	-.0534829	.0045521
ERMCE	.0351534	.0150745	2.33	0.020	.0056081	.0646988

Source: STATA 15 Outputs, 2024

Table 4.3 shows the indirect effect which is the mediating effect of the structural equation model. In our analysis, the p-values for the mediating paths are 0.717 for ERMCS, 0.148 for ERMCA, 0.026 for ERMCC, 0.098 for ERMCG and 0.020 for ERMCE. This means that FSIZE significantly mediates the effect of ERMCC and ERMCE on ROCE while it does not significantly mediate the effect of ERMCS, ERMCA and ERMCG on ROCE of DMBS in Nigeria.

Table 4.4: Structural Equation Model Total Effect Analysis

Total effects						
	Coef.	OIM Std. Err.	z	P> z	[95% Conf. Interval]	
Structural						
FSIZE						
ERMCS	-.0528815	.1451632	-0.36	0.716	-.3373961	.2316332
ERMCA	.3361701	.2194813	1.53	0.126	-.0940054	.7663456
ERMCC	4.086306	1.57877	2.59	0.010	.9919735	7.180638
ERMCG	-3.075827	1.722311	-1.79	0.074	-6.451494	.299841
ERMCE	4.419549	1.601003	2.76	0.006	1.281641	7.557458
ROCE						
FSIZE	.0079541	.0018252	4.36	0.000	.0043767	.0115315
ERMCS	-.002642	.0030092	-0.88	0.380	-.00854	.003256
ERMCA	.0054629	.0045498	1.20	0.230	-.0034546	.0143804
ERMCC	.0124329	.0327277	0.38	0.704	-.0517123	.076578
ERMCG	.0330857	.0357033	0.93	0.354	-.0368915	.1030629
ERMCE	.0951263	.0331886	2.87	0.004	.0300778	.1601747

Source: STATA 15 Outputs, 2024

Table 4.4 shows the total effect that is the direct plus the indirect effect. In our analysis, the p-values for the total effect are 0.380 for ERMCS, 0.230 for ERMCA, 0.704 for ERMCC, 0.354 for ERMCG and 0.004 for ERMCE. This means that its only ERMCE has a significant total effect on ROCE of DMBs in Nigeria.

Hypothesis One

Ho: Firm size does not significantly mediate the effect of Enterprise Risk Management Committee Size (ERMCS) on Return on Capital Employed (ROCE) of DMBs in Nigeria.

Decision: since the p-value of 0.717 is higher than the margin of error of 0.05, we therefore accept the null hypothesis: Firm size does not significantly mediate the effect of Enterprise Risk Management Committee Size (ERMCS) on Return on Capital Employed (ROCE) of DMBs in Nigeria.

Hypothesis Two

Ho: Firm size does not significantly mediate the effect of Enterprise Risk Management Committee Activism (ERMCA) on Return on Capital Employed (ROCE) of DMBs in Nigeria.

Decision: since the p-value of 0.148 is higher than the margin of error of 0.05, we therefore accept the null hypothesis: Firm size does not significantly mediate the effect of Enterprise Risk Management Committee Activism (ERMCA) on Return on Capital Employed (ROCE) of DMBs in Nigeria.

Hypothesis Three

Ho: Firm size does not significantly mediate the effect of Enterprise Risk Management Committee Composition (ERMCC) on Return on Capital Employed (ROCE) of DMBs in Nigeria.

Decision: since the p-value of 0.026 is lower than the margin of error of 0.05, we therefore reject the null hypothesis: Firm size significantly mediate the effect of Enterprise Risk Management Committee Composition (ERMCC) on Return on Capital Employed (ROCE) of DMBs in Nigeria.

Hypothesis Four

Ho: Firm size does not significantly mediate the effect of Enterprise Risk Management Committee Gender (ERMCG) on Return on Capital Employed (ROCE) of DMBs in Nigeria.

Decision: since the p-value of 0.098 is higher than the margin of error of 0.05, we therefore accept the null hypothesis: Firm size does not significantly mediate the effect of Enterprise Risk Management Committee Gender (ERMCG) on Return on Capital Employed (ROCE) of DMBs in Nigeria.

Hypothesis Five

Ho: Firm size does not significantly mediate the effect of Enterprise Risk Management Committee Expertise (ERMCE) on Return on Capital Employed (ROCE) of DMBs in Nigeria.

Decision: since the p-value of 0.020 is lower than the margin of error of 0.05, we therefore reject the null hypothesis: Firm size does not significantly mediate the effect of Enterprise Risk Management Committee Expertise (ERMCE) on Return on Capital Employed (ROCE) of DMBs in Nigeria.

4.4 Discussion of Findings

The focal point of this research was to investigate whether **firm size significantly mediates** the effect of Enterprise Risk Management Committee (ERMC) characteristics on the financial performance of Deposit Money Banks (DMBs) in Nigeria, as measured by return on capital employed (ROCE). Previous studies on ERMC characteristics have primarily focused on their **direct effects** on financial performance, with limited attention given to **mediating effects**, such as that of firm size.

Firstly, we found that firm size does not significantly mediate the effect of Enterprise Risk Management Committee Size (ERMCS) on Return on Capital Employed (ROCE) of DMBs in Nigeria. Our study showed a coefficient of -0.0004 and p-value of 0.717, meaning that ROCE decreases by less than 1% for every unit increase in ERMCS when mediated by firm size. The study similarly found that ERMCS does not significantly affect financial performance directly also. Our findings agree with prior empirical results like those of Mashonganyika (2015) and Husaini and Saiful (2017), whose results maintain that risk committee size does not significantly affect firm performance. Nevertheless, the result disagrees with the results of Meyer and Wet (2013); Badu & Appiah (2017); Onyali & Okerekeoti (2018); Palaniappan (2017); Akpan and Amran (2014); Badu and Appiah (2017). However, no prior study has attempted to mediate the effect of ERMCS on firm performance using firm size.

Secondly, we found that firm size does not significantly mediate the effect of Enterprise Risk Management Committee Activism (ERMCA) on Return on Capital Employed (ROCE) of DMBs in Nigeria. Our study showed a coefficient of 0.0027 and p-value of 0.148, meaning that ROCE increases by less than 1% for every additional

meeting held by ERMCA when mediated by firm size. The study similarly found that ERMCA does not significantly affect financial performance directly also. Our study finding corroborates with the discovery by Kakanda, Slim and Chandren (2017). But our result disagrees with that of (Husaini and Saiful, 2017; Lamidi et al, 2022; Ugwu, Ekwochi and Ogbu, 2021; Kakanda, Salim and Chandren, 2018). However, no prior study has attempted to mediate the effect of ERMCA on firm performance using firm size.

Thirdly, we found that firm size significantly mediates the effect of Enterprise Risk Management Committee Composition (ERMCC) on Return on Capital Employed (ROCE) of DMBs in Nigeria. Our study showed a coefficient of 0.0325 and p-value of 0.026, meaning that ROCE increases by 3.3% for every additional non-executive director that joins the committee when mediated by firm size. The study on the contrary also found that ERMCC does not significantly affect financial performance directly. The findings of this study are in agreement with results obtained by Akpan and Amran (2014) and Husaini and Saiful (2017). Our study result, however, disagrees with that of Kakanda, Slim and Chandren (2017), Meyer and Wet (2013), Mashonganyika (2015), and Andersson and Wallgren (2018). However, no prior study has attempted to mediate the effect of ERMCC on firm performance using firm size.

Fourthly, we found that firm size does not significantly mediate the effect of Enterprise Risk Management Committee Gender (ERMCG) on Return on Capital Employed (ROCE) of DMBs in Nigeria. Our study showed a coefficient of -0.0245 and p-value of 0.098, meaning that ROCE decreases by 2.45% for every additional female director that joins the ERMCA when mediated by firm size. The study similarly found that ERMCG does not significantly affect financial performance directly also. Our findings back up those of Onyali and Okerekeoti (2018). The findings, however, contradict those of Mashonganyika (2015), Andersson and Wallgren (2018), Akpan and Amran (2014) and Lamidi et al (2022). However, no prior study has attempted to mediate the effect of ERMCG on firm performance using firm size.

Lastly, we found that firm size significantly mediates the effect of Enterprise Risk Management Committee Enterprise (ERMCE) on Return on Capital Employed (ROCE) of DMBs in Nigeria. Our study showed a coefficient of 0.0351 and p-value of 0.020, meaning that ROCE increases by 3.3% for every additional director with accounting knowledge that joins the committee when mediated by firm size. The study on the contrary also found that ERMCE does not significantly affect financial performance directly. Importantly, we state that our result is in concordance with that of Husaini & Saiful, (2017) and Ugwu, Ekwochi and Ogbu (2021). Conversely, the result disagrees with Akpan and Amran (2014). However, no prior study has attempted to mediate the effect of ERMCE on firm performance using firm size.

5.0 CONCLUSION

Enterprise risk management committee was separated from the board audit committee to oversee the entity's risk management process, so as to create a solid risk management framework. Several studies have taken turns to examine the effect of enterprise risk management committee on various performance indices of different industries. This study examined firm size as a mediator on the effect of enterprise risk management committee on financial performance of DMBs in Nigeria. Several empirical literatures were reviewed both locally and internationally. The Upper Echelon Theory (UET) was the theoretical framework of this study. Ex post facto research design was adopted for this study because of the unalterable nature of the independent variables utilized in the study. The population of the study comprised the DMBs listed on the Nigerian Exchange Group. The sample was delimited to six (10) DMBs that has their annual reports from 2012-2022 online. The study employed the structural equation model to analyse the data. This study majorly found that firm size mediates the effect of ERMCC and ERMCE on financial performance and does not mediate the effect of other variables on financial performance of DMBs in Nigeria. Based on the findings of the study, the following recommendation are made:

1. Enterprise Risk Management Committee Size (ERMCS): given that firm size does not significantly mediate the effect of Enterprise Risk Management Committee Size (ERMCS) on Return on Capital Employed (ROCE) of DMBs in Nigeria, banks irrespective of their size should maintain a moderately sized ERMCS in line with extant laws.
2. Enterprise Risk Management Committee Activism (ERMCA): given that firm size does not significantly mediate the effect of Enterprise Risk Management Committee Activism (ERMCA) on Return on Capital Employed (ROCE) of DMBs in Nigeria, banks while leveraging on the peculiarities should adhere to the relevant regulations as to the number of time the ERMCA should meet. Not too frequent meeting is recommended so as to save cost associated with frequent meetings.
3. Enterprise Risk Management Committee Composition (ERMCC): since firm size significantly mediates the effect of Enterprise Risk Management Committee Composition (ERMCC) on Return on Capital Employed (ROCE) of DMBs in Nigeria, banks should have more of Non-executive committee members

in the committee, and at the same time, banks with smaller size should seek to increase their size in order to benefit from the positive effect of ERMCC on performance via firm size.

4. Enterprise Risk Management Committee Gender (ERMCG): since firm size does not significantly mediate the effect of Enterprise Risk Management Committee Gender (ERMCG) on Return on Capital Employed (ROCE) of DMBs in Nigeria, the number of females in ERMCG should not be of great concern to the banks irrespective of their size.
5. Enterprise Risk Management Committee Expertise (ERMCE): while firm size significantly mediates the effect of Enterprise Risk Management Committee Expertise (ERMCE) on Return on Capital Employed (ROCE) of DMBs in Nigeria, banks should have more of Non-executive committee members with accounting finesse in the committee, and at the same time, banks with smaller size should seek to increase their size in order to benefit from the positive effect of ERMCE on performance via firm size.

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