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An Assessment of Operational Risk Disclosure and Financial Performance of Listed Financial Institutions in Nigeria

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Abstract

This study was prompted by the observed decline in the performance of listed financial institutions in Nigeria. Its primary objective was to assess how disclosing operational risks affects the financial performance of these institutions listed on the Nigerian Exchange Group (NGX). The research employed ex-post facto and panel data research designs, using data extracted from the audited financial statements of listed financial institutions over a ten-year period from 2012 to 2021. The study focused on a population of thirty-four listed financial institutions, including nineteen deposit money banks and fifteen insurance companies on the NGX. A purposive sampling technique was applied, investigating twenty of these firms due to the availability of complete data. The descriptive statistic and panel regression analysis were adopted. The findings of the study suggest that operational risk disclosure plays a significant role in influencing the financial performance of listed financial institutions in Nigeria. Notably, specific types of risk disclosure, such as those related to technology, reputation, and strategic risks, have a positive impact on key financial metrics. Therefore, the study underscores the importance of comprehensive operational risk disclosure, particularly in areas like technology, reputation management, and strategic planning, for financial institutions seeking to enhance their financial performance and market perception.

Keywords: *Risk Management, Operational Risk Disclosure, Financial Performance, Financial Institutions, Nigerian Exchange Group.*

1. Introduction

Financial institutions in Nigeria have been experiencing a decline in performance over the years, partly due to the various risks they face. Their ability to manage these risks effectively is crucial for their survival (Al Zaidanin & Al Zaidanin, 2021). These risks can impact their performance by reducing the expected profit from investments or loans. Financial institutions play a vital role in economic development by facilitating the flow of funds, and their financial strength is critical for the progress of a country. Corporate organizations have a responsibility to provide full disclosure of material information

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about their operations, benefits, and risks, to ensure a true and fair view of their operational status, and to help investors make informed investment decisions (Amir & Lev, 2016).

This obligation stems from the regulatory framework for companies, particularly public entities, to ensure appropriate disclosures as their affairs are of public interest, and their growth is essential for overall economic growth (Desalegn, 2019). The volatile nature of the Nigerian business environment has exposed Nigerian businesses to operational risks that can affect their performance, as well as non-economic issues like natural disasters, instability in government, and changes in stakeholders' expectations. Risk is a reality that cannot be separated from company activities or decision-making, and the risk-bearing capacity of the financial sector is crucial due to its contributory effect on economic development (Nwanna, 2019).

Risk disclosure affects a company's future pattern of managing risk, with consequences for projected cash flows, which are determinants of the company's returns on assets and financial performance. Therefore, risk disclosure should encompass all forms of operational risk to enhance stakeholders' informed decisions (Nwude & Okeke, 2018). Investors make their investment decisions by evaluating both the returns and risks associated with an investment project; hence, risk disclosure permits investors to have a transparent choice and great confidence in the investments they make. Risk management information is key to achieving high-quality corporate reporting and enhancing performance (Muriithi & Waweru, 2017). Risk disclosure has increased significance and is a pivotal function in the process of making decisions. and is particularly important in today's volatile business environment. However, some risks are not within the control of management and cannot be measured objectively, making risk disclosures for companies complicated (Ugwu et al., 2021).

According to prior studies, there are still disparities in the conclusions drawn by various scholars regarding the influence of disclosing operational risk on the performance of the company. Anetoh et al. (2021) study revealed that deposit money banks experienced a positive but insignificant effect on financial performance due to operational risk, which contrasts with Rahayu et al. (2022) and Sundus et al. (2020) research indicating a significant and positive correlation between operational risk and bank value. In Nigeria, Adeyemi (2006), Ofoegbu and Okoye (2006), Okere et al. (2018), and Olarewaju and Adeyemi (2015) discovered that operational risk has a negligible and adverse effect on the value of deposit money banks. Given these findings, this study aims to analyze the impact of operational risk disclosure on the financial performance of Nigerian-listed financial institutions.

2. Literature Review

2.1 Conceptual Review

The study provides clarifications on the key concepts of the study in this section

2.1.1 Operational risk disclosure

Risk disclosure refers to the communication of information that describes the major risks faced by a company and their potential impact on its current and future performance. This information includes details about the company's strategies, operations, characteristics, and external factors that can affect expected results (Olarewaju & Adeyemi, 2015). The importance of risk disclosure has become increasingly recognized in recent years, particularly following the global financial crises of 2007-2009, which highlighted concerns about aggressive risk-taking by public companies. As a result, various government agencies and accounting standard setters have implemented regulatory

reforms aimed at improving risk management and disclosure (Naibaho and Mayayogini, 2023).

Corporate risk refers to any opportunity or threat that has already impacted or may impact a company in the future. Risk disclosure is important because effective risk management can contribute to fraud reduction, threat management, and more efficient use of resources, ultimately improving a company's performance (Nwanna, 2019). The Nigerian Code of Corporate Governance recommends a sound procedure for dealing with risk and ensuring efficiency in the internal control process to accomplish a firm's strategic goals and objectives (Naibaho and Mayayogini, 2023). The importance of risk disclosure has been recognized since at least 1998 when the Institute of Chartered Accountants in England and Wales published a discussion paper proposing that directors disclose their risk management information in annual reports. As a result, corporate risk disclosure has attracted growing interest from researchers and practitioners, and it has become an important part of corporate governance reforms (Rahayu et al., 2022).

2.1.1.1 Enterprise risk disclosure

Enterprise risk management (ERM) is described as an organized methodical approach dealing with various types of risks, which integrates strategy, technology, and human resources. It is designed to ensure that financial institutions can manage their uncertainties in a comprehensive and integrated manner, including both financial and non-financial risks, with the aim of maximizing their financial performance (Adebayo et al., 2019). Banks and insurance companies use ERM to pool and spread risk, protecting customers, policyholders, and financial institutions from financial harm. Effective ERM requires a complete understanding of the types of risks, their characteristics, interrelationships, sources of hazards, and potential impacts (Kafidipe et al., 2021).

ERM focuses on the ongoing activities of financial institutions to manage their risks and ensures that they remain within their risk tolerance thresholds. This involves the use of risk management strategies to identify, measure, and mitigate risks, as well as the connection of day-to-day operations with long-term company objectives (Olabisi et al., 2020). ERM includes managing risks such as underwriting risk, market risk, credit risk, operational risk, liquidity risk, and reputation risk, and also assesses external risks that could pose a significant threat to the business. Catastrophe risk and market risk are particularly dangerous in high-stress situations. ERM involves monitoring, analyzing, and modeling to identify the causes of risks, assess their levels, relationships, and economic impacts, and evaluate financial statements and non-economic issues as well as accounting and regulatory requirements (Oladimeji & Akpan, 2022).

2.1.1.2 Chief risk officer disclosure

According to the study conducted by Kafidipe et al. (2021) suggests that the hiring of a Chief Risk Officer (CRO) is a key pointer in the procedures of dealing with risk. According to this study, appointing CRO demonstrates significant influence on the success of a firm. Similarly, the studies conducted by Nwanna (2019) and Adebayo et al. (2019) indicate that the appointment of a CRO has an impact on the risk governance system and the overall performance of an organization. The CRO plays a crucial role in establishing an integrated and functional risk management framework that covers all levels of the organization (Hamdan, 2020).

2.1.1.3 Operating risk disclosure

Operational risk pertains to the potential financial loss resulting from failures in day-to-day operational procedures, which may occur due to non-compliance with policies, laws, and regulations or due to fraudulent activities (Rahayu et al., 2022). Although operational risk has been a challenge for financial institutions for a long time. Apochi et al. (2020) argued that an organization's culture is a crucial factor in managing operational risk. The author suggested that operational risk occurs by either an act of nature or a person. People

are central to an organization's culture, as they design and maintain processes and systems, and may cause operational risk events by either engaging in activities they should not or failing to execute activities they should be doing.

According to Al-Zaidani and Al-Zaidani (2019), banks face various types of operational risk in their daily transactions. The author emphasized that the increasing reliance on technology, intense competition, and globalization have heightened the exposure of the corporate world to operational risk. Adabayo et al. (2019) indicated that banks may use risk mitigation techniques to reduce market and credit risk exposure, which can, in turn, generate other forms of risk, such as operational risks, classified as organizational risks, process risks, technology risks, human risks, and external risks. Operational risk encompasses all risks not included in market and credit risk that have a measurable financial impact on the organization (Omiagbo & Daniel., 2021). For banks, a single significant operational risk event may cause more harm than credit losses related to the current financial market collapse. However, banks' ability to manage, hedge, and control the negative financial consequences of such events appears less developed than their management of credit and market risks (Osayi et al., 2018). The proper assessment and control of operational risk remain vital for financial institutions to maintain a sound and stable financial system.

2.1.1.4 Technology risk disclosure

Financial institutions face a risk when their technology investments fail to generate expected cost savings through economies of scale or scope (Okere et al., 2018). This risk can be assessed by analyzing the bank's excess capacity, redundant technology, and inefficiencies in its organization and bureaucracy. To manage this risk, it is expected that management should engage in proper planning, maintain up-to-date systems, and upgrade the technology being used. (Osayi et al., 2019).

2.1.1.5 Legal risk disclosure

Legal risk refers to the possibility of a financial or reputational loss that can occur as a result of insufficient knowledge or misunderstandings about the way laws and regulations are introduced to a company's business operations, processes, products, and services (ICAEW, 2017). This type of risk can arise from unintentional or negligent failures to meet legal obligations to specific clients, including fiduciary and suitability requirements, or from flaws in the design of a product. Abdullah et al. (2011) explain that proper awareness and understanding of legal requirements, as well as compliance with them, are essential to minimize legal risk.

2.1.1.6 Strategic risk disclosure

Strategic risk describes the possibility of events (within and outside) that could hinder or prevent an organization from attaining its objectives and goals. Such risks can have significant negative consequences for an organization in the long term. Oyerogba (2014) expands on this definition by stating that an organization's business strategy and strategic objectives can also generate strategic risks. In other words, strategic risks not only impact an organization's likelihood of achieving its strategy but also arise from strategic decisions themselves. Additionally, Sundus et al. (2021) argue that strategic risks are linked to the adoption or non-adoption of the appropriate strategy for an organization or not adjusting the chosen strategy in response to competition or other factors.

2.1.1.7 Environmental risk disclosure

Environmental risk management is the process of systematically identifying credible environmental hazards, analyzing the likelihood of occurrence and severity of the potential consequences, and managing the resulting level of risk (Oyerogba et al., 2016). Financial institutions in Nigeria have a responsibility to disclose the likelihood of risk affecting their existence.

2.1.1.8 Reputational risk disclosure

Reputational risk refers to the negative impact on a company's image and perception when it fails to meet the expectations of its stakeholders. This can harm businesses of any size and industry (Ugwu et al., 2021). The damage to a business entity's reputation could to a loss of financial capital, social capital, or market share. This loss is often measured in terms of lost revenue, increased operating costs, or decreased shareholder value. Reputational risk occurs when stakeholders have higher expectations than what the business delivers (Rahayu et al., 2022). It can arise when a firm fails to keep up with changing stakeholder beliefs, which can vary across regions and countries. Reputational risk can also stem from other types of risk faced by a company. To protect the firm's reputation, it is necessary to have proper risk management in place, including operational and compliance risk management. Failure to manage these risks can lead to workplace incidents or failure to meet industry and regulatory standards, which can result in fines or criminal penalties (Sundus et al., 2020).

2.1.2 Financial performance

Financial performance represents the assessment of a business entity's financial well-being, particularly in terms of its capacity to effectively allocate available resources to generate profits (Dagunduro et al., 2022). It is important to note that the long-term viability and value of a firm depend on its capacity to maintain a favorable level of profitability through its operational activities. As highlighted by Hamdan (2018), financial performance serves as a reflection of the executive leadership's effectiveness within a company. Olarewaju and Adeyemi (2015) further emphasize that financial performance can be evaluated through factors such as profitability growth, revenue generation expansion, the efficient allocation of available capital, and judicious usage of financial resources.

According to Kolawole et al. (2023), a performance system refers to a collection of metrics, indicators, or standards utilized to evaluate the efficiency and effectiveness of actions. Therefore, the term "Financial Performance" can be subjectively understood as a measure of the extent to which a company can generate revenue by leveraging its primary operational assets (Adewara et al., 2023). It has been observed that financial performance is considered a key indicator when assessing an organization's exposure to risks (Adedayo et al., 2019; Adewara et al., 2023). Various criteria are used to measure financial performance. For instance, Omiagbo and Daniel (2021) highlights profitability and issues of shares as measures of financial performance for a given year. On the other hand, Dagunduro et al. (2022) state that indicators such as ROA, ROE, and TQ can be used to gauge improvements in operating business performance for a particular period. Therefore, this study utilized ROA, ROE, and TQ as assessment metrics to evaluate financial outcomes.

2.1.2.1 Return on assets (ROA)

The definition of return on assets, as provided by Adebayo et al. (2019), is a metric that compares the assets of a company to its turnover during a specific period. If a company has a higher return on assets, it suggests that the company is performing well financially, and can be an attractive incentive for potential and existing shareholders to postpone consumption (Kolawole et al., 2023).

2.1.2.2 Return on equity (ROE)

According to Al Zaidanin and Al Zaidanin (2021), return on equity (ROE) is an indicator of a company's profitability and its ability to generate profits efficiently. A company that has a higher ROE is considered better at converting its equity financing into profits. Meanwhile, return on equity (ROE) is a measurement of a company's profit after tax, divided by its total equity (Kolawole et al., 2023).

2.1.2.3 Tobin’s Q (TQ)

Tobin's Q, also known as the Q ratio, is a measure of market valuation relative to the replacement cost of a company's assets (Dada et al., 2023). The Q ratio is calculated by dividing a company's market capitalization by its total assets. The Q ratio compares the market value of a company to the cost of replacing its assets (ICAEW, 2017). If the Q ratio is less than one, it suggests that the market value of the company is lower than its replacement cost, while a Q ratio greater than one suggests that the market value is higher than the replacement cost. Tobin's Q was introduced in 1966 by Nicholas Kaldor and popularized by Nobel Laureate James Tobin. It is a tool for estimating whether a business or market is overvalued or undervalued (Abdullah et al., 2011; Dada et al., 2023).

2.2 Theoretical Framework

This research hinged on the stakeholders' theory, which was introduced by Professor Edward Freeman in 1984. The theory suggests that businesses have a responsibility not only to shareholders but also to a diverse range of stakeholders, including employees, suppliers, customers, government, investors, and the community (Dagunduro et al., 2022; Kolawole et al., 2023). According to this theory, a company is interconnected through a network of different interests, and its success depends on meeting the needs of all stakeholders, not just shareholders. The theory offers valuable insights into the rationale for risk management, particularly with regard to operational risks. However, one key limitation of stakeholder theory is the challenge of simultaneously satisfying all stakeholders. Wagenhofer (1990) argued that the interests of stakeholders are so diverse and extensive that managing them all realistically becomes impractical. Nonetheless, the theory has been widely utilized to investigate various financial performance and risk management contexts, such as examining whether risk management adds value after business mergers and analyzing the impact of environmental factors on business profitability.

2.3 Empirical Review

Numerous research studies have investigated the correlation between operational risk disclosure and firms' performance. Naibaho and Mayayogini (2023) explored the influence of operational, credit, and liquidity risks on business performance, considering corporate governance as a moderating factor. Their findings revealed that operational risk and credit risk do not have a significant impact on a company's performance, while credit risk has a negative effect. Moreover, they discovered that corporate governance can enhance the relationship and mitigate the adverse impact of liquidity risk on business performance. Similarly, Anetoh et al. (2021) focused on how operational and credit risks influence the firm value of listed deposit banks in Nigeria. Their results indicated that credit risk had a substantial and unfavorable impact on the firm value of Nigerian deposit money banks, while operational risk had a significant and positive impact on their firm value.

In a separate study, Sundus et al. (2020) examined how operational risk factors affected the financial success of insurance businesses listed on the Kuwait Stock Exchange (KSE) from 2009 to 2017. Their findings highlighted that operational risk and credit risk had the most substantial impact on the financial performance of Kuwaiti insurance businesses, whereas liquidity risk showed no statistically significant impact on their performance. Also, Gadzo et al. (2019) conducted a study to assess how operational and credit risk influenced the financial performance of universal banks. The findings revealed that credit risk had an adverse impact on financial performance, and operational risk negatively affected the financial performance of Ghana's universal banks. The study also identified bank-specific factors like asset quality, bank leverage, cost-to-income ratio, and liquidity as having a beneficial impact on the financial performance of universal banks.

In another study, Muriithi and Waweru (2017) investigated the relationship between operational risk and the firm value of commercial banks in Kenya. The study found an inverse correlation between operational risk and firm value. Furthermore, Okpala et al. (2021) examined how disclosures about strategic risk management, technological risk management, and empowerment risk management influenced firms' performance, measured by return on equity. The results showed that firms significantly and positively benefited from strategic risk management disclosure, technological risk management disclosure, and empowerment risk management disclosure.

Similarly, Odigbo et al. (2022) studied the impact of Enterprise Risk Management Disclosure (ERMD) on the financial performance of deposit money banks in Nigeria. The findings indicated a positive and significant relationship between ERMD and sustainable financial performance (TQ & EPS) of listed deposit money banks in Nigeria. Lastly, Ogbuga et al. (2022) investigated the effect of risk management on the financial performance of deposit money banks in Kaduna state. The study revealed that credit risk had a negative impact on the financial performance of deposit money banks, while operational risk had a positive impact.

The empirical review suggests that corporate risk disclosure has been an area of interest for policymakers and researchers in a developed economy. It is however observed that studies on corporate risk disclosure are very scanty, especially in Nigeria where the business environment is very risky and volatile, and this can be referred to gap in the geography of the study. The connection between operational risk disclosure and financial performance remains uncertain, as a limited number of studies (Al-Dubai & Abdelhalim, 2021; Okpala et al, 2021; Wong, 2018) exploring this aspect have not reached a consensus. Additionally, it is evident that while numerous studies have examined the relationship between operational risk disclosure and the financial performance of companies, the majority of them have focused on deposit money banks, with relatively little attention given to financial institutions like listed deposit money banks and insurance companies. The study's hypothesis was formulated as follows:

H_o: Operational risk disclosure has no significant effect on the financial performance of listed financial institutions in Nigeria

2.5 Conceptual Framework

This study seeks to elaborate on how the operational risk disclosure affected the financial performance of financial institutions listed on the Nigerian Exchange Group. The operational risk disclosure is considered the independent variable, while financial performance serves as the dependent variable. The diagram below depicts the nexus between the variables of the study.

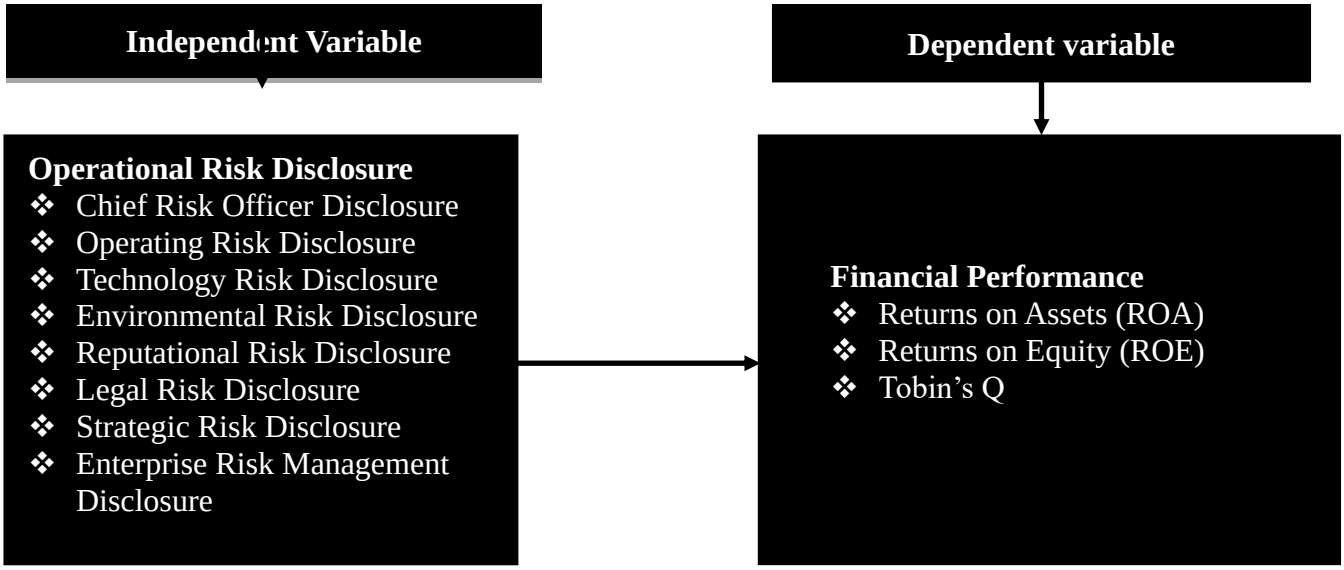

Figure 2.1 presents a Conceptual Framework illustrating the relationship between Operational Risk Disclosure and the Financial Performance of financial institutions listed on the Nigerian Exchange Group.

3. Data and Methods

This study used ex-post facto and panel data research designs with descriptive and inferential statistics. The essence was to search for data that were recorded over a period of time, and which existed in the administrative records and accounts of financial institutions quoted as of December 31, 2021, in the Nigerian Exchange Group (NGX). The records were considered adequate, representative, and acceptable in the process of carrying out this study. The data used for this was obtained from the annually published reports of listed financial institutions in Nigeria. The population of the study was thirty-four (34) financial institutions, which comprises nineteen (19) deposit money banks and fifteen (15) insurance companies listed on the Nigerian Exchange Group profile as of 31st December 2021. The choice of selection of this sector was based on the fact that most of the researchers did not consider the financial institutions in the previous studies conducted in Nigeria. The study selected all the quoted financial institutions in Nigeria using a purposive sampling technique due to the availability of complete data, twenty (20) firms were investigated, comprising ten (10) deposit money banks and ten (10) insurance companies listed on the Nigerian Exchange Group (NGX). The panel data obtained for this research underwent analysis using both descriptive and inferential statistics.

3.1 Model Specification

The aim of this study is to assess the impact of operational risk disclosure on the financial performance of financial institutions listed in Nigeria. To achieve this, the following econometrics model is used for estimation:

$$FP = \alpha 0 + \beta CROD + \beta 2ORD + \beta 3TRD + \beta 4ERD + \beta 5RRD + \beta LRD + \beta 7SRD + \beta ERD + \varepsilon$$

Where:

FP = Financial Performance

$\alpha 0$ = Constant

CROD = Chief Risk Officer Disclosure

ORD = Operational Risk Disclosure

TRD = Technology Risk Disclosure

ERD = Environmental Risk Disclosure

RRD = Reputational Risk Disclosure

LRD = Legal Risk Disclosure

SRD = Strategic Risk Disclosure

ENRD = Enterprise Risk Disclosure

The a-priori expectation = With $\beta 1, \beta 2, \beta 3 > 0$, it suggests that there is an anticipated positive relationship between the explanatory variables and the explained variable.

3.3 Operationalization and Description of Research Variables

SN	Variable	Acronym	Role	Measurement	Source
1	Financial Performance	FP	Dependent		
1a	Return on Assets	ROA	Dependent	Expressed as the ratio of after-tax earnings to total assets (%).	Kolawole et al., 2023
1b	Returns on Equity	ROE	Dependent	Measured as earnings after tax divided by total equity (%)	Desalegn, 2019
1c	Tobin's Q	TQ	Dependent	Measured as market capitalization divided by total asset	ICAEW, 2017; Dada et al., 2023
2	Operating Risk Disclosure	ORD	Independent		Olabisi et al., 2020
2a	Enterprise Risk Disclosure	ENRD	Independent	Measured as a dummy where "1" is assigned to the firm with annual reports with enterprise risk management information and "0" for otherwise	Olabisi et al., 2020
2b	Chief Risk Officer Disclosure	CROD	Independent	Measured as a dummy where "1" is assigned to the firm with annual reports with chief risk officer information and "0" for otherwise	Hamdan, 2020
2c	Operating Risk	OPRD	Independent	Measured as a	Odigbo et

	Disclosure				dummy where "1" is assigned to the firm with annual reports with operational risk information and "0" for otherwise	al., 2020
2d	Technology Risk Disclosure		TERD	Independent	Measured as a dummy where "1" is assigned to the firm with annual reports with cyber and technology risk information and "0" for otherwise	Osayi et al., 2019
2e	Reputational Risk Disclosure		RRD	Independent	Quantified as a binary variable, wherein "1" designates firms with annual reports containing reputational risk information, and "0" indicates firms without such information.	Oladimeji & Akpan, 2022
2f	Legal Risk Disclosure		LRD	Independent	Quantified as a binary variable, wherein "1" denotes firms with annual reports containing legal risk information, and "0" signifies firms without such information.	Olabisi et al., 2020
2g	Environmental Risk Disclosure		ERD	Independent	Expressed as a binary variable, where "1" is attributed to firms with annual reports containing environmental risk information, and "0" is allocated to firms without such information.	Nwanna, 2023
2h	Strategic Risk Disclosure		SRD	Independent	Quantified as a binary variable, wherein "1" is assigned to firms	Nwude & Okeke, 2018

	with annual reports containing strategic risk information, and "0" indicates firms without such information.	

Source: Researcher's compilation (2023)

4. Data Analysis and Discussion of Findings

4.1 Descriptive Statistics

Table 1 presents the descriptive statistics for the variables used in the study objective. The disclosure score of chief risk officers (CROD) has a mean of 0.65 and a median of 1. The highest score is 1, while the lowest score is 0. The score has a standard deviation of 0.478, indicating a significant variation across observations. The distribution of scores is slightly left-skewed, as evidenced by the skewness of -0.628. Regarding the technology risk disclosure score (TRD), the average is 0.120 with a median of 0. The highest and lowest scores are 1 and 0, respectively. The standard deviation is 0.325, indicating a considerable variation in technology risk disclosure. The distribution is highly right-skewed (skewness = 2.338). The kurtosis value of 6.469697 indicates a moderately peaked distribution. Additionally, the Jarque-Bera test statistic of 282.6465 with an associated probability of 0.0000 signifies a significant deviation from normality at a 5% significance level. Similarly, the variable ENRD has a mean of 0.9, a median of 1, and ranges from 0 to 1. suggests heavier tails compared to a normal distribution. The Jarque-Bera test statistic of 454.7325 and the probability of 0.0000 strongly suggest that the data does not follow a normal. The moderate standard deviation of 0.300 suggests some variability in the data.

The skewness value of -2.666 indicates left-skewness, and the kurtosis of 8.111111 distribution. As for the environmental risk disclosure variable (ERD), it exhibits a mean of 0.315, a median of 0, and ranges from 0 to 1. The relatively high standard deviation of 0.465 indicates notable variability in the data. The skewness value of 0.796 suggests right-skewness, and the kurtosis of 1.634457 indicates a slightly more peaked distribution than normal. The Jarque-Bera test statistic is 36.6878. For legal risk disclosure (LRD), the mean value is 0.633, while the median is 1. The variable ranges from 0 to 1, and the standard deviation is 0.483, indicating a considerable amount of variability. The negative skewness value of -0.552 implies a slight left-skewness, and the positive kurtosis value of 1.305392 suggests a slightly higher peak and longer tails compared to a normal distribution. The Jarque-Bera value of 33.93999 and a probability of 0.0000 provide evidence that the data is not normally distributed. The operating risk disclosure (ORD) exhibits an average of 0.845 and a median of 1. The variable ranges from 0 to 1, with a standard deviation of 0.362. It exhibits negative skewness (-1.906) and positive kurtosis (4.635045), indicating a non-normal distribution. The Jarque-Bera statistic value of 143.4463 with a probability of 0.0000 confirms the departure from normality. The mean score for strategic risk disclosure (SRD) is 0.365, indicating that, on average, firms disclose 36.5% of their strategic risks. The median SRD score is 0, implying that half of the firms do not disclose any strategic risks.

The maximum score is 1, indicating full disclosure by some firms, while the minimum score is 0, indicating no strategic risk disclosure by some firms. The standard deviation of SRD scores is 0.482, indicating a relatively dispersed dataset. The skewness of SRD scores is 0.560, suggesting a slightly right-skewed distribution. The kurtosis value of 1.314529 shows a moderately peaked distribution. The Jarque-Bera statistic is 34.15774,

with a probability of 0.0000, indicating a significant deviation from normal distribution. The average Tobin's Q score is 0.7442, implying that, on average, firms have a market value 74.42% higher than their book value. The median Tobin's Q score is 0.765, indicating that half of the firms have a score above 0.765.

The maximum score is 2.55, indicating that some firms have a market value more than two and a half times their book value. Conversely, the minimum score is 0.02, indicating that some firms have a market value only slightly higher than their book value.

Table 1: Descriptive Statistics

	Mean	Median	Max	Min	Std. Dev.	Skewness	Kurtosis	Jarque-Bera	Prob	Obs
CROD	0.65	1	1	0	0.478	-0.628	1.395	34.63752	0.0000	200
ENRD	0.9	1	1	0	0.300	-2.666	8.111111	454.7325	0.0000	200
ERD	0.315	0	1	0	0.465	0.796	1.634457	36.6878	0.0000	200
LRD	0.633	1	1	0	0.483	-0.552	1.305392	33.93999	0.0000	199
TRD	0.120	0	1	0	0.325	2.338	6.469697	282.6465	0.0000	200
ORD	0.845	1	1	0	0.362	-1.906	4.635045	143.4463	0.0000	200
RRD	0.625	1	1	0	0.485	-0.516	1.266667	33.92593	0.0000	200
SRD	0.365	0	1	0	0.482	0.560	1.314529	34.15774	0.0000	200
ROA	2.417	2.055	20.76	-17.59	4.178	-1.034	9.740224	414.2796	0.0000	200
ROE	14.192	11.145	1222.87	394.32	93.283	10.474	144.3454	170145.1	0.0000	200
TQ	0.7442	0.765	2.55	0.02	0.296	1.581	11.86035	737.5341	0.0000	200

Source: Researcher's Computation (2023)

4.1.2 Panel unit root test

The panel unit root test results presented in Table 2 aim to assess whether the individual variables in the dataset are stationary or non-stationary. The test employs two different statistics, namely the Levin, Lin & Chu t statistics and Im, Pesaran, and Shin's W-statistics, and their associated p-values are provided. In this case, all variables demonstrate very low p-values (0.0000), leading to the rejection of the null hypothesis of

a unit root for each variable. This indicates that all the variables are stationary and do not follow a random walk process. Additionally, the remarks in the table specify that all variables are "Integrated at level," implying that they have a constant mean, finite variance, and do not display any trend behavior over time. Consequently, these results suggest that the variables are stationary and can be used for econometric analysis that assumes stationarity.

Table 2: Panel Unit Root Test

	Levin, Lin & Chu t statistics		Im, Pesaran and Shin W-statistics		
	Levin, Lin & Chu t statistics	p-value	Im, Pesaran and Shin W-statistics	p-value	Remarks
CROD	-5.84485	0.0000	-1.86364	0.0000	Integrated at level
ENRD	-6.92247	0.0000	-4.7937	0.0000	Integrated at level
ERD	-7.16884	0.0000	-6.77637	0.0000	Integrated at level
LRD	-13.80434	0.0000	-9.476	0.0000	Integrated at level
ORD	-7.48909	0.0000	-5.03509	0.0000	Integrated at level
RRD	-6.62375	0.0000	-3.74391	0.0000	Integrated at level
SRD	-7.95798	0.0000	-6.97911	0.0000	Integrated at level
TRD	-14.38883	0.0000	-9.87619	0.0000	Integrated at level
ROA	-11.43103	0.0000	-8.5375	0.0000	Integrated at level
ROE	-11.74591	0.0000	-7.85409	0.0000	Integrated at level
TQ	-7.65036	0.0000	-6.8973	0.0000	Integrated at level

Source: Researcher's Computation (2023)

4.2 The Effect of Operational Risk Disclosure on the Financial Performance of Listed Financial Institutions on the Nigerian Exchange Group

4.2.1 Correlation matrix

Table 3 presents the correlation coefficients between various types of risk disclosures, namely CROD, ORD, TRD, ERD, RRD, LRD, SRD, and ENRD, for the specified objective. The off-diagonal entries in the table represent the correlations between pairs of variables, while the numbers in parentheses below the coefficients indicate the corresponding p-values. A p-value lower than 0.05 indicates that the correlation is statistically significant. The correlation analysis indicates that CROD shows a weak positive correlation with ORD (0.4090), TRD (0.2727), ERD (0.3203), RRD (0.3608), SRD (0.3860), and ENRD (0.2087). Similarly, ORD has a weak positive correlation with

CROD (0.4090) and TRD (0.1590). TRD exhibits a weak positive correlation with CROD (0.2727), ORD (0.1590), ERD (0.3450), and RRD (0.2880). ERD displays a moderate positive correlation with TRD (0.3450), RRD (0.2840), and LRD (0.3205). RRD demonstrates a weak positive correlation with CROD (0.3608), TRD (0.2880), and LRD (0.3205). LRD shows a moderate positive correlation with CROD (0.6402), ORD (0.5356), ERD (0.3205), RRD (0.3205), and SRD (0.2577). Similarly, SRD has a weak positive correlation with CROD (0.3860), ERD (0.3489), LRD (0.2577), and ENRD (0.2197). Finally, ENRD exhibits a weak positive correlation with CROD (0.2087), ORD (0.6398), and SRD (0.2197). Overall, the correlation results indicate the presence of weak to moderate relationships between different types of operational risk disclosures. Some disclosures are more closely related than others

Table 3: Correlation Matrix

Correlation Probability	CROD	ORD	TRD	ERD	RRD	LRD	SRD	ENRD
CROD	1.0000							

ORD	0.4090	1.0000						
	0.0000	-----						
TRD	0.2727	0.1590	1.0000					
	0.0001	0.0248	-----					
ERD	0.3203	0.2923	0.3450	1.0000				
	0.0000	0.0000	0.0000	-----				
RRD	0.3608	0.5237	0.2880	0.2840	1.0000			
	0.0000	0.0000	0.0000	0.0000	-----			
LRD	0.6402	0.5356	0.2818	0.1818	0.3205	1.0000		
	0.0000	0.0000	0.0001	0.0102	0.0000	-----		
SRD	0.3860	0.2982	0.4224	0.2441	0.3489	0.2577	1.0000	
	0.0000	0.0000	0.0000	0.0005	0.0000	0.0000	-----	
ENRD	0.2087	0.6398	0.0724	0.2275	0.3953	0.4044	0.2197	1.0000
	0.0031	0.0000	0.3091	0.0012	0.0000	0.0000	0.0018	-----

Source: Researcher's Computation (2023)

4.2.2 Variance Inflation Factors

Table 4 displays the coefficients and variance inflation factor (VIF) for a regression model with eight predictor variables (CROD, ORD, TRD, ERD, RRD, LRD, SRD, and ENRD). The VIF values indicate the level of multicollinearity between the predictor variables, and a value of 1 indicates no multicollinearity. The coefficients provide information on the magnitude and orientation of the connection among each of the predictor variables. The degree of multicollinearity among the predictor variables is low because they report VIF of less than 10. Therefore, the model can be estimated using the panel least square method.

Table 4: Variance Inflation Factors

Variable	Coefficient Variance	Centered VIF
CROD	0.003154	2.057287
ORD	0.005814	2.187059
TRD	0.004404	1.336066
ERD	0.002205	1.364882
RRD	0.003915	2.630323
LRD	0.005538	3.679267
SRD	0.002616	1.737827
ENRD	0.006870	1.776645
C	0.003857	NA

Source: Researcher's Computation (2023)

4.2.3 The Effect of Operational Risk Disclosure on the ROA of Listed Financial Institutions on the Nigerian Exchange Group

In Table 5, the Hausman test was used to compare the random effects model with the fixed effects model. The test examines which model is more suitable and calculates a test statistic based on the difference between the two estimates divided by their standard error. The obtained p-value of 0.0000 indicates that the random effects model is not appropriate, and the fixed effects model should be preferred instead. However, the Arellano-Bond Serial Correlation Test suggests no significant evidence of serial correlation. Therefore, the researcher should consider other potential issues, such as omitted variables or functional form misspecification, before drawing final conclusions. The R-squared value of 0.8134 shows that approximately 81.34% of the variation in ROA can be explained by the operational risk disclosure variable. The adjusted R-squared value of 0.7840 indicates that even after accounting for the number of independent variables, the operational risk disclosure variable still explains a significant proportion of the variation in ROA, highlighting the overall significance of the regression model.

The F-statistic of 27.6221 with a p-value of 0.0000 confirms the statistical significance of the regression model as a whole, indicating that at least one of the independent variables is related to the dependent variable. These results indicate a strong relationship between operational risk disclosure and ROA. Analyzing the coefficients of the independent variables, it is observed that CROD exhibits a positive coefficient of 0.6007 with a very low p-value of 0.0000, suggesting a strong positive relationship with ROA. On the other hand, ORD has a small coefficient of 0.2257 and a high p-value of 0.4721, indicating it is not a significant predictor of ROA. TRD shows a positive coefficient of 0.3387 and a p-value of 0.0386, implying a weak positive relationship with ROA. Similarly, ERD has a

positive coefficient of 0.2863 and a p-value of 0.0310, indicating a weak positive relationship with ROA. RRD exhibits a large positive coefficient of 0.7617 and a small p-value of 0.0124, suggesting a strong positive relationship with ROA. Regarding LRD, it reports a positive coefficient of 0.5691 with a p-value of 0.0480, implying a weak positive relationship with ROA. Conversely, SRD does not exhibit a significant relationship with ROA, with a negative coefficient of -0.2039 and a high p-value of 0.5643, indicating it is not a significant predictor of ROA. Similarly, ENRD demonstrates a small coefficient of 0.2271 and a high p-value of 0.4671, implying that it is not a significant predictor of

Table 5: The Effect of Operational Risk Disclosure on the ROA of Listed Financial Institutions on the Nigerian Exchange Group

Dependent Var: ROA

	Pooled OLS			Fixed Effect Model			Random Effect Model		
	Coeff.	t-value	p-value	Coeff.	t-value	p-value	Coeff.	t-value	p-value
CROD	2.0006	2.2453	0.0259	0.6007	7.6547	0.0000	2.0695	2.3282	0.0210
ORD	-1.5630	-1.2921	0.1979	0.2257	0.7505	0.4721	-1.2650	-1.0429	0.2984
TRD	0.3173	0.3014	0.7634	0.3387	2.2792	0.0386	0.1045	0.0988	0.9214
ERD	-0.7113	-0.9547	0.3409	0.2863	2.4104	0.0310	-0.5982	-0.8033	0.4228
RRD	1.6356	1.6475	0.1011	0.7617	3.1179	0.0124	1.7004	1.7148	0.0881
LRD	-2.5232	-2.1371	0.0339	0.5691	2.1207	0.0480	-2.6382	-2.2276	0.0271
SRD	0.1556	0.1918	0.8481	-0.2039	-0.5984	0.5643	0.0943	0.1166	0.9072
ENRD	1.7319	1.3169	0.1894	0.2271	0.7592	0.4671	1.5645	1.1783	0.2402
C	1.57745	1.6009	0.1110	2.490	27.4376	0.0000	1.4764	1.4906	0.1378
R-squared	0.0403			0.8134			0.1011		
Adjusted R-squared	-0.00002			0.7840			0.0167		
F-statistic	0.9994			27.6221			1.1983		
Prob(F-statistic)	0.4379			0.0000			0.2695		
Hausman test	28.2910(p=0.0000)								
Panel	27.3382(p=0.3917)								

Wooldridge heteroskedasticity test	
Lagrange Multiplier Tests for Random Effects	39.2547(p=0.0000)
Arellano-Bond Serial Correlation Test	-0.90330(p=0.3664)

Source: Researcher's Computation (2023)

4.2.4 The Effect of Operational Risk Disclosure on the ROE of Listed Financial Institutions on the Nigerian Exchange Group

Table 6 presents investigation conducted on the impact of operational risk disclosure on the return on equity (ROE) of financial institutions listed in the Nigerian Exchange Group. Three different models and various statistical tests are employed to determine the appropriate model and assess the validity of the results. The Hausman test is utilized to compare fixed effects and random effects models in panel data analysis. The obtained test statistic of 33.9049 is statistically significant at $p<0.05$, indicating that the fixed effects model is more suitable for estimating the effect of operational risk disclosure on ROE in the Nigerian exchange group. Similarly, the Lagrange Multiplier Tests for Random Effects suggests that the fixed effects model should be used instead of the random effects model, with a test statistic of 127.3299, statistically significant at $p<0.05$.

Diagnostic tests reveal no significant evidence of heteroskedasticity, as the Panel Wooldridge Heteroskedasticity Test yields a test statistic of 39.6027, not statistically significant at $p>0.05$. The Arellano-Bond Serial Correlation Test also finds no significant evidence of autocorrelation, with a test statistic of -0.04062, not statistically significant at $p>0.05$. The R-squared value of 0.6669 indicates that approximately 66.69% of the variation in ROE can be explained by the independent variables in the model. The adjusted R-squared value of 0.6206, considering the number of independent variables, suggests that 62.06% of the variation in ROE can be explained by the independent variables. The F-statistic of 20.7391 with a probability value of 0.0000 confirms overall statistical significance, indicating that at least one independent variable is statistically significant in explaining the variation in ROE.

The coefficient estimates, t-values, and p-values for each independent variable in the regression model are presented. CROD does not show statistical significance as a predictor of the dependent variable, with a coefficient estimate of -2.0529, a t-value of -0.2970, and a p-value of 0.7696. On the other hand, ORD demonstrates statistical significance at the 1% level, with a coefficient estimate of 7.0866, a t-value of 2.6717, and a p-value of 0.0082. TRD is statistically significant at the 5% level, with a positive coefficient estimate of 5.2659, a t-value of 2.1629, and a p-value of 0.0318. Similarly, ERD shows statistical significance at the 1% level, with a positive coefficient estimate of 1.6435, a t-value of 2.5182, and a p-value of 0.0126. RRD is also statistically significant at the 5% level, with a coefficient estimate of 1.1961, a t-value of 2.2566, and a p-value of 0.0251. However, LRD and ENRD do not demonstrate statistical significance in relation to ROE at the 5% level. Finally, SRD is statistically significant at the 5% level, with a coefficient estimate of 1.5285, a t-value of 2.4282, and a p-value of 0.0160, indicating a positive impact on ROE.

Table 6: The Effect of Operational Risk Disclosure on the ROE of Listed Financial Institutions on the Nigerian Exchange Group

Dependent Var: ROE

	Pooled OLS			Fixed Effect Model			Random Effect Model		
	Coeff.	t-value	p-value	Coeff.	t-value	p-value	Coeff.	t-value	p-value
CROD	-25.1825	-1.2545	0.2112	-2.0529	-0.2970	0.7696	-25.1825	-0.8002	0.4335
ORD	6.9822	0.2561	0.7981	7.0866	2.6717	0.0082	6.9822	0.6689	0.5115
TRD	13.2837	0.5600	0.5761	5.2659	2.1629	0.0318	13.2837	1.3797	0.1837
ERD	-13.4608	-0.8019	0.4236	1.6435	2.5182	0.0126	-13.4608	-1.0237	0.3188
RRD	19.4411	0.8692	0.3858	1.1961	2.2566	0.0251	19.4411	0.8811	0.3892
LRD	-13.9758	-0.5254	0.5999	-0.5946	-0.0903	0.9290	-13.9758	-0.3567	0.7252
SRD	-11.4663	-0.6272	0.5312	1.5285	2.4282	0.0160	-11.4663	-0.6396	0.5301
ENRD	-7.3176	-0.2469	0.8052	-0.1349	-0.0315	0.9752	-7.3176	-0.8927	0.3832
C	17.1213	0.7712	0.4415	8.6318	1.7003	0.1054	17.1213	1.7455	0.0970
R-squared	0.0248			0.6669			0.0248		
Adjusted R-squared	-0.0162			0.6206			-0.0162		
F-statistic	0.6043			20.7391			0.6043		
Prob(F-statistic)	0.7735			0.0000			0.7735		
Hausman test	33.9049(p=0.0000)								
Panel Wooldridge heteroskedasticity test	39.6027(p=0.0880)								
Lagrange Multiplier Tests for Random Effects	127.3299(0.0000)								

Arellano-Bond Serial Correlation Test	-0.04062(p=0.9676)

Source: Researcher's Computation (2023)

4.2.5 The Effect of Operational Risk Disclosure on Tobin's Q of Listed Financial Institutions on the Nigerian Exchange Group

Table 6 presents an investigation conducted on the impact of operational risk disclosure on the return on equity (ROE) of financial institutions listed in the Nigerian exchange group using three different models and various statistical tests to determine the appropriate model and assess the validity of the results. The Hausman test is employed to compare fixed effects and random effects models in panel data analysis, yielding a test statistic of 33.9049, which is statistically significant at $p<0.05$. This suggests that the fixed effects model is more suitable for estimating the effect of operational risk disclosure on ROE in the Nigerian exchange group. Similarly, the Lagrange Multiplier Tests for Random Effects provides a test statistic of 127.3299, statistically significant at $p<0.05$, indicating the preference for the fixed effects model over the random effects model.

The diagnostic tests show no significant evidence of heteroskedasticity, as the Panel Wooldridge Heteroskedasticity Test yields a test statistic of 39.6027, not statistically significant at $p>0.05$. The Arellano-Bond Serial Correlation Test also finds no significant evidence of autocorrelation, with a test statistic of -0.04062, not statistically significant at $p>0.05$. The R-squared value of 0.6669 indicates that approximately 66.69% of the variation in ROE can be explained by the independent variables in the model. The adjusted R-squared value of 0.6206, considering the number of independent variables, suggests that 62.06% of the variation in ROE can be explained by the independent variables. The F-statistic of 20.7391 with a probability value of 0.0000 demonstrates overall statistical significance, indicating that at least one independent variable is statistically significant in explaining the variation in ROE.

The coefficient estimates, t-values, and p-values for each independent variable in the regression model. The analysis reveals that CROD does not exhibit statistical significance as a predictor of the dependent variable, with a coefficient estimate of -2.0529, a t-value of -0.2970, and a p-value of 0.7696. However, ORD demonstrates statistical significance at the 1% level, with a coefficient estimate of 7.0866, a t-value of 2.6717, and a p-value of 0.0082. TRD shows statistical significance at the 5% level, with a positive coefficient estimate of 5.2659, a t-value of 2.1629, and a p-value of 0.0318. Similarly, ERD exhibits statistical significance at the 1% level, with a positive coefficient estimate of 1.6435, a t-value of 2.5182, and a p-value of 0.0126. RRD also displays statistical significance at the 5% level, with a coefficient estimate of 1.1961, a t-value of 2.2566, and a p-value of 0.0251. On the other hand, LRD and ENRD do not show statistical significance in relation to ROE at the 5% level. Finally, SRD is statistically significant at the 5% level, with a coefficient estimate of 1.5285, a t-value of 2.4282, and a p-value of 0.0160, indicating a positive impact on ROE.

Table 7: The Effect of Operational Risk Disclosure on the Tobin's Q of Listed Financial Institutions on the Nigerian Exchange Group

Dependent Var: TQ

	Pooled OLS			Fixed Effect Model			Random Effect Model		
	Coef f.	t-value	p-value	Coef f.	t-value	p-value	Coef f.	t-value	p-value
CROD	-	-	0.00	-	-	0.00	-	-	0.00

	0.1613	2.8737	45	0.1715	3.0372	27	0.1613	2.8752	45
ORD	-0.2616	-3.4316	0.0007	-0.2726	-3.5376	0.0005	-0.2616	-3.4335	0.0007
TRD	0.0473	0.7132	0.4765	0.0649	0.9661	0.3353	0.0473	0.7136	0.4763
ERD	0.1497	3.1879	0.0017	0.1524	3.2214	0.0015	0.1497	3.1896	0.0017
RRD	-0.2150	-3.4362	0.0007	-0.2257	-3.5826	0.0004	-0.2150	-3.4381	0.0007
LRD	0.3039	4.0848	0.0001	0.3225	4.2866	0.0000	0.3039	4.0871	0.0001
SRD	0.1272	2.4876	0.0137	0.1352	2.6341	0.0092	0.1272	2.4890	0.0137
ENRD	-0.1068	-1.2888	0.1990	-0.1050	-1.2453	0.2146	-0.1068	-1.2895	0.1988
C	1.0060	16.1997	0.0000	1.0092	16.0394	0.0000	1.0060	16.2086	0.0000
R-squared	0.2382			0.2751			0.2382		
Adjusted R-squared	0.2062			0.2070			0.2062		
F-statistic	7.4296			4.0419			7.4296		
Prob(F-statistic)	0.0000			0.00000			0.0000		
Hausman test	8.75363(p=0.2501)								
Panel Wooldridge heteroskedasticity test	27.2190(p=0.5615)								
Lagrange Multiplier Tests for Random Effects	170.6975(p=0.0000)								
Arellano-Bond Serial Correlation Test	0.3130, (p=0.7542)								

Source: Researcher's Computation (2023)

4.6 Discussion of Findings

The researcher initiated this study in response to a noticeable decline in the performance of listed financial institutions, including Deposit Money Banks and Insurance Companies, spanning the years from 2012 to 2021. The primary aim of the study was to assess how

operational risk disclosure impacts the financial performance of financial institutions listed on the Nigerian Exchange Group (NGX). The findings demonstrated that operating risk disclosure (ORD), technology risk disclosure (TRD), enterprise risk disclosure (ERD), reputational risk disclosure (RRD), and strategic risk disclosure (SRD) were found to have significant effects on ROE. This implies that when financial institutions disclose information related to these types of risks, it positively influences their return on equity. On the other hand, credit risk officer disclosure (CROD), legal risk disclosure (LRD), and environmental risk disclosure (ENRD) had no significant impact on ROE, indicating that disclosure in these specific risk areas did not significantly affect the return on equity.

Also, credit risk officer disclosure (CROD), technology risk disclosure (TRD), enterprise risk disclosure (ERD), reputational risk disclosure (RRD), and legal risk disclosure (LRD) were found to significantly influence the return on assets (ROA). This suggests that disclosing information about these risk areas positively affects a financial institution's return on assets. In contrast, operating risk disclosure (ORD), strategic risk disclosure (SRD), and environmental risk disclosure (ENRD) did not exhibit a significant influence on ROA. This means that disclosure related to operational, strategic, and environmental risks did not significantly impact the return on assets. Similarly, credit risk officer disclosure (CROD), operating risk disclosure (ORD), enterprise risk disclosure (ERD), reputational risk disclosure (RRD), legal risk disclosure (LRD), and strategic risk disclosure (SRD) were found to have a significant relationship with Tobin's Q, which is a measure of a firm's market value compared to its book value. This indicates that disclosing information about these risk areas is related to a financial institution's market value. However, technology risk disclosure (TRD) and environmental risk disclosure (ENRD) were not significantly related to Tobin's Q, suggesting that disclosure in these specific risk categories did not have a significant impact on a firm's market value relative to its book value.

Overall, the study's findings indicated that operational risk disclosure had a statistically significant effect on the financial performance of listed financial institutions in Nigeria. This means that the research results demonstrated a clear and measurable impact of operational risk disclosure on the financial performance of financial institutions that are publicly listed in Nigeria. In essence, this study highlights the significance of risk disclosure in various areas and its effects on the financial performance of listed financial institutions in Nigeria. It suggests that specific types of risk disclosures are associated with improved financial performance and market. The research has demonstrated, with a high degree of confidence, that when financial institutions in Nigeria disclose information about their operational risks, it has a notable and substantiated impact on their financial performance. This underscores the importance of transparently sharing such information, as it can influence how these institutions are perceived by investors, regulators, and the broader financial community and may affect their profitability and market value. The null hypothesis was rejected at a 5% level of significance, suggesting that increased operational risk disclosure positively impacted the financial performance of the firms in terms of ROE, ROA, and Tobin's Q. These results were consistent with previous research by Hamdan (2020), MacCarthy (2018), Odigbo et al. (2020), Wood & McConney (2021), among others. However, the findings were inconsistent with the studies of Ogbuga et al. (2022) and Zungu et al. (2018), which found an inverse relationship between operational risk disclosure and return on equity, return on assets, and Tobin's Q.

5. Summary, Conclusion, and Recommendations

This study was initiated in response to a noticeable decline in the performance of listed financial institutions in Nigeria, including Deposit Money Banks and Insurance Companies, from 2012 to 2021. The primary objective was to evaluate the impact of

operational risk disclosure on the financial performance of these institutions listed on the Nigerian Exchange Group (NGX). The findings revealed that certain types of risk disclosure, including operating risk (ORD), technology risk (TRD), enterprise risk (ERD), reputational risk (RRD), and strategic risk (SRD) disclosure, had significant positive effects on return on equity (ROE), return on assets (ROA), and Tobin's Q, which measures market value relative to book value. Conversely, credit risk officer (CROD), legal risk (LRD), and environmental risk (ENRD) disclosure had no significant impact on ROE. Furthermore, operational, strategic, and environmental risk disclosures did not significantly influence ROA. These results were consistent with previous research by Hamdan (2020), MacCarthy (2018), Odigbo et al. (2020), Wood & McConney (2021), among others, but inconsistent with studies by Ogbuga et al. (2022) and Zungu et al. (2018), which found inverse relationships between operational risk disclosure and financial performance.

The study's findings indicate that operational risk disclosure is a significant driver of financial performance for listed financial institutions in Nigeria. Specific risk disclosures, such as those related to technology, reputation, and strategic risks, positively impact key financial metrics like ROE, ROA, and market value. This highlights the importance of transparently disclosing operational risks to enhance a firm's performance and market perception. The rejection of the null hypothesis at a 5% level of significance underscores the positive influence of operational risk disclosure on financial performance.

Practical Implications

For financial institutions, the study underscores the importance of thorough operational risk disclosure, particularly in areas like technology, reputation, and strategic planning. Effective risk disclosure can contribute to improved financial metrics and market value, which can enhance their competitiveness and attract investors. Regulators can consider encouraging and monitoring risk disclosure practices to ensure transparency and stability within the financial sector.

Contribution to the Body of Knowledge

This research contributes to the existing body of knowledge by providing empirical evidence of the positive impact of operational risk disclosure on financial performance in the context of Nigerian-listed financial institutions. It builds on and supports previous studies while also offering insights into specific risk categories that have a significant influence on financial performance. These findings are valuable for both academic understanding and practical decision-making within the financial industry.

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Disclosure Statement

The authors declare that there are no competing interests to declare.

Data Availability Statement

The data supporting the findings of this study are available from the corresponding author (Dagunduro, M. E.), upon reasonable request.

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