CLIMATE RISK DISCLOSURE AND FIRM PERFORMANCE EVIDENCE FROM NIGERIAN OIL AND GAS COMPANIES (2021-2024)

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Abstract
This study examined the relationship between climate financial risk disclosure (proxied by DISINDEX) and firm financial performance. The study focused on how companies' transparency in disclosing climate risks and strategies influences their financial outcomes.The study utilized ex-post facto and longitudinal research design of which data from ten (10) oil and gas companies quoted on the Nigeria exchange group within the period of 2021-2024 was utilized in the study. The data were analyzed using the robust least squares to examine the relationship that exist between the variables.The result of the findings indicates that climate risk management was found to have a positive relationship with firm financial performance and also statistically significant at 5% level of significance. Although the Rw squared reported a low value which also gave further awareness about the fact that other factors such as size, age of firm and leverage have a major role to play when examine the level of climate risk disclosure in an organisation. It was therefore recommended that effective climate financial risk disclosure serves as a proactive tool that companies use to navigate the complexities of climate change, better anticipate future risks, and capitalize on emerging opportunities. Thus adequate disclosure of this risk is therefore relevant for most organisations.

Keywords: Climate risk, firm age, firm performance, firm size

1.0 Introduction

Climate change has become a major global concern, as it poses significant risks to the environment and socio-economic development of countries (IPCC, 2018). The impact of climate change has led to various regulatory actions aimed at reducing greenhouse gas emissions and promoting sustainable practices (Cohen et al., 2021). As a result, climate financial risk disclosure has become a critical tool for businesses in addressing climate change risks and enhancing their performance. In Nigeria, climate change risks have been identified as a significant threat to economic growth and development (World Bank, 2021). The Nigerian economy, which is heavily reliant on the oil and gas sector, is particularly vulnerable to the effects of climate change, such as extreme weather conditions and rising sea levels (Adenle et al., 2021). Moreover, Nigerian businesses are exposed to various climate change risks, such as increased

operational costs, reputational damage, and supply chain disruptions (Price Water House Coopers [PWC], 2021).

Given the significant risks associated with climate change, there is a growing need for Nigerian businesses to disclose their exposure to climate-related risks and opportunities (Task force on Climate related Financial Disclosure [TCFD], 2017). Climate financial risk disclosure involves the provision of information by firms to their stakeholders on the potential impact of climate change on their operations and financial performance (International Integrated Reporting Council [IIRC], 2019). This information enables stakeholders, including investors and lenders, to make informed decisions about the allocation of capital, which can ultimately affect the performance of firms (Eccles et al., 2014).

Climate change poses significant financial risks to firms, and there is a growing concern about the adequacy of corporate climate financial risk disclosure practices in Nigeria. The TCFD framework organized the climate financial risk disclosure practices around four core pillars namely: risk management, strategy, metrics and targets, governance. However, the extent to which climate financial risk disclosures affect firm performance in Nigeria is not well understood. According to Ginglinger and Moreau (2021), there is a lack of understanding of the effect of climate financial risk disclosure on firm performance in emerging economies, such as Nigeria. This is particularly concerning the country's vulnerability to the physical and transitional risks of climate change (Dung, et al., 2020).

Furthermore, the lack of effective climate financial risk disclosure practices in Nigerian firms may lead to negative consequences for both the firms and their stakeholders. Without adequate disclosure, investors and other stakeholders may be unaware of the potential risks and opportunities associated with climate change, leading to sub-optimal investment decisions and lost opportunities for value creation. Moreover, firms that fail to manage climate risks effectively may face financial losses, reputational damage, and regulatory sanctions, jeopardizing their long-term sustainability and competitiveness.

It is pertinent to note that to the best of the researcher’s knowledge studies on climate financial risk disclosure in Nigeria is scanty and deviates from the current trend of reporting which employs the use of Task Force on Climate-Related Financial Disclosures (TCFD) framework utilized by most developed countries (Hu, et al., 2020). Prior studies (Grewal et al., 2021; Hu et al., 2020) have shown that there is a positive relationship between climate financial risk disclosure (on risk management, strategy, governance, metrics and targets) and firm performance in other countries, but it is unclear whether this relationship holds in the Nigerian context. Therefore, this study seeks to examine the relationship between climate financial risk disclosure and firm performance in Nigeria by providing answer to this broad research question to what extent does climate risk disclosure which was measured using the TCFD disclosure index affect firm performance (ROA) in Nigerian oil and gas companies.

2.0 Literature Review

Climate change is, without a doubt, is humanity's greatest threat today. Scientists have continued to issue dire warnings about the dangers of climate change, as well as the disastrous effects. Further changes in average temperature, precipitation, and weather events will have an impact on

human health as well as global and regional economies, resulting in the extinction of some species as ecosystems evolve (DiMento, & Doughman, 2014).

Basically, climate change is expected to pose a greater risk, with potentially dire effects for human and other species' environmental health and survival (Enete & Amusa, 2010, p. 2). Climate risk refers to the detrimental effects that changes in the climatic condition of a specific geographical region may have on an organization. Some of this negative impact could be seen in adverse effects on people's lives, livelihoods, health, services, and infrastructure (Basel Commetee, 2019)

Extreme weather phenomena such as heat waves, floods, droughts, windstorms, wildfires, and gas flaring can have a direct influence on people's health, and Nigeria could be in the midst of a serious public health crisis (American Meteorological Society, 2018). Climate change can have an indirect effect on people's health by producing malnutrition as a result of reduced food production, the development of infectious diseases, water-borne diseases, and increasing air pollution. Climate change's influence on water resources, such as reduced water availability in some places and flooding that causes water contamination in others, could exacerbate Nigeria's already dire sanitary condition. Taking all of these considerations into account, it is clear that climate change must be taken into account. However, three major principles should be considered when attempting to critically examine climate financing: vulnerability, adaptation, and mitigation.

The type, size, and rate of climate variation to which a system is exposed, as well as its sensitivity and adaptive capacity, are defined by the Intergovernmental Panel on Climate Change (IPCC, 2001). In the climate change literature, vulnerability is defined as the sum of all threats to a certain system. Climate vulnerability, which includes climate variability and extremes, refers to a system's susceptibility to or incapacity to cope with the negative effects of climate change (Ayers, 2009). Physical, ecological, and social systems are all required to adapt to changes in their immediate environment in terms of adaptation. Changes in social and environmental processes, climate risk perceptions, risk-reduction behaviors and functions, and the investigation of novel climate-change options are all part of it.

The intergovernmental panel on climate change (IPCC, 2012) defines adaptation as the process of altering present or predicted climate and its consequences in human systems in order to prevent harm or capitalize on good opportunities. In other words, rather than focusing solely on climate change, adaptation can be understood as a continual process that handles a wide range of elements and stresses. It refers to the unconventional coping mechanisms utilized to reduce susceptibility and build resilience to climate changes observed and predicted effects (Shah, 2021). Policy and methods aimed at reducing greenhouse gas emissions are referred to as mitigation (GHG). Technological change and replacement reduce resource inputs and emissions per unit in terms of climate change. Human action to minimize the sources of Green House Gases or improve the sinks of Green House Gases is referred to as mitigation (IPCC, 2012). Reduced demand for carbon-intensive goods and services, enhanced efficiency gains, and expanded usage of low-carbon technologies are just a few examples of possible solutions.

The level of climate change financing in Nigeria is insufficient. Funding for climate and environmental change can come from both international and domestic sources. The former

comes mostly from development partners and non-governmental organizations, while the latter comes primarily from a statutory component of the national budget, the National Ecological Trust Fund. Final draft of Nigeria's Climate Change Study by the Federal Ministry of Environment reveals that the country has yet to fully estimate the costs associated with national climate change adaptation programs. According to available information from various sources in Nigeria, adapting well to anticipated climate changes will be extremely expensive for Nigeria. To address climate change, the Nigerian government has realized the need of having a critical mass of financial resources. The government is creating a National Strategic Climate Change Trust Fund to that purpose.

Recent research has highlighted statistical methods that make use of historical data, particularly weather fluctuations or natural disasters. Furthermore, because climate change is sluggish, estimating the economic effect of climate change simply using data on climate change is challenging. For these reasons, a plethora of data on high-frequency weather changes has been used in a number of recent articles. These studies are particularly crucial for analysing the impact of natural catastrophes that may occur in the near future or before people adjust to shifting climate change if climate-related weather occurrences become more frequent and intense.

Elements of Climate Financial Risk Disclosure

According to recent discussions, climate-related risks can be roughly characterized as either physical risks or transition risks (Boushey, Kaufman, & Zhang, 2021). When these threats materialize, they have an effect on the financial system in two ways: directly and through the real economy indirectly. Batten, Sowerbutts, and Tanaka (2016) provide more in-depth information on the ways in which physical and transitional hazards affect the financial system.

Climate change's physical consequences create new physical risks. Acute physical risks include floods and droughts, while chronic physical risks include rising sea levels and other long-term changes in climate patterns, such as the melting of glaciers. When physical dangers arise, physical capital, such as industries and homes, are damaged. Because of this, the creditworthiness of businesses and households deteriorates, having an impact on bank balance sheets. Collateral's value can also be reduced by physical damage, reducing the ability of businesses and individuals to borrow money (Kakuho, Hibiki, & Noriyuki, 2020).

Transition hazards are another term for the dangers that may occur as a result of the shift to a lower-carbon economy. Some of the specific elements generating such risks are policy upheavals, technical advances, shifts in tastes and societal norms. Firms with "stranded assets," such as fossil fuels, production and processing facilities and distribution infrastructure, can no longer make a profit from these assets if carbon taxes are imposed to curb greenhouse gas emissions, for example. Companies who possess these assets may see their financial sheets take a big hit as a result. While inexpensive fossil fuels may no longer be available, rising energy costs could have a negative impact on the profitability of businesses (Kakuho, Hibiki, & Noriyuki, 2020). Additionally, new technical advancements that speed up the transition to a low-carbon economy may affect the profitability of individual businesses and industries. Electric vehicle advancements, for example, have the potential to make traditional car manufacturers obsolete. Even if technology developments benefit the economy in the long run, financial institutions with strong exposure to these industries may suffer losses as a result (Kakuho et al., 2020)

The impact of financial institutions and enterprises on greenhouse gas emissions was also examined in subsequent research. Global financial institutions have cut their exposure to equities of high-emission companies, particularly those based in countries with a high climate consciousness, since 2015, they found. A reduced price-to-earnings and price to book ratio in the context of divestment has led to a rise in capital investment and research and development spending by high-emission corporations in these countries, which indicates that they are investing in ways to cut emissions (Choi, Gao, & Jiang, 2020). According to Jouvenot and Krueger (2020), enterprises in the UK responded to the disclosure requirement by reducing their emissions, particularly those with greater emissions prior to the implementation of obligatory reporting. According to the authors, one of the reasons for the reduction in emissions is the risk of a decrease in institutional investor investment following the implementation of obligatory reporting. According to Shive and Forster (2020), mutual fund ownership and board size have a negative impact on emissions at public companies, indicating that more oversight could lead to better environmental performance at these businesses.

The financial sector has become increasingly concerned in recent years with the potential financial hazards that climate change may bring. When it comes to climate change, financial institutions are at danger since extreme weather occurrences can cause huge losses. In addition, the financial sector faces risks connected with the transition to a carbon-neutral economy because of considerable exposures to high-emission sectors. Their vulnerability to new climate legislation, quick advancements in carbon-neutral technology, and shifting market conditions makes them exposed to these changes Climate-related hazards must be taken into account by banks.

Regulators expect banks to address climate change risks through their existing risk management frameworks as a result of this (Basel, 2019). In some cases, executives are attempting to incorporate climate-related risks into their overall management plan. For the 2019 supervisory review submission, the Basel committee obliged non-significant national banks and asset managers to present their own risk assessment on how climate-related risk affects their exposures, and how they monitor and manage these risks. Self-reporting on four major themes that have an impact on how banks operate was requested from banks. As a first step, banks are asked to provide information on how climate-related prudential risks are incorporated into their sound business and governance arrangements; second, they must provide information about the actual and potential impact of climate-related risks on their strategic and financial planning. Banks are asked to provide information on their long-term approach to managing prudential risks and opportunities resulting from climate change. iii) risk management and measurement: banks are required to provide information on how their existing risk management frameworks address prudential concerns posed by climate change; and (iv) financial reporting: Investment, lending, and insurance underwriting decisions may be better informed by climate-related financial disclosures, according to a new request from the Bank of England.

Theoretical Review

In the 1980s, Edward Freeman popularized the term "stakeholder" and the broader concept of "stakeholder theory, defining a stakeholder as any group or individual who can affect or is affected by the achievement of the organization's objective. This theory is utilized in this study to

drive home the point regarding the link between climate risk disclosure and firm financial performance.

Stakeholder theory emphasizes the importance of considering the interests and expectations of various stakeholders, including investors, employees, customers, and the broader society. Firms that proactively disclose climate financial risk information can build trust and enhance their reputation among stakeholders. This, in turn, can lead to improved firm performance through increased investor confidence, customer loyalty, and stakeholder support. The stakeholder theory lens provides insights into how climate financial risk disclosure can create value for the firm by meeting stakeholder expectations and maintaining positive relationships.

Institutional Theory

In order to further investigate how organizations fit with, are related to, and were molded by their societal, state, national, and global surroundings, John Meyer and Brian Rowan established institutional theory in the late 1970s. According to them, the evolution of formal structures inside an organization can be significantly influenced by the institutional environment, often more so than by market forces, according to institutional theorists.

The theoretical framework that explains the relationship between climate financial risk disclosure and firm financial performance is based on the concept of institutional pressures and is often referred to as the Institutional Theory perspective.

Institutional Theory posits that organizations are influenced and shaped by external social, political, and cultural forces, known as institutional pressures. These pressures create norms, rules, and expectations that organizations must conform to in order to gain legitimacy and maintain their social standing.

Institutional theory focuses on how organizations conform to and are influenced by institutional pressures and norms. In the Nigerian context, there are regulatory, legal, and societal pressures related to climate change and sustainability. Firms that adopt climate financial risk disclosure practices to comply with these pressures may enjoy enhanced legitimacy, reduced institutional risks, and improved firm performance. This framework enables the examination of how institutional factors shape the relationship between climate financial risk disclosure and firm performance in Nigeria.

Empirical Review

Climate Risk Strategy and Firm Performance

Strategic decision-making can significantly impact firm performance by aligning business goals with internal and external factors, such as market trends, customer needs, competitive landscape, and regulatory environment (Porter, 1996). A well-crafted and executed strategy can enable firms to capitalize on opportunities, manage risks, optimize resources, and differentiate themselves from rivals. However, a flawed or outdated strategy can lead to poor performance, lost market share, reputational damage, and even business failure (KPMG, 2021). In the context of climate financial risk disclosure, Nigerian firms that adopted proactive strategies to address climate risks were found to have better financial performance than those that did not (Oke & Olaifa, 2020).

Ahmad and Memon (2016) conducted a survey of Pakistani firms to investigate the effect of strategic planning on firm performance, using regression analysis. They found a positive and significant relationship between strategic planning and financial performance, as well as between strategic planning and market performance.Similarly, Chen et al. (2015) used a panel data analysis of Chinese firms to examine the impact of corporate strategy on firm performance. They found that firms with a clear and consistent strategy had higher profitability and market value than those with an unclear or changing strategy. Moreover, they found that the effect of strategy on performance was mediated by organizational learning and innovation.

In contrast, other studies have found mixed or inconclusive results regarding the link between strategy and firm performance. For instance, Lööf and Heshmati (2006) analyzed a sample of Swedish firms using a production function approach and found that strategic variables such as R&D, training, and marketing did not have a significant impact on productivity or profitability. They suggested that other factors, such as managerial skills and external market conditions, may be more important determinants of firm performance.

Furthermore, Wang and Chen (2017) conducted a meta-analysis of studies on the relationship between corporate social responsibility (CSR) strategy and financial performance, using a sample of 70 studies from various industries and countries. They found a weak and inconsistent relationship between CSR strategy and financial performance, and suggested that the effect may depend on the context and specific dimensions of CSR.

Berrone, et al. (2017) carried out a study in Spain to examine the impact of stakeholder pressure on corporate governance and firm performance. The authors used a sample of 352 publicly-traded firms and analyzed their corporate governance practices and financial performance. They found that stakeholder pressure was positively associated with corporate governance quality and firm performance, suggesting that firms that respond to stakeholder demands can improve their competitiveness and financial outcomes.

In the context of climate financial risk disclosure, this study highlights the importance of considering stakeholder expectations and demands in developing and implementing strategies that address climate risks. Firms that prioritize stakeholder engagement and respond to their concerns may enhance their reputation, attract and retain customers and investors, and ultimately improve their financial performance.

Brounen et al. (2019) study investigated the relationship between urban resilience, climate risk management, and sustainable real estate investment. The authors used a sample of 49 cities worldwide and analyzed their resilience and risk management practices, as well as the performance of their real estate markets. They found that cities with higher resilience and risk management scores tended to have more sustainable real estate markets, as measured by higher rental yields and lower risk premiums. This study suggests that firms that operate in cities with strong resilience and risk management practices may benefit from a more stable and profitable real estate market. By incorporating climate risk considerations in their investment decisions, firms can also enhance their long-term sustainability and resilience.

Lee et al. (2020) in their study examined the impact of green innovation on firm performance in the Korean manufacturing sector. The authors used a sample of 317 firms and analyzed their

innovation activities and financial performance. They found that firms that invested in green innovation tended to have better financial performance than those that did not, suggesting that green innovation can create economic value and competitive advantage. This study highlights the potential benefits of incorporating green innovation in firms' strategies to address climate risks. By developing and implementing innovative solutions that reduce environmental impact and enhance resource efficiency, firms can improve their financial performance and contribute to sustainable development.

Oke and Olaifa (2020) study investigated the relationship between climate risk management and corporate financial performance in Nigerian banks. The authors used a sample of 14 banks and analyzed their environmental and social risk management practices, as well as their financial performance. They found that banks that adopted proactive climate risk management practices tended to have better financial performance than those that did not, suggesting that climate risk management can contribute to banks' competitiveness and profitability. This study provides evidence that proactive climate risk management can have a positive impact on firms' financial performance, especially in sectors that are highly exposed to climate risks, such as the banking industry. By identifying and managing climate risks, firms can reduce

3.0 Methodology

This study adopts a Ex-post facto and Longitudinal research design was used. This study employed the use of these research design to describe the statistical association between the variables taking into account the fact that there has been an a-prior manifestation of the relationship among the variables. The target population of this study consists of all publicly listed companies operational in the oil and gas sector in Nigeria. These companies represent the target population for investigating the relationship between climate financial risk disclosure and firm performance in the Nigerian context. As at 2024 there were ten oil and gas companies listed on the floors of the Nigerian exchange group. The study was based on a census of all the oil and gas companies quoted on the floor of Nigeria exchange group for a period of four years ranging from 2021-2024. The choice of 2021 as the base year was as result of the fact that the official and reliable data on climate issues became available within this period in Nigeria. The study seeks to consider all the oil and gas companies listed on the Nigerian Stock Exchange known to have engaged in climate risk management practices. How ever, some companies were dropped during the analysis as a result of incomplete data.

Data for this study was collected from the company's annual reports and accounts (secondary data) that was mainly gathered from the Nigerian Stock Exchange market to collect data for the analysis. The study utilize content analysis to extract the data from the annual reports of the oil and gas companies listed on the floors of the Nigerian stock exchange market

Table 1
Construction of Climate Risk Disclosure Index

S/n	Governance	Strategy	Risk Management	Metrics and Target
1	Board oversight (Board composition, Board training, Board agenda)	Describe the climate related risk: Short Term (0-2yr): Energy efficiency	Risk Identification: Disclose the organizations process for identifying and assessing climate risk,	Disclose the Metrics used by the organization: Define key performance, Establish baseline

		improvement, Cost saving, Regulatory compliance Medium term(2-5yr): Product and services innovation, Supply chain reliance, Market expansion and adaptation strategies Long term(5yr +): Low-carbon Investment, Climate-related technology, Green financing, Sustainable investment	provide information on methodology,	data,Conduct risk assessment,Evaluate risk mitigation strategies,Monitor key metrics.
2	Opportunities (disclosure of climate risk opportunities, innovation and research opportunities)	Business strategy and financing: Evaluate the business strategy on climate related consideration, check if goals and objectives align with climate change	Process for Managing Risk: Monitor and review, Communication and transparency, Comprehensiveness and clarity, Decision making process.	Disclose scope 1 Scope 2 and Scope 3 green house: Scope 1 emissions are direct GHG emission from sources that are owned by the organization, Scope 2 emissions are indirect GHG emissions resulting from the consumption of purchased electricity, heat or stream, Scope 3 emission are indirect GHG emissions that occur from activities related to the organization
3	Description of management role (Stakeholders engagement, Reporting and disclosure practices, Independent review)	Resilience of organizations strategy: Regulatory update, adaptation and mitigation strategy, Scenario planning and testing	Process for identifying Risk:Establish the context of risk management, identify potential risk, Categorize the risk, Assess the likelihood and impact	Describe the target used by the organization to manage climate related risk: Emission Reduction targets, Renewable Energy Target, Energy Efficiency target

Source: Authors Compilations (2026).

DISINDEX= Govt + STG+Risk + Metric

Model of the Study

The model is presented in its functional form as follows:

FP = f(CRDO,FSZ, FAG)……(1)

Arising from the model above this study took into account the deterministic and stochastic aspect of the model. Thus intercept and coefficients are therefore introduced into the model to finally arrive at the econometric model for this study as given below

FP = $\beta 0 + \beta_1$ $CRDO_{lt}$+ β_2 FSZ+ β_3FAG ε_{it}…….(2)

FP= Firm Performance

CRM= Climate Risk Management

FSZ= Firm Size

FAG= Firm Age

4.0 Data Presentation and Analysis

Regression Result

Table 2

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-0.170484	0.000201	-847.6380	0.0000
DISINDEX	0.099785	9.81E-05	1017.005	0.0000
FSIZE	0.014846	2.70E-05	548.8712	0.0000
FAGE	0.000428	6.14E-07	697.0040	0.0000
Robust Statistics				
Rw-squared	0.039069	Adjust Rw-squared		0.039069
Scale	0.075235	Rn-squared statistic		409.1134
Prob(Rn-squared stat.)	0.000000			
Non-robust Statistics				
Mean dependent var	0.116894	S.D. dependent var		0.542437
S.E. of regression	0.571474	Sum squared resid		10.45063

Source: Eviews 9, 2026.

An examination of the variable in the table above revealed that climate risk disclosure was found to have a positive impact on firm financial performance has revealed by the positive coefficient value of 0.09. This therefore implies that on the average a unit change in change in climate risk disclosurewill lead to a 9% increase in firm financial performance. This variable was also found to be statistically significant when tested at 5% level of significance.

Firm size was found to have a positive impact on firm financial performance. It was also found to be statistically significant when tested at the 5% level of significance. The last variable which is the firm age was found to have a positive impact on firm financial performance as revealed by the positive coefficient value. It was also found to be statistically significant when tested at 5% level of significance.

Additionally, the Rw-square value is reported in the summary statistics. The RW (Rao-Wu) statistic is a measure used in robust least squares regression to find potential outliers or important observations in the data. In robust regression, it is one of the diagnostic statistics that is used to evaluate the influence of certain data points on the regression model. The difference between the expected reaction (as predicted by the regression model) and the actual observed response is captured by the RW statistic for a certain data point. It considers the robust estimate of scale, which describes the dispersion or variability of the model's residuals. A high RW statistic for a data point denotes a large departure from the regression model's predictions for that data point's observed response. This discrepancy suggests that the data point may be an outlier or have a significant impact on the coefficients of the regression model. Influential observations that might skew the estimation of the regression coefficients could be detected by looking at the RW statistics for all data points. Then, in order to create a regression model that is more robust and dependable, these influential points can be further examined to determine whether they should be kept or eliminated from the analysis.

From the table above it was observed that the Rw-square was found to have a value of 0.03. This therefore implies that on the average the model accounted for 3% of the systematic. While the remaining 96.1% left unaccounted for was captured by the stochastic error term.

Furthermore, the summary statistics revealed the Scale value of parameter. The scale statistics or S-estimator belongs to the class of high-breakdown-value estimators introduced by Rousseeuw and Yohai (1984). The breakdown-value of an estimator can be seen as a measure of an estimator's robustness to outliers. The scale indicates the average distance that the variable deviates from the regression line. The smaller the value of this statistic the better the model. Because small values indicates that the observations are tending towards the line of symmetry. A smaller scale value indicates that the model fits the data well, and the residuals are tightly distributed around the regression line". On the other hand, a larger scale value would indicate more variability in the residuals, suggesting that the model may not fit the data as well or that there might be influential data points affecting the regression. An examination of the scale value which refers to the scale parameter, also known as the "robust scale" or "robust estimate of scale which measures the spread or variability of the residuals (the differences between the observed values and the predicted values) in the robust regression model was found to have a value of 0.07. This therefore implies that the residuals in the robust regression model have a small spread or variability. In other words, the differences between the observed data and the model's predictions are relatively consistent and close to each other.

The Rn-squared also know has Wald test could be used to ascertain which model variables are contributing something significant. This statistics is used to find out if explanatory variables in the model are significant. If the test probability value are less than 5% it therefore implies that the model is statistically significant. From the result in the table above it was observed that the Rn-squared was found to have a probability value less than 5% therefore indicating that the model is jointly statistically significant at 5% level of significance.

Discussion of Findings

From the analysis carried out it was observed that the Rw squared was found to be low this was not surprising due to the complexity of human and organisational behavior and also climate risk disclosure is also a function of other factors such as macro-economic conditions, size of the firm,

age of firm and leverage of the firm. Furthermore, on like the OLS model, the robust least square regression model does not focus on maximizing explained variance but rather its focus is more on producing consistent and unbiased estimates.

On the basis of the individual coefficient, the finding showed that climate risk management has a positive impact on firm financial performance thereforeimplying that companies that proactively manage and address climate-related risks tend to experience improved financial outcomes. This is because, effective climate risk management involves identifying potential risks and developing strategies to mitigate their impacts. By addressing these risks proactively, companies can avoid or minimize adverse effects on their operations, supply chains, and financial performance.

Also as environmental, social, and governance (ESG) considerations gain importance in investment decisions, companies with robust climate risk management practices may find it easier to access capital and secure favorable terms from investors. A positive correlation between strong ESG performance and financial returns has been observed, making climate-conscious companies attractive to investors.

5.0 Conclusion

The topic of climate financial risk disclosure and firm financial performance highlights the increasing significance of climate-related risks and their impact on corporate financial performance. This study sought to examine the relationship between climate risk disclosure and firm financial performance, shedding light on how companies' transparency in disclosing climate-related risks and opportunities can influence their financial outcomes.

However, although the result of the analysis based on the coefficient was found to be in tandem with a-prior expectations, several limitations were also spoted in the result for the study. Some of these limitations were the low prediction power of the model, dependent variable measurement that was not market specific (Tobins Q) but rather financial based and also the study did not also include some control variables which might have enhanced the prediction power as well. Thus,further studies should be more intentional as regards some of this spotted limitation and also, they could also possibly delve into cross country comparison to actually see the level of climate disclosure in other climes.

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