SOCIAL AND ENVIRONMENTAL INFORMATION QUALITY ATTRIBUTES AND FINANCIAL PERFORMANCE OF LISTED NON-FINANCIAL COMPANIES IN NIGERIA.

Saka Tunde Abdulsalam [1], Olanrewaju Atanda Aliu [2]

[1]Kwara State University, Malete, Nigeria

[2]University of Ilorin, Ilorin, Nigeria

Corresponding author: Abdulsalam.tunde@gmail.com

ABSTRACT

The public perceived company's environmental and social information reported (ESIR) as a mere public relation exercise which lack quality attributes required for making investment choice that can improve company's financial performance. In view of this observation, this study investigated ESIR quality of listed non-financial companies in Nigeria (LNFCN) based on the information quality framework of Global Reporting Initiative (GRI, G3) and examine the impact on operating cash flow (OCFL) for the period 2011-2018. The study adopted Ex–Post Facto research design and data collected from annual reports of forty-seven (47) LNFCN were analyzed based on the regression analysis. Findings indicate that quality of ESIR of LNFCN comprehensively communicated their sustainability achievement. Consequently, investors and other stakeholders were motivated to patronize and provide finance capital that improved companies OCFL. The study concludes that disclosure of credible social and environmental information in a manner that consistently follow GRI quality reporting guidelines will attract finance capital that improve company financial success indicated in OCFL. The study recommended improvement in the quality of ESI through investors and other stakeholders' engagement to identify and address their concern and comprehensively report them; such practice will attract finance capital that will boost OCFL.

Introduction

Industries activities which have been generating environmental and social damages such as global warming, work related hazard as well as negative impact on communities have become a serious concern to investors, customers, employees, government and other stakeholders (Rachmat *et al*., 2024). The concern is the outcome of the perception that environmental and social harms threaten people, eco system and companies' reputation all over the world and create competitive setback that usually bring down financial success usually reflected in negative operating cash flow (OCFL). In view of the aforementioned, investors and wider stakeholders actively demand for disclosure of explicit environmental and social information (ESI) to facilitate evaluation of risk and opportunities in business and thus make informed investment decision that will positively impact company OCFL.

Today business environment has witness investors preference for sustainability friendly companies (Riso, *et al.*, 2025). Consequently, high-profile companies particularly listed non-financial companies in Nigeria (LNFCN) are spur to embrace GRI, G3 sustainability quality reporting principle made up of clarity, comparability, balance, reliability, relevance, and timeliness to report environmental and social matters in order to standardize ESI content, thereby improve corporate reputation and attract finance capital that in-turn boost company's OCFL (Adebayo, *et al.*, 2024).

GRI, G3 quality framework provide quality benchmark on which sustainability reports are evaluated to ensure reliability, relevance and comparability of reported ESI (Almeyda *et al.*, 2023). In the bid to strengthen quality of ESI reported among LNFCN, sustainability disclosure guidelines was included in the reviewed and National Code of Corporate governance (CCG) in 2011 and 2018 respectively. In 2016 NGX held sustainability reporting seminar, intimating LNFCN with GRI reporting guidelines and format. This however, influence LNFCN to progressively provide sustainability reports designed to attract investment fund that will improve their OCFL (Okon, Phillips & Okpokpo 2023). However, improved OCFL may be difficult to attain if sustainability information reported do not mirror information characteristics specified in GRI G3 quality framework.

It is worthy to mention that researchers in this field such as Adebayo, *et al.*, (2024); Abubakar, *et al.*, (2022) and several others focus sustainability volume reporting and the effect on financial performance (FP) while, quality of ESI reporting and the impact on financial performance are left unexplored, thereby creating literature gaps. Michelon, *et al.*, (2015) argue that sustainability volume disclosure does not in any manner substitute quality of sustainability. Given this gap identified in literatures, this study investigates quality of ESI and assess the impact on cash flow of LNFCN. In pursuit of this study objective, the following research hypothesis are proposed in Null form and tested:

Ho$_1$: Quality of social and environmental information reporting does not significantly affect the cash flow from operating activities of LNFCN

This study investigates ESIRQ of Forty-Seven (47) LNFCN and examine the impact on their OCFL for the period 2011-2018 which preceded Outbreak of COVID-19 in Nigeria.

Literature Review

Environmental and Social Information Reporting Quality

Environmental, and social information reporting quality (ESIRQ) refer to completeness, accuracy and reliability of sustainability information reported

(Helfaya, *et al*., 2019). In the word of Michelon, *et al*., (2015), quality environmental and social information can be identified based on completeness and accuracy of the information reported in the annual report. Okon, *et al*., (2023) wrote that ESIRQ represent sustainability information designed to ensure evaluation of business risk and compare performance to enable investors make informed investment choice. Dewi and widyawati , (2023) reported that ESIRQ provide relevant and reliable information which are value relevant to sustainability conscious investors because it reduces information asymmetry which subsequently attract investment fund that positively impact company financial performance.

It is sufficed to note that constructs employed to describe ESIRQ differ. A section of researchers described ESIRQ based on quantity, future oriented and good and bad news reported, other group of researchers describe quality sustainability information based on attributes available in sustainability reporting such as relevance, comparability and reliability of the disclosure (Habek, & Wolniak, 2015). In the recent work of Nwaigwe, *et al*. (2022), the authors argued that definition based on information characteristics identified in international standard quality reporting framework such as GRI, G3 appear more reliable as it provides balance and comparable report within and between firm and are likely to prevent regulatory risk in firm's sustainability reporting. Relying on the Nwaigwe *et al*., (2022) argument this study adopts sustainability information quality framework of GRI, G3.

GRI G3 Sustainability Quality Reporting framework

The GRI, G3 sustainability quality reporting principle is an accountability framework established in 2006 to offer unified information quality guidelines that will ensure disclosure of comparable, reliable and accurate sustainability information for making reasonable investment choice (Ismail, *et al*., 2021). GRI, G3 sustainability information quality framework is an acceptable guideline established as standard in which quality of firm sustainability reporting are evaluated. Helfaya, *et al*., (2019) stated that the appearance of G3 version of GRI empower investors to reasonably assessed, differentiate and compare environmental and social performance of firms to enable them make reasonable investment choice that promise sustainable returns. GRI, G3 stand out as the only recognized sustainability information quality framework following the appearance of CCG in Nigeria in 2004 (Abdulsalam, 2022). The framework strengthens investors understanding of potential risk and opportunities associated with business, thereby enable them to make informed investment decision (Shaban & Barakat, 2023)

Two sets of reporting principles are identified in GRI, G3 framework--- Performance indicator (PI) and Sustainability Quality Reporting Principle (QRP).

PI comprising of environmental and social items are designed as a guideline for reporting sustainability content of corporate report. Quality reporting framework comprising of information characteristics such as relevance, reliability clarity, balance, comparability and timeliness are principles put in place as a guideline to ensure disclosure of accurate and comparable ESI.

The social and environmental dimensions of GRI, G3 framework addresses non-financial information concern of internal (shareholder, employees etc.) and external (creditors, investors, customers, etc.) stakeholders. However, GRI G3 PI that addresses the concern of external stakeholders is the focus of this study and are presented in Table 1.

Table 1: *Environmental & Social items and Performance Indicators*

Categories & Indicators of GRI, G3 Environmental Performance Indicator (PI)	Categories & Indicators of GRI, G3 Social Performance Indicator (PI)	
Biodiversity conversion EN 11 (use of land), EN 12 (Core PI)	**Local communities** SO-1,SO-9, SO-10 (Core PI)	**Customer health and safety** PR 1 (Core PI)
Compliance with Legislation EN 28-(Core PI)	**Corruption** SO-2, 3, and 4 (Core PI)	**Product and service labeling for customer safety** PR 3 (Core PI)
Emission Reduction Effort (EN) EN-16, 17, 19, and 20-(Emission)	**Compliance** SO 8 (Core PI)	**Marketing communication** PR 6 (Core PI)
Effluence & Waste Management EN-22 (hazardous waste), EN-23 (spills & hazardous)	**Public Policy** SO-5 and 6 (Core PI)	

Source: GRI, G3 (2006, 2016)

GRI G3 social and environmental Performance indicators comprising of 4 and 7

items respectively are shown in Table 1

Table 2: *GRI, G3 Sustainability Quality Reporting Principles*

Clarity	ESI should be comprehensive, understandable and have readable form
Relevance	ESI presented should reflect actual state of firm social, and environmental performance to enable users assess firm sustainability performance adequately
Balance	ESI reports should contain information that reflects the good and bad news of firm's social and environmental activities to enable reasonable assessment of overall performance. The report should devoid of bias and omission and should provide a balance assessment of Firm's impact
Reliability	ESI should be gathered, analyzed and reported in a manner that enable third party to verify their veracity
Comparability	ESI should enable investors to identify similarities in and differences between two set of economic performance. ESI should enable firm sustainability data comparison within and between firms
Timeliness	ESI should be made available for business decision makers before it begin to loss its capacity to influence decision

Source: GRI, G3 (2006, 2016)

Financial Performance

Financial Performance (FP) is the capability of a company to carefully use its resources to achieve its stated goal and as well add value to its shareholders (Moreno, *et al*., 2025). In a study by Ali and Jadoon, (2022), the authors stated that FP often time are employed to compare overall accomplishment of different firm's operating in the same industry. Alam and Tariq (2022) expressed that financial performance indicates financial achievement of a firm during a specified period usually measure by return on asset, return on equity, Capital adequacy, cash flow

from operating activities, Tobin-Q, among several measures. However, Amahalu and Okudu (2023) argued sturdily that assessing company's performance solely on financial success put investors in the risk of excluding relevant sustainability information required to make better assessment of firm performance and as well reasonable investment choice that guarantee sustainable returns.

Given the appearance of the new listing rules and regulations in most capital market and the emergence of socially responsible investors, neglecting environmental and social information reporting most often create information gap in financial reporting which often-time discourage socially conscious investors from patronizing such sustainability unfriendly company (Ismail, *et al.*, 2021). The authors asserted that investors willingly boycott firm identified with sustainability unfriendly activities and firm connected with poor sustainability disclosure habit due to risk of litigation which may negatively bring down operating cash flow of the affected company. Ismail, *et al.*, (2021) further argued that such unfriendly practices usually lead to competitive setback which often bring down financial performance of the affected firm. Dewi and Widyawati (2023) posited that substantive sustainability information disclosure improve transparency and stimulate stakeholders trust in the company activities which often-time translate to enhanced performance.

Stakeholder Theory

Previous studies (Moreno, *et al.*, 2025) on ESR suggested that social obligation and environmental impact of company's activities must be accurately communicated to stakeholders. Dewi and Widyawatti, (2023) maintain that stakeholders comprising of shareholders, community, customers, creditors should be the focus of the organization rather than only profit motive. The authors maintain that stakeholders persistently seek for financial information as well as information concerning sustainability performance towards sustainable development. According to Moreno, *et al.*, (2025) non-financial information request of stakeholders are often fulfilled through disclosure of informative sustainability information which allow stakeholders to determine which organization most addressed their concern and expectations thereby deserve their resources.

Empirical Review

Various researchers have investigated the effects of social and environmental reporting quality on financial performance of listed firms, for instance Harymawan, Nasih and Putra (2020) analyzed the contents of assurance statement on sustainability information reported by listed companies in Indonesia and Malaysia and examined the impact on Firm value. The regression results revealed that assurance statement on sustainability disclosure led to improved

firm value. The study uncovers that assured statement on SEI disclosure enhance value of the firm.

Motivated by desire to improve credibility of company social responsibility (CSR) among Pakistan companies, Ismail, *et al*. (2021) examined the state of CSR reporting quality based on GRI quality reporting principles and found that nearly all studied companies provide precise and on-time sustainability information. However, sustainability information communicated are dominantly unbalance disclosure comprising of only positive news while negative news are ignored. Ali and Jadoon, (2022) explore the value relevance of sustainability performance among 13 companies in twelve highly sustainable economies in the period 2015 – 2020 based on the GRI framework. Findings uncovered that company's sustainability performance significantly grow stock market price, indicating that company social and environmental disclosure is value relevant and enhance sustainable value.

Recent research carried out by Shaban and Barakat, (2023) which explored the relationship between non-financial disclosure and financial accomplishment of Jordanian Bank in the period 2012 to 2021 found that by communicating reliable ESI, companies in developing economy can improve their reputation and patronage that can lead to improve financial efficiency. Using sample of Oil and Gas firms listed in NGX, Okon, *et al*., (2023) examine the impact of sustainability disclosure on their financial accomplishment in the period 2012-2021. Result obtained from regression analysis revealed that accurately reported ESI relatively improve financial performance of the studied companies. The Authors concluded that firm that holistically embrace sustainability practices are likely to secure improved financial performance. The growing concern among investors concerning credibility of ESI disclosure motivate Moreno, *et al*., (2025) to explore the effect of credible ESI on financial performance (FP) of 34 listed companies in Brazil (LCB). Findings revealed that credible social sustainability disclosure is prominent among LCB capital market. However, credibility of environmental report negatively impacts companies FP.

Research Method

Expo-facto research design was applied and secondary data were sourced from annual reports of LNFCN. 76 sustainability sensitive companies make up population of this study, these companies are considered sustainability sensitive because their activities impose significant effect on people and eco-system. As a consequence, they usually provide informative environmental and social reports required for making investment choice that boost company financial performance (Nweze, & Nwadialor, 2020).

Based on Krercie and Morgan (1970) sample table, sixty-two (62) sample size were obtained, however, fifteen companies were excluded from the sample size due to non-availability of sustainability reports and failure of the companies to remain listed during the period of the study. Consequently, 47 companies make up the sample and are selected from stratified sectoral arrangement provided by NGX ---Oil & Gas, Consumer goods, Natural resources, Industrial goods, Construction and real estate, Health care, and Agriculture sector.

Concerning data used in this study, while sustainability data were obtained from annual reports using GRI, G3 sustainability quality reporting principle as bench mark, data for financial accomplishment were obtained from account of listed sample companies. Moreover, sustainability data obtained were based on the following scoring scale: Zero (0) for non-availability of quality information in the report, For narrative disclosure one (1), two (2) for detailed disclosure, three (3) for non-monetary disclosure (quantitative) and four (4) for monetary quantitative report. Descriptive and regression analysis were employed to provide summary of the variables and to empirically ascertain effect of ESIR quality on OCFL

Model Specification

This study adapt model specified by Rahman, *et al.,* (2020) which is based on the Ohlson, (1995) valuation model. OhIson, (1995) model suggests that, disclosure of relevant and reliable environmental and social information along with financial items such as book value (BV) of equity, and accounting earning (AE) tend to significantly improve company financial performance. According to Ohlson, company FP is a function of company's BV and AE. However, to suit the hypotheses of this study the model was modified as follows:

$$CSFLit = \alpha_{0} + \alpha_1 BDVQi_t + \alpha_2 EMSQit + \alpha_3 EFWQit + a_4CLGQit + a_5EARNit + a_6BVEit + \alpha_7CSZit + \alpha_8 LEVit + \varepsilon_{it}$$ ---(i)

$$CSFLit = \beta0 + \alpha_1LCMQit + \alpha_2 CORQit + \alpha_3 PPLQit + \alpha_4 CHSQit + \alpha_5 PSLQit + \alpha_6 MCMQit \alpha_7 COPQit + \alpha_8 EARNit + \alpha_9 BVEit + \alpha_{10} CSZEit + \alpha_{11} LEVit + \varepsilon_{it}$$ ----------------------------(ii)

Where:

OCFLit	Operating Cash flow of company i at time t;	CHSQ$_{it}$	customer health & safety SIRQ of company i at time t;
BDVQ$_{it}$	Biodiversity sustainability information reporting quality (SIRQ) of company i at time t;	PSLQ$_{it}$	product & service labeling SIRQ of company i at time t;
EMSQ$_i$	Emission SIRQ of company i at time t;	MCMQ$_i$	Marketing communication SIRQ of company i at time t;
CLGQ$_i$	compliance with legislation SIRQ of company i at time t;	EARN$_{it}$	Earnings of company i at time t.
EFWQ$_i$	Effluence and waste SIRQ of company i at time t;	CSZE$_{it}$	Size of company i at time t;
LOCQ$_i$	Local communities SIRQ' of company i at time t;	BVEQ$_{it}$	Book value of Equity of company i at time t
CORQ$_i$	corruption SIRQ of company i at time t;	LEV$_{it}$	Leverage of company i at time t
PPL$_{it}$	public policy SIRQ of company i at time t;		

Result and Discussion

Descriptive statistics

Table 3 provide an overview of the of the statistical summaries of OCFL and ESIRQ. OCFL serve as dependent variable (DV), while ESIRQ represent independent variable (IV).

Table 3: Descriptive Statistics of variables of ESIRQ and operating Cash flow

No	Variable	Mean	Median	Max	Min	Std. Dev	Skewness	Kurtosis	Jarque-Bera (Prob)
1	Cash Flow	10.94	13.97	21.74	-3.91	6.83	-0.88	2.16	52.61 (0.000)
2	Biodiversity	1.96	0.00	17.00	0.00	3.74	2.21	7.45	544.52 (0.000)
3	Legislation	2.22	0.21	6.00	-0.66	2.83	0.58	1.35	56.53 (0.000)
4	Effluence & Waste	6.90	6.00	20.00	0.00	6.11	0.27	1.83	22.79 (0.000)
5	Emission	6.61	6.00	18.00	0.00	6.00	0.25	1.68	27.52 (0.000)
6	Local Communities	17.93	21.00	22.00	0.00	6.29	-1.84	5.13	249.67 (0.000)
7	Customer Health	9.22	12.00	21.00	0.00	5.02	-0.59	2.87	19.56 (0.000)
8	Product & Service Labeling	7.81	7.00	21.00	0.00	5.45	-0.09	2.28	7.68 (0.022)
9	Marketing Communication	4.70	0.00	19.00	0.00	5.74	0.71	2.07	40.07 (0.000)
10	Public Policy	10.86	11.00	21.00	0.00	4.70	0.15	2.56	3.93 (0.140)
11	Corruption	11.16	12.00	20.00	0.00	3.67	-1.18	4.90	127.10 (0.000)
12	Compliance Sustainability	1.95	0.00	23.00	0.00	5.73	2.72	8.71	862.33 (0.000)
13	Earning	288 million	1.23 million	25.4 billion	-552 million	2.99 billion	9.38	93.75	130,000 (0.007)
14	Book Value of Equity	930 million	13.8 million	76 billion	-616 million	5.58 billion	9.54	110.57	190,000 (0.007)
15	Leverage	0.82	0.14	47.9	-2.34	3.72	7.53	77.12	90,000 (0.007)
16	Total Asset	16.91	17.27	22.83	9.44	2.20	-0.73	4.11	46.79 (0.000)

Source: Author Computation, (2025)

Table 3 provide descriptive statistics indicating 10.939 as average value for OCFL with minimum value of 3.91and maximum value of 21.73. This indicate that LNFCN during the year 2011-2018 had a moderate level (50.32%) OCFL. Concerning the variables of environmental information disclosure quality (EIDQ), EFW had the highest average information quality disclosure of 6.902, while EMS,

CLG, BDV follow with average information disclosure quality of 6.608, 2.218 and 1.963 respectively.

With respect to variables of social information disclosure quality (SIDQ), LOC had the highest disclosure quality of 17.930, while COR, PLP, CHS, PSL and MCM information quality had 11.15, 10.86, 9.22, 7.81, and 4.89 respectively. By these statistical results, it implies that variables of SIDQ are more comprehensively reported than environmental information disclosure.

The descriptive statistic exhibited in table 3 shows value of skewness and Kurtosis indicate statistical non-normality distribution. The distributions are characterized with extreme skewness to the right and left, fatter tail (leptokurtic) and thinner (platykurtic) tail than normal distribution. To buttress the non-normality character of the distribution, Jarque Bera test was conducted and the result indicated that all the series are not normally distributed. By this result, pool regression for panel data is ignored consequently effect model prevail (Wooldridge, 2010).

Table 4: Pairwise correlation matrix of ESIRQ and Operating cash flow

	Cash flow	Bio-diversity	Compliance	Effluence	Emission	Local community	Customer Health	Product	Mkt Com~n	Public policy	Corruption	Compliance	Total Asset	Leverage	BVequity	Earning
Cashflow	1.0000															
Biodiversit	0.2712	1.0000														
Compliance	-0.0229	-0.0498	1.0000													
Effluence	0.2379	0.4055	-0.0498	1.0000												
Emission	0.2598	0.5336	-0.0292	0.7266	1.0000											
Local comm.	0.1653	0.2833	-0.1076	0.2755	0.3126	1.0000										
Cust. Health	0.2689	0.3626	0.0176	0.5714	0.6002	0.3484	1.0000									
Prod. & serv.	0.1099	0.2102	-0.1153	0.0544	0.2593	0.1474	0.0682	1.0000								
Mkt Communi	0.1850	0.4498	-0.0478	0.6384	0.6730	0.3227	0.5081	0.2737	1.0000							
Public Policy	0.2324	0.1943	-0.4769	0.1118	0.2419	0.2605	0.2231	0.1901	0.1870	1.0000						
Corruption	0.0685	0.2758	-0.0864	0.4368	0.2867	0.4737	0.2540	0.0973	0.4018	0.3211	1.0000					
Compliance	-0.0078	0.1263	0.1008	0.0826	0.0720	0.1223	0.0168	0.1548	0.1074	0.1178	0.1648	1.0000				
Totalasset1	0.3288	0.3158	0.1256	0.3615	0.2552	0.1797	0.2681	0.0371	0.2488	0.0321	0.2078	0.1184	1.0000			
Leverage	0.1232	-0.0797	-0.1014	0.1611	-0.1902	0.0273	-0.1575	-0.1712	-0.1344	-0.1847	0.0441	-0.0659	0.1055	1.0000		
BVequity	0.0343	-0.0719	-0.0531	-0.0346	-0.0365	0.0822	0.0182	0.0418	-0.0173	0.2229	-0.1377	-0.0345	0.0322	-0.1285	1.0000	
Earnings	0.0111	-0.0570	.0.0340	-0.0483	-0.0433	0.0673	-0.0098	0.0445	-0.0995	0.1747	-0.1232	-0.0264	-0.0119	-0.1091	0.7584	1.0000

Source: Author's Computation (2025)

Table 4 presents result of Pairwise Correlation, essential to evaluate multicollinearity among IV in this study. As indicated in the result of the correlation matrix analysis, multicollinearity is generally not an issue given that the extent of correlation among IV is very low. The value as indicated in the Table 4 were all below the threshold (0.8) as recommended by Gujarati (2003)

Table 5: Diagnostic Results of F-statistics, Breusch-pagan and Hausman Test

Model	F-Statistics	P-value	Model	BPL Multiplier Test		Hausman test	
				chi-Statistics	P-value	chi-Statistics	P-value
FIXEV	12.61	0.000	Environmental Disclosure Quality	12.47	0.0061	7.98	0.2397
RANEV	8.52	0.000					
FIXSO	10.52	0.000	Social Disc. quality	24.26	0.0069	36.35	0.2622
RANSO	8.09	0.000					

Source: Author's Computation (2025)

Result of F-Statistic depicted in Table 5 deduce that figures used in the model are fit to established regression model that will account for variability in the independent variables. To establish suitable regression model, Breusch-Pagan Lagrange (BPL) test was conducted and the result exposited in Table 5 show that P-value of chi-square (0.0061 and 0.0069) is less than 5% level of significant (LOS), thereby providing a basis for selecting Effect model. Moreover, Hausman test was conducted and the output of the test indicated in Table 5 show a value of 7.98 and 36.35 with a P-value of 0.2397 and 0.2622 exceeding 5% LOS. This implies that Null hypothesis is accepted and random effect (RE) option adopted.

Restatement and Test of Hypothesis

H_o: Environmental and social information reporting quality does not significantly impact OCFL of LNFCN

Table 6: Result of Fixed & Random Effect on the effect
the effect of EIRQ on Cash Flow Flow

Dependent Variable: Cash Flows from operating activities		
Independent variables	(1) Fixed Effects Coefficients (standard errors)	(2) Random Coefficients (standard errors)
Biodiversity reporting Quality	.2406291**	.4432375**
	(.0760876)	(.1278891)
Compliance with legislation report. Quality	-.0907336	-.110862
	(.4315943)	(.1289528)
Effluence &Waste reporting Quality	-.2008457	-.0048944
	(.3026175)	(.0896559)

Table 7: Results of Fixed and Random Effect on
of social Information Reporting Quality on Cash

Dependent Variable: Cash Flow from operating activities		
Independent variables	(1) Fixed Effects Coefficients (standard errors)	(2) Random Effects Coefficients (standard errors)
Local Comm. disclosure quality	.161392	.074272
	(.1247072)	(.0648695)
Cust. Health & saf. disclosure quality	.5298218***	.1822154**
	(.0912688)	(.0835267)
Product & serv. Lab. disclosure quality	.5402613***	.1462171
	(.1706603)	(.1548022)

Emission reporting Quality	.3952293**	.1318259**	**Mkt. Communication disclosure quality**		.3026179***	.0195693
	(.1750436)	(.0312742)			(.0794794)	(.0763521)
LnEarning	1.013206	1.517676**	**Public Policy disclosure quality**		.0625617	.2941325***
	(775,673)	(632,703)			(.0911051)	(.0802264)
Leverage	141,830	143,491	**Corruption disclosure quality**		-.1866273	-.2481025**
	(316,762)	(275,128)			(.1354758)	(.1149572)
lnBVequity	227,834	-627,022	**Compliance disclosure quality**		.1304125	-.0798251
	(899,086)	(729,711)			(.1783526)	(.0615737)
Total Assets	.0098515**	.0167494**	**lnEarning**		1.030506	1.263206*
	(.0050112)	(.0035613)			(777,586)	(659,632)
R-Square **Wald Chi2**	0.0283	0.1543	**lnBVequity**		382,956	-435,687
Prob>Chi2	1.17 0.3209	8.25 0.0000			(920,512)	(739,070)
Const	2.939141**	5.316699**	**Total asset**		.2117629**	.0190185***
	(.3228745)	(1.09752)			(.0881463)	(.003321)
Observations **Number of CID**		335 47	**Leverage**		137,722	287,225
					(321,011)	(270,555)
			R-Square (overall) **Wald Chi2** **Prob>Chi2**		0.6850	0.1999
					40.42 0.0000	8.09 0.0000
			Cons		16.79005	1.799678
					(3.56648)	(.07509)
			Observations	376		
			Number of CID	47		

Table 6 exposited the result of the panel regression, exploring the impact of ESIRQ on operating cash flow (OCFL) of listed NFCN. In the regression analysis DV is represented by OCFL, while IV is represented by EIRQ variables of BDV, EMS, EFW and COL. In addition to DV and IV variables, LEV, TA , ERN and BVE are included in the analysis as control variables (CV) and theoretical variables (TV) respectively

Random effect (RE) result presented in Column 2 of Table 6, provide that environmental information disclosure quality of BDV and EMS as well as EAR, and TA has a direct significant positive relationship with OCFL of LNFCN. That is movement in OCFL is significantly influenced by quality of sustainability information of BDV and EMS as well as EAR and TA. Since results shows that OCFL is influenced by quality of BDV and EMS information, the study conclude that quality of environmental information disclosure has a positive impact on OCFL in the period 2011-2018 at 5% LOS. However, quality of information disclosure of COL and EFW as well as BVE has negative and insignificant relationship with OCFL. LEV is positive but not significantly justified.

The result assessing the functional relationship between OCFL and variables of social information reporting quality (SIRQ) comprising of LC, CHS, PSL, MC, PP, CRP, and COP was presented in column 2 of table 7. The result shows that quality of SIRQ of CHS and PP as well as EAR and TA has direct significant positive relationship with OCFL of LNFCN at 5% LOS respectively. The positive impact of CHS and PP disclosure quality as well as EAR and TA implies that companies with clearly reported social information tend to experience improved OCFL. However, SIRQ of LC, PSL and MC, including LEV positively impact OCFL, but the impact is statistically unjustified. Moreover, sustainability information disclosure of COR is negative and significantly related with operating cash flow. Model diagnostic test show P=0.000, R2=63% and a wald-x^2=34.54. This result confirmed that the model is positively significant and displayed a good fit.

Discussions

This study explored quality of environmental and social information reporting of LNFCN and examine the impact on their OCFL. Empirical results of the study show that quality of environmental information disclosure (EIDQ) concerning BDV and EMS are positive and significantly improve OCFL of LNFCN. This implies that accurate information disclosure on investment made by companies in technology to reduce Green House Gas (GHG) attract finance capital that improved OCFL. Environmental information disclosure that addresses the concern of stakeholder follows stakeholder theory. Result of this study conform with study of Moreno, *et al.*, (2025) which suggest that credible social information disclosure enhanced firm's financial performance. However, this finding is inconsistent with the study of Tamunotonye and Ifeanyi Chukwu (2023)

Concerning the regression result of quality of social sustainability information disclosure and the impact on OCFL, findings indicated significant positive relationship between CHS (0.1822 at 5% LOS), public policy (0.2941 at 1% LOS) and operating cash flow (OCFL). This implies that information with respect to corporate commitment towards addressing safety of customer at all level of product life cycle and use of sustainable managed renewable resource, as well as corporate participation and supports for national sustainable development are substantively reported. This sustainability friendly action of companies and its comprehensive disclosure improve the reputation of the reporter and earn them competitive advantage that led to higher sales and more finance capital that improved OCFL. Results of CHS, PP and OCFL is consistent with the stance of stakeholder theory (ST). Findings are consistent with study of Adebayo, *et al.*,

(2024). However, the results make a significant different from the study of Tamunotonye and Ifeanyi Chukwu (2023).

Similar to the regression result secured above, significant positive relationship was obtained between earnings, company size and OCFL. This implies that higher earning and size of the company usually influence significant positive relationship between EIRQ and OCFL. Result of sustainability information quality of PSL, Marketing communication and local community revealed positive association with OCFL, however, the positive association is not statistically justified.

Conclusions and Recommendation

Based on the empirical outcome of this study, it is concluded that company that genuinely participated and accurately communicated their ESI in a manner consistent with GRI, G3 quality reporting guideline, are rewarded with improved financial success indicated in enhanced OCFL. Relying on findings, the study recommends that ESI should be explicitly reported and quantified in monetary term to attract finance capital of sustainability conscious investors thereby grow company OCFL. It is also recommended that sustainability sensitive companies should improve the quality of their ESI through investors engagement to identified and addressed their concern and expectation and comprehensively disclosed them to attract finance capital that will boost company's OCFL.

References

Abdulsalam, S. T. (2022). *Sectoral Analysis of Social and Environmental Disclosure Quality and Financial Performance of Listed Companies in Nigeria* (Doctoral dissertation, Kwara State University (Nigeria).

Abubakar, M. Y., Kaura, A. A., Tanko, G. I., & Abatcha, B. M., (2022). Sustainability Reporting and Financial Performance In Nigeria: A Review of Variables. *UMYU Journal of Accounting and Finance Research* Vol. 4 (1)

Adebayo, A. P., Omonuk, J. B., & Kinsley, O. O. (2024). Sustainability Reporting and Financial Performance of Listed Agriculture & Natural Resources Firm in Nigeria. *International Journal of Social Science & Management Science, 7* (4), 9422.

Ali, A., & Jadoon, I. A. (2022). The value relevance of corporate sustainability performance (CSP). *Sustainability*, *14*(15), 9098. https://doi.org/10.3390/su14159098

Almeyda, R., & Darmansyah, A. (2023).The Influence of Environmental. Social, and Governance Disclosure on Firm Financial Performance. *IPTEK Journal of Proceedings Series*, (5), 278-290

Alam, Z & Tariq, Y. B. (2022). Quality of Environmental Sustainability Reporting and Financial Performance: Evidence from Pakistan. *International Journal of Business and Managt*, *3*, (03)

Amahalu, N. N., & Okudu, C. C. (2023). Environmental Cost Disclosure and Productivity of Quoted Oil & Gas Firm In Nigeria. *International Journal of Multidisciplinary Research and Growth Evaluation*, *4*(3), 684-690.

Dewi, A., & Widyawati, L. (2023). The relationship between Sustainability Performance and financial Performance with External Assurance as Moderating Variable in Indonesian Listed Companies "*In IOP Conference Series: Earth and Environmental Science,* Vol. 1199 (1) 012025 IOP Publishing

Gujarati, D.N. (2003), Basic Econometrics, 4th ed., McGraw Hill United States Military Academy, West Point, NY.

Habek, P., & Wolniak, R., (2015). Factors influencing the development of CSR reporting practices: Experts' versus preparers' points of view. *Engineering Economics*, *26*(5), 560-570.

Harymawan, I., Nasih, M., Ratri, M., Salsabilla, A. & Putra, F. K. G. (2020). External Assurance on Sustainability Report Disclosure and Firm Value: Evidence from Indonesia and Malaysia. *Entrepreneurship and Sustainability Issues*, *7* (3), 1500-1512.

Helfaya, A., Whittington, M., & Alawattage, C. (2019). Exploring the quality of corporate environmental reporting: Surveying preparers and users' perceptions. *Accounting, Auditing & Accountability Journal*, *32*(1), 163-193.

Ismail, H., Saleem, M. A., Zahra, S., Tufail, M. S., & Ali, R. A. (2021). Application of global reporting initiative (GRI) principles for measuring quality of corporate social responsibility (CSR) disclosure: Evidence from Pakistan. *Sustainability*, *13*(20), 11409.

Krejcie, R.V. & Morgan, D.W., (1970). Determining sample size for research activities. "What sample size is 'enough' in internet survey research"? Interpersonal Computing and Technology: An electronic Journal for the 21st Century. Retrieved from: http://www.emoderators.com/ipct-j/1998/n3-4/hill.hmtl 13/10/2021

Michelon, G., Pilonato, S., & Ricceri, F. (2015). CSR reporting practices and the quality of disclosure: An empirical analysis. *Critical perspectives on accounting*, *33*, 59-78.

Moreno,G. C. D. L, De Souza, M. P., Hein, N., & Giannetti, B. F., (2025). Sustainability Report Credibility and Market Performance of Brazilian Companies. *Social Science & Humanities Open*, 11 101471

Nwaigwe, N. G., Ofoegbu, G. N., Dibia, N. O., & Nwaogwugwu, C. V. (2022). Sustainability disclosure: Impact of its extent and quality on value of listed firms in Nigeria. *Cogent Business & Management*, *9* (1), 2079393.

Nweze, A. U., & Nwadialor, E. O. (2020). Effect of social and environmental disclosures on   performance of non-financial firms in Nigeria. *Journal of Accounting and Financial Management*, *6*(1), 40-58

Ohlson, J. A. (1995). Earnings, book values, and dividends in equity valuation. *Contemporary Accounting Research,11(2)*, 661-87.

Okon, L. J., Philip, I. B., & Okpokpo, A. S. (2023). Sustainability Reporting and Financial Performance Sustainability Reporting and Financial Performance. *AKSU Journal of Administration and Corporate Governance (AKSUJACOG)*, *3*(1).

Rachmat, L. M., Sumirat, E., & Nainggolan, Y. A. (2024). The Influence of Sustainability Disclosure on Financial Performance: A Study of Indonesian Firms. *International Journal of Current Science Research and Review*, *7*(03).

Rahman, M., Rasid, S. Z. A., Basiruddin, R., (2020). Corporate Social Responsibility Reporting and Value Relevance of Banking Sector in Bangladesh. *Journal of Sustainability & Management 15 (5)* 192-214

Riso, V., Cantele, S., & Bracci, E., (2025). Sustainable but Not Accountable: A Quality Assessment of Sustainability Disclosure in Benefit Corporation. Business Strategy and The Enviroment

Shaban, O. S., & Barakat, A. (2023). The Impact of Sustainability Reporting on Company's Financial Performance: Evidence from the Emerging Market. *Journal of Governance and Regulation* 12(4).

Tamunotonye, P. G., & Ifeanyichukwu, O. O. (2023). Corporate Sustainability Reporting and Financial Performance of Listed Manufacturing Companies in Nigeria. *Research Journal of Management Practice| ISSN*, *2782*, 7674.

Wooldridge, J,M., (2010). Econometric analysis of cross section & panel data. Cambridge, MA: The MIT press.