VALUE RELEVANCE OF SUSTAINABILITY REPORTING OF LISTED INDUSTRIAL AND CONSUMER GOODS COMPANIES IN NIGERIA

1

OKONKWO Okechukwu[1] & IBRAHIM Hassan Jimba[2]
[1&2]Department of Accounting, Nasarawa State University, Keffi - Nasarawa State

Abstract

This research examines the effect of Sustainability Reporting (SR) on firm value of listed industrial and consumer goods companies (LICGC) in Nigeria. It adopts ex-post facto research design and a population of 34 (13 industrial goods and 21 consumer goods) companies as at 31st December 2022 listed on the Nigerian Exchange Limited (NGX). Thirty-two (32) firms were selected as sample size using purposive sampling method. The study period was from 2013 to 2022, while the technique for data analysis was multiple regression. Content exploration was utilized to obtain sustainability reporting index from the annual report of the sampled companies. Finding revealed that environmental, social, and corporate governance SR have significant and positive impact on company's value while economic SR has no significant influence on company's value. The study recommended the disclosure of sustainability reporting as this will spur a better regulatory rating in addition to improve share price.

Keywords: Sustainability Reporting, Global Reporting Initiative, Firm Value, Environmental Disclosure

1. Introduction

Companies have the main goal of boosting its value (Kurniawati, Riwayati & Firdaus, 2022). Khaghaany, Kbelah and Almagtome (2019) posit that in identifying the market value of the shares of a company, accounting data is crucial and inevitable. Reported information is said to have value and is relevant for decision making by investors when stock price responds to accounting information, (Echobu, Ekundayo & Abu, 2021). The connectivity between share price and accounting information makes it value relevance. Companies are paying special attention on becoming sustainable which has led to a significant increase in the last decade on studies on sustainability reporting (Bartlett, 2012). Especially so, given that business expansion in the era of globalization is now centered on a combination of financial, social, and environmental factors rather than just financial observations or a company's status (Mulya & Prabowo, 2018; Werastuti, Atmadja & Adiputra, 2021).

Nguyen (2020) posits that the public consciousness as regards to SR has made companies to reveal their efforts and actions being taken toward sustainability disclosure. The study of Husnaini and Basuki (2022) noted that there is always a decline of information asymmetry between companies and investors where a company disclose more on sustainability reporting, making it an avenue for companies to promote corporate governance.

Some countries such as Indonesia, France and South Africa have made SR mandatory, however, in many other countries, SR is still mainly in the purview of voluntary reporting (Echobu et al., 2021; Elena, 2021; Endiana & Suryandari, 2021). Firms have a tendency to reveal sustainability information willingly for two reasons: the first reason is to ensure uninterrupted access to resources and markets thereby making the company to conform to social expectation (i.e. increased customer patronage, access to labour and capital market). The second reason is that there is increase in capital market participants from the incremental information on SR, this makes investors to assess the risk profiles and financial forecasts more reliable, which in return leads to higher share price (Swarnapali & Le, 2018).

Over the past ten years, traditional financial disclosure has come under tremendous criticism for failing to accurately reflect all a firm's value (Uwuigbe, 2018; Buallay, 2020). This argument, together with the growing demand for non-financial reporting, the rise in ecological consciousness around the world, and the push for sustainable economic growth, are motivating businesses to make their operations more environmentally conscious and sustainable. Indriawati and Yanti (2021) opined that the essence of reporting the components of SR which are: environmental, social, and economic activities in annual reports is to promote transparency, responsibility, and accountability of the company to shareholders and prospective investors. One of the rudiments and crucial factor for all investors is the company's market value (Hendra, Yahya & Absah, 2022; Gift, Chukwubuikem & Ndubuisi, 2021).

SR is based on the Standard of the Global Reporting Initiative (GRI). Many studies on SR have been conducted after GRI Guideline was published (Sutopo, Kot, Adiati & Ardila, 2018; Singh & Agrawal, 2022; Hariyani, Wahyuandari & Salatnaya, 2022). A non-governmental organisation with headquarters in the Netherlands is the GRI. It started in 1997 as a project of the United Nations Environment Program and became autonomous in 2002. According to the study of Emeka-Nwokeji and Osisioma (2019), systemic risks and the true expenses associated with operating in today's world are not adequately highlighted by current company reporting, and global climate change and the successive loss of resources, financial crisis, and economic downturn have elevated essential doubts about the operation of the capital markets. To what extend has sustainability disclosure influence firm value?

In other to answer the, this study found that there has been considerable controversy regarding the genuine effect of SR on company's market value, frequently due to the quality of the qualitative data in SR. Moreover, SR standards are still voluntary, and Nigeria's level of reporting is quite low (Emeka-Nwokeji & Osisioma, 2019). The need to include sustainability disclosure in other to obtain quality report

beyond financial measures as in the case of shareholders of Cadbury Nigeria Plc is paramount, the shareholders discovered that the company's shares they acquired was based on audited financial statement that was altered and misleading.

The disagreement of different studies on whether company can make the most of their value if they execute SR couple with the heterogeneous results from different studies gave rise to this study. For instance, Almaqtari, Elsheikh, Tawfik and Youssef (2022), Bartlett (2012), Emeka-Nwokeji and Osisioma (2019) discovered that environmental sustainability disclosure has a significant favorable influence on market value of firm, while Atanda, Osemene and Ogundana (2021) reported a significant adverse effect. The study of Atanda et al. (2021), Bartlett (2012), Almaqtari et al. (2022) opined that social sustainability disclosure has a significant positive effect on firm value as against the opposing opinion of Emeka-Nwokeji and Osisioma (2019) with a negative and not significant effect. Finally, it was discovered from the review of literature that the empirical evidence of economic and corporate governance sustainability disclosure remains scanty in emerging economy such as Nigeria, and the emphasis has mostly been on advanced economies.

A study of this nature that aimed at determining the effect of SR (denoted by environmental, social, governance and economic) on company's value (represented by Tobin's Q score) of Listed Industrial and Consumer Goods Companies (LICGCs) in Nigeria have the hypotheses of the study below:

Ho_1: Environmental sustainability disclosure (EnSD) has no significant effect on firm value of LICGCs in Nigeria

Ho_2: Social sustainability disclosure (SoSD) has no significant effect on firm value of LICGCs in Nigeria

Ho_3: Corporate governance sustainability disclosure (CgSD) has no significant effect on firm value of LICGCs in Nigeria

Ho_4: Economic sustainability disclosure (EcSD) has no significant effect on firm value of LICGCs in Nigeria

2. Review of Literature

2.1   Conceptual Review

According to Loh, Thomas and Wang (2017), SR refers to the act of making non-financial information known to the public, this has to do with the publication of an entity's environmental, social, governance and economic activities, in a strategic manner. The study of Mulya and Prabowo (2018) postulated that the intention of sustainability report is to communicate company's commitment towards the economy,

environment, and social performances to the stakeholders and communities in a transparent way. The report provides stakeholders with a deeper picture of the firm's sustainable development initiatives.

Bartlett (2012) infer that SR has to do with company's public disclosure about their environmental, social, and governance measures and the strategies mapped out by the company to deal with the associated risks of SR. It refers to the incorporation of the Environmental, Social, and Governance (ESG) component into investing analysis, securities selection, portfolio creation, and risk management. (Emeka-Nwokeji & Osisioma, 2019). Kurniawati et al. (2022) observed that the SR is a different document that is disclosed from the annual report and has a voluntary nature. SR communicate to stakeholders about company's accomplishments and effort in becoming accountable for their actions and it include information on all topics that the annual report is unable to cover.

The study of Atanda et al. (2021) elaborated on social, environmental, and economic SR. Economic sustainability is the efficient use of available resources through a variety of tactics, allowing for the long-term achievement of a positive and responsible balance. It may discuss the reporting company's financial performance as well as the company's effects on the financial situations of its stakeholders and the international economic systems in which it conducts business. Financial and non-financial reporting are both necessary for environmental sustainability. Non-financial reporting covers a variety of topics related to environmental health and safety, including energy use, waste management, biodiversity, and carbon emissions.

Human rights, employment practices, business ethics, labour and industrial relations, anti-corruption practices, including non-discrimination policy, lobbying and advocacy, employees' safety and training, and local employment opportunities, particularly for hosts, are all part of social sustainability (Halimah, Irsyanti & Aini, 2020)

Emeka-Nwokeji and Osisioma (2019) viewed company's value as an economic degree which reflects the market value of an enterprise. According to Indriawati and Yanti (2021), the degree to which a company utilizes its resources adequately will reflect on company's share price and this is the investor's perception of company's value. This infers that the greater the stock price, the greater the worth of the company. According to Hendra et al. (2022), corporate value is the stock's market value. The stock market price, which represents investment choices, financing, and asset management, it shows the wealth of shareholders and the business itself. Kurniawati et al. (2022) stated that the stock price, which reflects the market's assessment of the firm's performance, can be used to determine the worth of a business.

The stock price equilibrium is at the point where supply and demand for the stock are balanced in the market.

2.2   Empirical Review

The study of Emeka-Nwokeji and Osisioma (2019) examined the extent to which SR of 93 non-financial companies listed on the Nigerian Stock Exchange (NSE) between 2006 and 2015 affect market value. The elements of SR used were environment, social, and governance. The proxy for firm market value was Tobin's Q, while the availability of each disaggregates components from the sustainability disclosure index of each firm using content analysis was used to measure environment, social and governance sustainability disclosure. Overall sustainability disclosures had considerable positive significant impact on business value, according to the results of the pooled ordinary least squares model. According to the individual hypotheses examined, corporate governance and environmental sustainability disclosure have a considerable positive influence on a company's market value, however social sustainability disclosure has an insignificant negative impact.

Atanda et al. (2021) considered the consequence of SR from three criteria (environmental, social, and economic) on firm value. Tobin's Q method was utilized to measure company's value. To assess the SR of 10 listed deposit money banks in Nigeria for the years 2014 to 2018, a sustainability disclosure index was created by utilizing indicators from the GRI SR framework, the total indices for each sustainability disclosure facet were simply averaged. The outcomes of the ordinary least square fixed effects regression showed that economic sustainability disclosure had an insignificant positive impact on company's value, social sustainability disclosure had a significant positive impact, and environmental sustainability had a significant negative impact. Thus, banks with significant environmental sustainability operations typically have lower firm values; also, increased social sustainability disclosure raises firm values, as demonstrated a rise in bank reporting of economic sustainability has no statistically significant impact on changes in company value.

For 10 different industries, Bartlett (2012) looked at the influence of corporate SR on business valuation from 2008 to 2009. Linear regression was used for data analysis. The closing stock price served as a stand-in for firm value, and sustainability reporting score served as a stand-in for the independent variable. The outcome of cross section valuation showed that market value is significantly connected favourably with both the environmental and social components of SR.

A study was undertaken by Almaqtari, et al. (2022) to establish the impact of several sustainability indicators on the value of businesses. 319 companies were employed in the study, which was conducted

from 2016 to 2021. From the 319, 81 were from Turkey and 238 were from the United Kingdom (UK). Firm value was represented by Tobin's Q. The ESG score was used to calculate ESG. Findings showed a significant positive effect of ESG indicators on company's value. What this means is that Tobin's Q is far more correlated with ESG measures than with stock prices or market-to-book value.

It was the goal of Mulya and Prabowo's (2018) investigation to determine how sustainability reporting affects firm value. One of the things they looked at was reporting on economic sustainability. Economy was assessed using content analysis from the sustainability reporting index, and company value was assessed using the Tobin's Q technique between 2014 and 2015. They employed 74 Indonesia Stock Exchange (ISE) listed businesses. The outcome of the regression analysis showed that reporting on economic sustainability has a significant positive effect on firm value.

Endiana and Suryandari (2021) sought to provide empirical proof of the value relevance of sustainability reporting for investors purchasing or disposing of stock as well as how it impacts on business value. 306 firms listed on the (ISE) between 2017 and 2020 made up the study's sample. To calculate firm value, each company's market value was measured using four months after the end of its fiscal year. For SR, the degree of disclosure score derived from the GRI Standards indicator of sustainability reporting was used. The study's findings revealed that SR significantly increases a company's market worth. In other words, the high market value of a company is because of the greater rate of transparency of SR. Moreover, investor's view SR data as having value-relevant information when making investment decisions.

The goal of the study by Kurniawati et al. (2022) was to diagnose empirically the influence of SR disclosure on the enterprise value of 11 manufacturing companies quoted on the (ISE) from 2016 to 2020. Tobin's Q ratio was used to calculate business value, and the GRI Sustainability Reporting Index was utilised to gauge SR. The outcome of the regression study demonstrated that SR significantly increases firm value.

According to the study of Jeriji and Nasfi (2022), sustainability reporting is required in South African and French businesses. As a result, their research looked at how mandated SR assurances affect firm value from the 2007 to 2018 timeframe. 83 French listed firms on the SBF120 index and 88 South African listed companies on the Johannesburg Stock Exchange (JSE) were used to test the hypothesis using fixed effects ordinary least squares panel regression. Company's value was assessed using the Tobin's Q metric. The test resulted in a high significant positive link between SR and business value. Like this, Thompson, et al. (2022) looked at the value relevance of SR for the top 100 companies that generated the most wealth and value for shareholders on the JSE in South Africa from 2015 to 2019. A strong

positive link between SR and business value, as proxy by Tobin's Q, was found in the fixed-effect panel data study.

Mutiha (2022) ascertained if there is a meaningful correlation between company value and the quality of SR disclosure. Tobin's Q was utilised as a stand-in for firm worth, and a score of the disclosure of the SR quality served as a stand-in for SR disclosure. In total, 40 listed non-financial organisations that published sustainability reports in 2019 and 2020 was used as the study's observations. It was found using the panel data regression method that there is a significant positive link between the quality of SR and equity share price.

Loh et al. (2017) did research on the link between SR and firm value of 502 sample mainboard-listed companies on the Singapore Exchange (SGX). SR score from GRI was used, 1 if a company discloses any sustainability reporting indicator, and 0 if there is non-disclosure. Stock market value was used to measure firm value. From the weighted least squares (WLS) regression, it was discovered that SR is positively related to company's market value.

Swarnapali and Le (2018) research sought to determine whether corporate SR may influence company's value in a developing nation like Sri Lanka. 220 companies listed on the Colombo Stock Exchange were used in the study. A binary variable was utilized to measure the independent variable, which is SR, score 0 was assigned to companies that did not submit sustainability reports and 1 for those that did. Tobin's Q was utilised in the study to calculate company value. Data outcome disclosed a strong and positive correlation between business market value and sustainability reporting.

To determine the link between SR and corporate value for 330 non-financial quoted companies on the Vietnamese stock exchange between 2015 and 2019, Nguyen, Dang, and Ta (2022) conducted a study. For evaluating firm value and SR, Tobin's Q value and GRI reporting from the economic, environmental, and social dimensions were employed, respectively. A significant and positive link between GRI reporting and company's value was revealed by the regression analysis.

Meini and Chotimah's (2022) research focused on the factors that affect corporate value. From 2016 to 2020, panel data of 37 businesses listed on the (ISE) was used, and Warp plc was used to process the data. The Tobin's Q score which was the proxy for corporate value was found to be positively and insignificantly impacted by the SR disclosure index. In the same vein, Hendra et al. (2022) investigated how 47 mining sector company value listed on the (ISE) between 2015 and 2019 is affected by SR. Firm value was assessed using the Tobin's Q metric. The SR was determined using content analysis from the

sustainability index. Multiple linear regression analysis and Smart PLS software were the analytical techniques used. The results demonstrated that SR has an insignificant positive impact on business value.

The SR disclosure and value significance of 519 Saudi companies listed on Tadawul were analysed by Haidar and Sohail (2021). While GRI reporting was used to quantity SR disclosure, Tobin's Q score was employed to determine business worth. Regression analysis was the method used for data analysis. The results demonstrated that GRI reporting had an insignificant positive impact on firm value.

From 2013 to 2017, Nguyen (2020) investigated the connection between SR and firm value for 97 sizable publicly traded German companies. Global Reporting Initiative (GRI) was used to determine SR and return on asset was used to determine firm value (ROA). A significant negative link between business worth and the amount of sustainability reporting was found through regression analysis.

An investigation on the influence of SR on corporate value was conducted by Husnaini and Basuki (2022) from 2014 to 2017. 494 companies were employed in the study, which was undertaken in five Association of Southeast Asian Nations (ASEAN) nations, comprising Indonesia, Malaysia, Singapore, the Philippines, and Thailand. Tobin's Q was used to quantify company value while content analysis based on the GRI was used to measure SR. SR has an insignificant negative effect on company's value in accordance with the hypothesis tested that was done from the regression of Ordinary Least Square (OLS) method.

Between 2016 to 2018, Indriawati and Yanti (2021) examined whether SR disclosure has an impact on the value of 19 non-financial companies quoted on the ISE. The price to book value ratio was used to calculate the firm's value. The price to book value ratio reveals how much a company's shares are worth in the market when valued at their book value. The SR disclosure index was used to quantify the disclosure of SR. The outcome of the regression analysis showed that the impact of SR on business value is both negative and insignificant.

2.3   Theoretical Framework
Legitimacy Theory
This theory believes that there is an agreement between a firm and the society, which is legally binding, the former should ensure that all its actions benefit everyone in the society within the jurisdiction in which the firm operate daily. If the activities of a company will impact negatively on the community they operate,

management is expected to voluntarily disclose the impact (Atanda et al., 2021). Modern legitimate theory began with Hogner publication on an article in the early 1980s, the thrust of the article was on social and environmental accounting practice. Haidar and Sohail (2021) opined that long surviving firms will always ensure that their operations are legal, in accordance with the law and is accepted by the society. Disclosing information voluntarily is one of the various forms managers of company legitimize the existence of their company. The legitimacy theory is predicated on the idea that society and enterprise have a social contract.

Legitimacy vacuum exists when there is a variance between a company's operations and how the society expect the firm to operate (Thompson et al., 2022). Firms normally use voluntary disclosure of information to reduce the legitimacy gap. Voluntary disclosure is that information not mandatory by law, however, is disclosed based on the firm discretion. Since legitimacy theory centers on social contract, by which companies execute a sequence of activities that society want. It is always difficult to established social contract. This is because there are different expectations from different stakeholders in the society. Nonetheless, it is frequently connected to a broad range of tacit and apparent societal demands pertaining to how companies must conduct their operations. According to Emeka-Nwokeji and Osisioma (2019), tacit demands are those that are not legislated and vary relying on the individual because they can be interpreted variously by each person. Explicit demands are those that are mandated by law. The significance of legitimacy theory to firm value and sustainability reporting is on the practical implementation of social contract that exists between business and society by a way of reporting of environmental, social and governance matters to the society. Disclosure undoubtedly affects a company's market value.

3. Methodology

The ex-post facto research technique is used in this empirical research. The population comprised of 34 (13 industrial goods and 21 consumer goods) firms as of 31st December 2022 listed on the Nigerian Exchange Limited (NGX) of which thirty-two (32) of them were chosen as sample using purposive sampling technique. The two major criteria used for selecting the 32 firms were first, each of the firm must have a constant accounting year end within the ten years period of this study and secondly, each firm should not have more than six months of trading halt. Secondary data from each of the firm's financial statement was used from 2013 to 2022. The technique utilized to analyse the data was multiple regression.

The regression equation utilised in this research is depicted in the model below:

$FVA_{it} = F (ENVI_{it}, SOCI_{it}, CGOV_{it}, ECON_{it}, \mu_{it})$.. (1)

The model can be expressed as:

$FVA_{it} = \beta_0 + \beta_1 ENVI_{it} + \beta_2 SOCI_{it} + \beta_3 CGOV_{it} + \beta_4 ECON_{it} + \mu_{it}$...................................(2)

Where: "FVA = Firm Value; ENVI = Environmental sustainability disclosure; SOCI = Social sustainability disclosure; CGOV = Corporate governance sustainability disclosure; ECON = Economic sustainability disclosure; β = coefficient of the parameter; it = Time coefficient; μ = error term.

Table 1: Description and Measurement of Constructs

Variable	Variable Type	Measurement Parameters	Sources
FVA	Dependent	The summation of the current equity value plus the book value of debt divides by company's total assets Tobin's Q = $\frac{MVE + BVD}{TAS}$	Husnaini and Basuki (2022), Haidar and Sohail (2021), Meini and Chotimah (2022), Hendra et al. (2022), Mutiha (2022)
ENVI	Independent	Sustainability Reporting Disclosure Index (SRDI) SRDI = $\frac{\text{sum of items revealed}}{\text{sum of items to be revealed}}$	Bartlett (2012), Endiana and Suryandari (2021), Ashimwe, Buertey and Kim (2022)
SOCI	Independent	SRDI = $\frac{\text{sum of items revealed}}{\text{sum of items to be revealed}}$	Emeka-Nwokeji and Osisioma (2019), Nguyen, Dang, and Ta (2022), Kurniawati et al. (2022)
CGOV	Independent	SRDI = $\frac{\text{sum of items revealed}}{\text{sum of items to be revealed}}$	Almaqtari, Elsheikh, Tawfik and Youssef (2022), Hendra et al. (2022)
ECON	Independent	SRDI = $\frac{\text{sum of items revealed}}{\text{sum of items to be revealed}}$	Atanda et al. (2021), Mulya and Prabowo (2018), Indriawati and Yanti (2021)

Source: Author's Compilation (2023)

Table 2: GRI Standards

Environmental	Social	Corporate Governance	Economic
Carbon emissions	Product responsibility	Anti-corruption and code of ethics	Market presence
Biodiversity	Training and education	Governance processes	Value and supply chain
Water	Human rights	Code of corporate governance	Indirect economic impact
Energy	Labour and industrial relations	Effectiveness of risk management processes	Economic performance
Material	Employees and health safety	Conflicts of interest	Risk management
Transportation	Philanthropy	Delegating authority Process	procurement practice

Environmental compliance	Customer health safety	Communicating critical concerns	Taxes
Waste management	Security practices	Review of economic, environmental, and social topics	**Anti-competitive Behavior**

Source: Loh et al. (2017), Atanda et al. (2021), Werastuti, et al. (2021), Echobu et al., 2021

Diagnostic Tests

Hausman test for fixed and random effects, correlation matrix, descriptive statistics, Variance Inflation

Factors (VIF) and heteroskedasticity test were performed as part of this article's diagnostic procedures.

Table 3: Descriptive Statistics

	FVA	ENVI	SOCI	CGOV	ECON
Mean	0.005831	2.925205	0.736212	1.166689	0.837684
Median	0.006067	3.000000	0.731720	1.176091	0.602060
Maximum	0.007003	3.176091	0.839345	1.397940	1.301030
Minimum	0.004019	2.000000	0.611664	1.000000	0.301030
Std. Dev.	0.000857	0.289059	0.058066	0.104376	0.341349
Skewness	-0.799704	-1.728315	0.252039	-0.008421	-0.031726
Kurtosis	2.518959	5.164457	1.901263	2.496489	1.217885
Jarque-Bera	37.19340	221.7755	19.48424	3.384095	42.39946
Probability	0.000000	0.000000	0.000059	0.184142	0.000000
Sum	1.865781	936.0657	235.5878	373.3406	268.0588
Sum Sq. Dev.	0.000234	26.65403	1.075567	3.475329	37.16958
Observations	320	320	320	320	320

Source: Eviews 10 output.   The descriptive data are displayed in the table above.

Table 4: Correlation Matrix

	FVA	ENVI	SOCI	CGOV	ECON
FVA	1.000000				
ENVI	0.530228	1.000000			
SOCI	-0.057550	-0.273627	1.000000		
CGOV	-0.017501	0.248709	0.237892	1.000000	
ECON	0.282758	0.535831	-0.337704	-0.048974	1.000000

Source: Eviews 10 output

There were no strong relationships visible in the correlation matrix.

Table 5: VIF

Date: 01/18/23 Time: 02:45			
Sample: 1 320			
Included observations: 320			
	Coefficient	Uncentered	Centered
Variable	Variance	VIF	VIF
ENVI	0.030808	170.3623	1.642354
SOCI	0.158207	202.8792	1.250359
CGOV	0.017607	154.8346	1.225609
ECON	0.020508	10.72562	1.523268
C	0.359207	378.4205	NA

Source: Eviews 10 output

The purpose of the multicollinearity test from table 5 is to determine if there is an interaction between the independent constructs that can skew the findings. Using VIF, the outcome supports the absence of multicollinearity between the independent constructs. This indicates that there is no multicollinearity between the exogenous constructs because the centered VIF is less than 10.

Table 6: Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-stat.	32.28032	Probability $F(4,315)$	0.1401
Obs*R^2	93.03497	Probability Chi^2-(4)	0.1632
Scaled explained SS	106.9035	Probability Chi^2-(4)	0.2176

Source: Eviews 10 output

The heteroskedasticity test, shown in table 6 above, is carried out to determine whether error variability is constant. The need of constant variance is one of the underlying premises of linear regression. The Breusch-Pagan-Godfrey test was used to determine whether this premise was broken. The outcome showed that there was no heteroskedasticity because the likelihood of the chi square was greater than 5%, as indicated by the probability of chi-square being 0.1632 (16.32%), in other words, at 5% level of significance, it is insignificant. This suggests that the results will not be impacted by the error of variability.

Table 7: Hausman Test

Correlated Random Effects - Hausman Test			
Equation: Untitled			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	30.678766	4	0.0000

Source: Eviews 10 output

The hausman test from table 7 was used to take a decision between cross section random effect and fixed effect in the OLS regression. Use fixed effect if the probability is less than 5%; otherwise, use cross

section random effect. The hausman test probability value is less than 5%, which shows that the fixed effect regression model is best suited for the collected data.

Table 8: Panel Least Squares

Dependent Variable: FVA				
Method: Panel Least Squares				
Date: 01/18/23 Time: 02:12				
Sample: 2013 2022				
Periods included: 10				
Cross-sections included: 32				
Total panel (balanced) observations: 320				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
ENVI	0.000818	0.064805	12.62006	0.0000
SOCI	0.002349	0.000531	4.426356	0.0000
CGOV	0.000490	0.000120	4.073255	0.0001
ECON	0.000102	0.056805	1.789247	0.0746
C	0.001052	0.000388	2.712583	0.0071
	Effects Specification			
Cross-section fixed (dummy variables)				
R^2	0.967224	Mean dep. var		0.005831
Adjusted R^2	0.963185	S.D. dep.t var		0.000857
S.E. of regression	0.000164	Akaike info criterion		-14.48234
Sum squared residual	0.000006	Schwarz criterion		-14.05840
Log likelihood	2353.175	Hannan-Quinn criter.		-14.31305
F-stat	239.4525	Durbin-Watson stat		2.034000
Prob(F-statistic)	0.000000			

Source: Eviews 10 output

The regression model with all the constructs examines overall significance using the F-statistic. The model has a good fit, given the prob. F-statistic value of 0.00 is less than 0.05. The adjusted R-square of 0.96 shows that 96% of the variability in company value is described by the study's factors, while only 4% is accounted by additional constructs that were not captured in this study.

The first finding from table 8 showed a significant positive effect of environmental sustainability disclosure on company's value for listed industrial and consumer products companies in Nigeria (Prob = 0.0000, Coefficient = 0.000818). Thus, publicly traded manufacturers of consumer goods and industrial goods with a high level of disclosure of environmental sustainability are likely to generate higher market value. The hypothesis, which states that environmental sustainability disclosure has no significant effect on the value of companies of LICGCs in Nigeria is rejected. The results of Almaqtari, et al. (2022), Nguyen, et al. (2022), and Bartlett (2012) documented evidence of a significant positive effect of environmental sustainability disclosure on company's value.

The second finding from table 8 showed that social sustainability disclosure significantly increases firm value of LICGCs in Nigeria (Prob = 0.0000, Coefficient = 0.002349). This suggests that the greater the disclosure of social sustainability, the higher the company's value of LICGCs. The alternative hypothesis that states that social sustainability disclosure has significant effect on firm value of LICGCs in Nigeria is accepted. This finding agrees with the studies of Atanda et al. (2021), Bartlett (2012), Almaqtari et al. (2022), and Nguyen et al. (2022) that found a significant positive influence of social sustainability disclosure on business value.

The third finding from table 8 showed that corporate governance sustainability disclosure significantly increases the firm value of LICGCs in Nigeria (Prob = 0.0001, Coefficient = 0.000490). This suggests that more disclosure of information about corporate governance sustainability will lead to noticeable impact on business value. The alternative hypothesis that states that corporate governance sustainability disclosure has significant effect on firm value of LICGCs in Nigeria is accepted. The findings of Emeka-Nwokeji and Osisioma (2019), Almaqtari, et al. (2022) who documented evidence of significant positive influence of corporate governance sustainability disclosure on business value support this finding.

Table 8 further showed that economic sustainability disclosure has an insignificant positive impact on the share price of LICGCs in Nigeria (Prob = 0.000102, Coefficient = 0.0746). This suggests that increasing the disclosure of economic sustainability will not, on average, raise value of the quoted companies. The hypothesis that states that the disclosure of economic sustainability has no significant effect on the firm value of LICGCs in Nigeria is accepted. This outcome is in line with the finding of Atanda et al. (2021), who found that disclosure of economic sustainability had an insignificant positive effect on business value.

4. Conclusion and Recommendations

According to the investigated hypotheses, economic sustainability disclosure has an insignificant but positive impact on the firm value of LICGCs in Nigeria, whereas environmental, social, and corporate governance sustainability reporting have significant and positive effect. According to the study's findings, disclosure of environmental, social, and corporate governance sustainability will significantly boost the listed company's value. Environmental, social, and corporate governance sustainability reporting have impact on the value of the listed companies.

The recommendations are helpful to stakeholders in sustainability reporting, it stems from the theoretical, practical, and regulatory implications.

Environmental sustainability reporting is crucial in the evaluation of SR index and this study has proved that it affects firm value positively, hence, companies should ensure adequate disclosure of

environmental sustainability as contained in the GRI as it will enhance firm value, this will also spur a better regulatory rating.

The practical implication of social sustainability reporting is that LICGCs in Nigeria engage in social sustainability reporting in other to legitimize their operation. Investors should further examine customer health safety, product responsibility and human rights violation as these are among the key areas that bind a company and the society.

This study discovered that there was no sufficient corporate governance disclosure on effectiveness of risk management processes and conflict of interest in LICGCs in Nigeria. Companies should improve on the disclosure of effectiveness of risk management and conflict of interest to have an enhance share value.

Theoretical from this study, economic sustainability reporting is harmful to firm value, empirical studies should be conducted using different sectors to support this finding.

References

Almaqtari, A., Elsheikh, T., Tawfik, O., & Youssef, M. (2022). Exploring the impact of sustainability, board characteristics, and firm-specifics on firm value: A comparative study of the United Kingdom and Turkey. *Journal of sustainability*, 1-27.

Atanda, F., Osemene, F. & Ogundana, H. (2021). Sustainability reporting and firm value: evidence from selected deposit money banks in Nigeria. *Global journal of accounting,*   7(1), 47-68.

Bartlett, B. (2012). Effect of corporate sustainability reporting on firm valuation. *CMC Senior Theses.* Paper 489. http://scholarship.claremont.edu/cmc_theses/489.

Buallay, A. (2020). Sustainability reporting and firm's performance: Comparative study between manufacturing and banking sectors. *International journal of productivity and   performance management*, 69(3), 431-445.

Echobu, J., Ekundayo, O., & Abu, S. (2021). Sustainability reporting and value relevance of listed oil and gas companies in Nigeria. *Federal university wukari journal of accounting   and finance*, 3(5), 49-65.

Elena, N. (2021). The value relevance of non-financial reporting in determining the market value of equity. *The audit financial journal, chamber of financial auditors of Romania*, 19(162), 320-320.

Emeka-Nwokeji, N., & Osisioma, B. (2019). Sustainability disclosures and market value of firms   in emerging economy: evidence from Nigeria. *European journal of accounting, auditing,   and finance research*, 7(3), 1-19.

Endiana, I., & Suryandari, N. (2021). Value relevance of sustainability report: evidence from Indonesia. *Jurnal akuntansi dan keuangan Indonesia*, 18(2), 168-182.

Gift, N., Chukwubuikem, P., & Ndubuisi, A. (2021). Effect of sustainability reporting on financial performance of quoted industrial goods companies in Nigeria. *International journal of management studies and social science research*, 3(5), 265-280.

Haidar, H., & Sohail, R. (2021). Sustainability reporting disclosure and value relevance on listed Saudi firms. *Open journal of business and management*, 9, 1782-1804.

Halimah, N., Irsyanti, A., & Aini, L. (2020). The value relevance of sustainability reporting: comparison between Malaysia and Indonesia stock market. *The Indonesian journal of accounting research*, 23(3), 447 – 466.

Hariyani, D., Wahyuandari, W., & Salatnaya, L. (2022). Sustainability reporting and company's value. *Journal of accounting, finance, and auditing studies*, 8(1), 60-74.

Hendra, H., Yahya, I., & Absah Y. (2022). The effect of sustainability reporting, good corporate governance, and dividend policy on firm value with financial performance as an intervening variable in mining company listed on Indonesia stock exchange. *International Journal of Research and Review*, 9(7), 60-71.

Husnaini, W., & Basuki, B. (2022). ASEAN corporate governance scorecard: Sustainability reporting and firm value. *Journal of Asian finance, economics, and business, 7 (11),* 315–326.

Indriawati, F., & Yanti, N. (2021). Sustainability reports and its impact on firm value in non- financial companies: Evidence from Indonesia. *International journal of management studies and social science research*, 3(5), 42-50.

Jeriji, M., & Nasfi, A. (2022). The value relevance of mandatory sustainability reporting assurance. *South African journal of accounting research*, 2(2), 1-15.

Khaghaany, M., Kbelah, A., & Almagtome, A. (2019). Value relevance of sustainability reporting under an accounting information system: Evidence from the tourism industry. *African journal of hospitality, tourism, and leisure*, 8(1), 1-12.

Kurniawati, D., Riwayati, H., & Firdaus, A. (2022). Effect of sustainability report on manufacturing sector firm value with profitability as a moderation variable. *Dinasti international of digital business management*, 3(5), 755-765.

Loh, L., Thomas, T., & Wang, Y. (2017). Sustainability reporting and firm value: Evidence from Singapore-Listed Companies. *Journal of sustainability*, 1-12.

Meini, Z., & Chotimah, L. (2022). The effect of sustainability reporting disclosure and liquidity on company value with ownership concentration variables as moderating. *Budapest international research and critics institute-journal,* 5(3), 20417-20431.

Mulya, H., & Prabowo, H. (2018). The impact of sustainability reports toward the firm value. *European research studies journal volume,* 21(4), 637-647.

Mutiha, A. (2022). The quality of sustainability report disclosure and firm value: further evidence from Indonesia. Presented at the 5th international conference on vocational   education   applied science and technology Teluk Betung, Indonesia, 26–28 October 2022, 1-7.

Nguyen, D. (2020). An empirical study on the impact of sustainability reporting on firm value. *Journal of competitiveness,* 12(3), 119–135.

Nguyen, V., Dang, N., & Ta, Q. (2022). Relationship between sustainability reporting and firm's value: Evidence from Vietnam, *Cogent business & management*, 9(1), 1-20.

Singh, P., & Agrawal, S. (2022). A review of the literature on corporate sustainability reporting   and its effect on financial performance. *International journal of innovative research in   technology*, 9(1), 1135-1153.

Sutopo, B., Kot, S., Adiati, A., & Ardila, L. (2018). Sustainability reporting and value relevance of financial statements. *Journal of sustainability*, 1-14.

Swarnapali, R., & Le, L. (2018). Corporate sustainability reporting and firm value: evidence from a developing country. *The international journal of organizational innovation*, 10   (4), 69-78.

Thompson, E., Ashimwe, O., Buertey, S., & Kim, S. (2022). The value relevance of sustainability reporting: does assurance and the type of assurer matter? *Sustainability accounting, management, and policy journal,* 1-20.

Uwuigbe, U., Teddy, O., Uwuigbe, O., Emmanuel, O., Asiriuwa, O., Eyitomi, G., & Taiwo, O. (2018). Sustainability reporting and firm performance: a bi-directional approach.   *Academy of strategic management journal*, 17(3), 1-15.

Werastuti, D., Atmadja, A., & Adiputra, P. (2021). Value relevance of sustainability report and its impact on value of companies. *Advances in Economics, Business and Management Research, 6th international conference on tourism, economics, accounting, management, and social science* 197(1), 257-267.