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Abstract

The study examined the effect of voluntary environmental disclosure on firm value of quoted financial services companies in Nigeria from 2012-2021. The study adopted the longitudinal research design and positivism as the research philosophy with a total population of 52 financial services companies quoted on the Nigerian Exchange Group (NGX) as at 1st January 2021. Filters were employed to reduce the number to a sample size of 37 financial services companies which had complete data for analysis. Secondary data was obtained from the audited financial statements of the sample companies covering a ten-year period from 2012-2021. Panel multiple regression technique was employed for the analysis and it was found that voluntary environmental disclosure has a positive and significant effect on firm value. The study concludes that by adopting transparent environmental reporting practices, companies can enhance their reputation, attract stakeholders, mitigate risks, improve operational efficiency, and position themselves for long-term sustainability and resilience. Therefore, the study recommends that companies should consider implementing voluntary environmental disclosure practices as part of their overall sustainability strategy. By providing transparent information about their environmental performance and initiatives, companies can build trust, attract stakeholders, and strengthen their competitive position.

Keywords: Voluntary Environmental Disclosure, Firm Value

Introduction

Voluntary disclosure has become a topical issue across the globe in the past few decades largely due to the inadequacy/insufficiency of information available to the stakeholders in the traditional financial statements. There has been a preference for disclosure of accounting numbers over useful non-financial information which should give credence to the financial statements, thereby resulting in investments and analysis of financial results being based on partial information. The spate of corporate scandals at the start of the 21st century in the United States, Canada and Europe, involving massive earnings restatements, excessive CEO compensation, and backdating of stock options, to mention a few, has also been attributed to the insufficiency/inadequacy of information provided in the published financial statements. The situation was exacerbated by the global financial crises of 2007-2008, resulting in business failures which adversely affected the global economy with investors at the receiving end. This has further heightened the clamour for improved information disclosure especially voluntary disclosure.

The main objective of the financial statements is the disclosure of information to investors and other stakeholders, providing them with the necessary information to reduce uncertainty and make suitable economic and financial decisions (Sepasi et al., 2016). Disclosure is basically classified into mandatory and voluntary. While mandatory disclosure is required by regulation or statutory stipulations, voluntary disclosure is made at the instance of the

firm. Voluntary information disclosure refers to sharing information publicly other than what is required by laws or regulations and it is done for the sake of enhancing the image of a company in the eyes of investors, analysts and other stake holders and also for risk avoidance. There is a demand for more disclosure, hence firms have started to supply some additional information in order to fill the disclosure gap in response to the dissatisfaction expressed by stakeholders.

One of the types of information disclosure desirable by stakeholders for effective investment analysis is the information on the environment. Voluntary environmental disclosure has been identified as a specific area of study with abundant literature on the subject. The world has been brought under great environmental threats ranging from global warming to natural disasters like flood and volcanic eruptions; environmental degradation like air pollution, erosion, deforestation, drought and desertification; diseases like ebola, monkey pox, COVID19 pandemic, etc. All these events and incidents have brought about a global awareness of the severity of environmental problems and challenges culminating in various standards and regulations in an effort to save the environment and make the world a safer place to live in. This has also led to a global call for increased voluntary disclosure of environmental information.

The financial services companies in Nigeria have been chosen for this study because of the critical role they play in financial intermediation and economic development. The financial services sector is also one of the major employers of labour in the Nigerian economy.

Furthermore, the financial services companies operate in the environment and a threat to the environment and the society is a threat to the business (Nwaigwe et al., 2022). Therefore the adoption of deliberate policies on responsible environmental practices and the disclosure of environmental information is quite relevant for financial services companies.

The barrage of environmental threats and challenges all over the globe is probably the reason why the United Nations (UN) and its member countries have put in a great deal of effort to

“Save the world”. From the Earth Summit in June 1992 in Rio de Janeiro, Brazil, to the Millennium Summit in September 2000 at the UN Head Quarters in New York, the Johannesburg Declaration on sustainable development and the UN Summit in Rio de Janeiro in 2012, the United Nations and its member countries have been very intentional about the articulation and adoption of a comprehensive strategy to improve human lives and protect the environment culminating in the adoption of the 17 Sustainable Development Goals (SDGs) at the UN Sustainable Development Summit in September 2015. No wonder then that about 50% of the seventeen SDGs of 2030 are specifically about the environment including clean water and sanitation, affordable and clean energy, sustainable cities and communities, responsible consumption and production, climate action, life below water, life on land, peace, justice and strong institutions.

Among the major disasters in the 1980s were Bhopal (Union Carbide), Schweizerhalle (Sandoz), and Prince William Sound (Exxon), all of which had both financial and environmental consequences for the companies involved (Patten, 1992). In 1984, a cloud of poisonous methyl iso-cyanate leaked from Union Carbide’s Pesticide Plant, located on the outskirts of Bhopal, India. Its effect on human life was devastating with approximately 4,000

deaths and 200,000 injuries. The financial impact was also pronounced and virtually immediate. Within five trading days of the chemical leak the market value of Union

Carbide's common stock fell approximately by about 27.9% (from US \$ 3,443 million to US \$ 2,483 million) (Cho & Patten, 2002).

It can be argued that environmental risk has grown in importance and can be categorized as follows: Fines for pollution of land, water, or air; Clean-up costs for land sites; Liability for disposal of hazardous wastes; System break-down allowing environmental problems to occur; Loss of the public confidence (damaged reputation or corporate image) and Loss of market share when environmental incidents occur.

Seeing that threat to the environment and society is a threat to the business, the financial services companies cannot therefore be insulated from the issues of the environment even though they are not involved in direct manufacturing of goods or drilling of natural resources. They are directly affected by some aspects of the SDGs including clean water and sanitation, affordable and clean energy, sustainable cities and communities, responsible consumption and production, life on land, and peace, justice and strong institutions. They can also make a positive impact on the other aspects of the SDGs like climate action and life below water through their social responsibility initiatives.

Policies on environmental protection emphasize the availability of an environmental management system according to ISO 14001:2004, the availability of an energy management system according to EN 16001:2009 or ISO 50001:2011 and the company's concern towards energy saving or a more efficient final electricity consumption or use of renewable energy. Also, the company should disclose whether it owns greenhouse gas emission certificates or green certificates and other concerns or socially responsible investments towards water protection. The company should also disclose concerns on reducing water consumption or a more efficient usage of water, or socially responsible investments towards natural resources protection and biodiversity conservation. Concerns or socially responsible investments towards air protection, land and groundwater protection, and protection against noise and vibration should also be disclosed. The company can also own a selective waste collection system. Consequently, if the company owns a waste recycling system and is socially responsible through involvement in tree planting campaigns, the company is seen as being responsible towards environmental protection.

There are several policies which aim at improving the energy and environmental performance of products. The Ecology friendly departments of the various environmental regulatory agencies in Nigeria such as the Federal Ministry of Environment and Ministries of Environment in all the states of the Federation, the National Environmental Standards and Regulations Enforcement Agency (NESREA), have established a framework for setting ecodesign requirements for energy-using products. Reduction of greenhouse gas emissions could be accomplished through more efficient final electricity consumption including energy audit, use of renewable energy, purchase of solar panels, carbon offsets, solar lights and energy saving bulbs.

According to Shrivastava (1995), the natural environment is an important framework for economic competition, and environmental issues such as energy, natural resources, pollution, or waste provide competing opportunities

and constraints and give corporations the chance to acquire a competitive advantage by managing the environmental variables. Thus, the corporate environmental strategy is an instrument which creates an opportunity for companies to gain a competitive advantage and record improved performance (Porter & Van der Linde, 1995; Shrivastava, 1995; Hart, 1997; Trung & Kumar, 2005). To reduce pollution, companies could reduce the related costs and energy consumption by implementing the recycling of materials, what is now popularly referred to as the circular economy. This would decrease the environmental impact and depletion of resources and improve the ecoefficiency (Knight, 1995; Starik & Marcus, 2000). In addition, the companies that highlight strong environmental initiatives will record a better environmental reputation (Shrivastava, 1995; Miles & Covin, 2000). Environmental issues present a number of challenges for companies. One particular aspect is the disclosure of the issues to a variety of groups. This is particularly true in the light of growing pressure from stakeholders (investors, customers, lenders, suppliers, governments/other agencies and the general public) on companies to improve their performance in this area (Bennett et al., 1999; Al-Najjar & Anfimiadou, 2012). This in turn increases the importance of environmental disclosure practices, especially elements which report on the financial impacts of environmental matters. The need for consistency has provided a motivation for international organisations to provide frameworks to improve the reporting of environmental issues.

With the increase in awareness of environmental issues, environmental pressure groups have been growing in most countries (Dixon et al., 2005; Giannarakis et al., 2014). A number of countries have environmental laws and regulations to protect their environment. These laws impose sanctions on offending companies; therefore, environmental issues may have a material effect on companies either directly or indirectly (Adams et al., 1998; Gray, 2006; Meibo & Lawrence 2018).

There is a dearth of research studies on voluntary disclosure in developing economies like Nigeria. Most of the previous studies are on developed economies. The few studies done in Nigeria covered the manufacturing sector with few studies on the financial services sector. This study will fill the gap in literature by providing information on the effect of environmental disclosure of financial services companies in Nigeria on firm value. It is against this backdrop that this study hypothesizes that Environmental disclosure has no significant effect on firm value of quoted financial services companies in Nigeria.

Literature Review

Corporate Environmental Disclosure

Berthelot et al. (2003) defined corporate environmental disclosure as the set of information items that relate to a firm's past, current and future environmental management activities and performance. Corporate environmental disclosure also comprises information about the past, current and future financial implications resulting from a firm's environmental management decisions or actions. These information items can take many forms, for example, qualitative statements, quantitative facts or assertions, financial statements' figures, or footnotes. The realm of environmental disclosure encompasses the following items: past and current expenditure or operating costs for pollution control equipment and facilities, site restoration costs, financing for pollution control equipment or facilities, present or potential litigation, air, water or solid wastes releases, description of pollution

control processes or facilities, compliance status of facilities, discussion of environmental regulations and requirements, environmental or conservation policies, environmental awards or prizes, existence of environmental management or audit departments.

Nofianti et al. (2018) defined environmental disclosure as a general term describing the ways in which firms disclose information about their environmental activities to users of financial statements while Atanda et al. (2021) asserted that environmental sustainability involves both non-financial and financial reporting. They cited the American Petroleum Institute-API (2005), which defined non-financial sustainability reporting as reporting on a range of environmental health and safety (which includes carbon emission, waste management, biodiversity and energy, among others); social and economic issues and impacts that relate to the operations and services of a company. They opined that companies may choose to use a variety of other terms to refer to this concept, such as corporate responsibility, corporate citizenship, or contributions to sustainable development.

The Chartered Institute of Management Accountants (2012) defined environmental reporting practices as the public disclosure of information concerning an entity's environmental performance information, similar to the publication of its financial performance. This makes organizations appear more accountable for the economic, environmental and social significance of their activities. They opined that the practice of environmental reporting is very important as it enhances the quality of decision making, requiring firms to establish a standard, set reduction targets, realise the importance of changing unsustainable consumption and production patterns alongside protecting and managing national resources. The information contained in environmental reports is necessary for accountability, comparability and probity, hence when not made available a company could be perceived as being biased, not transparent, fraudulent and liable to risk which in turn could discourage patronage from consumers, suppliers, investors and surrounding communities.

Hooghiemstra (2000) argued that companies use environmental reports as a communication instrument with the main aim of influencing people's perceptions about the company's corporate image or reputation while Elkington (1997) viewed environmental reporting practices as a public relations vehicle designed to offer reassurance and to help with feelgood image building.

Adams et al. (1998) reported that UK companies also use environmental reports as a means of advertising their social responsibility. An interesting evolution that shows the importance of environmental reporting and the driving force behind it is the promulgation of global indices by the Dow Jones Sustainability Group which ranks companies worldwide according to their environmental and sustainable performance.

Concept of Firm Value

Investors, both existing and potential, regard value as the fundamental reason for investing in a particular firm. Stock value can be in form of capital appreciation/depreciation (as obtained in the Nigerian Exchange Group) plus dividend received if any. Stock prices are important metrics of measuring firm value. Therefore, the value attached to stocks matters a lot to both existing and prospective investors in the stock market. There are several factors in stock price determination in the stock market, which range from accounting to non-accounting information (Ibrahim & Hussaini, 2015). The commonest way to know the value of a firm is through trading in

the secondary market, where investors trade in stocks. The capital market serves as a place or arrangement where investors and investees interact. The price of shares being sold is determined by the corporate firm characteristics which usually affect the amount of capital a company can raise from the stock market. The stock market provides a link between firms which need to raise funds for business continuity or expansion (by selling stocks) and those investors who wish to invest their excess resources (by buying stocks).

Share prices are determined by demand and supply, which is usually influenced by firm specific factors and/or macroeconomic variables (Adedoyin, 2011).

Furthermore, the value of a company can be determined by looking at the company's market value. This is also known as the company's market capitalization. Market capitalization is the value arrived at when all the outstanding shares of the company's stock are multiplied by the current price of a single share. If a firm has one type of stock its market capitalization will be the current market share price multiplied by the number of shares. However, if a company has multiple types of equity, then, the market capitalization will be the total of the market value of the different types of shares. The stock exchange is an exceedingly fluid, dynamic and engaging entity which facilitates thousands of transactions which occur simultaneously from traders striving to outbid and outsell each other. New information about company developments and stock recommendations are continuously made available while information is released on new and different ways in which the market can be exploited (Safdar et al., 2013).

Oktarina (2018) defined firm value as a market value which is closely related to stock prices, and which gives investors an insight into the risks and prospects of the company in the future while Qamruzzaman et al. (2021) asserted that firm value is the cumulative present value of all profits likely to be produced throughout a business venture. In other words, firm value is the current benefits, and the possible benefits that a business may produce. These definitions show that firm value can be obtained through different measures, each of which is likely to give a value that differs from that obtained by another measure.

This study uses Tobin's Q as the measure for firm value because it is considered the most appropriate measure for firm value and is used in the economic, accounting and finance literature (Fooladi et al., 2013; Utama & Utama, 2014; Wang et al., 2019; Alqatan et al.,

2019; Enache & Hussainey, 2019). Tobin's Q measures the relationship of the firm stock market value to the firm's resources replacement cost (Sahay & Pillai, 2009). It is considered as the best predictor of market correction (Pett, 2013) and it can also explain most of the investment variability (Cooper & Ejarque, 2003). It can also be applied in the analysis of the financial condition of the company. It is believed that Tobin's Q is the most appropriate measure of market performance because rather than ROE and EPS that reflect only accounting market performance, Tobin's Q reflects long-term firm value (Haj-Salem, 2020).

Measurement of Environmental Disclosure

This study adopted the GRI Sustainability indicators for the measurement of environmental disclosure using 33 items under twelve thematic areas. The GRI index was chosen because it is a global standard and is very comprehensive. It has also been used by several researchers on sustainability reporting including Ofoegbu and

Onyebuenyi (2022), Nwaigwe et al. (2022) and Plumlee et al. (2010). The following thematic areas are covered by the standards under corporate environmental disclosure: Material, Energy, Water, Bio diversity, Emissions, Effluents and Waste, Products and Services, Compliance, Transport, Overall, Suppliers' Environmental Assessment and Environmental Grievance Mechanism. For each disclosure item, a score of 1 mark is awarded while non-disclosure attracts 0 score. The percentage of disclosure is computed as the total score of disclosures obtained to the total expected score of disclosures. All disclosure checklists for the independent variables are shown in the appendix.

Environmental disclosure and firm value

The results of previous studies on the relationship between environmental disclosure and firm value have not been converging. While Atanda et al. (2012) found a negative and significant relationship between sustainability disclosure and firm value, Emeka-Nwokeji and Osioma (2019), Oyedokun et al. (2019), Nofianti et al. (2018) and Okpala and Iredele (2019) found a positive significant relationship. Ruhayat and Murwaningsari (2019) found no association between environmental disclosure and firm value while Nwaigwe et al. (2022) found a positive non-significant relationship between sustainability disclosure and firm value.

Kalash (2020) opined that through environmental disclosure firms legitimize their activities to stakeholders by disclosing environmental information and this may increase sales and decrease cost of capital because consumers and investors prefer firms with good environmental reputation. Plumlee et al. (2015) indicated that voluntary environmental disclosure is related to firm value through cash flows and cost of equity while Nofianti et al. (2018) asserted that the firm's goals are to increase the value of the firms and so, all firms will strive to achieve and retain firm value by maximizing performance. The study agreed with Wang (2016) who concluded that environmental information disclosure will likely increase the value of the firm.

Empirical Review

Nwaigwe et al. (2022) examined the effect of the extent and quality of sustainability disclosure on market value of firms from 2010–2019. Using a sample size of 39 companies drawn from 9 sectors of the economy, 31 relevant sustainability performance indicator aspects were analyzed resulting in 390 firm-year observations and 12,090 data points were used to calculate unweighted sustainability extent and quality indices. The GRI 3 guidelines were used to measure sustainability reporting. Findings from regression analysis suggested a positive non-significant association between extent of sustainability disclosure and firm market value. Quality of sustainability disclosure was found to be negatively related to market value. While the samples for the previous study were drawn from nine sectors of the economy, the current study focused on the financial services sector alone. The current study is also more recent, covering the period 2012- 2021.

Atanda et al. (2021) examined the effect of sustainability disclosure on firm value, drawing data from ten randomly selected listed deposit money banks, covering the period 2014-2018. The study employed qualitative content analysis, using the information obtained from audited reports and accounts, to measure overall sustainability disclosure index and its three dimensions (environmental, social and economic) and used descriptive tools and ordinary least square fixed-effects regression for analysis. The study found consistent and

strong evidence that banks with high overall sustainability and environmental sustainability disclosure had low firm value. However, the study found that social sustainability disclosure exerted a more pronounced positive impact while the insignificant effect of economic sustainability disclosure suggested that its increase would not enhance firm value. These results indicated that overall sustainability and environmental sustainability disclosures were detrimental, rather than beneficial, to firm value. The previous study focused on deposit money banks which is a subset of the financial services sector while the current study is more robust in sectoral coverage as it covered the entire financial services sector. The previous study covered a five-year period while the current study covered a ten-year period and had more firm-year observations making for more valid results.

Yang et al. (2020) examined the impact of environmental information disclosure on the firm value of listed manufacturing firms in China. Based on a panel dataset composed of the listed manufacturing firms in China from 2006–2016, the study used the difference-in-differences

(DID) model and the propensity score matching (PSM) method to investigate whether the Environmental Information Disclosure Measure (for Trial Implementation; EIDMT) affected the firm value. The results showed that EIDMT exerted a significant impact on the listed manufacturing firms' value. The previous study was done in China hence issues of external validity may arise as a result of differences in the legal and operating environments of the countries of domain. While the previous study utilized the DID and PSM models, the current study utilized the multiple regression technique and this may result in differences in the results.

Oyedokun et al. (2019) examined the effect of environmental accounting disclosure on firm value of listed industrial goods companies in Nigeria from 2007- 2016. The population of the study was drawn from all the 18 quoted industrial goods companies on the Nigerian Exchange Group (NGX) from 2007 to 2016. Census sampling method was used to sample fifteen of the companies because three of the companies had incomplete data and were therefore eliminated from the study. The ex-post facto research design was adopted while the data was obtained through the individual sample companies' annual financial statements. Multiple regression was used to analyze the effect of environmental accounting disclosure on firm value. Environmental accounting disclosure was measured by non-financial indicators, financial indicators and performance indicators while the firm value was measured by Tobin's Q. The results revealed that non-financial indicators had a positive significant effect on firm value while performance indicators had a negative significant effect on firm value and the financial indicators had no significant effect on firm value of industrial goods companies in Nigeria. The previous study covered the industrial goods companies while the current study focused on the financial services sector, thus results may differ as a result of operating differences in both sectors. The previous study used three models to separate environmental disclosure into three components to make for a very robust analysis of the independent variable.

Ruhiyat and Murwaningsari (2019) examined the effect of environmental disclosure on the proportion of the board of commissioners and the size of the board of directors on company value. The study was quantitative in nature using data from manufacturing companies in the basic industrial and chemical sectors which were listed on the Indonesia Stock Exchange from 2015-2017. The purposive sampling method was used to obtain 23 companies. Multiple regression analysis technique was used to test the relationship between the independent and

the dependent variables. The results revealed that Environmental disclosure analysis did not affect the value of the company. The previous study focused on the manufacturing sector while the current study focused on the financial services sector. Issues of external validity may also arise.

Theoretical Framework

The Stakeholder Theory

The stakeholder theory was propounded by Richard Edward Freeman in 1984 to build a framework that was responsive to the concerns of managers who were being confronted with unprecedented levels of environmental turbulence and change which the traditional strategy frameworks could not address. Freeman (1984) opined that the model of the organization as a mere resource converter was no longer valid and that aside from the interest of stockholders, the interest of all stakeholders should also be considered where a stakeholder is defined as any group or individual who is affected by or can affect the achievement of the organization's objectives. Freeman (1984) believed that a stakeholder approach would help managers to manage and integrate the relationships and interests of shareholders, employees, customers, suppliers, communities and other groups in a way that guarantees the long-term success of the firm and also addresses the three interconnected problems relating to business which include the problems of value creation and trade, the ethics of capitalism and managerial mindset.

According to Ademola (2014), the stakeholder theory argues that the happiness of all who have stakes, not just those with a monetary stake in the business, should be taken into consideration and that by so doing, the business will better achieve its objectives and grow the investment of the shareholders. This requires an expansion of the estimation of the company to include the concerns of all stakeholders. To this end, managers need to carry out a stakeholder investigation which is a methodology of recognizing and assessing the impact of an organization's stakeholders.

The stakeholder theory asserts that the organization is part of the broader social system in which it operates and is accountable to various stakeholders for its actions and outcomes. It asserts that an organization needs to identify and respond to the needs of its significant or powerful stakeholders if it is to remain viable. Bowrin (2018) asserted that the more an organization is dependent on a stakeholder, the more powerful or significant the stakeholder is to the organization.

Since the stakeholder theory posits that stakeholders have a powerful influence over the management of a company in managing its resources, therefore the greater the power of stakeholders, the greater the effort of the company to obtain their confidence in order to create value. Voluntary disclosure is therefore seen as a key mechanism available to organizations and management to balance the competing and frequently conflicting expectations of various stakeholders of the firm.

The stakeholder theory is relevant to this study because if adequate information about the company is made available to stakeholders, such an action would increase the confidence of stakeholders and reduce the risk factor for the investors. Organizations should therefore voluntarily provide adequate and sufficient information which is vital for the sustainable success of the organization and various significant stakeholders including investors,

lenders, employees and their representatives, regulatory agencies and non-governmental organizations who demand for such information.

Methodology

This study adopted the longitudinal research design and positivism as the research philosophy. In a longitudinal study, researchers repeatedly examine the same items or objects to detect any changes that might occur over a period. The population of this study consists of all financial services companies quoted on the Nigerian Exchange Group (NGX) as at 1st January 2021. According to NGX Fact Book (2021), there are fifty-two (52) quoted financial services companies in Nigeria. In view of the nature of the model used in the study, filters were employed to arrive at an adjusted population in line with the studies of Kamaruzaman et al. (2019), Dusterhoft et al. (2020), Erin et al. (2020) and Surdu et al. (2020). Firms with the financial and market information necessary to extract the panel data needed for the period 2012-2021 from the annual reports and accounts of the firms and daily lists of the NGX for the study period were sampled for the purpose of data collection. Furthermore, these companies must have the complete information on all content items for all variables to be used for the purpose of data collection. This brought the number of sampled companies to thirty-seven (37). The linear representation of the model is:

$FV_{it} = \beta_0 + \beta_1VEND_{it} + \beta_2FS_{it} + \varepsilon_{it}$

Where:

FV = Firm value

VEND = Voluntary environmental disclosure

FS = firm size

i = firm t = time

ε = error term

Measurement of Variables

Variable	Variable Measurement	Source
Voluntary Environmental Disclosure	GRI 4 Index	Welbeck et al. (2017)
Firm Value (Tobin's Q)	$\frac{\text{Common value of stock} + \text{Debt}}{\text{Total Asset}}$ Yang et al. (2020)	
Firm size	Logarithm of total assets	Ndukwe and John (2015)

Results and Discussion

Table 1: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max	-----+-----				
-----	fv	370	.3088051	.4379459	.0000262	3.280621	vend	370	.3618243	.1871201
.125	.875	fs	370	10.77363	1.052451	8.129432	13.05273	Source: Stata, 2023		

Firm value is the total worth or economic value of a company or business. It represents the combined value of all the assets, operations, and future cash flows generated by the firm. The result reveals that financial companies had firm value ranging between .0000262 and 3.280621. This indicates that the companies had high net worth more than one. The implication is that the market value of a company is greater than the replacement cost of its assets.

Voluntary environmental disclosure is the practice of companies providing information about their environmental performance and initiatives beyond what is required by regulations or reporting standards. It involves the proactive disclosure of environmental data, goals, policies, and practices to stakeholders. Financial companies had minimum voluntary environmental disclosure of .125 (12.5%) while the maximum disclosure was .875 (87.5%). On average, financial companies disclosed 36.18% of their environmental information. Firm size was used as control variable. It shows the total assets of the financial companies in Nigeria. The summary shows that the minimum firm size was 8.129432 while the maximum was 13.05273.

Table 2: Correlation Result

	fv	vend	fs
fv	1.0000		
vend	-0.0448	1.0000	
fs	-0.1152	-0.0898	1.0000

Source: Stata, 2023

The correlation above shows negative relationship between the independent variables and firm value. Voluntary environmental disclosure has negative correlation with firm value to the extent of 4.48% while firm size is negatively related with firm value to the extent of 11.52%. The implication of the result is that there is no collinearity problem since the relationship between the variables is low and below 0.80(80%) (Gujarati, 2004).

Table 3: Regression Diagnostics

Regression assumptions:	Test:	We seek values
1) no heteroskedasticity problem	Breusch-Pagan hettest	> 0.05
Chi2 (1): 1.345 P-value: 0.246		
2) no multicollinearity problem	Variance inflation factor	< 5.00 fs : 1.01
vend : 1.01		
3) residuals are normally distributed	Shapiro-Wilk W normality test	> 0.01 z: 457
4) p-value: 0.245		

Source: Stata, 2023

The result shows that there is no heteroskedasticity problem since the p-value is greater than 5% significant level. Also, there is no multicollinearity problem related to the independent variables since the VIF's are low and less

than 10. Regarding the normality of the variables, the result shows that the variables are normally distributed with Shapiro-Wilk W p-value greater than 5% significant level.

Table 4: Hausman Test ---- Coefficients ----

(b)	(B)	(b-B)	sqrt(diag(V_b-V_B))	fixed	random	Difference	S.E. ---
				vend	.970817	.8301923	.1406248
.0202054	fs	-.0540544	-.0442867	-.0097676	.009729		

b = consistent under Ho and Ha; obtained from xtreg B =

inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(2) = (b-B)'[(V_b-V_B)^(-1)](b-B) = 50.78

Prob>chi2 = 0.0000

Source: Stata, 2023

The hausman result shows that fixed effect model is most preferred since the p-value is significant at 5% hence, the testing of the hypotheses is based on fixed effect model. The study does not conduct Lagrange multiplier since the testing of hypothesis is based on fixed effect model.

Table 5: Regression Result

Group variable: id										Number of groups	=	37	R-sq: within	=	0.3021	Obs per group: min	=	10	between
																			</

Source: Stata, 2023

The study found that voluntary environmental disclosure has positive significant effect on firm value at 5% significant level. This simply means that percentage increase in voluntary environmental disclosure will improve firm value by .970817. Positive effects of voluntary environmental disclosure on firm value indicate that investors perceive environmental disclosure as a favorable signal of the company's commitment to sustainability and responsible business practices. This can increase investor confidence in the firm, potentially leading to higher demand for its stock and increased valuation. Investors may be more willing to pay a premium for shares of a company that demonstrates strong environmental performance and transparency.

One theory that can explain the finding of a positive effect of voluntary environmental disclosure on firm value is the Stakeholder Theory. The Stakeholder Theory posits that organizations should consider the interests and needs of various stakeholders, including shareholders, employees, customers, communities, and the environment,

rather than solely focusing on maximizing shareholder value. In the context of voluntary environmental disclosure, the theory suggests that when firms engage in proactive environmental disclosure, they are acknowledging the importance of environmental concerns to stakeholders and society at large. By providing transparent information about their environmental performance and initiatives, firms demonstrate their commitment to addressing environmental issues and acting in the best interests of stakeholders. According to the Stakeholder Theory, this engagement with stakeholders and the proactive management of environmental concerns can result in several positive outcomes that contribute to firm value. The finding is supported by the study of Atanda et al. (2021), Yang et al. (2020) but disagrees with Nwaigwe et al. (2022), Ruhayat and Murwaningsari (2019) and Oyedokun et al. (2019) which state that environmental disclosure has insignificant effect on firm value.

Also, the study found that firm size has negative significant effect on firm value of listed financial companies in Nigeria. Though firm size is used as a control variable, it was found that it has decrease firm value of financial companies. Even though the model explained low changes on firm value, it is significant and fit with p-value less than 5% significant level.

Conclusion

Voluntary environmental disclosure can positively impact firm value by enhancing reputation, attracting stakeholders, mitigating risks, and improving operational efficiency. It indicates that environmental sustainability practices are valued by stakeholders and can generate tangible benefits for the company. Environmental disclosure is not just a compliance requirement but a strategic opportunity. Companies that go beyond mandatory reporting and proactively disclose environmental information can gain a competitive advantage and improve their long-term sustainability.

In conclusion, the finding underscores the importance of voluntary environmental disclosure in enhancing firm value. By adopting transparent environmental reporting practices, companies can enhance their reputation, attract stakeholders, mitigate risks, improve operational efficiency, and position themselves for long-term sustainability and resilience. The study recommends that companies should consider implementing voluntary environmental disclosure practices as part of their overall sustainability strategy. By providing transparent information about their environmental performance and initiatives, companies can build trust, attract stakeholders, and strengthen their competitive position. Also, companies should actively communicate their environmental initiatives and performance to investors and financial institutions. By highlighting their commitment to sustainability and responsible practices, companies can increase their attractiveness to investors and potentially lower their cost of capital.

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