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RESEARCH ARTICLE

GAINING INVESTORS' CONFIDENCE THROUGH ENVIRONMENTAL INFORMATION DISCLOSURES IN ANNUAL REPORTS OF COMPANIES IN NIGERIA

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Abstract: The disclosure of information about the environment in which firms operate has been identified as an important aspect of corporate social responsibility. Stakeholders are motivated to respond to such disclosure by building confidence in such firms. Though there are many studies on environmental disclosure, this study adopted disclosure of environmental policies instead of environmental costs in order to investigate the relationship between environmental policies information disclosure and investors' confidence. The main objective of the study was to ascertain whether the disclosure of information on environmental policies will engender the confidence of investors in the capital market. The independent variable of the study was the environmental policies disclosure which was proxied by environmental replenishment policy disclosure, waste management policy disclosure and carbon emission management policy disclosure. The dependent variable was the investor's confidence which was measured by market capitalisation. The study adopted *ex post facto* research design as data were utilised from secondary sources. The population of the study was made up of six oil and gas firms and three cement companies listed on the floor of Nigerian Exchange Group. Content analysis was used to extract information from annual reports of the selected companies for the years 2016 to 2022. The data were analysed using descriptive statistics and multiple regressions. The results of analysis indicate that the environmental replenishment policy disclosure, waste management policy disclosure and carbon emission management policy disclosure exhibited significant positive relationship with the market capitalisation of the firms. The study therefore concludes that the disclosure of information on environmental policies enhances investor's confidence on firms in the capital market. The study recommends amongst others that firm should not only formulate policies relating to environment but should disclose such policies as this will enhance the confidence of investors in the capital market.

Keywords: *Investors' confidence, Corporate reputation, Environmental policies disclosure, Market capitalisation*.

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INTRODUCTION

The interactions of enterprises with the environment have attracted global attention in recent times and this has been the center stage of sustainability reporting. Stakeholders in the corporate world are much interested in how corporate entities are interacting with the environment in which they operate. This comes on the basis of the fact that corporate entities receive from the environment (in form of input) and give back to the environment (in form or finished product, waste, restoration). The essence of these interactions is to create a sustained future for the companies. The future of enterprises can be sustained when there is assurance of continued operations (Inseng and Uford, 2019). The activities of enterprises overtime have resulted in colossal impact on the environment and this has cast doubt over the ability of the enterprise to continue in the nearest future without measures being taken to remediate the environment.

The starting point of companies' interest in environment is through the enunciation of policies pertaining to remediation of the environment, and curtailing the negative impact of its activities on the environment through proper management of waste and carbon emission. These policies are usually the focal point of efforts by the firms to remediate the environment. Policies relating to replenishment, waste management and carbon emission are usually developed by firms to guide them in their dealings on environment issues. These policies are usually indications of the willingness of management to mitigate the environment. Thus investors see disclosure of such policies as an important move which should activate their interest in such firms.

The confidence is built when investors and other stakeholders in the entity have developed interests, likeliness and emotional sentiments towards such entity to the extent that they will be willing to invest and become part owners of such entity. Investor's confidence is a function of thorough assessment of the activities and performance of an entity over time thereby culminating in building confidence or thrust in such an entity. Disclosure of information on environmental matters communicates value-relevant message to stakeholders. This is as a result of the importance placed on the environment by stakeholders.

One of the major attributes of limited liability companies is the flexibility in raising funds through issue of stocks in the capital market. Funds raised in the capital market are long term in nature which eliminates the pressure of repayment of such funds and rather allows companies to concentrate on the core activities of improving performance. However, in order for such companies to attract appropriate capital from investors in the capital market, their performance must be enough to endear them to the investors. This implies that the performance of the companies must have motivated the investors to develop reasonable amount of emotions, interests and sentiments towards them. This will then persuade the investors to entrust their capital to that firm. Confidence in this case represents absence of fear of losing investments.

The environment plays a very important role in the success or otherwise of every endeavour. Okpo (2020) documents that environment represents all factors that have impact directly or indirectly on the activities of the firm. The firm receives input from the environment and gives out output (products) to the society. Consequently, environmental information disclosure is the communication of the activities of the firm about their interaction with the environment to the appropriate stakeholders through annual reports.

The contribution of the firm for the sustainability of the environment in the short, medium and long term is adjudged to be a responsible behaviour which earns such firm good standing before stakeholders and consequently, investors perceive such firm to be socially responsible (Okpo and Emenyi, 2023).

Many firms attempt to enhance or boost the confidence of stakeholders by increasingly embarking on different activities that add value to the entity. The disclosure of information on the activities of the firm with regards to the environment is one of the crucial means of building investor's confidence about the firm. Firms have used environmental information disclosure to demonstrate sustainable development capabilities (Su *et. al,* 2023).

Zhang and Wang (2023) describe corporate environmental information disclosure as a practice of releasing and accepting public oversight of the environment impacts and environment related performance data caused by the firm's production and operation processes. The environmental information disclosure is a medium through which the society is informed in a genuine way about the firm's environmental inputs, environmental liabilities, environmental benefits as well as environmental responsibilities.

Zhang and Wang (2023) averred that environmental information disclosure is viewed by many stakeholders as an essential tool for enhancing the execution of the firm's green initiatives and creating green corporate governance systems. Also Oyedokun *et. al* (2019) posited that high quality environmental accounting disclosure influences investors as well lenders decisions because they assess risks and returns and decide where best to place their money, strengthen the efficiency of capital allocation as well as offer the benefit of reducing the cost of capital. They went further to state that high quality corporate environmental disclosure provides clarity on the extent to which companies meet legal and ethical requirements.

The concept of investor's confidence is the major driver of the capital market. The capital market thrives on the confidence investors have in it. Investor's confidence is seen as the perception of investors about the firm, the attractiveness of the investment opportunities in terms of perceived risks and expected returns pertaining both to prospects of issuers and the prospect of the expropriation by other market participants.

The investor's confidence is a function of continuous monitoring of the performances of the firm over time, compliance with the law, ethics and observance of standards. Ley *et. al.* (2019) opined that investor's confidence has been found to be significantly related to firm's value. Thus the more confidence the investors place on the firm the more the value of the firm will be. This implies that investor's confidence and value are positively related.

Discussions on environmental information disclosure is never ending because of the complexities, nature and many activities that are classified as environmental matters. Thus research in this area will continue unabated into the nearest future. This study adopts another dimension of environmental information disclosure by looking at the policies put in place by companies instead of associated costs.

This is in view of the fact that environmental cost is somehow complex and difficult to measure. Thus rather than look at the cost, the study adopted the environmental policy disclosure as a measure of environmental information disclosure. Specifically the policy disclosure is evaluated from three perspectives as follows: environmental replenishment policy disclosure, environmental waste management policy disclosure; and carbon emission management policy disclosure. Moreover, unlike other studies which focused on oil and gas firms only, this study added cement companies to make it more robust, considering the impact of the activities of cement companies on the environment.

Cement companies just like oil and gas firms create monumental impact on environment. This comes in form of air pollution, water pollution, land degradation, noise and other human existence threatening activities. Therefore the investors will be motivated about disclosure of information on the policies of both oil and gas and cement companies on their remediation policies about the environment.

LITERATURE REVIEW

Environmental Information Disclosure (EID)

Environment describes all those activities or actions which influence or bear directly or indirectly upon the individual organization. Encapsulated in the concept of environmental factors are such factors as employment, cost of capital, inflation, exchange rates, technology, legal provisions, industry demand and nature of competition.

Okpo (2020) documents that the companies receive input from the environment in form of raw materials and natural factors such as weather while in turn produces finished product and by-pro ducts for members of the society. Also the waste and other useless components are returned to the environment. According to Nguyen *et. al.* (2017), business activities influence environment either positively or negatively, and on the other hand, the contribution of the environment to the firm could either be to the advantage or disadvantage of the firm.

Consequently, information relating to the environment cost and revenue will enable firms to decipher clearly the relationship between business activities and the environment. Companies could appreciate the relevance of external environment when they constantly acquaint themselves with the environment in which they operate through periodic scanning and analysis in order to identify any driving or threatening forces. This is expected to motivate them to gather internal forces to take advantage of driving forces and guard against those forces that threaten them (Gado, 2015).

The way environment is effective as a larger spectrum affects the success of companies operating in the environment. When the environment is peaceful, secure and friendly, then business activities will thrive in it. Thus, the wellbeing of an environment affects the general performance of companies operating in it. Hence disclosure of information on the environment would really give assurance of the relationship that exist between the company and the environment. It will also provide assurance of the sustainability of the performance of the company over time.

Barth, McNicholas and Wilson (1997) found that the extent of disclosure of environmental liabilities are associated with the five key factors including regulation, enforcement activity; management information, litigation and negotiation concerns, capital market concerns; and other regulatory influence.

On the other hand, conducting a study on some Vietnam construction companies, Nguyen *et. al.* (2017) found that the disclosure level of environmental factors is influenced by factors such as size of firms, profitability, financial leverage, number of years listed and independent auditing; and the number of persons of management board. Wu and Li (2023) asserts that the disclosure of environmental information helps to improve corporate reputation, market competitiveness and enhance investor's confidence in investment, and this has positive economic impact on corporate financial performance (Okpo, Eshiet and Emenyi, 2023).

Another way of capturing environmental information is usually through information about corporate social responsibility (CSR). The information contained in this aspect of environmental disclosure is to showcase the responsibility of the firm in providing positively-impacted activities on the environment which tend to protect consumers, employees, communities, stakeholders as well as the public sectors. Companies may attempt to reduce the impact on their environmental performances through implementation of appropriate environmental policies. Thus in the views of Beredugo and Mefor (2012) investors increasingly require that companies pursue environmental accounting strategies that reduce the damage caused to the environment while increasing the or at least not decreasing shareholders' value.

Also Onyeka and Nwankwo (2016) documents that corporate social responsibilities have significant impact on net profit of manufacturing firms in Nigeria. The implication of this finding is that as companies add back to the societies where they are operating and consequently this will endear the companies to their stakeholders. This will attract more patronage of the firm's product and services. This will in turn increase their performance or their returns in terms of profit will be positively affected.

In a developed economic system where the environment has been neglected or undermined with the development of the economy, government and stakeholders are more sensitive to environmental information. Environmental information disclosure (EID) is one of the most crucial non-financial information which investors usually adopt in their investment decision making process. As a result, investors are usually responsive to any information about the interaction of an enterprise with the environment.

The reaction of investors are either positive or negative. Investors react positively when the disclosure of information on enterprise interaction with environment is persuasive enough to motivate the investors to desire to invest in such enterprise. The implication of the disclosure of environmental information is that the uncertainty surrounding the future expectations of investors is addressed by the enhanced disclosure of environmental information. On the other hand, the non-disclosure of such information will continue to exacerbate the fear and uncertainty about such enterprise with the consequence that the investors will avoid such enterprise. The process of expansion and retraction of interest of investors in the enterprise will have effect on the price of stock of such enterprise through the forces of demand and supply. Moreover, it will also expand the shareholder base of such enterprise. The aggregate effect is increase or decrease in the market capitalisation of such enterprise.

There are arguments on the discouraging effect of over disclosure of information on the environment. The first argument is that of the increased cost of pursuing the environmental matters. This cost has huge impact of decreasing the profitability of the firm. The second argument is the neglect of the main objective of the firm which is profitability in pursuit of satisfying the environmental matters.

The question therefore arises as to whether the managers should dissipate their resources in pursuing environmental matter at the detriment of primary organisational objective of profitability. Arising from the above, the investors see over disclosure of information on environment as not aligning to their investment goal. Thus the investors tend to look down on excessive disclosure of information on environment. This view corroborates the findings of the study by Alsahlawi *et. al.,* (2021) who found that higher disclosure of information on environment will decrease the stock return of firms.

Environmental Replenishment Policy Disclosure

The fundamental responsibilities of companies to environment centers around the processes or activities of companies directed at replenishing the environment that have been devastated through the activities of firms so that it can be available to the future generations. The deliberate efforts of firms to restore the environment so that it can retain its normal state is important in wooing investors to the firm. Consequently, when firms enunciate policies that ensures the sustainability of environment it will send signals to the stakeholders that such firms future growth prospect.

Firms through their activities have caused the biophysical environment to be degraded. Various governments have placed limitations on the activities of these firms. Beyond that there have been sensitization activities aimed at creating awareness on the dangers of the activities of the firms and the need for sustained efforts at restoring the environment. As a result, many firms have resorted to initiate policies that will facilitate the protection of the environment. Therefore disclosure of information about such policy will present positive signals to the investors and this may attract investors to such firm.

Environmental Waste Management Policy Disclosure

Waste management can be described as an orderly approach to waste disposal which is concerned with the safe collection, transportation and treatment of solid waste (Obanore *et. al.,* 2022). The benefits of having effective waste management system range from creation of suitable environment, promotion of healthy population, improved economic activities and promotion of aesthetic environment.

There are different types of wastes that are being churned out by cement companies on a daily basis. They can be in form of solid waste, air and water. The effect of these wastes are devastating. Much solid waste generated litter the environment, block drainages causing flood and air pollution.

Firms are required to initiate policies that are directed at addressing the challenge of waste management in line with the policy of government. Therefore disclosure of information by firms on the policies that have been adopted to effectively manage and mitigate against the impact of waste is expected to endear such firm to stakeholders who may be interested in investing in such firms.

Carbon Emission Management Policy Disclosure

Carbon emission management policy is often developed to give the policy direction of an organisation in managing and controlling carbon emission. This is in view of the impact of the carbon emission to the environment. Therefore the disclosure of information on the carbon emission policy of an organisation conveys to stakeholders the deliberate arrangement of the entity to mitigate against the effect of carbon emission. The importance of emission disclosure stems from the fact that it is considered as a form of company transparency to stakeholders in dealing with the impact of climate change global warming. Carbon emission disclosure can be an effective way for business to demonstrate their commitment to environmental issues, especially the impact of carbon emission (Ika, *et. al.,* 2021).

One of the efforts that firms can make in reducing carbon emission is by disclosing these carbon emission. Moreover, carbon emission disclosure can be considered as a form of corporate social responsibility that have positive impact of strengthening investor confidence in the company's financial capabilities (Santika and Sari, 2022).

Carbon emission is one of the major causes of climate change and global warming and this has elicited concerns particularly with regards to the activities of companies. Global warming results in increase in the temperature of the earth over a long period, and the heat cannot be reflected because it is held back by a layer of gases resulting from the greenhouse effect.

The effect of climate change on people's lives range from decreasing water quality and quantity, changing habits, as well as decreasing agricultural quality (Sanika and Sari, 2022). As documented by Haque and Ntim (2020) companies that disclose their carbon emission provide investors with information about their environmental impact and such disclosure and indicate the commitment of the firm to environmental sustainability and can positively influence investor's perception and demand. However, a study by Sudibyo (2018) found that the volume of carbon emission disclosure was not however related to firm value. Moreover, the risk of climate change was found to have a great deal of influence on investor's investment decision (Lee, 2022).

Investor's Confidence in the Capital Market

Investor's confidence can be described in several ways. Guisa *et. al.* (2022) define investor's confidences as the investor's willingness to engage in the investment opportunities and associated intermediation channels available to them based on their perception of risk and return. Furthermore, investors' confidence can be referred to as the trust, assurance and positive sentiment displays by investors towards a particular company, market or about the general investment environment. It is the belief that a particular investment will perform as expected and generate expected returns. The investors' confidence is always earned through such factors as company's financial performance, management credibility, market stability, regulatory environment, general economic stability and a host of others (Uford, 2017).

Investor's confidence is usually earned through proper functionality of the corporate entity. Thus an entity that is adjudged to perform well will attract the confidence of stakeholders (Charles and Uford, 2023). Investor's confidence arises as a result of collective perception of the organisations' past actions and expectations regarding future actions in view of efficiency in relation to the main competitors of the firm.

Companies that have enjoyed good reputation tend to enjoy the confidence of investors. The maintenance and fostering of investors' confidence is necessitated by transparency, strong financial performance effective communication of activities and commitment to ethical practices (Samuel, Akpan and Okpo, 2022).

Capital market is a highly sensitive market which reacts or responds to new information in an instantaneous manner. Consequently, disclosure of any information which projects the firms in good light before the investors will attract such firms to the investors. The investors' reputation is therefore expanded with the disclosure of value-driven information. The benefit of good reputation are numerous.

A high level of investors' confidence attracts capital, encourages long term investment and contribute to economic growth. Pires and Trez (2018) document that the benefits of good reputation include reduction in shareholders uncertainty about the organisations' future performance, strengthening competitive advantage, contribution to the target audience trust and to value creation as well as maximization of the ability of the firm to offer product and services with high value added.

The implication of investors' confidence is that investors will tend to invest more money and drive economic growth higher when they have confidence in the future of the firm. Investor's confidence also relates to the stability and healthy development of the stock market (Li *et. al.,* 2016).

Su *et. al.,* (2023) opined that environmental information disclosure significantly and robustly enhances the efficiency and capital allocation. Moreover, prior studies by Hu *et. al.,* (2018) reveal that environmental information disclosure appears to have significant positive effect on human loan size available, while the cost of capital is less sensitive to environmental information disclosure.

In the same vein, the findings of the study by Ley *et. al.,* (2019) indicates that investors' confidence plays significant roles in the relationship between CEO duality and firm value. In the same vein, Su *et. al.,* (2023) documented that transparent and comprehensive environmental information disclosure enhances investor's risk tolerance and boosts consumer confidence in firms, which in turn, mitigates negative evaluation from stakeholders and reduce the overall corporate risk.

Theoretical Perspective

This study is anchored on stakeholder's theory developed by Freeman in 1984 to express the interrelationships amongst various stakeholders of an enterprise. The enterprise relates with various stakeholders such as customers, the community, the creditors, suppliers and a host of others.

The firm is expected to take decisions that enhance the various interests of stakeholders. Environmental activities of enterprises have direct or indirect impact on the environment and by extension the stakeholders.

The deliberate actions of the firm to restore the environment to enhance the sustainability of the enterprise over time are loaded with interpretations. The environmental lovers will view the action of the enterprise to restore or replenish the environments as value-added and this will endear them to such firm.

The investors in the capital market react to new information about firms in different ways. On one hand, they may respond positively when the information is perceived as being good news, while on the other hand, they may respond negatively when the information is perceived to be bad, and lastly, they may not even react at all, particularly when available information is not persuasive enough.

The effect of the reaction of investors to disclosure of information about environmental policies of an enterprise listed on the capital market may be expansionary or contractive. Positive reaction will lead to the expansionary effect on the market capitalisation while negative reaction will lead to contraction of the market capitalisation.

The activities of cement and oil and gas companies have different dimensions of impact on the environment and when concrete remediation policies are enunciated by these companies, there is an expectation that stakeholders may react positively to such gesture. Thus this study attempts to evaluate the reaction of stakeholders to the disclosure of such information.

Empirical Literature

Being a contemporary issue, environmental information disclosure has enjoyed a wide range of academic research as published in extant literature.

Al Amosh and Khatib (2023) investigated the impact of environmental, social and governance (ESG) disclosure on the market value of listed firms in Jordan. The data for the study were taken from annual reports of listed 173 firms in Amman Stock Exchange for the years 2012 to 2019. Their findings indicate that environmental and social disclosures individually and ESG collectively maximise market value positively; while the role of governance disclosure was negligible.

Wu and Li (2023) investigated the relationship between environmental disclosure and financial performance as well as the mediating effect of economic development and information penetration. The study focused on heavily polluted enterprises in China from 2008 to 2019.

Contents analysis was used to measure the level of environmental disclosure. The result of analysis shows that environmental disclosure positively relate to financial performance.

Alsakini (2023) investigated the impact of environmental disclosure on market performance in Jordanian industrial companies listed on the Amman Stock Exchange. The data for the study were extracted from annual reports of 43 industrial firms for the years 2017 to 2021. The findings of the study reveal that there is statistically significant effect of environmental disclosure in both market value and stock turnover rate in addition to Tobin's Q turnover rate.

Olagunju and Ajiboye (2022) studied how environmental accounting disclosure influences the market value of listed non-financial firms in Nigeria. The dependent variable of the study was market value proxied by earnings per share (EPS) while the independent variable was proxied by the index of environmental accounting disclosure constructed by the researcher. The data for the study were extracted from the annual reports of 72 out of 112 listed non-financial firms in Nigeria. The findings of the study reveals that environmental accounting disclosure influences the earnings per share (EPS) and share price positively and significantly.

Alsahlawi, et al, (2021) investigated the impact of environmental sustainability disclosure on stock return of Saudi listed firms with the moderating role of financial constraints. The main objective of the study was to investigate the effect of environmental disclosure in the investment decision making process of investors in Saudi Arabia. The sample of the study was made up of firms listed on Saudi stock exchange during 2015 to 2019.

The data relating to environmental sustainability disclosure, financial constraints and frim characteristics were collected from Bloomberg database. The dependent variable was the stock return. The data were analysed using regression model. The results of the analysis show a significant negative relationship between environmental disclosure and stock return.

This implies that higher disclosure of information on environmental factors will decrease stock return of Saudi listed firms. The findings of this study are however a negation of the expectations that increased disclosure will enhance stock returns.

Razali *et. al.,* (2019) investigated the relationship between environmental disclosure and stock market liquidity of public listed firms in Bursa, Malaysia. The explanatory variable in the study was the stock market liquidity and the independent variable was the disclosure of environmental information. The data for the study were obtained from annual reports for the year 2016 using contents analysis.

The data were analysed using regression model. The findings of the study show there is a significant relationship between environmental disclosure and stock market liquidity in terms of bid-ask spread. The study concludes that increase in environmental disclosure enhances transparency of information and therefore investor's confidence to invest in the firm.

Oyedokun *et. al.,* (2019) conducted a study on the effect of environmental accounting disclosure on firms' value of listed industrial goods company in Nigeria. The study used *ex post facto* research design with data gathered from sampled company's annual financial statements of 18 companies listed from 2007 to 2016.

The environmental accounting disclosure was measured by non-financial disclosures, financial disclosures and performance indicators while the firm value was measured by Tobin Q. The data were analysed with multiple regression using e-view package. The findings of the study revealed that financial indicators have positive insignificant effect on value of industrial goods firms in Nigeria while the non-financial indicators have a positive significant effect on firm value.

Wei and Wang (2016) studied environmental disclosure, investor's investment decisions and their perceptions of the credibility of management in Taiwan. The study used experimental and non-experimental disclosure groups. Questionnaires were assigned to each group.

The study used multivariate analysis variance (MANOVA) to test analyse the data. The findings of the study reveal that environmental disclosure positively influences investor's stock purchase decisions and their perception of the credibility of management. Nor *et. al.,* (2016) studied the effect of environmental disclosure on financial performance of firms in Malaysia. The main objective of the study was to investigate the relationship between environmental disclosure and financial performance of some companies in Malaysia.

The data for the study were extracted from annual reports using content analysis which constituted the dependent variable, while the independent variable was based on the environmental information index constructed by the researcher. The data were analysed with Spearman's rank correlation. The findings of the analysis show that the companies emphasized the disclosure of environmental information in order to attract investors and fulfil the demand of stakeholders groups.

METHODOLOGY

Hypotheses Development

Three hypotheses were developed for this study to cover the relationship of environmental policies disclosures and market capitalisation which was used to proxy investor's confidence.

The main thrust of sustainability is the efforts or activities of firms to replenish the depleted environment. The willingness of firms to replenish the environment is seen in the policies they put in place towards ameliorating the environment. Therefore the first hypothesis was developed to ascertain whether the disclosure of information on the policy of replenishing or remediating the environment with the aim of restoring the environment stimulated the confidence of investors.

H_{01}: Environmental replenishment policy disclosure does not have any effect on Market capitalisation of listed companies in Nigeria. Another important factor in the management and sustenance of environment is about the

management of waste materials emanating from the activities of the firms. Wastes when not properly managed could have devastating effect on all living things. Consequently, hypothesis two was developed to capture the response of investors towards disclosure of information on policies towards managing wastes and thus reducing the effect of wastes on the environment.

H_{02}: The disclosures of information on environmental waste management policy does not have any effect on market capitalisation of listed companies in Nigeria.

The activities of cement and oil and gas firms come in forms of gas emission into the atmosphere. The effect of these on the living organisms cannot be overstated. Investors see policies put in place to address carbon emissions as a responsible behaviour. Thus hypothesis three was postulated to look at the effect of disclosure of information on carbon emission management policy on the corporate reputation of the firms.

H_{03}: The disclosure of information on carbon emission management policy does not affect the market capitalisation of listed companies in Nigeria.

Model Development

The independent variable of the study was the environmental information disclosure (EID) which was broken down into environmental replenishment policy disclosure (ERPD), environmental waste management policy disclosure (EWMPD) and carbon emission management policy disclosure (CEMPD). The dependent variable of the study was investor's confidence which was proxied by market capitalisation (MCAP). Consequently, the functional models which express the relationship among the variables are developed.

MCAP = f(EID)-------------------------------------(1)

The second model shows the interaction within variables

EID = f (ERPD, EWMPD, CEMPD)---------- (2)

The third model is econometric model showing the relationship between the dependent and independent variables:

MCAP = β_0 + ß1ERPD + ß2EWMPD + ß3CEMPD + μ -------------------------------------(3)

The values of $ß_0$, $ß_1$, $ß_2$ and $ß_3$ will be derived from the results of analysis of data.

Data Generation

This study adopted *ex-post facto* research design as data for the study were obtained from annual reports of selected Cement Companies in Nigeria. The study adopted the population of all three cement companies and six oil and gas companies in listed on the floor of Nigeria Exchange Group. The study period covered spanned seven years from 2016 to 2022. The necessary data were extracted from annual reports of the selected companies. Content analysis was used to extract the disclosure from the financial statements based on disclosure checklist developed by the researcher. Based on prior studies (see Santika and Sari, 2022), a score of 1 was awarded for disclosure of environmental information, while 0 was awarded for non-disclosure. The data generated were used to develop disclosure index as follows:

$$\text{Dscore}_{it} = \frac{\sum \text{disclosure scores}}{\text{Maximum number of disclosure scores}}$$

Where: Dscore $_{it}$ = Disclosure score index in period t. The aggregate disclosure scores were analysed with market capitalisation using SPSS version 20.

Results of analysis

The results of the analyses of the data generated for the study are discussed.

Descriptive Statistics

The descriptive statistics of the data deployed for analysis is as stated in Table 1 below.

Table 1: Descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ERPD	63	.40	1.00	.6095	.18413
WMPD	63	.40	1.00	.8857	.18755
PMPD	63	.20	.80	.6571	.20142
MCAP	63	74523.60	728812.70	248741.5857	221305.97999
Valid N (listwise)	63				

From Table 1 above the minimum disclosure score index for environmental replenishment policy disclosure was 0.40 while the maximum disclosure score index was 1.00 with mean and standard deviation were 0.6095 and 0.18413 respectively. This indicates that the disclosure of environmental replenishment disclosure policy was adequate to influence the behaviour of investors. The minimum and maximum disclosure score index for waste management policy disclosure were 0.40 and 1.00 while the mean and standard deviation stood at 0.8857 and 0.18755 respectively. These indicate that the disclosure of information on waste management policy was adequate to influence the decision of investors.

The minimum and maximum disclosure score index of carbon emission management policy disclosure stood at 0.20 and 0.80 with mean and standard deviation of 0.6571 and 0.20142. For market capitalisation, the minimum value was N74, 523.6 billion, the maximum was N728,812.7 billion with the mean of N248,741.59 and standard deviation of N221,305.98 billion. These indicate that the disclosure of information on carbon emission disclosure was adequate to influence the decision of investors in the capital market.

Test of Hypothesis

The results of analysis of data for the study are contained in Table 2 below.

Table 2: Coefficients[a]

Model	Unstandardized coefficients		Standardized coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	374451.807	132838.456		2.819	.012
ERPD	587933.416	205786.461	.489	2.857	.011
WMPD	66142.254	28176.719	.355	2.347	.031
CEMPD	313859.972	187475.677	.286	1.674	.112

a. Dependent Variable: MCAP

Hypothesis One

From the results of analysis in table 2 above, the beta value of environmental replenishment policy disclosure (ERPD) stood at 0.489. This implies that 48.9 percent of variation in the market capitalisation of listed companies in Nigeria is attributable to variation in the environmental replenishment policy disclosure. The t-value of 2.857 is greater than 1.986 at 5 percent level of significance. The p-value of 0.011 is greater than 0.000 indicating that the null hypothesis be rejected and thereby necessitating the acceptance of alternate hypothesis.

Hypothesis Two

From the results of analysis in Table 2 above, the beta value of waste management policy disclosure (WMPD) stood at 0.355. This implies that 35.5 percent of variation in market capitalisation of listed cement companies is accounted for by changes in the disclosure of information on waste management policy. The t-val of 2.347 is greater than 1.986, while the p-value of 0.031 is greater than 0.00. This gives indication that the null hypothesis should be rejected.

Hypothesis Three

From the results of analysis in table 2 above, the beta factor of carbon emission management policy disclosure stood at 0.286. This shows that 28.6 percent of changes in market capitalisation is accounted for by changes in the carbon emission management disclosure policy. The t-value of 1.674 is lower than the t-cal value of 1.986, while the p-value of 0.112 is greater than 0.000, signifying that the null hypothesis is accepted.

Discussion of Findings

The summary results of analysis of data are presented in Table 3 below.

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.784[a]	.614	.546	149054.36584

a. Predictors: (Constant), PMPD, WMPD, ERPD

The coefficient of determination of the data analysis stood at 0.614 indicating that the regression line fits the data by 61.4 percent. The adjusted coefficient of determination of the results of analysis as shown in Table 3 above stood at 0.546. This shows that 54.6 percent of variation in the dependent variable, which is the market capitalisation, is explained by adjustment in the independent variable, which is the environmental information disclosure.

The implication of the result is that an adjustment in the disclosure of environmental policies will lead to adjustment of 54.6% in the market capitalisation of cement and oil and gas firms. The result of the various hypotheses indicate the rejection of hull hypotheses which imply that the disclosure of information on environmental replenishment policy, waste management policy and carbon emission policy disclosures are significant in boosting firm reputation in the perception of investors.

This is consistent with prior studies of Olagunju and Ajiboye (2022), Alsakini (2022); who found that environmental disclosure influences the market value of firms. However, the findings of this study are in negation of earlier work of Asahlawi *et. al.*, (2021) who found a negative relationship between environmental disclosure and stock returns.

CONCLUSION AND RECOMMENDATIONS

The findings of the study indicate that the various parameters that measure the independent variable were positively related to market capitalisation. This means that disclosure of environmental policies is capable of influencing the investors' confidence on firms. Thus firms that want to increase investors' confidence in their firms are encouraged not only to develop environmental policies but also disclose such policies in their annual reports. This study contributes to existing literature on the relationship between environmental disclosure and corporate reputation. This findings of this study have implications on capital market operators, policy makers, investors, shareholders, government agencies particularly those concerned with the environment as well communities or stakeholders.

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