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GREEN ACCOUNTING DISCLOSURE AND STOCK MARKET VALUE IN LISTED OIL AND GAS FIRMS IN NIGERIA

By

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ABSTRACT

This study investigated the effect of green accounting disclosure on stock market value of listed oil and gas firms in Nigeria. Environmental remediation and compliance were used as dimensions of green accounting disclosure, while the market price per share and price to earnings ratio were used to measure stock market value. The study raised five research questions and hypotheses, and the stakeholder theory and the legitimacy theory were used as the baseline theories to underpin the study variables. The study was anchored on the positivist philosophical paradigm and used the "ex post facto" research design to obtain secondary data from 2013 to 2022. In addition, the quasi-experimental research design was used to ascertain the impact of green accounting disclosure on stock market value. The population of the study consist of nine (9) listed oil and gas firms, drawn from the official websites of the Nigeria Exchange Group. The sampling procedure used for the study was the census method, therefore, the entire population was also adopted as the sample size, with the published annual financial statement spanning from 2013 to 2022, hence, the total observation of the study was 90. Furthermore, the study used panel data, which were presented and analyzed. Descriptive statistics was used for the univariate analysis, while regression analysis was used for the bivariate and multivariate analysis, which was used to ascertain the impact of green accounting disclosure on stock market value, and the influence of firm size on the effect of green accounting disclosure on stock market value. From the analysis, it was revealed that all the dimensions of green accounting disclosure (Environmental remediation and compliance), have a significant impact on all measures of stock market value (market price per share and price to earnings ratio), therefore, it was concluded that green accounting disclosure has a positive significant impact on stock market value of listed oil and gas firms in Nigeria, and that firms that practice green accounting disclosure significantly increase their stock market value. Therefore, it was recommended that Oil and gas firms should allocate sufficient resources towards environmental compliance, and also integrate remediation activities into their core business strategies to enhance their market valuation.

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Keyword: Green Accounting Disclosure, Stock Market Value, Environmental Remediation, Disclosure, Environmental Compliance Disclosure, Market Price per Share, Price-Earnings Ratio (P/E Ratio), Firm Size

Introduction

The current changes in stakeholders' information needs and the trend of expanding the profit sphere in the business sector have led to most firms facing social, environmental, and humanitarian issues (Ntim, 2016). The oil and gas industry has had a significant impact on the Nigerian economy in recent years, especially since the 2019 coronavirus pandemic, which has redefined the importance of innovation in production methods for economic survival. A study was conducted on the importance of green accounting disclosure to the finances of oil and gas firms in Nigeria and other developed countries. Green accounting disclosure is the integration of environmental information into financial reporting, providing stakeholders with a comprehensive understanding of a company's environmental performance, including emissions, resource use, waste management, and environmental risks.

Studies have shown that firms with strong environmental performance and transparent disclosure tend to outperform their peers in terms of stock market performance over the long term (Clarkson, Richardson & Vasvari, 2020). This outperformance can be attributed to several factors, including reduced regulatory and reputational risks, enhanced access to capital from socially responsible investors, and improved operational efficiency through resource conservation and innovation (Epstein & Roy, 2003). Additionally, green accounting disclosure can improve investor confidence by providing a more complete picture of a company's performance and risk exposure. However, the long-term benefits of green accounting disclosure for oil and gas firms often outweigh the initial costs. By proactively addressing environmental concerns and transitioning towards cleaner energy sources, firms can future-proof their operations and maintain investor confidence amid growing climate-related risks (Sawani & Alagathurai, 2018). Additionally, transparent reporting can enhance stakeholder trust and foster constructive dialogue between firms, investors, and regulatory authorities, ultimately contributing to long-term value creation.

Schaltegger, and Burritt, (2015) sustainability accounting for firms: Catchphrase or decision support for business leaders, Deegan and Gordon, (2015) investigated environmental disclosure practices of Australian corporations. Elkington, (2018) investigated Partnerships from cannibals with forks: The triple bottom line Igbekoyi, Solanke, and Sunday(2021) studied Environmental Accounting Disclosure and Financial Performance of Listed Multinational Firms in Nigeria, and Noviansyah and Yatminiwati (2019), examined Disclosure off Green Accounting on Financial Performance, however, it is rare to find in literature, an empirical study that examines the impact between green accounting and stock market value, and also in the oil and gas industry, which creates a lacuna in the literature, hence, this study is proposed to bridge this existing gap. Consequently, the study aimed to explore how Nigeria's listed international oil and gas businesses were affected by green accounting disclosure and stock market value.

Statement of the Problem

Nigeria's oil and gas firms face unique challenges in green accounting due to environmental impact and dependence on oil revenues, with a lack of regulatory frameworks mandating comprehensive reporting practices (Okoye, & Nwezeaku, 2018). While Nigeria has made efforts to enhance corporate transparency and accountability through initiatives like the Nigerian Extractive Industries Transparency Initiative (NEITI), The regulatory gap in

environmental disclosures by oil and gas firms and the complexity of their operations pose challenges in accurately quantifying and reporting environmental costs and impacts, including land degradation, water pollution, and biodiversity loss (Akinwumi et al., 2019). However, assessing the full extent of these impacts and attributing them to specific activities or projects can be challenging, particularly in the absence of standardized methodologies and metrics for environmental accounting in the sector.

Nigerian oil and gas corporations' inability to adopt green accounting techniques and principles is a significant issue, potentially hindering their ability to implement robust environmental management systems and comprehensive sustainability reporting (Okoye & Ezejiofor, 2019). This is exacerbated by a general inclination towards the optimization of short-term financial performance, which may give priority to cost-cutting initiatives above long-term environmental stewardship. Furthermore, there are problems with data accessibility and accuracy, especially when it comes to environmental impact evaluations and monitoring. Limitations in monitoring infrastructure, data collection procedures, and stakeholder participation may make it difficult for oil and gas firms in Nigeria to obtain accurate and current environmental data (Okoye & Ezejiofor, 2019). For this reason, the data shown regarding the environmental Reports could be inconsistent or incomplete, which would damage their credibility and make them less helpful to stakeholders.

The socio-political context in Nigeria, characterized by corruption, political instability, and conflicts in the Niger Delta region, further complicates green accounting disclosure in the oil and gas sector (Oyedepo, 2017). Issues such as community grievances, oil spills, and human rights violations may not only have significant environmental implications but also impact the reputation and social license to operate oil and gas firms. However, the disclosure of such sensitive information may be perceived as detrimental to corporate interests, leading to underreporting or misrepresentation of environmental risks and liabilities. Another problem is the lack of investor pressure and market incentives for oil and gas firms in Nigeria to improve their environmental disclosure practices (Okoye, 2018). Despite growing global awareness of environmental issues and increasing investor demand for sustainable investment opportunities, the Nigerian capital market may not yet fully appreciate the importance of environmental performance in investment decision-making. As a result, oil and gas firms may perceive limited benefits in investing resources to enhance their green accounting disclosure practices. And, there are capacity constraints within regulatory agencies and oversight bodies responsible for monitoring and enforcing environmental disclosure requirements in the oil and gas sector (Oyedepo et al., 2017). Weak institutional frameworks, inadequate enforcement mechanisms, and resource constraints may limit the effectiveness of regulatory efforts to promote transparency and accountability among industry players. However, to address this problem, this study sought to examine the impact of green accounting disclosure on stock market value of oil and gas firms in Nigeria.

Conceptual Framework

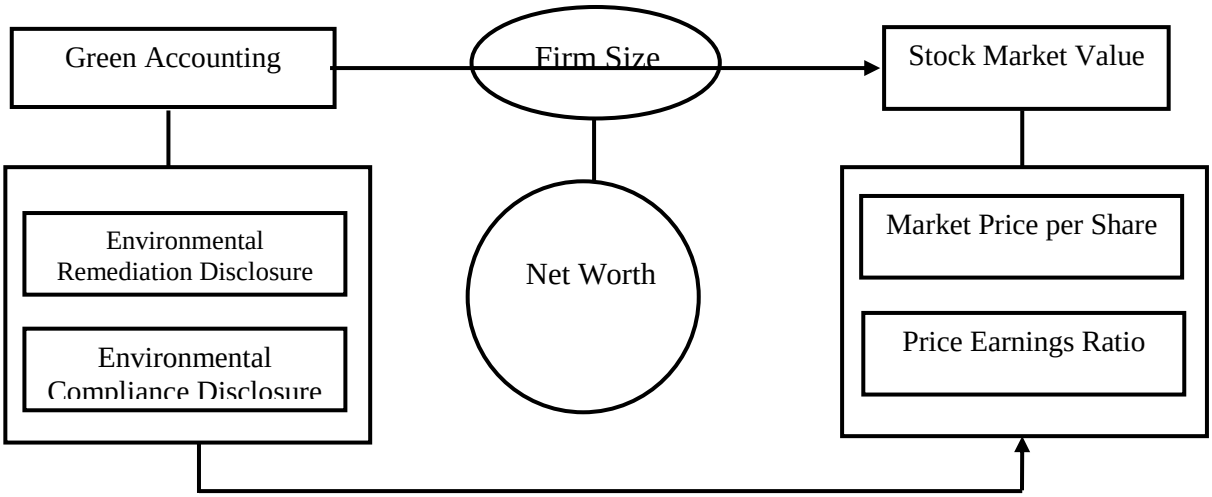


Figure 1.1: Conceptual framework of the impact of green accounting disclosure on stock market value.
Source: Researcher's Desk (2024), adapted from (Onumah, 2020: Ajayi, & Uwuigbe, 2020: Oyewo & Owolabi, 2018 Adegbaju, & Oloko, 2019: Uwuigbe & Uwuigbe, 2017).

Purpose of the Study

The purpose of the study was to examine the impact of green accounting disclosure on the stock market value of listed oil and gas firms in Nigeria, while the objectives were to:

i. Determine the impact of environmental remediation disclosure on the stock market value of listed oil and gas firms in Nigeria,
ii. Investigate the effect of environmental compliance disclosure on market price per share of listed oil and gas firms in Nigeria.
iii. Examine the relationship between environmental remediation disclosure and price earnings ratio of listed oil and gas firms in Nigeria.
iv. Evaluate the moderating influence of firm size on the impact of green accounting disclosure on stock market value of listed oil and gas firms in Nigeria.
v. Explore the effect of environmental compliance disclosure on price earnings ratio of listed oil and gas firms in Nigeria.

Research Question

In line with the research objectives, the following questions were raised:

i. What is the impact of environmental remediation disclosure on market price per share of listed oil and gas firms in Nigeria?
ii. What is the effect of environmental compliance disclosure on market price per share of listed oil and gas firms in Nigeria?
iii. What is the relationship between environmental remediation disclosure and price earnings ratio of listed oil and gas firms in Nigeria?
iv. What is the moderating influence of firm size on the impact of green accounting disclosure on stock market value of listed oil and gas firms in Nigeria?
v. What is the effect of environmental compliance disclosure on price earnings ratio of listed oil and gas firms in Nigeria?

Research Hypotheses

To answer the research questions, the following hypotheses were formulated:

H_{01}: There is no significant impact of environmental remediation disclosureon market price per share of listed oil and gas firms in Nigeria.

H_{02}: There is no significant effect of environmental compliance disclosure on market price per share of listed oil and gas firms in Nigeria

H_{03}: There is no significant relationship between environmental remediation disclosure and price earnings ratio of listed oil and gas firms in Nigeria

H_{04}: Firm size does not moderately influence the impact of green accounting disclosure on stock market value.

H_{05}: There is no significant effect of environmental compliance disclosure on price earnings ratio of listed oil and gas firms in Nigeria?

Significance of the Study

Firstly, it is anticipated that the study will shed light on the extent to which green accounting disclosure practices influence the perception of investors regarding the environmental performance of oil and gas firms. Secondly, the study is expected to provide valuable guidance for regulatory authorities in Nigeria regarding the formulation of policies aimed at promoting environmental transparency and accountability within the oil and gas industry. By highlighting the potential impact of green accounting disclosure on stock market value, policymakers can develop incentives and regulations that encourage firms to adopt more environmentally responsible practices. Thirdly, the findings of the study are likely to influence the strategic decision-making processes of oil and gas firms operating in Nigeria. Also, Scholars may explore how green accounting disclosures influence investor perceptions and market dynamics, examining regulatory frameworks, industry-specific characteristics, and moderating factors on the relationship between disclosure and stock market value.

LITERATURE REVIEW

Theoretical Framework

The baseline theories that were used to underpin the relationship between green accounting disclosure and stock market value are the stakeholder theory and the legitimacy theory. These theories will be used due to their link with the study variables and the fact that they have been used by scholars in related studies.

Stakeholders Theory

The origins of stakeholder theory can be traced back to the works of R. Edward Freeman in the early 1980s. Freeman introduced the concept of stakeholders as "any group or individual who can affect or is affected by the achievement of the organization's objectives" (Freeman, 1984). This broad definition expanded the traditional view of corporate responsibility beyond shareholders to include various stakeholders with legitimate interests in the firm’s operations.

Over time, stakeholder theory has evolved and been refined by both scholars and practitioners, leading to its widespread integration into management practices and corporate governance frameworks. The theory has found diverse applications across multiple disciplines, including business ethics, corporate social responsibility (CSR), strategic management, and accounting. In the field of accounting, stakeholder theory highlights that stakeholders are not solely concerned with financial performance, but also with the broader societal and environmental consequences of business activities (Hahn & Kühnen, 2013). It emphasizes the importance of transparent and comprehensive reporting to meet the informational needs of a wide range of stakeholders, extending beyond traditional financial metrics (Gray, Owen, & Adams, 1996). As a result, accounting practices have adapted to include non-financial indicators and disclosures—particularly those related to environmental, social, and governance (ESG) factors. These developments have led to the rise of integrated

reporting frameworks, which aim to present a holistic picture of an organization's value creation over time. By considering the interests of various stakeholders, such frameworks encourage businesses to adopt sustainable, ethical, and long-term approaches to decision-making. Thus, stakeholder theory not only broadens the accountability of organizations but also reinforces the role of accounting in promoting responsible corporate behavior and long-term value creation.

Legitimacy Theory

Legitimacy theory, originating in the late 1970s and early 1980s, emerged as a response to the growing societal demand for corporations to justify their existence and activities beyond mere financial performance (Deegan, 2002). Developed primarily through the works of Suchman (1995) and Dowling and Pfeffer (1975), the theory posits that organizations seek to maintain legitimacy by aligning their operations with prevailing societal norms, values, and expectations. This alignment ensures continued acceptance and support from stakeholders, which is essential for organizational survival and success. According to legitimacy theory, organizations engage in various legitimacy-seeking strategies, such as adopting socially responsible behaviors, implementing corporate social responsibility (CSR) initiatives, and disclosing relevant information to demonstrate their commitment to societal expectations (Dowling & Pfeffer, 1975). These actions help organizations manage their public image and maintain or regain legitimacy, especially in times of crisis or criticism. The application of legitimacy theory has expanded across various academic disciplines, including accounting, management, sociology, and organizational studies. In accounting research, it has been particularly influential in examining corporate reporting practices. Scholars have used legitimacy theory to explore how and why organizations disclose environmental, social, and sustainability information. CSR reporting and sustainability disclosures are often seen as mechanisms through which firms signal their alignment with societal values, respond to stakeholder concerns, and manage legitimacy in a dynamic and evolving social context (Deegan, 2002).

Conceptual Review

Green Accounting Disclosure

Green accounting disclosure refers to the practice of integrating environmental information into financial reports to provide stakeholders with a comprehensive understanding of an organization's environmental performance (Kolk & Perego, 2010). According to Kolk and Perego, this type of disclosure aims to communicate the environmental impact of business activities—such as resource consumption, pollution, and emissions—thereby enhancing transparency and accountability. It encompasses the measurement, valuation, and reporting of environmental assets and liabilities alongside financial data (Deegan, 2002). Green accounting disclosure involves the systematic identification and quantification of environmental costs and benefits associated with business operations (Gray, 2006). These may include expenditures on pollution control, environmental remediation, and investments in sustainable practices, as well as the valuation of ecosystem services and natural capital (Gray et al., 2014).By disclosing such information, organizations can demonstrate their commitment to sustainable development and facilitate informed decision-making by investors, regulators, and other stakeholders (Adams et al., 2001). Green accounting disclosure also serves as a tool for evaluating the effectiveness of environmental management strategies and policies (Burritt & Schaltegger, 2010), enabling organizations to improve their

sustainability performance while meeting the growing expectations of society for corporate environmental responsibility.

Environmental Remediation

Environmental remediation refers to the process of mitigating or reversing environmental damage caused by human activities, such as pollution, contamination, or habitat destruction (EPA, n.d.). It involves the identification, assessment, and implementation of measures aimed at restoring or rehabilitating degraded ecosystems, including water bodies, soil, and air quality (Brunner & Rechberger, 2016). The primary goals of environmental remediation are to reduce environmental risks, protect public health, and restore ecological balance. Common remediation techniques include soil and groundwater treatment, habitat restoration, and pollution control initiatives (Baker & Wilkinson, 2001).The significance of environmental remediation in financial reporting disclosure lies in its substantial financial implications for organizations. Remediation activities often involve considerable costs, such as cleanup expenditures, legal liabilities, regulatory fines, and potential penalties (Khan & Tarantino, 2000). These costs can materially affect a company's financial performance, profitability, and cash flow—especially if they are unforeseen or underestimated. Consequently, transparent disclosure of environmental remediation liabilities and related expenditures is crucial for stakeholders, including investors, creditors, and regulators. Such disclosures enable stakeholders to assess the financial stability, environmental responsibility, and long-term sustainability of an organization (Burritt & Schaltegger, 2010). By incorporating environmental remediation into financial reporting, firms not only fulfill regulatory requirements but also enhance their legitimacy and accountability in the eyes of society.

Environmental Compliance

Environmental compliance involves adhering to laws, regulations, and industry standards designed to protect the environment and public health from the harmful impacts of human activities, including pollution. This process includes obtaining permits, conducting environmental assessments, monitoring emissions, and implementing pollution control measures (Boyd, 2003; Bhattacharya et al., 2003). It requires organizations to integrate environmental considerations into their policies and procedures, manage environmental risks, and continuously improve compliance through monitoring and adaptation to changing regulations (Schaltegger & Burritt, 2010; Dunlap & McCright, 2008). Non-compliance can lead to legal sanctions, fines, and reputational damage, negatively affecting a company's long-term competitiveness (Burritt & Schaltegger, 2010; Cho & Patten, 2007). In Nigeria, environmental compliance is governed by the NESREA Act and other regulations, with firms required to conduct Environmental Impact Assessments (EIAs) for activities with potential environmental risks (Oyewunmi & Babatunde, 2014). Violations may result in penalties, fines, or legal action (Ejibunu & Olusegun, 2013).

In Nigeria's oil and gas sector, firms are subject to strict compliance requirements, including obtaining permits, conducting EIAs, and implementing Environmental Management Systems (EMS) based on ISO 14001 standards (Akpan, 2018; Ite et al., 2008). These firms must monitor and report environmental performance, engage in community consultation, and participate in corporate social responsibility (CSR) initiatives (Ite et al., 2008; Ite & Ibok, 2009). They are also required to have emergency response plans for accidents like oil spills (Obot & Offiong, 2015). Non-compliance can lead to enforcement actions, including fines, environmental damage remediation, and the restoration of ecosystems, with regulatory bodies

such as the Department of Petroleum Resources (DPR) and NESREA authorized to conduct inspections, audits, and impose penalties (Akpan, 2018; Nwaubani & Nwaubani, 2014).

Stock Market Value

Stock market value is a critical metric in assessing a company's performance, reflecting investor sentiment and perceptions of financial health, growth prospects, and risk. Huang and Litzenberger (1988) define it as the present value of expected future cash flows, discounted at an appropriate rate reflecting investment risk. Damodaran (2012) further emphasizes that stock market value is influenced by market dynamics such as supply and demand, investor sentiment, and liquidity, as well as corporate fundamentals like profitability and growth. Key dimensions influencing stock market value include financial performance (Huang & Litzenberger, 1988), growth prospects (Damodaran, 2012), risk factors, and investor sentiment (Shiller, 1981). Macroeconomic indicators such as GDP growth and inflation rates also significantly impact stock values (Bekaert & Harvey, 2003), while corporate earnings and investor psychology play a crucial role in stock price fluctuations (Fama & French, 1992; Skinner, 1994). Furthermore, market liquidity, technological innovations, and geopolitical factors influence the overall value, driving stock price changes and market volatility (Biais et al., 2005; Brynjolfsson & McAfee, 2014).

For oil and gas firms in Nigeria, stock market value serves as a key performance indicator, reflecting financial health, market sentiment, and governance practices (Omotola, 2011; Ologunde & Hassan, 2014). Stock market value influences access to capital, corporate strategies, and risk management, particularly in the volatile oil and gas industry (Adewuyi & Adetiloye, 2020). It also acts as a governance and accountability tool, promoting transparency and regulatory compliance (Oluwatobi et al., 2017; Olayide & Olaniyan, 2019). Market capitalization, P/E ratio, and other valuation multiples like P/B ratio are common measures of stock market value, providing insights into a company's relative performance and growth potential (Damodaran, 2012; Graham & Dodd, 2008). Additionally, technical and sentiment analysis tools, such as moving averages and the put/call ratio, offer valuable insights into stock price movements and market behavior (Murphy, 1999; Baker & Wurgler, 2007). These measures assist investors in making informed decisions, helping them gauge stock value and market trends.

Measures of Stock Market Value

Market Price per Share

Market price per share is a key concept in finance, reflecting the value at which a company's stock trades on the open market, driven by supply and demand dynamics, investor sentiment, and market conditions (Brigham & Ehrhardt, 2013). It fluctuates throughout the trading day based on factors such as company performance, macroeconomic conditions, industry trends, and investor expectations (Damodaran, 2012). Positive news like strong earnings or new product launches can drive demand and increase stock prices, while negative news such as poor financial results or regulatory issues can lead to price declines. Market price per share is often assessed using metrics like the price-to-earnings (P/E) ratio, which compares a company's stock price to its earnings per share, offering insights into the stock's valuation relative to its earnings potential (Damodaran, 2012). Moreover, market capitalization, which is calculated by multiplying the market price per share by the total number of shares

outstanding, provides a measure of a company's size and market position (Brigham & Ehrhardt, 2013).

The market price per share is influenced by a range of determinants, including the company's financial performance, macroeconomic factors like interest rates and inflation, and industry-specific trends (Fama, 1991; Fama & French, 1992). Strong financial performance, revenue growth, and profitability often result in higher stock prices, while negative economic conditions or poor performance can exert downward pressure (Damodaran, 2012). Investor sentiment, speculative behavior, and market psychology also play a significant role, as news, rumors, and social media can cause stock prices to deviate from their intrinsic value (Shiller, 2000; Barber & Odean, 2008). Additionally, supply and demand factors, such as share buybacks or new stock issuance, affect liquidity and investor preferences, influencing stock price movements (Fama & French, 1992). Regulatory and legal factors, including corporate governance standards and market integrity, can also impact investor confidence and, consequently, stock prices (Securities and Exchange Commission, 2003; Coffee, 2006).

The Price-Earnings Ratio (P/E Ratio)

The Price-Earnings Ratio (P/E Ratio) The Price-Earnings Ratio (P/E Ratio) is a key financial metric calculated by dividing a company's market price per share by its earnings per share (EPS), offering valuable insights into market perceptions of a company's future earnings potential (Damodaran, 2012). It serves as a critical tool for assessing stock valuation, with a high P/E ratio typically indicating optimism about future growth and a low P/E ratio suggesting skepticism or undervaluation (Graham & Dodd, 1934). The two primary types of P/E ratios—trailing P/E, which uses historical earnings data (Penman, 2013), and forward P/E, based on estimated future earnings (Brealey et al., 2017)—offer investors different perspectives on market expectations. Additionally, the P/E ratio plays an important role in comparative analysis, enabling investors to assess stock valuation within industries where varying P/E ratios reflect differences in growth rates and risk profiles (Brealey et al., 2017; Damodaran, 2012). Changes in a company's P/E ratio over time can reveal trends in market sentiment and growth expectations (Penman, 2013).

In the Nigerian stock market, the P/E ratio is widely utilized by investors and analysts to gauge market sentiment and the relative value of stocks, with high P/E ratios often signaling optimism about future profitability and low P/E ratios reflecting concerns (Malkiel & Fama, 1970). Understanding industry-specific dynamics is essential for interpreting P/E ratios, as different sectors exhibit varying average ratios due to their unique growth rates and risk profiles (Damodaran, 2012). However, the P/E ratio should not be relied upon in isolation, as factors such as accounting practices, economic conditions, and market sentiment can influence it, potentially distorting its reliability (Brealey et al., 2017). To make well-rounded investment decisions, investors should complement the P/E ratio with other financial metrics for a more comprehensive analysis of stock market conditions (Brealey et al., 2017).

Moderating Variable

Firm Size

Firm size significantly influences organizational policies, decision-making processes, and financial reporting disclosure practices. Larger firms typically have more complex structures, diverse operations, and a wider range of stakeholders, which results in multi-layered

decision-making and extended cycles for consensus-building (Cheng & Courtenay, 2006; Chenhall & Langfield-Smith, 2003). They are often subject to greater regulatory scrutiny and market expectations, leading to more rigorous financial reporting and internal controls to maintain transparency and meet compliance requirements (Ali et al., 2007; Barth et al., 2001). Additionally, large firms benefit from economies of scale, access to capital markets, and extensive resources, allowing for investments in advanced technologies and talent acquisition to support decision-making and reporting (Ittner et al., 2003). In contrast, smaller firms, which face resource constraints, typically have simpler decision-making processes and less formalized risk management and control mechanisms (Eisenhardt, 1989; Barth et al., 2001). Firm size is also determined by factors such as revenue, market share, assets, and capitalization, with larger firms often having greater financial strength, market influence, and the ability to pursue strategic initiatives like expansion and acquisitions (Barney, 1991; Demsetz, 1973; Porter, 1980).

Moreover, larger firms are more likely to engage in proactive investor relations and governance practices, responding to market pressures, investor activism, and the need for transparency (Lang & Lundholm, 1996; García-Meca et al., 2005). Smaller firms, however, tend to focus more on relationship-based disclosure practices and may have fewer external stakeholders and lower market scrutiny (García-Meca et al., 2005). Firm size is also influenced by management capabilities, organizational structure, and external factors such as industry dynamics and macroeconomic conditions (Hitt et al., 2001; Afuah, 2003). Effective management, technological innovation, and brand reputation contribute to the growth and resilience of larger firms, enabling them to navigate competitive pressures and industry changes (Barney, 1991; Afuah, 2003). Additionally, larger firms can exploit economies of scale, reduce costs, and enhance profitability, while diversifying into related industries to increase their market presence and competitiveness (Williamson, 1975; Porter, 1980).

Measure of Firm Size

Net Worth

Net worth, also known as shareholder's equity or book value, represents the residual value of a firm's assets after deducting its liabilities, calculated by subtracting total liabilities from total assets (Palepu et al., 2010). It signifies the ownership interest attributable to shareholders and reflects a firm's economic value. A positive net worth indicates financial strength and solvency, providing a cushion against financial shocks, while a negative net worth suggests insolvency risks. Net worth is crucial for financial health assessment, guiding strategic decision-making, and influencing a firm's ability to secure capital and manage financing costs. A strong net worth allows firms to reduce borrowing costs, increase financial flexibility, and invest in strategic initiatives like research and development, mergers, and acquisitions, while a weak net worth may limit growth opportunities and access to capital (Palepu et al., 2010). It also impacts dividend policies and shareholder value creation, with robust net worth supporting consistent dividends and fostering investor confidence (Ross et al., 2019).

Net worth is integral to firm decision-making, influencing creditworthiness, borrowing costs, and managerial incentives. Credit rating agencies use net worth to assess a firm's financial strength and default risk, with a higher net worth leading to better credit ratings and lower borrowing costs (Palepu et al., 2010). Moreover, net worth aligns managerial interests with those of shareholders, motivating executives to pursue strategies that enhance net worth and

shareholder value (Ross et al., 2019). Lastly, net worth has regulatory implications, as firms are required to disclose it in financial statements, ensuring transparency and adherence to capital adequacy regulations (Palepu et al., 2010).

Empirical Review

Riyadh et al. (2020) investigated the green accounting (GA) impact on financial performance (FP). The research question about this research will answer empirical investigation and analysis of the top 100 multinational corporations. The research seeks to answer the question: Does green accounting cost have an impact on financial performance in the top 100 multinational corporations? Thus, secondary data and multiple regression analysis were employed in this research, such as CSR reports, sustainability reports, and financial statements. The selected corporations were the 100 largest multinational corporations in the year 2018. Then, green accounting used a proxy of the environmental cost (EC), while financial performance employed a proxy of Return on Capital Employed (ROCE). The finding of autonomous Green Accounting costs on financial performance has a negative relationship.

Yang and Yi Li (2020) carried out a study on the impact of environmental information disclosure on the firm value of listed manufacturing firms in China between 2006 and 2016. The dataset was analyzed using the difference-in-differences (DID) model and the propensity score matching method (PSM) and the result showed that the Environmental Information Disclosure Measure for Trial Implementation (EIDMT) exerts a significant impact on the listed manufacturing firms' value Solomon (2020) carried out a literature review on environmental disclosure and financial performance of listed oil and gas firms in Nigeria. Performance was proxied by return on asset, return on equity, earnings per share, cash flow, and profit margin. The findings revealed a mixed outcome of a negative and positive relationship.

On the other hand, Acti, Lyndon, and Bingilar (2013) in their study investigated the impact of environmental cost on corporate performance: a study of oil firms in Niger Delta states of Nigeria using returns on total assets (ROTA) as a performance measure. The multiple regression analysis was explored in the study. Three selected indicators of sustainable business practices were used namely: community development cost (CDC); waste management cost (WMC) and employee health and safety cost (EHSC). The study reveals that CDC is statistically significant but negatively related to corporate performance, WMC is statistically significant but negatively related to corporate performance and EHSC has a positive significant relationship with corporate performance. The findings showed that investment in social and environmental responsibilities such as employee health and safety costs will likely improve the return on total assets of environmentally-conscious firms. The study recommended that the management of oil firms in the Niger Delta States of Nigeria should develop a well-articulated environmental costing system that will guarantee a conflict-free corporate atmosphere needed by managers and workers for maximum productivity and eventually improve corporate performance.

Furthermore, Odesa, Igbru, and Agbasi (2016) examine the effect of environmental cost on firm performance: a study of selected manufacturing and oil and gas firms in Nigeria. Data covering the period of 2010-2014 were obtained from the annual report of the selected firms. The study used descriptive statistics, correlation, and regression analysis. The regression result shows that a positive significant relationship exists between corporate social responsibility, employee health and safety cost, waste management, and firm performance

while community development cost has a negative and insignificant relationship with firm performance. The study therefore recommends that firms should invest more in the development of their host communities to boost their corporate image and maintain good relationships with the host communities.

In this same vein, Oti and Mbu-Ogar (2018) investigate the analysis of environmental and social costs and financial performance of selected quoted oil and gas firms in Nigeria. Time series data for five years were collected from 5 oil and gas firms and analyzed using the ordinary least square regression technique. Employee health and safety (EHS), waste management (WM) and community development (CD) are the explanatory variables for the study while return on capital employed (ROCE) is the dependent variable used for measuring performance. Results from the statistical analysis revealed that costs on employee health and safety and community development do not significantly affect financial performance while costs on waste management had a positive and significant effect on firms' financial performance. The study recommended that oil and gas firms should constantly review their waste management strategy and employ bespoke technology in waste management to mitigate their impact on the environment.

In contrast, Nwaiwu and Oluka (2018) examine the effect of environmental cost and financial performance measures of quoted oil and gas firms in Nigeria. Time series data were collected from annual financial reporting and economic review of the Central Bank of Nigeria. A Pearson product-moment correlation and multiple linear regression analysis were used and the result revealed that adequate disclosure of environmental cost and compliance with corporate environmental regulations has a positive and significant effect on financial performance. Thus, it was emphasized that regulatory enforcement for adequate environmental cost accounting and proper reporting by the management of oil and gas firms in Nigeria would guarantee a conflict-free corporate atmosphere that would lead to improved corporate performance.

Adediran and Alade, (2013), investigated the environmental accounting impact on the performance of a company in the Republic of Nigeria. It investigates the relationship between return on capital employed (ROCE) and environmental accounting; earnings per share (EPS) and net profit margin (NPM) dividends per share (DPS), as secondary knowledge obtained from the annual report and account of the fourteen (14), voluntary selected firms quoted in the Nigerian securities market for the year 2010. The information was then examined for mistreatment multivariate analysis. The result showed that environmental accounting incorporates an essential relationship with the assorted variables utilized in activity company performance. In addition, over that general image that arises from recent reportage since the revelations of environmental info measures voluntarily, there is a diversity of observations. Giant corporations tend to report much setting info in their annual reports compared to medium-scale businesses. Therefore, even though there is a significant correlation between company performance and environmental accounting, the speech act tends to be a lot of qualitative than quantitative.

On the other hand, Acti, Lyndon, and Bingilar (2013) in their study investigated the impact of environmental cost on corporate performance: a study of oil firms in Niger Delta states of Nigeria using returns on total assets (ROTA) as a performance measure. The multiple regression analysis was explored in the study. Three selected indicators of sustainable business practices were used namely: community development cost (CDC); waste management cost (WMC) and employee health and safety cost (EHSC). The study reveals that CDC is statistically significant but negatively related to corporate performance, WMC is

statistically significant but negatively related to corporate performance and EHSC has a positive significant relationship with corporate performance. The findings showed that investment in social and environmental responsibilities such as employee health and safety cost will likely improve the return on total assets of environmentally conscious firms. The study recommended that the management of oil firms in the Niger Delta States of Nigeria should develop a well-articulated environmental costing system that will guarantee a conflict-free corporate atmosphere needed by managers and workers for maximum productivity and eventually improve corporate performance.

Furthermore, Odesa, Igbru, and Agbasi (2016) examine the effect of environmental cost on firm performance: a study of selected manufacturing and oil and gas firms in Nigeria. Data covering the period of 2010-2014 were obtained from the annual report of the selected firms. The study used descriptive statistics, correlation, and regression analysis. The regression result shows that a positive significant relationship exists between corporate social responsibility, employee health and safety cost, waste management, and firm performance while community development cost has a negative and insignificant relationship with firm performance. The study therefore recommends that firms should invest more in the development of their host communities to boost their corporate image and maintain good relationships with the host communities.

Summary and Gap in Literature

While numerous studies have examined the relationship between green accounting practices and corporate financial performance globally, there is limited empirical evidence specifically addressing how green accounting disclosure affects stock market value in developing economies, particularly within Nigeria's oil and gas sector. Much of the existing research has concentrated on traditional financial performance indicators such as return on assets and return on capital employed, with less attention given to market-based indicators like market price per share and price-earnings ratio, which provide insights into investor perceptions and firm valuation. Additionally, the potential moderating role of firm size in shaping the impact of green accounting disclosure has been largely underexplored. This presents an important gap, as firm size can significantly influence the extent, consistency, and transparency of environmental disclosures. Therefore, a study that integrates these dimensions within the Nigerian oil and gas industry context is both timely and essential for advancing understanding in this field.

Methodology

This study employed the "ex post facto" research design to examine the impact of green accounting disclosure on the stock market value of listed oil and gas firms in Nigeria from 2013 to 2022. The ex post facto design was chosen as it allows the researcher to investigate past data to establish associations among variables and predict future trends (Kothari, 2014). By analyzing historical panel data, the study aimed to determine how green accounting practices, such as environmental remediation and compliance, influence stock market value, measured by the market price per share and price-to-earnings ratio. The population for this study consisted of nine oil and gas firms listed on the Nigeria Exchange Group (NGX) over the specified period. This period was deemed appropriate as it covered significant accounting and tax reforms impacting both the Nigerian economy and the oil and gas sector (Nigeria Exchange Group, 2024). The sample size was derived using the census method, ensuring all nine firms were included to eliminate any sampling bias.

Data for this study were collected from the published annual financial statements of the listed oil and gas firms, utilizing a structured data collection matrix to capture relevant information. According to Kothari (2014), secondary data, already analyzed and validated by auditors, was employed to ensure reliability and consistency. The study focused on three key variables: green accounting disclosure (independent variable), stock market value (dependent variable), and firm size (moderating variable). Green accounting disclosure was operationalized through environmental remediation and compliance, using dummy variables to indicate whether these practices occurred in a given year (1 for practice, 0 for non-practice). Stock market value was measured by market price per share and the price-to-earnings (P/E) ratio, which provided insights into the firms' market valuation and investor sentiment (Adebayu, 2022; Lapreku, 2022). The moderating variable, firm size, was quantified using net worth, calculated by subtracting total liabilities from total assets, including both tangible and intangible assets (KPMG, 2022). The study also emphasized the validity and reliability of the research instrument, citing the auditing processes used to validate secondary data sources (Vogt, 2007). Data analysis was performed using descriptive statistics, regression tests, and inferential statistics, including tests for normality, linearity, homoscedasticity, non-multicollinearity, and non-serial correlation, ensuring the robustness of the results.

Model Specification

To achieve the objective of this study to examine the effect of green accounting disclosure and stock market value structure, on the empirical form of the model is set below;

Function:

$$SMV = f(GAD) \quad (3.1)$$

$$SMV = \alpha_0 - \alpha_1 GAD + \mu_1 \quad (3.2)$$

$$MPS = f(ENR, ENC) \quad (3.3)$$

$$MPS = \beta_0 + \beta_1 ENR + \beta_2 ENC + \mu_2 \quad (3.4)$$

$$PER = f(ENR, ENC) \quad (3.5)$$

$$PER = \beta_0 + \beta_1 ENR + \beta_2 ENC + \mu_3 \quad (3.6)$$

$$SMV = f(GAD, NWT) \quad (3.7)$$

$$SMV = c_0 + c_1 GAD + c_2 NWT + \mu_4 \quad (3.8)$$

Where:

SMV = Stock Market Value

GAD = Green Accounting Disclosure

ENR = Environmental Remediation

ENC = Environmental Compliance

MPS = Market Price Per Share

PER = Price to Earnings Ratio

NWT	=	Net Worth
a_0, b_0, c_0	=	Slope
a_1-a_3, b_1-b_3, c_1-c_3	=	Regression Coefficient
U	=	Error Term

Data Analysis

The study utilized a dataset comprising key green accounting disclosure information, such as environmental remediation (ENR), environmental compliance (ENC), where obtained from the firms report on environmental compliance and sustainability report, and direct information on green accounting disclosure obtained through correspondence from the firms ;environmental and pollution control unit, and furthermore, the key stock market value indicators, such as market price per share(MPS) And earnings per share(EPS), were obtained from the Nigeria Exchange Group official websites, and from the published audited annual financial report of the nine(9) listed oil and gas firms in Nigeria, from 2013 to 2022.

Table 1: Ten Years Average Dataset Used For Analysis

S/N	FIRMS	ENR	ENC	MPS(N)	PER	NWT(NBillion)
1.	Capital Oil Plc	0.00	1.00	2103.12	0.19	818,450,762
2.	Conoil Plc	0.00	0.00	842.42	0.16	2,085,376,329
3.	Eternal Plc	1.00	1.00	913.23	0.63	2,984,221,300
4.	Japaul gold & Ventures Plc	1.00	0.00	1141.43	0.18	890,991,438
5.	Mrs Oil Nigeria Plc	0.00	0.00	231.23	0.14	1,002,450, 440
6.	Oando Plc	1.00	1.00	342.23	0.22	882,459,110
7.	Rak Unity Pet. Comp. Plc	1.00	0.00	231.41	0.27	300,671,329
8.	Seplat Energy Plc	0.00	0.00	934.23	0.33	113,172,500
9.	Total Energies Marketing Nigeria Plc	1.00	1.00	421.21	0.31	482,606,399

Source: Field Report, 2024.

Table 2: Descriptive Statistics for all Variables

	ENR	ENC	MPS	PER	NWT
Mean	0.712575	0.652695	14.49102	12.83856	57.47910
Median	1.000000	1.000000	14.00000	7.090000	56.25000
Maximum	1.000000	1.000000	20.00000	65.00000	88.88000
Minimum	0.000000	0.000000	10.00000	0.000000	21.42000
Std. Dev.	0.453923	0.477546	2.356402	15.93362	13.34698
Skewness	-0.939430	-0.641421	0.321622	1.675629	0.089638
Kurtosis	1.882528	1.411420	2.788649	4.962116	3.276553
Jarque-Bera	33.25287	29.01115	3.189922	104.9374	0.755823
Probability	0.000000	0.000001	0.202916	0.000000	0.685291
Sum	119.0000	109.0000	2420.000	2144.040	9599.010
Sum Sq. Dev.	34.20359	37.85629	921.7365	42144.10	29571.55
Observations	90	90	90	90	90

Source: E-view 10, 2024

Table 2 revealed that on the average environmental remediation of listed oil and gas firms in Nigeria is 0.712575 with a median value of 1.000000. The maximum value of 1.000000 and the minimum value of 0.0000000. This suggests that 71% of studied listed oil and gas firms in Nigeria, carried out environmental remediation, and incurred cost, with a maximum of one hundred percent every year while the minimum audit firm size reported within the investigation period of the studied bank is zero, which suggest that there are periods in which none of the firms carry out environmental remediation. Environmental remediation has a standard deviation value of 0.453923, which shows the dispersion of environmental remediation around the mean value of the data series. This implies that the series is widely dispersed around the mean value of the set. The environmental remediation skewness of -0.939430 which is less than the threshold of zero. This implies that environmental remediation is negatively skewed, it suggests that the majority of environmental remediation data series are less than the mean value. The environmental remediation kurtosis value of 1.882528 is less than the normal kurtosis distribution value of 3. This suggests that environmental remediation kurtosis indicates flat distribution, which is also platykintic, it is also an indication that the data series are lowly peaked which is slightly below the normal distribution peaks. This implies that most of the environmental remediation value is less than the mean value. The JargueBera value of audit firm size is 33.325287 and a probability value of 0.000000 which is less than 0.05 significance level suggest that the null hypothesis of normal distribution is not upheld.

Bivariate Analysis

In line with the objectives and hypothesis formulated for this study, which is to determine the impact of the independent variable on the dependent variable, this section is set to establish

the impact of the independent variable on the dependent variable of the study to determine the magnitude or direction of the relationship using ordinary least square regression statistical tools.

Decision Criteria

Accept the alternate hypothesis if the p. Value is less than 0.05 significance level and reject the null hypothesis if the p-value is greater than 0.05.

Test of Hypothesis One

H_{01}: There is no significant impact of environmental remediation on market price per share of listed oil and gas firms in Nigeria.

Table 3: Regression Output for Environmental Remediation

Dependent Variable: MPS
Method: Least Squares
Date: 10/07/24 Time: 22:57
Sample: 2013- 2022
Included observations: 90

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.330191	0.217924	-1.515167	0.1316
ENR	0.067956	0.014843	4.578364	0.0000

R-squared	0.812116	Mean dependent var	0.654762
Adjusted R-squared	0.806768	S.D. dependent var	0.476867
S.E. of regression	0.450692	Akaike info criterion	1.255768
Sum squared resid	33.71844	Schwarz criterion	1.292958
Log likelihood	-103.4845	Hannan-Quinn criter.	1.270861
F-statistic	20.96142	Durbin-Watson stat	1.971598
Prob(F-statistic)	0.000009		

MPS = -0.330191 + 0.067956ENR+μ
Source: E-view 10, 2024

Table 3 revealed the regression result on the impact of environmental remediation on market price per share of listed oil and gas firms in Nigeria. The r-squared value is 0.812116 suggests that the model explain 81 percent of the systematic variation of the dependent variable (market price per share) is influence by the independent variable (environmental remediation), while the remaining nineteen percent are due to unknown variables in the model. The coefficient of determinate of 0.067956 and the probability value of 0.000 which is less than 0.05 level, suggest that here is a positive and significant relationship between environmental remediation on market price per share of listed oil and gas firms in Nigeria. The probability value of the f-statistic of 20.961412 and the probability value of 0.000 which is less than a 0.05 significance level. The Durbin-Watson statistics of 1.971598 is very close to 2. Suggest the unlikelihood of serial autocorrelation in the model.

Based on the result, the probability value of the f-statistic is 0.000 which is less than 0.05 significant levels. Therefore, we rejected the null hypothesis and accept the alternate hypothesis, and conclude that there is a significant impact of environmental remediation on the market price per share of listed oil and gas firms in Nigeria.

Hypothesis Two

H_{02}: There is no significant impact of environmental remediation on price-to-earnings ratio of listed oil and gas firms in Nigeria

Table 4: Regression Output for Environmental Remediation and Price Earnings Ratio

Dependent Variable: PER
Method: Least Squares
Date: 10/07/24 Time: 23:12
Sample: 2013- 2022
Included observations: 90

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.342039	0.218204	1.567516	0.1189
ENR	0.825570	0.014864	1.720289	0.0873

R-squared	0.817620	Mean dependent var	0.712575
Adjusted R-squared	0.011666	S.D. dependent var	0.453923
S.E. of regression	0.451267	Akaike info criterion	1.258389
Sum squared resid	33.60094	Schwarz criterion	1.295731
Log likelihood	-103.0755	Hannan-Quinn criter.	1.273545
F-statistic	2.959396	Durbin-Watson stat	1.950330
Prob(F-statistic)	0.087255		

PER = 0.342039+ 0.825570ENR+μ
Source: E-view 10, 2024

Table 4 shows the regression result of the impact of environmental remediation on price-to-earnings ratio of listed oil and gas firms in Nigeria. The R-squared value is 0.817620 implies that 8.1 percent variation of the dependent variable (price to earnings ratio) is attributed to the changes of our independent variable (environmental remediation), while the remaining 19 percent variation were unaccounted for in the model are due to the error term. The regression coefficient of 0.255170 and the probability value of 0.0873 implies that environmental remediation is positive and has insignificant impact on of environmental remediation on price to price-to-earnings ratio of listed oil and gas firms in Nigeria. The f-statistic value is 2.959396 with a probability value of the f-statistic at 0.87255 which is greater than 0.05 significance. The Durbin-Watson statistical test of 1.914353 is very close to two. Therefore, we conclude that there is no serial correlation in the model. The probability value of

0.087255 is greater than 0.05 significance level. Therefore, the null hypothesis is accepted and the alternate hypothesis is rejected. We conclude that there is no significant impact of environmental remediation on price to price-to-earnings ratio of listed oil and gas firms in Nigeria.

Hypothesis Three

H_{03}: There is no significant impact of environmental compliance on market price per share of listed oil and gas firms in Nigeria.

Table 5: Regression Output for Environmental Compliance and Market Price Per Share

Dependent Variable: MPS

Method: Least Squares

Date: 10/07/24 Time: 23:06

Sample: 2013- 2022

Included observations: 90

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	6.950140	0.421093	16.50500	0.0000
ENC	0.105923	0.028681	3.693199	0.0003
R-squared	0.875928	Mean dependent var		8.485396
Adjusted R-squared	0.770362	S.D. dependent var		0.903224
S.E. of regression	0.870868	Akaike info criterion		2.573182
Sum squared resid	125.8964	Schwarz criterion		2.610372
Log likelihood	-214.1473	Hannan-Quinn criter.		2.588275
F-statistic	13.63972	Durbin-Watson stat		1.914353
Prob(F-statistic)	0.000300			

AUDF = 6.950140 + 0.105923ENC+μ
Source: E-view 10, 2024

Table 5 narrates regression results on the impact of environmental compliance on market price per share of listed oil and gas firms in Nigeria. The R-squared value of 0.875928 suggests 87 percent of the variation of our dependent variable (market price per share) is explained by our independent (environmental compliance), and the remaining 13 percent is due to an unknown variable in the model. The regression coefficient 0105923 and probability value of 0.0003 implies that there is positive and significant impact of environmental compliance on market price per share of listed oil and gas firms in Nigeria. The f-statistic

value is 13.63972 with a probability value of 0.0003 which is less than 0.05 significance level. Durbin Watson statistic of 1.914353 is much closer to 2 which indicated that there is no serial auto correlation in the model. Since the probability value of 0.0003 is less than 0.05 significance level. The null hypothesis is rejected and the alternate hypothesis is accepted. We conclude that there is a significant impact of environmental compliance on market price per share of listed oil and gas firms in Nigeria.

Hypothesis Four

There is no significant impact of environmental compliance on price to price-to-earnings ratio of listed oil and gas firms in Nigeria.

Table 6: Regression Output for Environment Compliance and Price to Earnings Ratio
Dependent Variable: PER

Method: Least Squares

Date: 10/07/24 Time: 23:01

Sample: 2013-2022

Included observations: 90

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.186920	0.159673	1.170646	0.2434
ENC	0.008143	0.002708	3.007147	0.0030

R-squared	0.951661	Mean dependent var	0.654762
Adjusted R-squared	0.845948	S.D. dependent var	0.476867
S.E. of regression	0.465783	Akaike info criterion	1.321639
Sum squared resid	36.01429	Schwarz criterion	1.358829
Log likelihood	-109.0176	Hannan-Quinn criter.	1.336732
F-statistic	9.042932	Durbin-Watson stat	1.980622
Prob(F-statistic)	0.003047		

AUDT = 0.186920 + 0.008143ENC+μ
Source: E-view 10, 2024

Table 6 described the regression result of the impact of environmental compliance on price to price-to-earnings ratio of listed oil and gas firms in Nigeria. The r-squared value of 0.951661 suggests that the model explain 95 percent of the systematic variation of the dependent variable (price to earnings ratio) is influence by the independent variable (environmental compliance), while the remaining five percent are due to unknown variables in the model. The coefficient of determinate of 0.008143 and the probability value of 0.0030 which is less

than 0.05 significance level, suggest that here is a positive and significant impact of environmental compliance on price to price-to-earnings ratio of listed oil and gas firms in Nigeria. The probability value of the f-statistic of 9.042932 and the probability value of 0.003047 which is less than 0.05 significance level. The Durbin-Watson statistics of 1.980622 is very closed to 2. Suggest the unlikelihood of serial auto correlation in the model. Based on our result, the probability value is 0.0030 which is less than 0.05 significant levels. Therefore, we rejected the null hypothesis and accept the alternate hypothesis, and conclude that there is a significant impact of environmental compliance on price to price-to-earnings ratio of listed oil and gas firms in Nigeria.

Multivariate Analysis

Statistical inference has been established based on bivariate analysis and evidence based on the result has been established, which provides an insight into a research problem. It is also necessary to carry out multivariate statistical analysis to provide in-depth insight into the study, therefore the study will conduct multivariate analysis based on the formulated models of this study. We will look at the joint impact of each of the dependent variables on independent variables.

$$MPS = \beta_0 + \beta_1 ENR + \beta_2 ENC + \mu_1 \quad (4.1)$$

$$PER = \beta_0 + \beta_1 ENR + \beta_2 ENC + \mu_2 \quad (4.2)$$

Table 7: Regression Output of the Joint Impact of Environmental Remediation, Environmental Compliance on Market Price Per Share, Moderated by Net worth.

Hypothesis Five

H_{05}:

Dependent Variable: MPS
Method: Least Squares
Date: 10/07/24 Time: 23:20
Sample: 2013-2022
Included observations: 90

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.751259	0.229888	-3.267937	0.0013
ENR	0.072874	0.014477	5.033598	0.0000
ENC	0.003924	0.002542	1.543443	0.1247
NWT	0.009568	0.002083	4.593121	0.0000

R-squared	0.934805	Mean dependent var	0.654762
Adjusted R-squared	0.820808	S.D. dependent var	0.476867
S.E. of regression	0.420940	Akaike info criterion	1.130866
Sum squared resid	29.05917	Schwarz criterion	1.205246
Log likelihood	-90.99278	Hannan-Quinn criter.	1.161053
F-statistic	16.77486	Durbin-Watson stat	1.980122
Prob(F-statistic)	0.000000		

$$MPS = -0.751259 + 0.072874ENR + 0.003924ENC + \mu_1$$

Source: E-view 10, 2024

Table 7 shows regression output of the joint impact of environmental remediation and environmental compliance on market price per share of listed oil and gas firms in Nigeria, moderated by net worth of the firm as a measure of firm size. The regressed coefficient correlation result shows that environmental remediation associates positively with market price per share (= 0.072874) and environmental compliance associates positively with market price per share (= 0.003924). The probability values of the slope coefficient show that P(ENR= 0.0000 < 0.05;) ENC= 0.1247 > 0.05;. This implies that environmental remediation has a positive and statistically significant relationship with market price per share, but associates negatively and statistically insignificantly with price to earnings ratio. The coefficient of determination obtained is 0.93 (93%) which is common referred to as the r-square. The cumulative test of hypothesis using r-square to draw statistical inference about the explanatory variables employed in this regression equation, shows that 95% of the systematic variations in the dependent variable can be jointly predicted by all the independent variables. 5% was explained by unknown variable that were not included in the model. The value of the Durbin-Watson statistic is 1.980122, which is an indication that there is no present of serial correlation in the model. The overall significance of the model (F- statistic = 0.0000) is statistically significant at 5%.The p-value of the test is 0.000000 which is less than 0.05. Hence, reject H_0 and accept H_1. Therefore, we conclude that environmental remediation and environmental compliance has a joint significant impact on market price per share. Hence, firm size does moderately influence the relationship between green accounting disclosure and stock market value.

Table 8: Regression Output of the Joint Impact of Environmental Remediation, Environmental Compliance on Price to Earnings Ratio, Moderated by Net worth.

Dependent Variable: Price to Earnings Ratio
Method: Least Squares
Date: 10/07/24 Time: 23:22
Sample: 2013-2022
Included observations: 90

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.785510	0.416003	13.90736	0.0000
ENR	0.113250	0.026198	4.322778	0.0000
ENC	0.013161	0.004601	2.860706	0.0048
NWT	0.023261	0.003770	6.170703	0.0000

R-squared	0.801546	Mean dependent var	8.485396
Adjusted R-squared	0.788769	S.D. dependent var	0.903224
S.E. of regression	0.761730	Akaike info criterion	2.317071
Sum squared resid	95.15803	Schwarz criterion	2.391451
Log likelihood	-190.6340	Hannan-Quinn criter.	2.347258
F-statistic	23.60141	Durbin-Watson stat	1.920090
Prob(F-statistic)	0.000000		

PER = 5.785510 + 0.113250ENR + 0.013161ENC + μ_1
Source: E-view 10, 2024

Table 8 shows regression output of the joint impact of environmental remediation and environmental compliance on price to earnings ratio. The regressed coefficient correlation result shows that environmental remediation associates positively with price to earnings ratio by ($= 0.113250$) and environmental compliance associates positively with price to earnings ratio by ($= 0.013161$). The probability values of the slope coefficient show that P(ENR$=$ $0.0000 < 0.05;$), and ENC$= 0.0048 < 0.05;$. This implies that environmental remediation has a positive and statistically significant relationship with price to earnings ratio and environmental compliance, also associates positively and, is statistically significantly with price to earnings ratio. The coefficient of determination obtained is 0.80 (80%) which is common referred to as the r-square. The cumulative test of hypothesis using r-square to draw statistical inference about the explanatory variables employed in this regression equation, shows that 80% of the systematic variations in the dependent variable can be jointly predicted by all the independent variables. 20% was explained by unknown variable that were not included in the model. The value of the Durbin-Watson statistic is 1.920090, which is an indication that there is no present of serial correlation in the model. The overall significance of the model (F- statistic = 0.0000) is statistically significant at 5%.The p-value of the test is 0.000 which is less than 0.05. Hence, reject H_0 and accept H_1. Therefore, we conclude that environmental remediation and environmental compliance have a joint significant impact on price-earnings ratio. Hence, firm size moderately influences the impact of green accounting disclosure on stock market value.

Discussion of Findings

The study ascertained the impact of green accounting disclosure on stock market value of listed oil and gas firms in Nigeria. In order to achieve the objectives of this study, hypothesis and research questions were formulated, analysis was done on the basis of univariate, bivariate and multivariate analysis. The findings of the analysis from table 4.7 and 4.8, revealed that there is a positive and significant relationship between environmental remediation on market price per share of listed oil and gas firms in Nigeria, and also, that environmental remediation has positive and insignificant impact on of environmental remediation on price to price-to-earnings ratio of listed oil and gas firms in Nigeria. These findings are affirmed by the investigation of Riyadh et al, (2020), Investigated, the green accounting (GA) impact on financial performance (FP). The research question about this research will answer empirical investigation and analysis of the top 100 multinational corporations, and concluded that the impact of autonomous green accounting costs on financial performance of negative and insignificant. Also, Ogoun and Ekpulu (2020) investigated how environmental reporting by firms operating within the manufacturing sector in Nigeria affects their operational performance, and showed a positive effect of environmental reporting on firms' operational or financial performance. Further investigation from Yang and Yi Li (2020) showed that the Environmental Information Disclosure Measure for Trial Implementation (EIDMT) exerts a significant impact on the listed manufacturing firms' value, in addition, Solomon (2020) carried out a literature review on environmental disclosure and financial performance of listed oil and gas firms in Nigeria. and found out a revealed a mixed outcome of a negative and positive relationship.

In addition, Okafor (2018) conducted a study on oil and gas firms quoted in the Nigerian Stock Exchange to ascertain the effect of environmental costs on firm performance from 2006 to 2015, and found that better environmental performance influences organizations positively. Egbunike and Okoro (2018) investigated whether green accounting matters to the profitability of Nigerian firms or not, and revealed that green accounting has a significant effect on profitability among non-consumer goods firms. Similarly, Nnamani, Onyekwelu,

and Ugwu (2017), used the brewery sector to conduct a study on the effect of sustainability accounting on the financial performance of listed manufacturing firms in Nigeria, and found that green accounting disclosure or environmental disclosure has a positive and significant effect on the firms' Performance financial., and Jero and Okoro (2016) evaluated the effect of environmental and dismantling costs on a firm's Performance among selected firms in the oil and gas firms, and found to have a negative and significant effect on the performance of the firm.

Furthermore, the results shows that there is positive and significant impact of environmental compliance on market price per share of listed oil and gas firms in Nigeria, and also, that there is a positive and significant impact of environmental compliance on price to price-to-earnings ratio of listed oil and gas firms in Nigeria. These findings collaborate with the work of Acti, Lyndon, and Bingilar (2013) in their study investigated the impact of environmental cost on corporate performance: a study of oil firms in Niger Delta states of Nigeria using returns on total assets (ROTA) as a performance measure. And found that that CDC is statistically significant but negatively related to corporate performance, also, that investment in social and environmental responsibilities such as employee health and safety costs will likely improve the return on total assets of environmentally-conscious firms. Furthermore, Odesa, Igbru, and Agbasi (2016) examine the effect of environmental cost on firm performance: a study of selected manufacturing and oil and gas firms in Nigeria. Data covering the period of 2010-2014 were obtained from the annual report of the selected firms. And found that a positive significant relationship exists between corporate social responsibility, employee health and safety cost, waste management, and firm performance while community development cost has a negative and insignificant relationship with firm performance.

In addition, Obara, Ohaka, Nangih, and Odinakachukwu (2017) Also found that waste management has a positive and significant influence on the return on assets, return on equity, and operating profit level. Umoren, Akpan, and Okafor (2018) in their report, found significant relationships between environmental accounting costs and performance variables that is ROCE, NPM, DPS, and EPS. In this same vein, Oti and Mbu-Ogar (2018) investigate the analysis of environmental and social costs and financial performance of selected quoted oil and gas firms in Nigeria, and revealed that costs on employee health and safety and community development do not significantly affect financial performance while costs on waste management had a positive and significant effect on firms' financial performance.

Finally, the multiple regression analysis revealed that firm size moderately influence the relationship between green accounting disclosure and stock market value, which is in line with the investigator carried out by Acti, Lyndon, and Bingilar (2013) in their study investigated the impact of environmental cost on corporate performance: moderated by firm size, and concluded that environmental cost and corporate finance is being influenced by firm size. Similarly, Furthermore, Odesa, Igbru, and Agbasi (2016) examine the effect of environmental cost on firm performance: a study of selected manufacturing and oil and gas firms in Nigeria, and found that a positive significant relationship exists between corporate social responsibility, employee health and safety cost, waste management, and firm performance while firm size has an insignificant relationship with green accounting cost and firm performance.

Summary of Findings

The study investigates the impact of green accounting disclosure on Nigerian listed oil and gas firms' stock market value, focusing on the moderating influence of environmental remediation and compliance. The research used univariate analysis, bivariate analysis, and multivariate analysis to analyze the data. The study used descriptive statistics parameters and the E-view statistical package for univariate analysis, and the ordinary least square statistical package for bivariate and multivariate analysis. The findings suggest that green accounting disclosure can positively impact market price per share and price to earnings ratio, while environmental remediation and compliance can moderate this effect. Based on the analysis, it was found that:

1. The probability value of 0.000 which is less than 0.05 level, therefore, there is a positive and significant impact of environmental remediation on market price per share of listed oil and gas firms in Nigeria.
2. The probability value is 0.0873, which is greater than 0.05, therefore, there is a positive and significant impact of environmental remediation on price to earnings ratio of listed oil and gas firms in Nigeria.
3. The probability value of 0.0003 is less than 0.05, therefore, there is a positive and significant impact of environmental compliance on market price per share of listed oil and gas firms in Nigeria.
4. The probability value of 0.008143 is less than 0.05, therefore, there is a positive and significant impact of environmental compliance on price to earnings ratio of listed oil and gas firms in Nigeria.
5. Firm size does moderately influence the impact of green accounting disclosure on stock market value.

Conclusion

Nigeria's oil and gas firms have caused significant environmental degradation, including oil spills, gas flaring, and deforestation, causing severe contamination of land, water, and air resources, particularly in the Niger Delta region. This pollution also contributes to climate change and health risks. The lack of strict environmental regulations exacerbates these issues, allowing firms to operate with minimal oversight. Green accounting disclosures are crucial for accurate reporting of environmental impacts and promoting accountability, enabling stakeholders to advocate for sustainable practices. Hence, this study examines the impact of green accounting disclosure on Nigerian listed oil and gas firms' stock market value. It found that firms are using green accounting disclosures to boost their market value by improving their price per share and price-to-earnings ratio. Transparent reporting of environmental impacts and remediation efforts boosts investor confidence and aligns with the growing preference for environmentally responsible firms, thereby enhancing overall stock market performance.

Recommendations

Based on the findings, the following recommendations were made

i. Oil and gas firms should allocate sufficient resources towards environmental remediation efforts and integrate remediation activities into their core business strategies to enhance their market valuation.

ii. Firms must ensure strict adherence to environmental regulations and standards, and regular audits and compliance checks should be conducted to ensure that all operations meet or exceed regulatory requirements.

iii. Oil and gas firms should invest in systems that allow for accurate and comprehensive environmental reporting, increase transparency and build investor confidence, and in all enhancing their market prices per share and price to earnings ratio.

iv. Oil and gas firms should actively, engage with stakeholders, including investors, regulators, local communities, and environmental agents of the government. Transparent communication that will foster environmental initiatives and green accounting disclosures to increase their stock market values is crucial.

v. Oil and Gas firms should invest in technologies that minimize environmental impact, such as cleaner production techniques and renewable energy sources, and reduce pollution and operational risks, thereby improving financial performance and market value.

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