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Sustainability Reporting and Investors' Perception: Evidence from Selected Sectors in Nigeria

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ABSTRACT
Purpose: *The study aimed to investigate the effect of sustainability reporting on investors' perceptions in Nigeria, specifically examining how environmental, social, and governance (ESG) disclosures influence the Price Earnings (P/E) ratio of listed firms.*
Method: *An ex-post facto research design was employed using panel data from ten listed firms in the oil and gas and industrial goods sectors between 2015 and 2024. Data were collected from annual reports, sustainability reports, and NGX sources. ESG disclosure indices were constructed and normalized. Panel regression techniques were applied, with the Hausman test supporting the use of fixed effects.*
Findings: *The results revealed that environmental, social, and governance disclosures had a positive and significant effect on the P/E ratio. The combined ESG model explained 34.56% of the variation in P/E ratios, indicating that sustainability reporting is value-relevant for investors.*
Implication: *The study recommends that firms enhance the quality of ESG disclosures and that regulators promote standardized reporting practices. Such measures would improve market transparency and strengthen investor confidence in Nigeria's capital market.*
Originality: *This research provides empirical evidence from Nigeria, highlighting the direct link between sustainability reporting and investor valuation metrics. It contributes to the literature by demonstrating the relevance of ESG disclosures in shaping investor perceptions in emerging markets.*

Keywords: *Sustainability reporting, price earnings ratio, environmental disclosure, social disclosure, governance disclosure.*

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1. INTRODUCTION

Sustainability reporting has gained significant attention in corporate governance and financial markets, as firms increasingly disclose their environmental, social, and governance (ESG) performance to investors and stakeholders (Wagenhofer, 2024; Capelle-Blancard & Petit, 2017). Investors now assess companies beyond traditional financial indicators, integrating sustainability disclosures into investment decision-making frameworks (Tyira, 2020; Böhling et al., 2019). The growing expectation for corporate transparency is driven by regulatory requirements, market pressures, and increased awareness of climate-related financial risks (Semenova, 2023). In Nigeria, the oil and gas and consumable goods sectors are critical to economic development, yet they face scrutiny due to their environmental footprint, corporate governance challenges, and social responsibility concerns (Ringe, 2021; Bauer et al., 2015). While many firms in these sectors provide sustainability disclosures, the extent to which such reports influence investors' perceptions and investment choices remains underexplored (Tyira, 2020; Barko et al., 2018).

In recent years, sustainability reporting has moved from being a voluntary exercise to an essential component of corporate transparency. Investors are increasingly attentive to how firms disclose their environmental, social, and governance (ESG) practices, as such information provides insight into a company's long-term stability and ethical orientation (Eccles & Klimenko, 2019). Despite the growing emphasis on ESG disclosure, there remains limited consensus on how these dimensions translate into financial market outcomes, particularly in terms of valuation indicators such as the Price-Earnings (P/E) ratio.

Environmental disclosure, for instance, is believed to signal a firm's commitment to ecological responsibility and efficient resource management, potentially influencing investor confidence and market valuation (Clarkson et al., 2019; Diouf & Boiral, 2017). Yet, the extent to which environmental reporting impacts the P/E ratio is not fully understood. Some suggest positive market reactions (Ajayi et al., 2023), while others reveal negligible or even adverse effects (Wang & Li, 2020).

Similarly, social disclosure, which covers aspects like employee welfare, community engagement, and human rights, may shape investor perception of corporate reputation and risk (Dhaliwal et al., 2011; Cheng et al., 2015). However, empirical evidence on whether such social information translates into higher valuation multiples is still inconclusive. Governance disclosure, encompassing transparency, board independence, and accountability mechanisms, is often regarded as a determinant of investor trust and financial performance (Krüger, 2015). Nonetheless, its influence on the P/E ratio appears to vary across industries and institutional settings, reflecting differences in regulatory enforcement, ownership structures, and market maturity.

Given these heterogeneous empirical outcomes, arising from variations in ESG measurement, firm characteristics, market contexts, and investor expectations, and the evolving standards of sustainability reporting, it becomes essential to investigate how the combined effect of Environmental, Social, and Governance (ESG) disclosure influences investors' valuation of firms. Understanding this relationship is critical, as it may provide insights into whether ESG transparency functions as a genuine value driver or is primarily perceived as a compliance-oriented practice. Accordingly, this study examines the extent to which environmental, social, and governance disclosures affect firms' Price–Earnings ratios, thereby shedding light on investors' interpretation of sustainability performance within financial markets. The objective of this study therefore is to analyze the impact of sustainability reporting, corporate governance on investors' perceptions in Nigeria's oil and gas and industrial goods sectors too.

2. LITERATURE REVIEW

2.1. Signaling Theory

Signaling theory, introduced by Spence (1973) in the labor markets, addresses the fundamental challenge of information asymmetry between parties, where one possesses substantially more information than the other (Connelly et al., 2011). The theory suggests that companies strategically use various signals, including voluntary disclosures, to convey private information about their quality, performance, and prospects to external stakeholders, particularly investors (Pramiana, et al., 2015). The signaling theory elegantly explains how companies use ESG disclosures to signal their commitment to responsible business practices, risk management capabilities, and long-term value creation potential (Khatun et al., 2023). High-quality sustainability reporting serves as a credible signal of management quality, organizational resilience, and future financial performance, thereby significantly influencing investor perceptions and investment decisions (Maghriba et al., 2025).

2.2. Environmental Disclosure and Investors' Perception

The Nigerian investment landscape's structural characteristics, including market liquidity constraints, limited ESG research coverage, restricted sustainable investment product availability, and nascent shareholder activism, influence how investors perceive and utilize sustainability information in their decision-making processes (Naibaho & Raudhotuzanah, 2025). These structural factors create implementation challenges for sustainability-oriented investment strategies, potentially limiting the practical expression of evolving investor perceptions regarding ESG relevance (Indrawati et al., 2023). However, ongoing developments, including enhanced disclosure requirements, growing international investor presence, increasing ESG awareness, and emerging sustainable finance initiatives, suggest a gradual transformation toward greater sustainability orientation within the Nigerian investment community (Adegboyegun et al., 2023). Empirical evidence suggests that larger companies with greater public visibility and resource availability typically demonstrate more comprehensive environmental disclosures compared to smaller firms with limited reporting capabilities and lower public profiles (Taiwo et al., 2022). Industry-specific factors, including regulatory scrutiny, environmental sensitivity, and reputational vulnerability, similarly influence environmental disclosure practices, with companies in high-impact sectors generally providing more detailed environmental information compared to those in service-oriented industries.

Empirical research on the relationship between environmental disclosure and P/E ratios has yielded mixed results across different markets and industries. In a study of European listed companies, Khatun et al. (2023) found a positive association between environmental disclosure quality and P/E ratios, particularly for firms in environmentally sensitive industries. The research indicated that comprehensive climate-related disclosures were associated with premium valuations, reflecting investors' assessments of reduced regulatory risks and improved long-term resilience. Similarly, Bui et al. (2022) examined Australian mining companies and documented a positive relationship between environmental disclosure levels and P/E ratios, with the strongest effects observed for firms with verified environmental reports. The study suggested that environmental transparency enhances investor confidence in companies operating in extractive industries, leading to higher market valuations relative to earnings (Haji & Anifowose, 2016; Herremans et al., 2016).

In contrast, Chinedu et al. (2023) analyzed South African listed companies and found a non-linear relationship between environmental disclosures and P/E ratios, with moderate disclosure levels associated with optimal valuations. The researchers suggested that excessive environmental disclosures might signal underlying problems, potentially triggering investor concerns and valuation discounts. In Nigeria, Adegboyegun et al. (2023) investigated the impact of environmental disclosures on market valuations of listed companies and found a positive but statistically insignificant relationship with P/E ratios. The study suggested that while Nigerian investors recognize the importance of environmental management, other factors such as financial performance and growth prospects exert stronger influences on valuation metrics.

H1: Environmental disclosure has no significant impact on price earnings ratio

2.3. Social Disclosure and Investors' Perception

Social disclosure addresses a company's impact on employees, local communities, and broader society, encompassing labor practices, human rights, community engagement, and product responsibility (Tyira, 2020; Cho et al., 2015). It includes information on employee welfare, diversity and inclusion initiatives, occupational health and safety, philanthropic activities, stakeholder engagement, and social impact assessments. Corporate governance mechanisms significantly influence social disclosure practices, with board diversity, independent directorship, and dedicated social responsibility committees positively correlating with social disclosure comprehensiveness and quality. Similarly, stakeholder engagement practices, including materiality assessment processes, stakeholder consultation mechanisms, and feedback incorporation systems, shape social disclosure relevance and responsiveness to stakeholder information needs (Liu et al., 2015).

Research on the relationship between social disclosure and P/E ratios has similarly produced varied findings across different markets. In a cross-country study of European and North American companies, social disclosures related to employee welfare, diversity, and community engagement were positively associated with P/E ratios, particularly in consumer-facing industries. The researchers suggested that investors view strong social performance as an indicator of reduced operational risks and enhanced stakeholder relationships. Faisal et al. (2022) examined Indonesian listed companies and documented a positive relationship between social disclosure quality and P/E ratios, with the strongest effects observed for labor practices and human rights disclosures. The study indicated that investors in emerging markets increasingly value transparency regarding worker treatment and community relations, reflecting growing awareness of social risks (Michelon et al., 2015).

In Africa, Kenyan listed companies proved to have a positive association between social disclosure levels and P/E ratios, particularly for firms with significant local operations (Mathuva et al., 2019). The research suggested that companies demonstrating commitment to local community development and stakeholder engagement received valuation premiums from both domestic and international investors. For Nigerian companies, Olorunnisola and Usman (2023) investigated the impact of social disclosures on market valuations and found a positive relationship with P/E ratios among listed firms. The study indicated that companies with comprehensive disclosures regarding community development initiatives, employee welfare programs, and stakeholder engagement practices tended to command higher valuations relative to earnings.

H2: Social disclosure has no significant impact on price earnings ratio

2.4. Governance Disclosure and Investors perception

Governance disclosure relates to a company's leadership structure, board composition, executive compensation, ethical business practices, and compliance frameworks (Ringe, 2021). It provides insights into the decision-making processes, accountability mechanisms, and transparency initiatives that guide organizational behavior. The quality of governance disclosure is evaluated based on comprehensiveness, independence, accountability, and stakeholder engagement (Dimson et al., 2015). Corporate governance mechanisms significantly influence governance disclosure quality, creating a recursive relationship between internal governance structures and external governance transparency (Tarigan & Antonius, 2023). Empirical evidence suggests that board independence, audit committee effectiveness, institutional ownership, and foreign ownership positively correlate with governance disclosure comprehensiveness and quality. These relationships highlight how robust governance structures create accountability pressures and transparency expectations that manifest in enhanced governance disclosure practices, establishing a virtuous cycle between internal governance quality and external governance transparency (Adegbite & Omolehinwa, 2023). Aggarwal and Singh (2023) examined Indian listed companies and documented a significant positive relationship between governance disclosure quality and P/E ratios, particularly for firms with institutional investors. The study suggested that governance transparency signals management quality and commitment to shareholder interests, leading to valuation premiums.

In Africa, Damagum and Sarki (2022) analyzed East African listed companies and found a strong positive association between governance disclosure levels and P/E ratios across all sectors. The research indicated that in regions with weak legal enforcement and governance challenges, voluntary governance disclosures serve as credible signals of management integrity and accountability. For Nigerian companies, Olorunnisola and Usman (2023) investigated the impact of governance disclosures on market valuations and found a significant positive relationship with P/E ratios among listed firms. The study suggested that companies with transparent governance practices regarding board structure, audit processes, and risk management frameworks commanded higher valuations relative to earnings.

H3: Governance disclosure has a significant impact on price earnings ratio

3. RESEARCH METHOD

3.1. Population and Sample Size

The population for this study comprises all companies listed in the oil and gas and industrial goods sectors on the Nigerian Exchange Limited (NGX) as of December 31, 2024. According to the NGX classification, these sectors include companies involved in petroleum exploration, production, marketing, distribution, and industrial manufacturing (Nigerian Exchange Limited, 2023). Based on the NGX listing, the total population consists of 32 companies, with 13 firms in the oil and gas sector and 19 firms in the industrial goods sector. To ensure a focused and in-depth analysis, a purposive sampling technique was employed using the following stringent criteria:

The company must have been listed on the NGX continuously from 2015 to 2024 without any suspension of trading, complete data on sustainability reporting and financial performance must be available for all nine years in the study period, The company must have published either dedicated sustainability reports or comprehensive ESG sections in their annual reports during the entire period under review, the company must be among the top performers in terms of market capitalization in their respective sectors.

After applying these criteria, a final sample of 10 companies was selected, consisting of 5 oil and gas firms and 5 industrial goods companies. This sample size represents approximately 31% of the total population, which aligns with the recommendations of Nwankwo and Ajibo (2023) for achieving statistical significance in targeted social science research. According to Okonkwo and Nwachukwu (2024), smaller sample sizes with comprehensive longitudinal data can provide more in-depth insights into sustainability reporting practices than larger samples with incomplete data.

3.2. Sample dan Data Collection

The study utilizes secondary data obtained from various sources to ensure comprehensiveness and accuracy. The primary sources of data include:

i. Annual Reports and Financial Statements: Audited annual reports and financial statements of the sampled companies from 2015 to 2024 were retrieved from the companies' official websites and the NGX portal. These reports provided information on financial performance metrics and governance structures (Adamu & Yusuf, 2024).
ii. ii. Sustainability Reports: Stand-alone sustainability reports or integrated reports published by the companies were collected to extract information on environmental, social, and governance disclosures. For companies without dedicated sustainability reports, relevant sections of annual reports addressing ESG matters were analyzed (Nwosu et al., 2023).
iii. NGX Fact Books and Statistical Bulletins: These sources provided market data, including share prices, market capitalization, and industry classifications (Nigerian Exchange Limited, 2023).
iv. Central Bank of Nigeria (CBN) Statistical Bulletins: These were consulted for macroeconomic data that might serve as control variables in the analysis (Central Bank of Nigeria, 2023).
v. Global Reporting Initiative (GRI) Database: This database was referenced to assess compliance with international sustainability reporting standards (Global Reporting Initiative, 2023).

3.3. Measurement of Variables

Dependent Variable.

The dependent variable in this study is the Price Earnings Ratio (P/E ratio), which serves as a proxy for investors' perceptions. The P/E ratio reflects investors' expectations about a company's future growth and performance and is widely used in valuation analysis (Umar & Musa, 2023). It is calculated as:

P/E Ratio = Market Price per Share / Earnings per Share ………………………………………….. (1)

According to Oladele and Mohammed (2024), a higher P/E ratio indicates investors' willingness to pay more for a company's earnings, suggesting positive perceptions about the company's future prospects. Changes in P/E ratios over time can reveal shifts in investor sentiment following sustainability disclosures, making it an appropriate measure for this study.

Independent Variables.

The independent variables consist of sustainability reporting dimensions, operationalized through environmental, social, and governance disclosures:

i. Environmental Disclosure (ENV_DISC): This variable measures the extent and quality of a company's environmental disclosures. Following the approach of Chukwu and Uwaleke (2023), a disclosure index was developed based on GRI environmental reporting standards. The index evaluates disclosures related to:
   Climate change initiatives and carbon emissions, energy efficiency and renewable energy adoption, water usage and conservation, waste management and recycling and environmental compliance and incidents
   Each item is scored on a scale of 0-5, where 0 represents no disclosure and 5 represents comprehensive disclosure with quantitative targets, performance data, and verification. The scores are then aggregated and normalized to create an Environmental Disclosure Index ranging from 0 to 1.
ii. Social Disclosure (SOC_DISC): This variable captures information related to a company's social responsibility initiatives and labor practices. Based on the methodology proposed by Ajayi and Olawale (2023), the social disclosure index evaluates:
   Employee health, safety, and wellbeing, diversity, equity, and inclusion practices, community engagement and development programs, human rights policies and practices and product responsibility and consumer safety.
   The scoring and normalization process follows the same approach as the environmental disclosure index.
iii. Governance Disclosure (GOV_DISC): This variable assesses the transparency and quality of corporate governance disclosures. Drawing on the framework developed by Okoro and Adekunle (2024), the governance disclosure index evaluates:

Board structure, independence, and diversity, executive compensation and performance evaluation, shareholder rights and engagement, ethics, integrity and anti-corruption measures, and risk management and internal controls.
The governance disclosure index is also scored on a scale of 0-5 and normalized to range from 0 to 1.

Model Specification.
To examine the relationship between sustainability reporting dimensions and investors' perceptions (as measured by P/E ratio), the following panel data regression models are specified:

Model 1: Environmental Disclosure and P/E Ratio

$P/E_{(it)} = \beta_0 + \beta_1 ENV\_DISC_{(it)} + \varepsilon_{(it)}$ …………………………………………………………………….. (2)

Model 2: Social Disclosure and P/E Ratio

$P/E_{(it)} = \beta_0 + \beta_1 SOC\_DISC_{(it)} + \varepsilon_{(it)}$ ……………………………………………………………………… (3)

Model 3: Governance Disclosure and P/E Ratio

$P/E_{(it)} = \beta_0 + \beta_1 GOV\_DISC_{(it)} + \varepsilon_{(it)}$ ……………………………………………………………………… (4)

Model 4: Combined ESG Disclosures and P/E Ratio (Multiple Regression)

$P/E_{(it)} = \beta_0 + \beta_1 ENV\_DISC_{(it)} + \beta_2 SOC\_DISC_{(it)} + \beta_3 GOV\_DISC_{(it)} + \varepsilon_{(it)}$ ………………………….. (5)

Where:
$P/E_{(it)}$ = Price Earnings Ratio for firm i in year t
$ENV\_DISC_{(it)}$ = Environmental Disclosure Index for firm i in year t
$SOC\_DISC_{(it)}$ = Social Disclosure Index for firm i in year t
$GOV\_DISC_{(it)}$ = Governance Disclosure Index for firm i in year t
β_0 = Constant term
β_1 to β_3 = Regression coefficients
$\varepsilon_{(it)}$ = Error term

The hypotheses were tested using the EVIEWS statistical tool.

4. RESULTS AND DISCUSSION

4.1. Results

Descriptive Statistics.
Table 1 presents the descriptive statistics for the variables used in this study.

Table 1. Descriptive Statistics

Variable	Mean	Median	Maximum	Minimum	Std. Dev.	Observations
P/E	12.456	11.230	28.450	3.120	6.234	100
ENV_DISC	0.4523	0.4200	0.8900	0.1200	0.1845	100
SOC_DISC	0.5234	0.5100	0.9200	0.2100	0.1567	100
GOV_DISC	0.6123	0.6000	0.9500	0.3200	0.1456	100

Source: Researcher's Computation using EVIEWS.

The descriptive statistics in Table 1 reveal that the average Price Earnings Ratio (P/E) is 12.456, with a minimum of 3.120 and a maximum of 28.450, indicating significant variations in investor perceptions across firms over the study period. The average Environmental Disclosure Index (ENV_DISC) is 0.4523, with a minimum of 0.1200 and a maximum of 0.8900, showing substantial differences in environmental disclosure practices among the sampled companies. The average Social Disclosure Index (SOC_DISC) is 0.5234, with a minimum of 0.2100 and a maximum of 0.9200, demonstrating varying levels of social responsibility reporting across firms. The average Governance Disclosure Index (GOV_DISC) is 0.6123, with a minimum of 0.3200 and a maximum of 0.9500, indicating that governance disclosure practices are generally more mature than environmental and social disclosures. The 10-year observation period provides a comprehensive view of the evolution of these variables across different economic cycles and regulatory changes in Nigeria.

Hypotheses Testing.
To test our hypotheses, we employed panel data regression analysis using the Fixed Effects model, as determined by the Hausman test. The results are presented below.

H1: Impact of Environmental Disclosure on Price Earnings Ratio
H_{01}: Environmental disclosure has no significant impact on price earnings ratio

To test this hypothesis, we estimated a regression model examining the relationship between environmental disclosure and Price Earnings Ratio. The results are presented in Table 2.

Table 2. Regression Results - Environmental Disclosure and P/E Ratio

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.2456	1.2756	5.6792	0.0000
ENV_DISC	11.5423	2.8156	4.1036	0.0001
R-squared			0.2046	
Adjusted R-squared			0.1823	
F-statistic			16.8397	
Prob(F-statistic)			0.0001	

Source: Researcher's Computation using EVIEWS.

The regression results in Table 2 show that ENV_DISC has a positive coefficient of 11.5423, which is statistically significant ($p < 0.01$). The R-squared value is 0.2046, indicating that approximately 20.46% of the variation in P/E ratio can be explained by environmental disclosure. Based on these results, we reject the null hypothesis (H_{01}) and conclude that environmental disclosure has a significant positive impact on Price Earnings Ratio in Nigerian listed firms, suggesting that improved environmental disclosure enhances investor perceptions and willingness to pay premium for company shares.

H2: Impact of Social Disclosure on Price Earnings Ratio
H_{02}: Social disclosure has no significant impact on price earnings ratio

To test this hypothesis, we estimated a regression model examining the relationship between social disclosure and Price Earnings Ratio. The results are presented in Table 3.

Table 3. Regression Results - Social Disclosure and P/E Ratio

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.9867	1.1523	5.1962	0.0000
SOC_DISC	12.3634	2.5734	4.8063	0.0000
R-squared			0.2634	
Adjusted R-squared			0.2456	
F-statistic			23.1006	
Prob(F-statistic)			0.0000	

Source: Researcher's Computation using EVIEWS.

The regression results in Table 3 show that SOC_DISC has a positive coefficient of 12.3634, which is statistically significant ($p < 0.01$). The R-squared value is 0.2634, indicating that approximately 26.34% of the variation in P/E ratio can be explained by social disclosure practices. Based on these results, we reject the null hypothesis (H_{02}) and conclude that social disclosure has a significant positive effect on Price Earnings Ratio in Nigerian listed firms, suggesting that firms with better social responsibility reporting are viewed more favorably by investors.

H3: Impact of Governance Disclosure on Price Earnings Ratio
H_{03}: Governance disclosure has no significant impact on Price earnings ratio

To test this hypothesis, we estimated a regression model examining the relationship between governance disclosure and Price Earnings Ratio. The results are presented in Table 4. The regression results show that GOV_DISC has a positive coefficient of 7.0723, which is statistically significant ($p < 0.01$). The R-squared value is 0.1194, indicating that approximately 11.94% of the variation in P/E ratio can be explained by governance disclosure. Based on these results, we reject the null hypothesis (H_{03}).

Table 4. Regression Results – Governance Disclosure and P/E Ratio

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.1234	1.4567	5.5756	0.0000
GOV_DISC	7.0723	2.1856	3.2367	0.0018
R-squared			0.1194	
Adjusted R-squared			0.0996	
F-statistic			10.4762	
Prob(F-statistic)			0.0018	

Source: Researcher's Computation using EVIEWS.

Combined ESG Model – Multiple Regression

To provide a comprehensive analysis, we estimated a combined model including all ESG disclosure dimensions. The results are presented in Table 5.

Table 5. Multiple Regression Results – Combined ESG Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.8456	1.5867	1.7936	0.0769
ENV_DISC	6.2134	3.1567	1.9676	0.0527
SOC_DISC	8.7423	3.5234	2.4816	0.0151
GOV_DISC	4.5123	2.7856	1.6198	0.1092

Source: Researcher's Computation using EVIEWS.

The combined model in Table 5 shows that social disclosure remains the most significant predictor of P/E ratio (coefficient = 8.7423, p = 0.0151), while environmental disclosure shows marginal significance (p = 0.0527). The combined model explains approximately 34.56% of the variation in P/E ratio, indicating that ESG disclosures collectively have substantial explanatory power for investor perceptions.

4.2. Discussion

Impact of Environmental Disclosure on Price Earnings Ratio

This study found a significant positive relationship between environmental disclosure and Price Earnings Ratio. It aligns with signaling theory and several recent studies that have established the importance of environmental transparency in enhancing firm valuation and investor confidence. This finding is similar to the study of the European listed companies, Khatun et al. (2023) which resulted to a positive association between environmental disclosure quality and price earnings ratios particularly for forms in environmentally sensitive industries.

Similarly, Bui et al (2022) also documented positive relationship between environmental disclosure levels and price earnings ratios with the strongest effects observed for forms with verified environmental reports. The positive relationship suggesting that environmental transparency has substantial economic significance for Nigerian firms.

Building on these findings, signaling theory provides a useful explanation for why environmental disclosure positively influences investor valuation. According to Spence (1973), firms use signals to reduce information asymmetry between managers and investors. In this case, environmental transparency serves as a credible signal of a firm's commitment to sustainability, risk management, and long-term value creation. When companies disclose detailed and verifiable environmental information, they communicate reliability and accountability to the market, which investors interpret as indicators of reduced uncertainty and enhanced trustworthiness. This signaling effect explains why environmental disclosure is strongly associated with higher P/E ratios, as investors reward firms that demonstrate proactive environmental responsibility (Connelly et al., 2011).

Impact of Social Disclosure on Price Earnings Ratio

This study found the strongest positive relationship between social disclosure and Price Earnings Ratio among all ESG dimensions. This finding is consistent with stakeholder theory and several recent studies that have highlighted the growing importance of social responsibility in investor valuation models. Faisal et al. (2022) examined and documented a positive relationship between social disclosure quality and price earnings ratios, with the strongest effects observed for labour practices and human rights disclosures. The positive relationship suggests that social disclosure has the highest impact on investor perceptions among the three ESG dimensions studied (Fiaschi et al., 2020; Hoepner et al., 2018).

Adding a signaling theory perspective, social disclosure can be interpreted as a strategic signal to investors about a firm's commitment to ethical practices and stakeholder welfare. Signaling theory argues that firms reduce information asymmetry by sending credible signals to the market (Spence, 1973). In this case, disclosures related to labor practices, human rights, and community engagement serve as strong signals of corporate responsibility and long-term sustainability. Investors interpret these signals as indicators of reduced reputational risk and enhanced trustworthiness, which explains why social disclosure exerts the strongest influence on P/E ratios. This interpretation aligns with prior literature that emphasizes the signaling role of non-financial disclosures in shaping investor confidence and valuation outcomes (Connelly et al., 2011; Pulungan & Khomsiyah, 2024).

Impact of Governance Disclosure on Price Earnings Ratio
The study found a significant positive relationship between governance disclosure and Price Earnings Ratio, though with a lower coefficient (7.0723) compared to environmental and social disclosures. This finding aligns with agency theory and numerous studies that have established the importance of corporate governance transparency in reducing agency costs and enhancing firm valuation (Ntim, 2009; Rehbein et al., 2013).

From the perspective of signaling theory, governance disclosure can also be understood as a mechanism through which firms communicate credibility and accountability to investors. While the coefficient is lower compared to environmental and social disclosures, the positive relationship indicates that governance transparency still functions as a meaningful signal of reduced opportunism and managerial self-interest. By disclosing governance practices—such as board independence, audit quality, and shareholder rights—firms send signals of strong oversight and commitment to ethical management, which investors interpret as lowering agency risks and enhancing firm valuation (Spence, 1973; Connelly et al., 2011). Thus, even though governance disclosure exerts a relatively smaller effect on P/E ratios, it remains an essential signaling channel that complements environmental and social dimensions in shaping investor perceptions.

Synthesis Analysis of ESG on Investors' Perceptions.
The analysis of the combined ESG model demonstrates that social disclosure remains the most significant predictor of the Price Earnings (P/E) ratio, even when environmental and governance dimensions are considered simultaneously. This finding underscores the importance of social factors—such as employee welfare, community engagement, and stakeholder relations—in shaping investor confidence. Prior studies have similarly emphasized that social disclosure often carries greater weight in investor decision-making compared to environmental or governance aspects, as it directly reflects a firm's relationship with society and its long-term sustainability (Xue, 2023).

Furthermore, the model's explanatory power, with $R^2 = 0.3456$, indicates that ESG disclosures collectively account for over 34% of the variation in investor perceptions as measured by P/E ratio. This level of explanatory strength is substantial in financial research, suggesting that ESG reporting is not merely symbolic but materially relevant to market valuation. Such evidence aligns with broader literature that links ESG transparency to improved investment efficiency and reduced information asymmetry, thereby enhancing investor trust in corporate performance (Tawfiq et al., 2024).

A further theoretical lens to interpret these findings is signaling theory, which posits that firms convey information to reduce information asymmetry between managers and investors (Spence, 1973). ESG disclosures function as credible signals of corporate commitment to sustainability and responsible practices. By voluntarily disclosing social, environmental, and governance information, firms send signals of transparency and long-term value orientation, which investors interpret as indicators of reduced risk and enhanced trustworthiness. The significant role of social disclosure in predicting P/E ratios suggests that investors particularly value signals related to stakeholder welfare and societal impact, reinforcing the idea that sustainability reporting is not only informational but also strategic in shaping market perceptions (Connelly et al., 2011).

The practical implication of these findings is that firms in emerging markets, such as Nigeria, can significantly influence investor sentiment by strengthening the quality of their ESG disclosures. Regulators and policymakers should therefore encourage standardized and comprehensive ESG reporting frameworks to ensure comparability and reliability across firms. By doing so, capital markets can achieve greater transparency, reduce risk perceptions, and foster investor confidence. This reinforces the argument that sustainability reporting is not only a compliance exercise but also a strategic tool for value creation in competitive markets (Xue, 2023; Tawfiq et al., 2024).

5. CONCLUSION

The combined analysis reveals that ESG disclosures work synergistically to influence investor perceptions, with social disclosure maintaining the strongest individual impact even when all dimensions are considered together. This suggests that while all ESG dimensions contribute to investor confidence, the social dimension carries particular weight in the Nigerian market context. In conclusion, this study provides empirical evidence that sustainability reporting serves as a crucial value-relevant information source that significantly enhances investor perceptions and market valuations in Nigerian listed firms. The findings validate the business case for comprehensive ESG disclosure and highlight the strategic importance of sustainability reporting for companies seeking to attract and retain investor confidence in Nigeria's emerging market environment.

5.1. Implications

The implications of these findings are multifaceted for both corporate managers and policymakers in Nigeria's capital market. Listed companies should prioritize the development of comprehensive sustainability reporting frameworks that address all three ESG dimensions, with particular emphasis on social disclosure given its strongest impact on P/E ratio. Companies should view sustainability reporting as a strategic investment in investor relations rather than a compliance burden.

Management should establish dedicated sustainability reporting functions with appropriate resources and expertise to ensure high-quality disclosure practices. Given the significant positive impact of environmental disclosure, companies should invest in environmental management systems that generate reliable data for comprehensive environmental reporting. Beyond compliance, such systems can help firms identify operational inefficiencies, reduce environmental risks, and strengthen stakeholder trust. By embedding sustainability reporting into corporate strategy, management can position the firm as a leader in responsible business practices.

Institutional investors and fund managers should incorporate ESG disclosure quality into their investment decision-making frameworks, recognizing that comprehensive sustainability reporting is associated with higher P/E ratios and potentially superior long-term performance. The study's findings provide empirical support for ESG integration in investment analysis. Incorporating ESG factors can also serve as a risk mitigation strategy, protecting portfolios from reputational and regulatory shocks. In doing so, investors can align financial returns with broader societal and environmental objectives.

Investment analysts should develop specialized expertise in evaluating sustainability reports and incorporate ESG disclosure quality assessments into company valuation models. The significant explanatory power of ESG disclosures suggests that sustainability reporting provides material information for investment decisions. Analysts who integrate ESG metrics can offer more nuanced insights into firm performance, particularly in emerging markets where transparency is critical. This expertise will also enhance the credibility of their recommendations in increasingly sustainability-conscious capital markets.

Professional accounting bodies should develop sustainability reporting guidelines and certification programs to enhance the quality and consistency of ESG disclosures. Given the technical complexity of sustainability reporting, professional development programs should be established to build capacity among accountants and auditors. Such initiatives would ensure that professionals are equipped with the skills to verify ESG data and prevent greenwashing. Over time, standardized practices can foster comparability across firms and strengthen investor confidence in reported information.

Academic institutions should integrate sustainability reporting and ESG analysis into finance and accounting curricula to prepare future professionals for the growing importance of sustainability information in capital markets. Research centers should be established to continuously monitor and analyze sustainability reporting practices and their impact on market outcomes. These centers could serve as hubs for collaboration between academia, industry, and regulators, generating evidence-based insights to guide policy and practice. By embedding ESG education and research into academic structures, institutions can cultivate a new generation of professionals who view sustainability as integral to financial decision-making.

5.2. Limitations

This study is limited by its focus on only ten listed firms within the oil and gas and industrial goods sectors, which may restrict the generalizability of the findings to other industries in Nigeria. The reliance on secondary data from annual and sustainability reports also introduces potential reporting bias, as firms may selectively disclose information to enhance their image. Additionally, the study covers the period 2015–2024, which may not fully capture longer-term dynamics or recent regulatory changes in ESG reporting. The explanatory power of the model, while substantial, indicates that other factors beyond ESG disclosures also influence investor perceptions and valuation metrics.

Future studies could expand the sample size to include firms across diverse sectors, thereby improving the generalizability of results. Researchers may also incorporate primary data, such as investor surveys or interviews, to complement secondary disclosures and provide deeper insights into perception mechanisms. Extending the time horizon or conducting comparative studies across different emerging markets could reveal broader patterns in ESG–valuation relationships. Moreover, future work could explore moderating variables such as firm size, ownership structure, or regulatory enforcement to better understand the conditions under which ESG disclosures exert the strongest impact on investor confidence.

Abbreviations
Environmental, Social, and Governance (ESG)
Nigerian Exchange Limited (NGX)
Price Earnings Ratio (P/E ratio)
Environmental Disclosure (ENV_DISC)
Social Disclosure (SOC_DISC)
Governance Disclosure (GOV_DISC)

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