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Capital structure and non-financial performance of listed oil and gas companies in Nigeria

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Abstract

This study assessed the influence of capital structure (CS) on the non-financial performance (NFP) of listed oil and gas (O&G) companies in Nigeria. The study employed a panel data regression approach using financial statements of the companies from 2014 to 2023. The Hausman test guided the analysis, ensuring robust model estimation. Findings revealed a significant positive relationship between E/TC and ESG scores, suggesting that companies with higher equity are better positioned to foster sustainable and socially responsible practices, while it exhibits no significant effect on CSR. D/TC shows no significant effect on environmental, social, and governance (ESG) but exhibits a significant negative impact on corporate social responsibility (CSR), indicating that excessive debt undermines CSR initiatives. These results highlight the differential effect of CS components on various dimensions of NFP. The study concluded that an optimal CS, emphasizing equity over debt, is essential for enhancing sustainability in the O&G sector. It is recommended that firms prioritize equity financing to strengthen their ESG performance and minimize reliance on debt to support CSR efforts.

Keywords: Capital Structure; Debt to Total Capital Ratio; Environmental Sustainability; Equity to Total Capital Ratio; Non-Financial Performance

1. Introduction

Non-financial performance (NFP) in the oil and gas (O&G) sector refers to a firm's ability to manage and report on its environmental, social, and governance (ESG) and corporate social responsibility (CSR) impacts, in addition to its financial outcomes. In Nigerian O&G companies, NPF is particularly critical due to the industry's significant environmental and social footprint [1]. Environmental degradation, including gas flaring, oil spills, and deforestation, as well as social issues like community displacement and inadequate compensation, are pervasive challenges in the sector [2, 3]. These concerns have led to growing demands for greater transparency and sustainability in the sector, as stakeholders increasingly expect companies to demonstrate responsibility beyond just financial profit.

However, assessing and reporting non-financial performance in the Nigerian oil and gas sector presents substantial challenges [4]. A key issue is the lack of standardized frameworks for measuring and reporting ESG factors, which leads to inconsistent and fragmented reporting [5]. This lack of consistency hampers stakeholders' ability to accurately assess a company's true performance, particularly in relation to sustainability objectives. Furthermore, many companies struggle to align their environmental and social initiatives with their financial strategies [6], which can result in a disconnect between short-term financial goals and long-term sustainability objectives. As a result, companies face reputational risks, regulatory scrutiny, and stakeholder distrust if they fail to adequately address these non-financial dimensions of performance [6]

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According to Onyemere [7], capital structure (CS), which refers to the mix of debt and equity used by a company to finance its operations, plays a crucial role in addressing these challenges associated with non-financial performance. The choice between debt and equity financing directly influences a company's ability to invest in sustainability initiatives and manage its environmental and social responsibilities [8]. For oil and gas companies in Nigeria, which face capital-intensive operational needs and volatile economic conditions, optimizing capital structure decisions can help strike a balance between financial stability and long-term non-financial goals [9]. Debt financing provides immediate access to capital for large-scale projects but can limit flexibility in investing in sustainable technologies or community programmes [10] On the other hand, equity financing, while more stable, may dilute ownership but aligns better with the growing emphasis on ESG factors by providing greater financial flexibility for long-term investments in sustainability [11].

According to Bagh et al. [12], optimizing capital structure can help mitigate the challenges of fragmented reporting and the integration of non-financial performance measures. Oil and gas companies can embed ESG metrics into their financial strategies, ensuring a more cohesive approach to performance measurement by adopting sustainable financing models, such as green bonds or sustainability-linked loans [13]. This improves transparency and helps companies align their operations with global best practices in sustainability. Moreover, an optimum CS may offer the financial stability necessary to invest in environmental technologies, social responsibility initiatives, and long-term sustainability projects that are crucial for improving NFP.

Therefore, addressing the challenges of non-financial performance in the Nigerian O&G sector requires a comprehensive method that mixes CS decisions with sustainability objectives. Entities can improve their capacity to meet both financial and NFP objectives by optimizing the combination of equity and debt financing, The study is imperative as it sought to provide an opportunity to explore how capital structure can be used as a strategic tool to improve sustainability, transparency, and accountability in the sector, ultimately contributing to more responsible and sustainable growth in the Nigerian O&G sector.

Though there has been considerable inquiry into capital structure and firm performance, most of the studies centred on financial metrics such as return on assets (ROA), return on equity (ROE), and earnings per share (EPS). NFP indicators, including CSR and ESG factors, have received comparatively little focus [14,15]. Although research like de Campos-Rasera et al. and Lin et al. [16, 17] has investigated the link between CS and CSR in global firms, studies focusing on emerging economies such as Nigeria are limited. The O&G sector illustrates this gap especially well, as entities are under a mounting burden to incorporate sustainability into their financial strategies. Companies might miss essential sustainability elements affecting their long-term success if they do not consider the influence of ESG and CSR on decisions regarding CS.

Moreover, the findings of existing research on CS and CSR/ESG frequently contradict one another, underscoring the necessity for additional inquiry. As an example, de Campos-Rasera et al. [18] identified a positive connection between CS and CSR, whereas Aruna et al. [19] discovered that debt financing has an adverse effect on environmental sustainability disclosure. Similarly, Al Amosh et al. [20] discovered that while debt financing improves ESG performance, equity financing does not impact it. The presence of these inconsistencies indicates that the link between CS and ESG/CSR differs by industry and geography, highlighting the need for localized studies on Nigeria's O&G sector. To understand the effects of CS on financial and NFP in Nigeria, research contextualized within this environment is essential. This necessity arises from the distinct economic, regulatory, and operational conditions present there.

Furthermore, although Vieira and Madaleno [21] pointed out a growing trend in research on CS and CSR, studies are still scarce in emerging markets, especially in Nigeria. Many studies, including Almaqtri et al. [22] and Houqe et al. [23], have concentrated on developed economies, which may not reflect the complexities encountered by O&G companies in Nigeria. Moreover, existing studies frequently do not provide a thorough evaluation of the effects of CS decisions on ESG outcomes within the sector. This study sought to offer a better understanding of how firms can weigh financial sustainability with environmental and social objectives by exploring the connection between debt, equity, and NFP metrics. In addition, it sought to highlight the need for standardized performance metrics that can facilitate more transparent and consistent reporting, helping O&G firms align their financial strategies with sustainability goals.

In an industry under increasing scrutiny from regulators, investors, and the public, optimizing capital structure to support integrated performance is important for ensuring enduring resilience and competitiveness [5, 13]. Therefore, the objective of this research is to examine how CS affects the NFP of Nigeria's listed O&G companies by investigating the influence of CS on ESG and CSR performance in these companies. A more holistic understanding of these dynamics will help align capital structure decisions with sustainability goals, offering valuable insights for policymakers, managers, and investors in Nigeria's oil and gas industry.

2. Literature Review

2.1. Conceptual Review

2.1.1. Non-Financial Performance (NFP)

NFP in the case of O&G companies refers to the broader set of performance indicators that extend beyond traditional financial measures, such as profitability; ROA, TobinQ and ROE According to Bagh et al. [12], these indicators include environmental sustainability, social responsibility, and governance practices, which are increasingly recognized as critical to long-term corporate success.

2.1.2. Environmental, Social, and Governance (ESG)

In recent years, stakeholders have emphasized the importance of integrating environmental, social, and governance (ESG) factors into corporate performance evaluations, particularly in industries like oil and gas that significantly impact the environment and local communities [24]. According to Adebayo et al. [25], the pressure to adopt sustainable practices and address societal concerns has intensified, with oil and gas companies being held accountable for their environmental footprint and social impact. As such, this study considers non-financial performance as a crucial dimension in evaluating the integrated outcomes of capital structure decisions, aligning with the increasing focus on sustainability in the corporate world [26], and equity financing to balance sustainability goals and financial performance [27].

As Nigerian oil and gas companies manoeuvre regulatory pressures and stakeholder expectations, according to Sokołowska and Zargartalebi [26], the impact of capital structure on their ESG practices becomes a critical area of investigation. This study explored how capital structure decisions influence ESG metrics, stressing the value of viable financial strategies.

2.1.3. Corporate Social Responsibility (CSR)

Corporate Social Responsibility (CSR) reflects a company's commitment to ethical practices and community well-being, beyond profit maximization [28]. In the O&G industry, CSR activities are mostly because of the sector's direct impact on local societies and the environment. Recent studies have shown that firms with robust CSR strategies tend to perform better in terms of reputation and stakeholder trust [29]. This study sought to uncover how financing decisions influence companies' ability to invest in socially responsible initiatives, fostering both financial and NFP by evaluating the function of CS on CSR outcomes.

2.1.4. Capital Structure

Capital structure refers to the mix of debt and equity financing used by a company to fund its operations and growth [30]. According to [31], the balance between debt and equity impacts a firm's financial risk, cost of capital, and overall performance. Companies must carefully manage their capital structure to optimize profitability and sustainability [32], particularly in the volatile oil and gas sector. Understanding the relationship between capital structure and non-financial performance, such as environmental, social governance, and corporate social responsibility, is critical for companies aiming to achieve sustainable growth [33]. This study examined how CS choices affect non-financial outcomes for Nigerian O&G companies.

2.1.5. Equity to Total Capital Ratio (E/TC)

E/TC indicates the portion of an entity's capital that is financed through share ownership, as opposed to borrowing. A higher equity ratio generally lowers financial risk [34] and allows for greater flexibility in adopting non-financial strategies like ESG and CSR. Companies with a strong equity base are often better positioned to invest in sustainable business practices without facing the constraints associated with debt financing [35].

2.1.6. Long-Term Debt to Total Capital Ratio (D/TC)

D/TC gauges the portion of an entity's capital funded by long-term debt. According to Al Amosh et al. [20], a higher D/TC indicates greater reliance on long-term borrowing, which can impact a firm's ability to invest in long-term sustainability initiatives. Research suggests that long-term debt can offer more stability, potentially supporting the financing of ESG initiatives and enhancing a firm's commitment to CSR [36].

2.2. Theoretical Review

Several theories elucidate how firms make CS decisions, with the trade-off and stakeholder theories being among the most prominent.

2.2.1. Trade-Off Theory (TOT)

The trade-off theory was developed by Kraus and Litzenberger in 1973 [37]. Kraus and Litzenberger [38] suggest that firms balance the benefits and costs of debt to determine their optimal capital structure. According to Kraus and Litzenberger [38], the benefits of debt include tax shields and lower cost of capital, while the costs involve bankruptcy risk and agency problems. Firms should find an equilibrium between debt and equity financing to lessen these costs while maximizing value.

According to trade-off theory, taking advantage of the tax deduction for loan interest results in a lower cost of debt than equity [20]. Therefore, before choosing the source of capital structure financing, the theory recommends a trade-off between costs and benefits to determine the best mix of debt to finance the company's capital to meet its goals [20]. Critics argue that the trade-off theory oversimplifies capital structure decisions by ignoring other factors such as market conditions, managerial preferences, and the dynamic nature of financing decisions [39].

The application of TOT to this study lies in its explanation of how listed O&G firms in Nigeria may decide on their capital structure while balancing financial and non-financial outcomes like ESG and CSR performance. It also offers a foundation for finding the equilibrium between debt and equity in achieving both financial and non-financial objectives, such as the integration of ESG and CSR considerations in CS decisions in the Nigerian O&G sector.

2.2.2. Stakeholder Theory

Proposed by R. Edward Freeman in 1984, stakeholder theory emphasizes that a firm's success depends on managing relationships with all stakeholders, including employees, customers, suppliers, communities, and shareholders [40]. Freeman [41] argued that companies should balance the interests of these groups rather than focusing solely on maximizing shareholder value. This holistic approach fosters trust, long-term sustainability, and ethical practices. For the O&G sector, stakeholder engagement is critical because of the environmental and social impacts of their operations. Recent studies, such as Okafor et al. [42], highlight that stakeholder-oriented practices improve corporate reputation and operational resilience in resource-intensive industries.

Critics argue that stakeholder theory lacks precision and creates challenges in balancing conflicting stakeholder interests [43]. Jensen [43] posits that focusing on multiple objectives may dilute managerial accountability and impede financial performance. Despite these criticisms, stakeholder theory remains relevant for understanding NFP in O&G companies. This theory provides a foundation for evaluating CSR, environmental sustainability, and employee relations. For example, Adebanjo [44] found that stakeholder engagement positively influences Nigerian oil firms' community relations and NFP. This underscores the theory's applicability in addressing CS decisions that support broader stakeholder goals.

2.3. Empirical Review

The empirical studies offer a variety of perspectives on the link between CS and CSR/ESG performance in various contexts. In their studies, Campos-Rasera et al. [16] and Lin et al. [17] examined 1,642 publicly listed companies from the ten largest economies and discovered a positive correlation between shareholder equity and CSR, whereas debt financing had a detrimental effect on CSR. De Campos-Rasera et al. [18] reinforced these findings by demonstrating a significant positive association between CS and CSR using multiple regression models. Likewise, Vieira and Madaleno [21] observed that companies with significant debt restrict CSR investments, although their bibliometric review revealed mixed conclusions. All of these studies imply that equity financing boosts CSR involvement, whereas excessive debt can limit firms' activities related to social responsibility.

Conversely, certain studies point out that debt can have a beneficial effect on ESG performance. The study by Al Amosh et al. (20], which concentrated on industrial firms in Jordan, discovered that debt financing has a positive effect on ESG by reducing shareholder opportunism and promoting ESG investments, whereas equity financing did not have a significant effect. Similarly, Aruna et al. [19] demonstrated that while total debt negatively affected sustainability disclosure in Nigerian oil and gas companies, both short-term and long-term debts positively influenced environmental disclosures. In the Chinese context, Li and Wang [45] expanded on this viewpoint, demonstrating that state-owned capital equity enhances ESG performance by alleviating financial constraints and addressing external environmental

pressures The findings underscore the contextual variations in leveraging debt to advance ESG goals, especially within certain governance or regulatory frameworks.

Moreover, Radhakrishna and Lappay [46] investigated 50 companies and identified a negative correlation between the debt-equity ratio and ESG scores, highlighting the necessity of sustainable financing strategies to improve NFP. At the same time, Li and Wang [45] highlighted how state capital can enhance ESG performance by improving internal controls and adapting to external environmental factors. Vieira and Madaleno [21] noted an increase in scholarly interest but pointed out that debates about the best CS for CSR investment continued. These empirical studies emphasize that while equity financing typically fosters CSR/ESG initiatives, the impact of debt differs based on firm characteristics, national contexts, and regulatory environments. This provides distinct insights into how CS affects sustainability practices.

3. Methodology

3.1. Research Design

A panel data regression method was adopted to investigate the relationship between CS and NFP of listed O&G companies in Nigeria. These integrated cross-sectional and time series dimensions enabled a more detailed assessment of how the variables evolved and varied across different oil companies under study.

3.2. Population and Sample Size

Nigeria's O&G industry formed the population, and the sample was the listed O&G companies in the NGX as at 31st December 2013.

3.3. Data Source

Data were culled from the financial statements of the sampled entities for ten years (2014 – 2023). These reports provided the necessary data on the ESG, CSR, and capital structure of the companies.

3.4. Method of Data Analysis

The study carried out a pre-analysis test, the Hausman (HM) test, to assess the suitable estimation techniques among the random and fixed effect analyses to efficiently estimate the coefficients of the independent variables.

3.5. Model Specification

The model specification was drawn following the objectives of the study to determine the effect of CS decisions, proxy with E/TC and D/TC on NFP proxy with ESG and CSR, within the O&G sector of the Nigerian economy. The implicit form of the model is as specified below:

$$\text{Non} - \text{financial performance} = f(capital\ structure) \quad \text{.....(3.1)}$$

Explicitly:

$$ESG = f(E/TC, D/TC\ ) \text{.....} (3.2)$$

$$CSR = f(E/TC,\ D/TC) \text{.....} (3.3)$$

Econometrically:

$$ESG_{it} = \beta_0 + \beta_1 E/TC_{it} + \beta_2 D/TC_{it} + \varepsilon_{1it} \text{ ..... } (3.4)$$

$$CSR_{it} = \theta_0 + \theta_1 E/TC_{it} + \theta_2 D/TC_{it} + \varepsilon_{2it} \text{ ..... } (3.5)$$

Where;

E/TC = Ratio of equity to total capital

D/TC = Ratio of debt to total capital

ESG = Environmental, Social, and Governance

CSR – Corporate Social Responsibility

$\beta_0, and\ \theta_0$ are the intercepts of the models

$\beta_1, \beta_2, \theta_1\ and\ \theta_2$ are the coefficients of the independent variables to be estimated.

i – are the oil and gas firm

t- time period (2014 to 2023)

ε_{1-4} are the error terms of the model.

4. Data Analysis and Interpretation

4.1. Hausman Test

Table 1 Result of Hausman (HM) Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Equation 3.2	54.342022	2	0.0000
Equation 3.3	1.218794	2	0.5437

Source: Authors' Computation (2025)

The HM test results in Table 1 provide insight into the appropriate econometric models for analyzing Equations 3.2 and 3.3. For Equation 3.2, the p-value is 0.0000, which is < 5% sig. Level ($p < 0.05$). This result leads to the acceptance of the random effects model as the most suitable. Hence, the fixed effects model is preferred for analyzing Equation 3.2.

Conversely, for Equation 3.3, the p-value is 0.5437, which is > 0.05. This shows that the random effects model is more suitable for analyzing Equation 3.3. Hence, the HM test outcomes prefer using the fixed effects model for Equation 3.2 and the random effects model for Equation 3.3.

Table 2 Result of Panel Regression Analysis (Fixed Effect) for Equation 3.2

Dependent Variable: ESG				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
E/TC	0.166006	0.052336	3.171947	0.0025
D/TC	-0.000425	0.000481	-0.883226	0.3812
C	0.535762	0.025651	20.88682	0.0000
R-squared	0.620231	Mean dependent var		0.606667
Adjusted R-squared	0.569108	S.D. dependent var		0.146608
S.E. of regression	0.096237	Akaike info criterion		-1.720447
Sum squared resid.	0.481598	Schwarz criterion		-1.441201
Log-likelihood	59.61341	Hannan-Quinn criterion		-1.611219
F-statistic	12.13219	Durbin-Watson stat		1.445669
Prob(F-statistic)	0.000000			

Source: Authors' Computation (2025)

The panel regression assessment in Table 2 reveals the relationship between E/TC, D/TC, and ESG scores, employing the fixed effects model. The coefficient of E/TC is 0.166006, which suggests that 1 1-unit rise in E/TC causes an average rise of 0.17 units in the ESG scores. This relationship is significant, as shown by the p-value of 0.0025 (< 0.05). In contrast, the coefficient of D/TC is -0.000425, with a p-value of 0.3812 (> 0.05), exhibiting an adverse, insignificant association of D/TC with ESG scores.

The R2 of 0.620231 implies that approximately 62.02% of the disparity in ESG scores is described by the regressor variables (E/TC and D/TC). The F-statistic of 12.13219 with a p-value of 0.0000 implies statistical significance of the model as a whole, indicating that the regressor variables collectively have a meaningful effect on ESG scores. The Durbin-Watson statistic of 1.445669 suggests the existence of positive autocorrelation in the model.

Table 3 Result of Panel Regression Analysis (Random Effect) for Equation 3.3

Dependent Variable: CSR				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
E/TC	0.435074	1.100503	0.395341	0.6942
D/TC	-0.027858	0.011340	-2.456622	0.0173
C	13.98206	1.006908	13.88614	0.0000
R-squared	0.104287	Mean dependent var		4.833006
Adjusted R-squared	0.070486	S.D. dependent var		2.347230
S.E. of regression	2.263588	Sum squared resid		271.5631
F-statistic	3.085364	Durbin-Watson stat		1.264052
Prob(F-statistic)	0.054010			

Source: Authors' Computation (2025)

The panel regression assessment in Table 3 evaluates the relationship of E/TC and D/TC with CSR using a random-effects model. The analysis shows that E/TC has a coefficient of 0.435074 with a p-value of 0.6942 (> 0.05), meaning a unit rise in E/TC would result in a 0.44-unit increase in CSR. However, this connection is statistically insignificant, meaning E/TC does not significantly influence CSR. Conversely, D/TC has a coefficient of -0.027858 with a p-value of 0.0173 (< 0.05), showing that a unit rise in D/TC would lead to a 0.03 unit decrease in CSR significantly. This means D/TC has a significant adverse effect on CSR.

The R-squared value of 0.104287 shows about 10.43% of the disparity in CSR is described by the regressor variables (E/TC and D/TC). The F-statistic of 3.085364, with a corresponding p-value of 0.054010, means that the complete model is marginally insignificant at the 5% level. The Durbin-Watson statistic of 1.264052 is less than 2 shows positive autocorrelation in the model.

5. Discussion of Findings

This study assessed the effect of CS on the NFP of listed O&G companies in NGX using panel regression analyses with both fixed and random effects models from 2014 to 2023. In the fixed effects model (Table 2), a statistically significant positive connection was found between E/TC and ESG scores. The finding of this study suggests that entities with higher equity in relation to debt are inclined to score better on ESG. This implies that a strong equity base might foster more sustainable and socially responsible practices in these companies.

This discovery is consistent with stakeholder theory, which posits that companies with stronger equity bases are more inclined to participate in socially responsible activities due to reduced pressure from debt repayment obligations and greater flexibility in addressing stakeholder concerns. This finding supports the finding of Li and Wang [45] which found that injection of state-owned capital into private firms instead of debt significantly and positively influences ESG performance.

Conversely, the D/TC shows a negative, insignificant impact on ESG outcome, indicating that debt structure does not influence firms' environmental or governance practices significantly. This finding is against the findings of

Radhakrishna and Lappay [46] and Aruna et al. [19], which found a negative effect of D/TC on ESG scores; and Al Amosh et al. [20], which found a positive significant relationship between D/TC and ESG scores. However, this discovery agrees with the trade-off theory, which suggests that while debt offers tax advantages, an overreliance on it escalates financial distress risks, causing firms to prioritize debt servicing at the expense of sustainability and social initiatives.

The random effects model in Table 3 reveals that E/TC does not significantly affect CSR, which is against the findings of Lin et al. [17] and de Campos-Rasera et al. [18], who found a positive and significant relationship between E/TC and CSR. Moreover, the D/TC's relationship with CSR is significantly negative, implying that higher levels of debt compared to equity can undermine an entity's obligation to social responsibility. These results suggest that while equity structure may positively influence ESG scores, excessive debt could hinder CSR efforts. This discovery lends credence to stakeholder theory, which postulates that companies have responsibilities to other stakeholders apart from the shareholders, such as personnel, communities, and the environment.

Firms with high leverage may place greater importance on financial obligations than on social and environmental responsibilities, resulting in a decrease in their CSR engagement. This implies that although a more robust equity base might enhance ESG performance, an overdependence on debt financing could restrict firms' capacity to maintain stakeholder interests in social responsibility.

6. Conclusion

This study offers important understanding into the relationship between CS and the NFP of listed O&G companies in Nigeria. The findings indicate that the E/TC ratio positively and significantly affects ESG scores, while it has no significant influence on CSR. Its positive significant relationship with ESG highlights the important role of equity in promoting environmental sustainability practices. Conversely, the D/TC shows no significant effect on ESG performance, suggesting that debt levels do not directly influence environmental and governance outcomes. However, D/TC shows a significant negative effect on CSR, which signifies that the entities with higher levels of debt relative to their overall capital are less likely to invest in or prioritize corporate social responsibility activities. These results underscore the distinct effects of CS components on different aspects of NFP.

6.1. Contributions to Knowledge

The study adds to knowledge in the field of accounting by broadening the perception of how financing decisions shape NFP, particularly in emerging markets. The study emphasizes the strategic importance of optimal capital structure in achieving sustainability objectives by demonstrating the positive effect of equity financing on ESG performance and the detrimental effect of excessive debt on CSR efforts. These findings provide accounting scholars and practitioners with a distinct perspective on integrating financial decision-making with environmental, social, and governance goals, especially in resource-dependent sectors like oil and gas.

The study informs policymakers, investors, and corporate managers about the value of keeping a balanced CS to enhance NFP. For accounting professionals, the study emphasizes the value of incorporating ESG metrics into financial reporting and decision-making processes. This study advances the discourse on sustainable corporate practices and offers actionable insights for improving accountability and transparency in the O&G sector by bridging the gap between financial strategies and non-financial outcomes.

6.2. Recommendations

- **Optimize Capital Structure for Sustainability:** Oil and gas companies should prioritize maintaining a balanced capital structure, with an emphasis on increasing equity relative to debt, to improve their ESG performance. A strong equity base can provide better financial flexibility, enabling firms to fund sustainable and socially responsible initiatives.
- **Strengthen Debt Management Practices:** Companies should prudently control their debt levels to avoid the adverse effects of outrageous leverage on corporate social responsibility (CSR) efforts. This involves aligning debt financing with strategic goals that consider both financial and non-financial performance, ensuring that high debt levels do not hinder their commitment to sustainability.
- **Enhance ESG Integration in Decision-Making:** Policymakers and corporate managers should incorporate ESG metrics into strategic decision-making and performance evaluations. This integration will ensure that capital structure decisions are aligned with broader corporate sustainability objectives, fostering long-term value creation for stakeholders.

- **Encourage Transparent Reporting:** Firms should adopt transparent reporting practices that disclose information on their CS in relation to NFP metrics, such as ESG and CSR. This transparency will improve accountability, build investor confidence, and encourage the adoption of best practices across the O&G industry in Nigeria.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest

Statement of ethical approval

Complied with ethical standards

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