



Triple Bottom Line Reporting and Financial Performance of Quoted Oil and Gas Firms in Nigeria

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ABSTRACT

This study ascertained the effect of triple bottom line reporting on financial performance of quoted oil and gas firms in Nigeria for eleven years period spanning from 2011-2021. Specifically, three objectives were formulated. Purposively, eleven (11) quoted oil and gas firms constituted the sample size of this study between 2011 and 2021. *Ex-Post facto* research design and content analysis were adopted while secondary data were extracted from the annual reports and accounts of the sampled firms and were analysed using E-Views 10.0 statistical software. This study utilised descriptive statistics and inferential statistics via Pearson correlation and Panel Least Square (PLS) regression analysis. Findings from the empirical analysis showed that economic bottom line reporting has a significant and positive effect on cash flow return on investment ($\beta_1 = 0.139780$; p-value = 0.0000); Social bottom line reporting has a significant and positive effect on cash flow return on investment ($\beta_2 = 0.189075$; p-value = 0.0001); Environmental bottom line reporting has a significant and positive effect on cash flow return on investment ($\beta_3 = 0.647667$; p-value = 0.0000) of quoted oil and gas firms in Nigeria at 5% level of significance. The study concludes that the components of triple bottom line reporting considered in this study are important variables in explaining cash flow return on investment of quoted oil and gas firms in Nigeria. It was recommended amongst others that corporate firms should undertake more social responsibility and environmental responsibility in order to strengthen their communication with stakeholder and then improve corporate image and market competition.

Keywords: Economic Bottom Line Reporting, Social Bottom Line Reporting, Environmental Bottom Line Reporting, Cash Flow Return on Investment

Introduction

The triple bottom line is a business concept that posits firms should commit to measuring their social and environmental impact in addition to their financial performance rather than solely focusing on generating profit, or the standard bottom line. The Triple Bottom Line (TBL) is a method that allows companies to assess their performance against three bottom lines: environmental, social and economic. The TBL dimensions are also commonly called the three (3) Ps: people, planet and profits (Okudo & Amahalu, 2023). The TBL captures the essence of sustainability by measuring the impact of an organization's activities on the world including both its profitability and shareholder values and its social, human and environmental capital.

TBL reporting incorporates presenting what the business is doing well, along with areas that need improvement. Reporting in this way demonstrates a drive towards increased transparency, which can mitigate concerns by stakeholders on hidden information (Ekweozor, Ogbodo & Amahalu, 2022). Everyone involved in the process of TBL, including employees and external stakeholders, can increase their knowledge of the company and expand their relationships with other stakeholders in the company. Participating in a learning environment is beneficial and necessary for a business to meet the goals of sustainability. The process of building a sustainable environment can lead to other revelations on how the business world can lend a helping hand in protecting the natural resources that are quickly evaporating. A company's financial performance tells investors about its general well-being. It is a snapshot of its economic health and the job its management is doing by providing insight into the future: whether its operations and profits are on track to grow and the outlook for its stock.

Today, the commitment to place equal emphasis on environmental, social and financial performance is becoming a mainstream approach. As climate change has become a climate emergency, and inequality has been starkly exposed through the health crisis and evidence of global institutional racism, conducting business through the triple bottom line is now more relevant than ever before. The general goal of a sustainable business strategy is to positively impact the environment, society, or both, while also benefiting shareholders (Amahalu & Okudo, 2023). Business leaders are increasingly realizing the power of sustainable business strategies in not only addressing the world's most pressing challenges but driving their firms' success. However, defining what sustainability means, solidifying clear and attainable goals, and formulating a strategy to achieve those goals can be daunting. A key challenge of the triple bottom line is the difficulty of measuring certain social and environmental bottom lines. Because the TBL does not include guidelines, any company can claim to follow the TBL. If every business claims that they are adopting the Triple Bottom Line, while doing little or nothing to encourage social and environmental progress, the term could lose its power. Several numbers of literatures have examined the relationship between sustainability reporting and firm performance, yet no consensus was reached. The first strand of prior studies is of the opinion that sustainability reporting has a positive relationship with firm performance (Mbonu & Amahalu, 2022; Joana & Fonseca, 2022). A second strand of literature documented a negative relationship between sustainability reporting and firm performance (Ghardallou & Alessa, 2022; Modozie & Amahalu, 2022). On the other hand,

the third strand of prior literatures reported a non significant relationship between sustainability reporting and firm performance (Waymond, Mouza & George, 2021). The conflicting results amongst the scholars created a lacuna which this study tends to fill. It is against this backdrop, that this study sought to ascertain the effect of triple bottom line reporting on financial performance of quoted oil and gas sectors in Nigeria.

Objectives of the Study

The main objective of this study is to ascertain the effect of triple bottom line reporting on financial performance of quoted oil and gas firms in Nigeria.

The specific objectives are to:

- i. Evaluate the effect of economic bottom line reporting on cash flow return on investment of quoted oil and gas firms in Nigeria.
- ii. Determine the effect of social bottom line reporting on cash flow return on investment of quoted oil and gas firms in Nigeria.
- iii. Assess the effect of environmental bottom line reporting on cash flow return on investment of quoted oil and gas firms in Nigeria.

Research Hypotheses

The following null hypotheses were tested at 5% level of significance:

Ho₁: Economic bottom line reporting has no significant effect on cash flow return on investment of quoted oil and gas firms in Nigeria

Ho₂: Social bottom line reporting has no significant effect on cash flow return on investment of quoted oil and gas firms in Nigeria

Ho₃: Environmental bottom line reporting has no significant effect on cash flow return on investment of quoted oil and gas firms in Nigeria

REVIEW OF RELATED LITERATURE

Triple Bottom Reporting (TBL)

The triple bottom line is a business concept that posits firms should commit to measuring their social and environmental impact in addition to their financial performance rather than solely focusing on generating profit, or the standard bottom line. It can be broken down into three Ps: profit, people, and the planet (Udo, Oraka & Amahalu, 2022). The triple bottom line (TBL) is an accounting framework that includes social, environmental and financial results as bottom lines. Businesses, nonprofits and government entities use TBL to evaluate their financial gains, as well as their social and environmental impact. Rather than only focusing on the standard bottom line, TBL adds social and environmental concerns to help measure an organization's impact on its surroundings. This is typically measured using the three P's: profit, people and the planet. The idea behind the TBL is to gauge an organization's commitment to corporate, environmental and [social responsibilities](#).

Economic Bottom Line Reporting

Economic bottom line reporting is the term used to identify various strategies that make it possible for a firm to use available resources to their best advantage. The idea is to promote the use of those resources in a way that is both efficient and responsible, and likely to provide long-term benefits. In the case of a business operation, it calls for using resources so that the business continues to function over a number of years, while consistently returning a profit (Tatum, 2022). Economic bottom line deals with the economic value created by the organization after deducting the cost of all inputs, including the cost of the capital tied up. Economic bottom line is only partly about the financial profitability of the business. The economic capital must be measured in terms of how much of an impact a business has on its economic environment (Eze, Okoye, Amahalu & Obi, 2022). Economic bottom line reporting refers to practices that support long-term economic growth without negatively impacting social, environmental, and cultural aspects of the community.

Social Bottom Line Reporting

The social bottom line is the outcome of a business' social sustainability practices. It is the measurement of profits in terms of human capital. Social sustainability is related to how we make choices that affect other humans in our global community. Social bottom line reporting is about identifying and managing business impacts, both positive and negative, on people (Krugman, 2022; Okafor, Egbunike & Amahalu, 2022). Social bottom line focuses on the need to put people first in development processes. It promotes social inclusion of the poor and vulnerable by empowering people, building cohesive and resilient societies, and making institutions accessible and accountable to citizens. Social bottom line reporting involves the creation of policies that mitigate social inequality and promote equal opportunities for all humans to live a high quality of life, regardless of their socioeconomic or cultural backgrounds.

Environmental Bottom Line Reporting

Environmental bottom line is the responsibility to conserve natural resources and protect global ecosystems to support health and wellbeing, now and in the future. Environmental bottom line is the capacity to improve the quality of human life while living within the carrying capacity of the earth's supporting

ecosystems. Environmental bottom line is the responsibility to conserve natural resources and protect global ecosystems to support health and wellbeing, now and in the future (Okudo & Ndubuisi, 2021; Amahalu, Ezechukwu & Obi, 2017). According to the United Nation Environmental Programme (2021), environmental sustainability involves making life choices that ensure an equal, if not better, way of life for future generations. Environmental sustainability aims to improve the quality of human life without putting unnecessary strain on the earth's supporting ecosystems. It is about creating an equilibrium between consumerist human culture and the living world. This can be done by living in a way that does not waste or unnecessarily deplete natural resources.

Financial Performance

Financial performance is a complete evaluation of a company's overall standing in categories such as assets, liabilities, equity, expenses, revenue, and overall profitability. It is measured through various business-related formulas that allow users to calculate exact details regarding a company's potential effectiveness. Financial Performance in broader sense refers to the degree to which financial objectives being or has been accomplished and is an important aspect of [finance risk management](#) (Okudo Amahalu, & Oshiole, 2023). It is the process of measuring the results of a firm's policies and operations in monetary terms.

Cash Flow Return on Investment

Cash flow return on investment (CFROI) refers to the financial ratio that is used as the proxy for economic return against the overall investment made in the subject company. In effect, it is the internal rate of return that is compared with the hurdle rate to check whether or not the subject company is performing better than the set expectations. CFROI is a valuation model that assumes that the stock market decides the prices based on the company's cash flow (Amahalu & Okudo, 2023). Cash flow return on investment measures dollar-for-dollar a company's [cash flow](#) from invested [capital](#). It also indicates the value of a company's capital [investments in terms](#) of how effectively those investments produce and generate [profit](#) relative to the costs they incur (Ecker, 2022). The cash flow return on investment (CFROI) is a metric that analyzes a company's cash flow in relation to its capital employed. This ratio is used by investors who believe that cash flow is the underlying driver of value in a company, as opposed to earnings or sales.

Economic Bottom Line Reporting and Financial Performance

Due to the markets and business globalization, geographical expansion and the greater demand for information and transparency among investors, stakeholders and society in general, market agents find their toehold in the quality of their economic reporting and their main source of knowledge on company strategy (Udo, Oraka & Amahalu, 2022). According to Lawrence, (2022), companies with better quality of economic reporting information are associated with subsequent higher performance, due to the fact that the market positively assesses those companies which are more committed to the issuance of good information for shareholders and other stakeholders, aiming to reduce or avoid information asymmetries between market participants. Amahalu, Ezechukwu & Okudo (2022), Yoon and Chung (2018) found that the effect of sustainability reporting on firm performance produced a positive effect. Contrarily, Bae, El-Ghoul, Gong and Guedhami (2021) established a non-significant and negative effect of sustainability disclosures on firm performance.

Social Bottom Line Reporting and Financial Performance

Increasing the impact of sustainability by gathering a wealth of information and measuring social and environmental impacts helps organizations improve their operational efficiency and natural resource management, which remains important to shareholders, employees, and other stakeholders. Involvement in social activities, when accurately managed and aligned with the business model, is a driving strategy for value creation (Okudo, Ezechukwu & Amahalu, 2022). Extant literature (for example, Sameer, 2021, Wu, Zhen. Yang, Ding & Zhang, 2020) state that companies involved in corporate social reporting (CSR) activities can create indirect value for their business, and this value can be assessed through their relationships with stakeholders. According to Nzekwe, Okoye and Amahalu (2021), the involvement in these activities also allows firm to obtain external knowledge, thus increasing absorptive capacity in knowledge related to their corporate and innovative performance.

Environmental Bottom Line Reporting and Financial performance

The increase in global environmental awareness and the campaign for sustainable economic development is redirecting the attention of firms towards environmental sensitivity (Nwaigwe, Ofoegbu, Dibia & Nwaogwugwu, 2022; Oshiole, Elamah & Amahalu, 2020). The quest for sustainability has caused an emergence of many global institutions enunciating varying norms that guide human interaction with the environment. These standards are influencing business corporations to understand that their strategic position in society has the power to influence behavior and alter the state of physical, social and economic environment (Okafor, Egbunike & Amahalu, 2022; Atanda, Osemene and Ogundana (2021); Ezeokafor and Amahalu, (2019); found a positive and significant relationship between the quality of environmental information disclosure and financial performance, while Mion and Adai (2019); Yu, Guo and Luu, (2018) reported no significant relationship between the level of environmental disclosure and the company's financial performance.

Theoretical Framework

Stakeholder Theory

In 1984, [R. Edward Freeman](#) originally detailed the Stakeholder Theory of organizational management and business ethics that addresses morals and values in managing an organization. The stakeholder theory is a theory of [organizational management](#) and [business ethics](#) that accounts for multiple constituencies impacted by business entities like employees, suppliers, local communities, creditors, and others. It addresses morals and values in managing an organization, such as those related to [corporate social responsibility](#). Stakeholder Theory is a view of capitalism that stresses the interconnected relationships between a business and its customers, suppliers, employees, investors, communities and others who have a stake in the organization.

Empirical Review

John (2021) studied the relationship between triple bottom financial reports and the firms performance of companies in Ghana from 2011-2019. The study employed the ex post facto design where secondary data were obtained from the annual reports. Correlation and panel least square regression techniques were employed. The result revealed a positive and non-significant relationship between triple bottom financial reports and earnings per share.

Waymond, Mouza and George (2021) examined the relationship between sustainability and firm performance in Nigeria from 2011-2019 using Algorithmic Pathways in the analysis. The study was carried out using OLS multiple regressions for the analysis and the study reported a positive and non-significant relationship between a firm's sustainability and net profit margin.

Mbonu and Amahalu (2022) ascertained the effect of Corporate Social Responsibility Costs on Financial Performance of Deposit Money Banks listed on Nigeria Stock Exchange for a ten year period ranging from 2011- 2020. Thirteen (13) Deposit Money Banks were purposively selected from a population of Fourteen (14) listed Deposit Money Banks. The proxies for Corporate Social Responsibility Costs were Corporate Donations, Occupational Health and Safety Cost, Training Cost and Remediation Cost while Return on Assets was employed as Financial Performance index. Four (4) hypotheses were formulated. Ex-Post facto research design was adopted while Pearson Correlation Coefficient and Panel Least Square (PLS) Regression analysis via STATA 13 statistical software were used to test the hypotheses of the study. The result of this study showed that Corporate Donations, Occupational Health and Safety Cost, Training Cost and Remediation Cost have a significant positive effect on Return on Assets at 5% level of significance respectively.

METHODOLOGY

The research design employed in this study is *ex-post facto* research design. The population of this study consisted of all the twelve (12) oil and gas companies listed on the Nigerian Exchange (NGX) Group as at 31st December, 2021. They include: 11 Plc (formerly Mobil Oil Plc); Anino International Plc; Capital Oil Plc; Conoil Plc; Eterna Plc; Ardova Plc (formerly Forte Oil Plc); Japaul Oil & Maritime Services; MRS Oil Nigeria Plc; Oando Plc; Rak Unity Petroleum Company Plc; Seplat Petroleum Development Company Plc; Total Nigeria Plc. The sample size of this study comprised of eleven (11) listed oil and gas firms on the Nigerian Exchange (NGX) Group from 2011 to 2021. Purposive sampling technique was adopted to select oil and gas companies that consistently filed their annual reports with the Nigerian Exchange (NGX) Group for the study period (2011-2021), these are: 11 Plc (formerly Mobil Oil Plc); Anino International Plc; Capital Oil Plc; Conoil Plc; Eterna Plc; Japaul Oil & Maritime Services; MRS Oil Nigeria Plc; Oando Plc; Rak Unity Petroleum Company Plc; Seplat Petroleum Development Company Plc; Total Nigeria Plc. This study basically utilized secondary data that were extracted from the annual reports and statements of account of the sample listed oil and gas companies.

Table 1 Variables Definition and Measurement Units

Variable Type	Indicators	Measurement Unit	Variable Symbols	Variables Explanation
Independent Variables (Triple Bottom Line Reporting)				
	Economic Bottom Line Reporting	Operating Costs Disclosure	OCD	Total operating score disclosed
				Maximum number of operating disclosure score that a firm could disclose
	Social Bottom Line Reporting	Community Investments Disclosure	CID	Total community investments disclosed
				Maximum number of community investments disclosure score that a firm could disclose
	Environmental Bottom Line Reporting	Effluent Disclosure	EFD	Total effluent score disclosed
				Maximum number of effluent disclosure score that a firm could disclose
Dependent Variable (Financial Performance)				
			CFROI	Operating Cash Flow

	Cash Flow Return on Investment			Total Assets – Total Current Liabilities
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Content analysis was adopted in this study. A content analysis was performed on the sample sustainability reports to study how organizational boundaries are set for the whole report and how operational boundaries are set for specific triple bottom line indicators. Any data using fair standard meanings for a specific group of people can be subjected to content analysis (Stanton, 2017). This study adopted the Global Reporting Initiative (GRI) framework disclosures according to the G4 guidelines for the purpose of developing the triple bottom line reporting indices. Triple bottom line reporting was evaluated by 4 indicators for economic reporting; 12 indicators for environmental reporting and 10 indicators for social reporting (refer to appendix A).

For each of these triple bottom line reports, all the 26 indicators were scored as follows:

- a score of 0 for an item not referred to in a report;
- a score of 1 when the report only briefly mentioned something pertinent to the item or provided only qualitative statements;
- a score of 2 when the report provided detailed information with some numerical support; and rarely
- a score of 3 was given when a report provided extensive numerical support with data on goals achieved or fully accomplished.

So, a total score for triple bottom line reporting could reach the maximum score of 78.

Therefore,

$$TBLDI = TDP/MP$$

Where;

TBLDI = Triple Bottom Line Disclosure Index

TDP = Total Disclosure Points of a Firm

MP = Maximum Points for a Firm

Model Specification

This study adapted the model of Okafor, Egbunike and Amahalu (2022):

$$ROCE = \beta_0 + \beta_1EFD + \beta_2CMD + \beta_3EMD + \varepsilon \dots\dots\dots (1)$$

Where:

ROCE = Return on Capital Employed

CMD = Community Disclosure

EMD = Employment Disclosure

ε = error term

Sequel to the adapted model, the following equation construct was modeled:

$$CFROI_{it} = \beta_0 + \beta_1OCD_{it} + \beta_2CID_{it} + \beta_3EFD_{it} + \mu_{it}$$

Where:

β_0 is the intercept of the regression.

$\beta_1, \beta_2, \beta_3$ are the coefficients of the regression

$CFROI_{it}$ = Cash Flow Return on Investment of firm i in period t

OCD_{it} = Operating Cost Disclosure of firm i in period t

CID_{it} = Community Investment Disclosure of firm i in period t

EFD_{it} = Effluent Disclosure of firm i in period t

i = individual firms (1,2,3...11)

t = time periods (2011, 2012 ... 2021)

μ_{it} = Error term

DATA PRESENTATION AND ANALYSIS

Table 2: Pearson Correlation Matrix

	CFROI	OCD	CID	EFD
CFROI	1.0000			
OCD	0.3731	1.0000		
CID	0.0720	0.2012	1.0000	
EFD	0.0876	-0.5338	-0.6291	1.0000

Source: E-Views 10.0 Correlation Output, 2023

Interpretation of Correlation Matrix

The result of the Pearson Coefficient analysis in table 4.2 indicates that CFROI positively correlates with OCD, CID and EFD at correlation coefficients of 0.3731, 0.0720 and 0.0876 respectively.

Test of Hypotheses

Table 3: Panel Least Square Regression Analysis testing the effect of Triple Bottom Line Reporting on Financial Performance

Dependent Variable: CFROI

Method: Panel Least Squares

Date: 02/12/23 Time: 13:13

Sample: 2011 2021

Periods included: 11

Cross-sections included: 11

Total panel (balanced) observations: 121

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.217839	0.014247	15.28997	0.0000
OCD	0.139780	0.017255	8.100840	0.0000
CID	0.189075	0.045031	4.198804	0.0001
EFD	0.647667	0.096990	6.677679	0.0000
R-squared	0.387304	Mean dependent var		0.109292
Adjusted R-squared	0.371594	S.D. dependent var		0.024746
S.E. of regression	0.019617	Akaike info criterion		-4.992365
Sum squared resid	0.045024	Schwarz criterion		-4.899943
Log likelihood	306.0381	Hannan-Quinn criter.		-4.954829
F-statistic	24.65315	Durbin-Watson stat		1.627315
Prob(F-statistic)	0.000000			

Source: E-Views 10.0 Panel Regression Output, 2023

Interpretation of Regression Result

Table 3 reveals an adjusted R^2 value of 0.371594. The adjusted R^2 , which represents the coefficient of multiple determinations imply that 37.16% of the total variation in the dependent variable (CFROI) of quoted Oil and Gas in Nigeria is jointly explained by the explanatory variables (OCD, CID and EFD). The adjusted R^2 of 37.16% did not constitute a problem to the study because the F- statistics value of 24.65315 with an associated $\text{Prob.} > F = 0.000000$ indicates that the model is fit to explain the relationship expressed in the study model and further suggests that the explanatory variables are properly selected, combined and used. The value of adjusted R^2 of 37.16% also shows that 62.84% of the variation in the dependent variable is explained by other factors not captured in the study model. This suggests that apart from OCD, CID and EFD, there are other factors that mitigate CFROI of quoted Oil and Gas in Nigeria. The results in table 3 illustrated that OCD has a positive and significant relationship with CFROI measured with a beta coefficient (β_1) = 0.139780, t- value of 8.100840 and p- value of 0.0000 which is statistically significant at 5%; CID has a significant positive relationship with CFROI as reported by the beta coefficient (β_2) = 0.189075, t- value = 4.198804, p-value = 0.0001 which is statistically significant at 5%; EFD has a positive and significant relationship with CFROI considering the beta coefficient (β_3) = 0.647667, t- value = -6.677679, p-value = 0.0000.

Thus,

$$\text{CFROI} = 0.217839 + 0.139780\text{OCD} + 0.189075\text{CID} + 0.647667\text{EFD} + \mu$$

This beta coefficient revealed that if OCD, CID and EFD increase by one unit, then the sampled firms CFROI would increase by 13.98%, 18.91% and 64.77% respectively. In addition, Durbin-Watson test is implied to check the auto correlation among the study variables. The Durbin-Watson value is 1.627315 which is less than 2 provide an evidence of no auto-correlation among the variables, since the value at 1.627315 is not more than 2.0 approximately.

Decision

Based on the empirical evidence that suggests that OCD, CID and EFD have a significant positive effect on CFROI of quoted Oil and Gas firms in Nigeria at 5% level of significance, thus, the alternative hypothesis of the study is therefore accepted.

FINDINGS, CONCLUSION AND RECOMMENDATIONS

Findings

Based on the analysis of this study, the following findings emerged:

- i. Economic bottom line reporting has a significant and positive effect on cash flow return on investment of quoted oil and gas firms in Nigeria at 5% level of significance ($\beta_1 = 0.139780$; p-value = 0.0000).
- ii. Social bottom line reporting has a significant and positive effect on cash flow return on investment of quoted oil and gas firms in Nigeria at 5% level of significance ($\beta_2 = 0.189075$; p-value = 0.0001)
- iii. Environmental bottom line reporting has a significant and positive effect on cash flow return on investment of quoted oil and gas firms in Nigeria at 5% level of significance ($\beta_3 = 0.647667$; p-value = 0.0000).

Conclusion

This study ascertained the effect of triple bottom line reporting on financial performance of quoted oil and gas firms in Nigeria from 2011-2021. Panel data were sourced from the annual reports and accounts of the sampled firms. Inferential statistics using correlation analysis and panel least square regression were employed via E-Views 10.0 statistical software. Data analysis revealed that economic bottom line reporting has a significant and positive effect on cash flow return on investment ($\beta_1 = 0.139780$; p-value = 0.0000); Social bottom line reporting has a significant and positive effect on cash flow return on investment ($\beta_2 = 0.189075$; p-value = 0.0001); Environmental bottom line reporting has a significant and positive effect on cash flow return on investment ($\beta_3 = 0.647667$; p-value = 0.0000) of quoted oil and gas firms in Nigeria at 5% level of significance. The study concludes that the components of triple bottom line reporting considered in this study are important variables in explaining cash flow return on investment of quoted oil and gas firms in Nigeria.

Recommendations

The following recommendations were made in line with the findings and conclusion of this study:

- i. As a result of the positive relationship between economic bottom line reporting and financial performance, firms should adopt reporting mechanism that helps make organizations' decision-making processes more efficient and, in turn, enables them to reduce risk across their supply chain; a process that reduces waste and yields significant cost savings.
- ii. Considering the positive relationship between social bottom line reporting and financial performance, corporate firms should undertake more social responsibility and environmental responsibility in order to strengthen their communication with stakeholder and then improve corporate image and market competition.
- iii. Firms should produce environmental report that focuses on business' attention on environmental performance. Typically, this will result in [improved performance, which should lead to cost savings](#). Producing an environmental report can bring a marketing advantage by demonstrating a business' awareness of its environmental responsibilities. It may also help [improve relationship with key stakeholders, such as investors, suppliers and the wider local community](#).

References

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- Amahalu, N.N., & Okudo, C.C. (2023). Firm characteristics and cash holdings of quoted conglomerates in Nigeria. *Scholarly Journal of Management Sciences*, 2(3), 111-126
- Amahalu, N.N., & Okudo, C.L. (2023). Effect of corporate social responsibility on financial performance of quoted oil and gas firms in Nigeria. *Research Journal of Management Practice*, 3(3), 25-38.
- Amahalu, N.N., Ezechukwu, B.O., & Obi, J.C. (2017). Corporate social responsibility and financial performance of quoted deposit money banks in Nigeria. *Asian Journal of Science and Technology*, 08(12), 7183-7191

- Amahalu, N.N., Ezechukwu, B.O., & Okudo, C.L. (2022). Intellectual capital and market value added of listed insurance companies in Nigeria. *International Journal of Science Academic Research*, 03(10), 4528-4533.
- Atanda, F.A., Osemene, F., & Ogundana, H.F. (2021). Sustainability reporting and firm value: Evidence from selected deposit money banks in Nigeria. *Global Journal of Accounting*, 7(1), 47-68.
- Bae, K.H., El-Ghoul, S., Gong, Z., & Guedhami, O. (2021). Does CSR matter in times of crisis? Evidence from the COVID-19 pandemic. *J. Corp. Financ.*, 67, 101876.
- Ecker, J. (2022). Cash flow return on investment. <https://www.wallstreetmojo.com/cfroi/>. Accessed 15/10/2022.
- Ekweozor, M.A., Ogbodo, O.C., & Amahalu, N.N. (2022). Effect of corporate social responsibility on financial performance of listed oil and gas firms in Nigeria. *International Journal of Trend in Scientific Research and Development (IJTSRD)*6 (2), .282-289.
- Eze, A.J., Okoye, P.V.C., Amahalu, N.N., & Obi, J.C. (2022). Financial mix and bottom line profit of quoted industrial goods companies in Nigeria. *International Journal of Management Studies and Social Science Research*, 4(1), 44-59
- Ezeokafor, F.C., & Amahalu, N.N. (2019). Effect of sustainability reporting on corporate performance of quoted oil and gas firms in Nigeria. *Journal of Global Accounting*, 6(2), 217-228.
- Ghardallou, W., & Alessa, N. (2022). Corporate social responsibility and firm performance in GCC countries: A panel smooth transition regression model. *Sustainability*, 14(8), 7908.
- Joana, C., & Fonseca, J.P. (2022). The impact of corporate social responsibility and innovative strategies on financial performance. *Risks* 10(103). 567-584.
- John, F. (2021). Triple bottom financial reports and the firms performance of companies. *Journal of Environment Assessment Policy and Management*, 8(3), 259-280.
- Krugman, P. (2022). Economic sustainability. <https://www.masterclass.com/articles/economic-sustainability>. Accessed 13/10/2022.
- Lawrence, M. (2022). Sustainability reporting and financial performance of companies listed in the Nigeria Stock Exchange. *European Journal of Accounting, Auditing and Finance Research*, 10(5), 25-73.
- Mbonu, C.M., & Amahalu, N.N. (2022). Effect of corporate social responsibility costs on financial performance of listed deposit money banks in Nigeria. *Journal of Global Accounting* 8 (1), 40 - 52.
- Mion, G., & Adau, C.R. (2019). Mandatory non-financial disclosure and its consequences on the sustainability reporting quality of Italian and German companies. *Sustainability*, 11(17), 4612-4640.
- Modozie, E.C., & Amahalu, N.N. (2022). Effect of board structure on sustainability reporting of listed industrial goods firms in Nigeria. *International Journal of Management Studies and Social Science Research*, 4(1), 204-215
- Nwaigwe, N.G., Ofoegbu, G.N., Dibia, N.O., & Nwaogwugwu, C.V. (2022). Sustainability disclosure: Impact of its extent and quality on value of listed firms in Nigeria. *Cogent Business & Management*, 9(1), 2079393.
- Nzekwe, O.G., Okoye, P.V.C., & Amahalu, N.N. (2021). Effect of sustainability reporting on financial performance of quoted industrial goods companies in Nigeria. *International Journal of Management Studies and Social Science Research*, 3(5), 265-280.
- Okafor, O.O., Egbunike, P.A., & Amahalu, N.N. (2022). Determinants of environmental disclosure of quoted oil and gas firms in Nigeria. *International Journal of Management Studies and Social Science Research*, 4(1), 77-88.
- Okudo, A.G., & Ndubuisi, N.A. (2021). Corporate governance and carbon disclosure practices of quoted manufacturing firms in Nigeria. *International Journal of Contemporary Research and Review*, 12 (07), 20420-20433.
- Okudo, C.C., & Amahalu, N.N., & Oshiole, S. (2023). Complementarity of equity and debt capital on profitability of quoted consumer goods firms in Nigeria. *International Journal of Trend in Scientific Research and Development (IJTSRD)*, 7(2), 491-501.
- Okudo, C.L., Ezechukwu, B.O., & Amahalu, N.N. (2022). Dividend policy and financial performance of quoted brewery firms in Nigeria. *International Journal of Science Academic Research*, 03(10), 4494-4498.
- Okudo, C.L; & Amahalu, N.N. (2023). Effect of environmental accounting on profitability of listed oil and gas firms in Nigeria. *International Journal of Advanced Academic Research*, 9(3), 47-61.
- Oshiole, S., Elamah, A.F., & Amahalu, N.N. (2020). Effect of environmental cost disclosure on profitability of listed oil and gas firms in Nigeria. *International Journal of Academic Research in Accounting, Finance and Management Sciences* 10(2), 157-170.
- Sameer, I. (2021). Impact of corporate social responsibility on organization's financial performance: Evidence from Maldives public limited companies. *Future Business Journal* 7(3), 29.

- Tatum, M. (2022). What is economic sustainability? <https://www.smartcapitalmind.com/what-is-economic-sustainability.htm>. Retrieved 13/10/2022.
- Udo, C.U., Oraka, A.O., & Amahalu, N.N. (2022). Female directors and corporate sustainability of quoted conglomerates in Nigeria. *International Journal of Management Studies and Social Science Research*, 4(1), 131 – 143.
- United Nation Environment Programme (2021). Environmental sustainability. <https://www.unep.org/>. Accessed 13/10/2021.
- Waymond, G., Mouza, D., & George, T. (2021). Sustainability and firm performance. *Business Ethics Quarterly*, 1(1), 243–262.
- Wu, L., Zhen, S., Yang, C., Ding, T., & Zhang, W. (2020). The Impact of CSR and financial distress on financial performance - Evidence from Chinese listed companies of the manufacturing industry. *Sustainability*, 12(6), 6799.
- Yoon, B., & Chung, Y. (2018). The effects of corporate social responsibility on firm performance: A stakeholder approach. *J. Hosp. Tour. Manag.*, 37, 89–96.
- Yu, E.P., Guo, Q.C., & Luu, B.V. (2018). Environmental, social and governance transparency and firm value. *Business Strategy and the Environment*, 27(7), 987–1004.

Appendix A

Categories and Aspects in the Guidelines

Category	Aspects
Economic	<ul style="list-style-type: none"> • Economic Performance • Market Presence • Indirect Economic Impacts • Procurement Practices
Environmental	<ul style="list-style-type: none"> • Materials • Energy • Water • Biodiversity • Emissions • Effluents and Waste • Products and Services • Compliance • Transport • Overall • Supplier Environmental Assessment • Environmental Grievance Mechanisms
Social	
Human Rights	<ul style="list-style-type: none"> • Community Investment • Non-discrimination • Freedom of Association and Collective Bargaining • Child Labor • Forced or Compulsory Labor • Security Practices • Indigenous Rights • Assessment • Supplier Human Rights Assessment • Human Rights Grievance Mechanisms

Source: GRI G4 Sustainability Reporting Guidelines, 2023