



ENVIRONMENTAL, SOCIAL AND GOVERNANCE DISCLOSURES AND THE VALUE OF LISTED CONSUMER GOODS FIRMS IN NIGERIA: ROLE OF EXECUTIVE COMPENSATION

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ABSTRACT

In the contemporary business landscape, there is growing interest in the connection between executive compensation and Environmental, Social, and Governance (ESG) disclosures, particularly in achieving corporate objectives. Firms often leverage executive compensation as an incentive to drive ESG initiatives, ultimately enhancing firm value. Drawing on Instrumental Stakeholder Theory, this study examined the effect of ESG disclosures on the value of listed consumer goods firms in Nigeria from 2006 to 2023, with executive compensation as a moderating variable. The study population comprises 21 firms, with 16 firms purposively selected as the sample. Multiple regressions were employed for analysis in this study. The outcome of this study showed that environmental, social, and governance disclosures each have significant positive effect on firm value. Furthermore, executive compensation enhances these effects, as its moderating effect was both significant and positive in all three instances. The study recommends that firms adopt a strategic approach to ESG disclosure to foster positive perceptions among instrumental stakeholders, thereby enhancing firm value.

KEYWORDS: - Environmental, social and governance disclosures, executive compensation, instrumental stakeholder theory, price to book value.

INTRODUCTION

The ultimate reason for establishing and operating most business firms is to optimise value. Firm value (FV) is closely linked to stock price, which reflects market performance and plays a crucial role in determining a firm's overall worth. Generally, a higher share price corresponds to a higher firm value, and vice versa (Lin et al., 2015). As a result, most FV indicators incorporate price elements. Moreover, FV can be enhanced through dynamic strategies, one of which involves improving stakeholders' perceptions of the firm through socially responsible activities. Stakeholders' perceptions are shaped by a firm's investment in environmental, social, and governance initiatives, as well as the transparent disclosure of such efforts (Adiputra&Hermawan, 2020).

For this reason, a firm is expected not only to engage in profit-making activities but also to prioritise its stakeholders by addressing environmental, social, and governance (ESG) concerns. ESG gains relevance by responding to stakeholders' demands for standardised and sustainable metrics. Consequently, there has been a paradigm shift in stakeholders' information expectations from a sole focus on financial disclosures to an increasing emphasis on non-financial disclosures, with ESG being a key component. In response, firms now disclose both financial and non-financial information in their annual reports to signal their commitment to sustainability and responsible business practices to investors and other instrumental stakeholders. ESG encompasses a firm's activities related to environmental sustainability, social engagement with both internal and external stakeholders, and governance structures that ensure accountability. This approach considers human rights, workforce welfare, environmental impact, product responsibility, and ethical governance practices.

The contemporary business environment has made it appealing for firms to improve their positive image and build a favourable reputation by explicating their positive commitments beyond financial considerations via ESG disclosure. Moreover, executives often face pressure from shareholders and other stakeholders regarding the firm's environmental, social, and governance endeavours (Şeker&Şengür, 2021). Investors evaluate corporate behaviour based on environmental and social initiatives when making investment decisions. Since investors respond to positive corporate signals, firms seek to strengthen their credibility, gain social acceptance, and enhance their public image through ESG disclosures.

Progressive firms leverage ESG disclosure to enhance their public image, transparency, and accountability, which, in turn, boosts investor confidence, mitigates risks, and positively influences firm value over time (Abdi et al., 2022). By disclosing ESG responsibilities, firms aim to prevent reputational risks, demonstrate ethical business practices, and foster social trust. Accordingly, substantial human, financial, and physical resources are channelled towards relevant environmental and social initiatives. Effective management of these resources by a firm's executives enables the integration of competing economic, environmental, social, and governance demands. In this regard, executives' knowledge, skills, expertise, and social acumen serve as key drivers of firm value, with appropriate compensation acting as a catalyst for their efforts. Consequently, the level of motivation among executives can determine their commitment to fulfilling ESG objectives for optimal firm

value. As such, executive compensation can either strengthen or weaken the effect of ESG disclosure on firm value.

In Nigeria, the current economic climate has played a significant role in the decline of firm values, driven by factors such as higher energy costs, increased borrowing costs, rising interest rates, inflation, reduced consumer purchasing power, investor sentiment, and a weakening exchange rate (Cardinal Stone, 2024). Specifically, the naira depreciated by 48% against the dollar between 2023 and 2024, dropping from N770 to N1,470, while core inflation surged from 7.34% to 20.06% from mid-2023 to mid-2024 (PwC, 2024). As a result, 12 listed consumer goods firms on the Nigerian Exchange (NGX) are currently operating at a loss, primarily due to the impact of the depreciating naira (Stears Business, 2024). Furthermore, many firms in the consumer goods sector rely heavily on imported raw materials for production, and the devaluation of the naira has led to higher importation costs, ultimately reducing profitability and firm value.

In addition, the increased cost of borrowing, driven by high interest rates, has contributed to the decline in firm value and made the stocks of these firms less attractive to investors. Supporting this, Ogwu (2022) reported that 10 listed consumer goods firms were among the poorest performers in terms of market value in 2022, with a cumulative market capitalisation of N299.5 billion. Furthermore, in October 2024, the Consumer Goods Index decreased by 0.75%, accounting for 0.92% of the overall market decline, which further highlights the weak performance of stocks in this sector (Nwachukwu, 2024). In March 2024, the Central Bank of Nigeria (CBN) raised the Monetary Policy Rate (MPR) from 22.75% to 24.75% (Central Bank of Nigeria, 2024), and this high interest rate has had a negative impact on consumer goods firms. Given these challenges, other strategies, such as focusing on ESG initiatives, could play a crucial role in boosting investor confidence and stabilising firm value.

Most macroeconomic factors are beyond a firm's control; however, there are strategies a firm can employ to enhance its attractiveness to investors and other stakeholders, helping to mitigate the decline in firm value. One such strategy is addressing ESG concerns, which can improve a firm's image and attract more investment, potentially increasing both its market price and overall value. Thus, if a firm fails to generate a positive perception among investors and other stakeholders by enhancing its visibility, reputation, and image through environmental, social, and governance initiatives, optimising firm value may remain elusive, especially given the challenging macroeconomic conditions. Moreover, the willingness and effectiveness of a firm's executives to disclose ESG compliance, an important factor in optimising firm value, should also be considered. If executives are indifferent to the firm's ESG commitments, this could hinder efforts to enhance value through ESG strategies. Therefore, incentivising executives to prioritise ESG initiatives and disclose their commitments through appropriate compensation could be a promising approach to addressing this challenge.

Against this background, this study examined the effects of environmental, social, and governance disclosures on the value of listed consumer goods firms in Nigeria, with executive compensation serving as a moderating factor. The null hypotheses for this study are:

H₀₁: Environmental disclosure does not have significant effect on the value of listed consumer goods firms in Nigeria.

H₀₂: Social disclosure has no significant effect on the value of listed consumer goods firms in Nigeria.

H₀₃: Governance disclosure has no significant effect on the value of listed consumer goods firms in Nigeria.

H₀₄: Executive compensation does not have significant moderating effect on environmental disclosure and the value of listed consumer goods firms in Nigeria.

H₀₅: Executive compensation has no significant moderating effect on social disclosure and the value of listed consumer goods firms in Nigeria.

H₀₆: Executive compensation does not have significant moderating effect on governance disclosure and the value of listed consumer goods firms in Nigeria.

2. LITERATURE REVIEW

This section of the study reviews relevant literature, including conceptual, theoretical, and empirical works aligned with the study's main focus.

Conceptual Review

Investors increasingly recognise that a firm's success extends beyond profit maximisation to include activities that enhance firm value (Adiputra&Hermawan, 2020; Wiranudirja et al., 2022). Firm value (FV) reflects an assessment of a firm's book value relative to its market value (Yang et al., 2020). A higher market value signals strong firm performance, which in turn boosts investor confidence (Jihadi et al., 2021). Additionally, firms often leverage capital market mechanisms to enhance their value and build investor trust by improving share prices (Simanjuntak et al., 2020).

Firm value has several indicators, including market price per share, price-to-book value, Tobin's Q, and the price-earnings ratio, among others. However, this study focuses on price-to-book value (PBV), which allows for a comparative assessment of whether a firm's market value exceeds its book value or falls below it. Consequently, PBV reflects investors' perceptions of the firm's prospects.

According to Pramesworo and Evi (2021), PBV is a key metric for evaluating a company's market price relative to its book value, serving as an indicator of the value created from invested capital. It represents the relationship between a company's market value and its book value per share over time (Amahalu et al., 2017). As a measure of firm value, PBV helps assess whether a company's share price is high or low in relation to its book value. A higher PBV ratio indicates a higher firm value (Zulhilmi&Tarmizi, 2022). Additionally, PBV can be used for comparative analysis across firms and industries, particularly when companies adhere to the same accounting standards.

The environmental dimension promotes practices that support energy efficiency, water conservation, and natural resource preservation through recycling and pollution reduction (Sulaiman et al., 2024). The growing number of firms has contributed to environmental challenges, necessitating deliberate corporate actions to mitigate adverse environmental impacts (Indrayati, 2020). To reinforce this, Ghardallou and Alessa (2022) advocate for firms to uphold a clean and

sustainable environment by adopting eco-friendly practices that minimise pollution. Moreover, by prioritising environmental concerns, firms can enhance their visibility and long-term value (Naseer et al., 2024). Key environmental considerations include energy policies, pollution control measures, waste management, environmental research and development, and resource conservation (Tarek, 2019). Additionally, addressing environmental issues involves reducing contaminants and pollutants to foster a healthier ecosystem (Ibrahim & Ademu, 2021).

Forward-looking firms are intentional about their environmental commitments, particularly regarding waste emission policies and responsible resource utilisation (Ghardallou & Alessa, 2022). Consequently, firms are encouraged to adopt proper waste disposal practices and ensure transparent disclosure (Cho et al., 2019). Environmental disclosure involves reporting a firm's environmental impact to stakeholders, providing insight into its interactions with the surrounding environment (Indriastuti & Chariri, 2021; Itan et al., 2023). By leveraging environmental disclosure, firms can enhance stakeholder perception, demonstrating their commitment to environmental responsibility and reinforcing their public image.

The social pillar reflects a firm's commitment to inclusiveness, fairness, and the overall welfare of its workforce and society, addressing social concerns and promoting equity (Sulaiman et al., 2024). The social dimension primarily focuses on the complexities of a firm's internal and external relationships (Feneir, 2023), assessing its ability to cultivate positive perceptions among customers and foster loyalty among employees and the broader society (Abdi et al., 2020). The significance of the social dimension lies in its potential to strengthen stakeholder relationships, thereby enhancing corporate reputation. Disclosing these relational aspects improves stakeholder perception, ultimately contributing to increased firm value (Chang & Lee, 2022; Abed et al., 2023). Social disclosure, therefore, reflects a firm's responsibility toward employee welfare, customer satisfaction, and societal development (Şeker & Şengür, 2021). In essence, transparent disclosure of social commitments enhances a firm's reputation, public image, and social capital, ultimately leading to optimal value creation (Yi et al., 2022).

Social disclosure (SD) involves reporting information on various aspects of a firm's social responsibility, including workforce welfare, product responsibility, human rights strategies, and customer satisfaction (Bruno et al., 2023). It also encompasses disclosures on employee safety, training programs, and contributions to community well-being (Becchetti et al., 2022). SD communicates a firm's social commitments such as employee welfare and inclusivity, fair-trade ethics, and community development to stakeholders through its annual report, thereby enhancing corporate image (Majidi & Wahyuningtyas, 2024). By voluntarily disclosing social and community-related initiatives beyond legal requirements, firms demonstrate their dedication to corporate responsibility (Xaviera & Rahman, 2024). Furthermore, transparent reporting of past social commitments fosters accountability and reinforces a firm's dedication to social initiatives (Shaheen & Zaytoun, 2024). Additionally, social disclosure highlights a firm's ability to manage resources effectively, leading to increased customer satisfaction, workforce loyalty, and positive societal perception (Alsayegh et al., 2020).

The governance aspect focuses on the effective management of a firm's internal structure to optimise productivity and enhance operational efficiency. Governance disclosure, therefore, highlights a firm's leadership capacity and its commitment to implementing sound governance principles (Suretno et al., 2022). Key governance principles include board composition, executive compensation structures, audit frameworks, internal control mechanisms, and the protection of shareholders' rights (Angir&Weli, 2024).

Governance serves as the foundational pillar that enables the effective implementation of environmental and social initiatives. Additionally, it reflects a firm's integrity, transparency, and risk management capabilities (Sulaiman et al., 2024). Executives often face pressure from shareholders and other stakeholders to uphold best governance practices, which are subsequently disclosed in the firm's annual report (Şeker&Şengür, 2021). Governance disclosure signals a firm's transparency and accountability, enhancing investor confidence, mitigating risks, and positively influencing firm value over time (Abdi et al., 2022). Furthermore, firms leverage governance disclosure to prevent reputational risks, demonstrate adherence to ethical business practices, and strengthen public trust (Şeker&Şengür, 2021).

Executives are the primary decision-makers within a firm; therefore, to ensure optimal performance and alignment with organisational goals, their compensation must be given paramount attention. Compensation serves as an incentive, enabling firms to leverage the skills, knowledge, and expertise of executives to achieve strategic objectives, including value optimisation. Executive compensation (EC) refers to the total remuneration provided to a firm's executives within a fiscal year (Utomo et al., 2021). It encompasses both short-term and long-term, fixed and variable, cash and non-cash compensation, along with other benefits designed to align executive interests with those of the firm (Deckop et al., 2006). Firm value, particularly through ESG engagements, is significantly influenced by executive decision-making. The quality of these decisions depends not only on expertise but also on the incentives provided (Utomo et al., 2021). In other words, a firm's decision to engage in ESG initiatives is closely tied to the level of incentives offered to its executives (Ryu&Chae, 2021).

Recruiting, maintaining, and retaining executives is a challenging task, as these positions require individuals with the requisite skills, expertise, and experience (Naji et al., 2022). Firms that offer competitive compensation packages are more likely to attract executives with these desirable qualities (Zhang & Zhang, 2022). Additionally, shareholders exert a degree of influence over executive decision-making through compensation structures (Edem et al., 2021). As a result, executive compensation (EC) mechanisms are designed to align the interests of executives with those of the firm (Haque&Ntim, 2020). In this regard, Ghaleb et al. (2021) argue that, beyond cash remuneration, equity-based compensation further strengthens this alignment, as executives' rewards increase in tandem with the firm's value over time.

Instrumental Stakeholder Theory

The instrumental approach to stakeholder theory legitimises firms' pursuit of rewards for their capacity to achieve ESG commitments, framing these efforts as strategic investments (Jones et al., 2018). Instrumental Stakeholder Theory (IST) emphasises the attainment of economic benefits

through social engagements (Babalola, 2012). While developing strong stakeholder relationships incurs incremental costs, the long-term benefits often outweigh these expenses due to their potential to drive corporate success (Jones et al., 2018). This perspective evaluates the effectiveness of stakeholder management based on its outcomes (Gilbert & Rasche, 2008). Thus, leveraging ESG initiatives to engage stakeholders while optimising firm value creates a mutually beneficial, win-win scenario.

Drawing from Instrumental Stakeholder Theory (IST), Jones et al. (2018) argue that ESG serves as a strategic approach to fostering close relationships that help firms achieve their predetermined goals. ESG is viewed as a long-term commitment designed to generate both immediate and future gains, benefiting society and stakeholders while enhancing a firm's reputation and value (Ryu & Chae, 2021). For most publicly traded firms, enhanced firm value (FV) is the ultimate objective of ESG engagement, as it reflects the collective impact of a firm's actions on its stakeholders (Singh & Misra, 2021). Thus, IST aligns with the principle of "doing well by doing good" (Flammer, 2015). In other words, firms that "do good" through ESG initiatives improve their chances of achieving greater performance and value (Kurucz et al., 2009).

Empirical Literature

Existing studies provide evidence of the direct impact of environmental, social, and governance (ESG) disclosures on firm value, as well as the influence of executive compensation. Additionally, some studies examine the moderating role of executive compensation in this relationship. These reviews are presented under the relevant headings.

Environmental Disclosure and Firm Value

Kolsi and Attayah (2018) examined 61 firms listed on the Abu Dhabi Exchange in the United Arab Emirates from 2010 to 2014. Firm value was measured using the market-to-book ratio, while environmental disclosure was assessed through content analysis based on a predetermined environmental index. The study outcome showed that environmental disclosure had an insignificant effect on firm value. In contrast; Okpa et al. (2019) investigated 80 non-financial firms listed on the Financial Times Stock Exchange (FTSE) 100 Index in the United States from 2007 to 2016. Their findings indicated a significant positive effect of environmental disclosure on firm value, measured by share price.

In Kenya, Ogachi and Zoltan (2020) analysed 11 listed firms across 13 sectors on the Nairobi Securities Exchange from 2010 to 2019. Firm value was proxied by Return on Equity (ROE) and Net Profit Margin (NPM). The regression analysis revealed that environmental scores had an insignificant effect on proxies, aligning with the findings of Kolsi and Attayah (2018) and Wahua and Ezeilo (2021). Conversely, Yang et al. (2020) examined 6,066 listed manufacturing firms in China from 2002 to 2016. Firm value was measured using the Book-to-Market Ratio, while environmental disclosure was assessed using the Environmental Information Disclosure Measure for Trial Implementation (EIDMT). The study applied propensity score matching, a difference-in-difference model, and logit regression for analysis. The results indicated a positive and significant effect of environmental disclosure on firm value.

Anchored in Stakeholder Theory, Wahua and Ezeilo (2021) examined six listed mortgage banks in Nigeria from 2015 to 2020. Using multivariate analysis of covariance, the study found that environmental disclosure had an insignificant effect on firm value, measured by Earnings Per Share (EPS). Similarly, Hidayat et al. (2023) analysed 40 manufacturing companies listed on the Indonesian Stock Exchange from 2018 to 2021. The outcome of the study showed that environmental disclosure had an insignificant effect on firm value. In contrast; El-Deeb et al. (2023) examined 100 firms listed on the Egyptian Stock Exchange from 2017 to 2021. Using Tobin's Q as a proxy for firm value and applying regression analysis, the study found a significant and positive relationship between environmental disclosure and firm value.

In the education sector, Júnior et al. (2024) examined 50 listed organisations across 13 countries from 2012 to 2021. Firm value was proxied by Tobin's Q and Market-to-Book Value, while environmental disclosure was assessed using metrics from the RefinitivEikon database. The study found that environmental disclosure had an insignificant effect on both firm value proxies. Similarly, in the energy sector, Muthia et al. (2024) analysed eight firms listed on the Indonesian Stock Exchange from 2017 to 2021. Environmental disclosure was measured using Global Reporting Initiative (GRI) indicators, while firm value was proxied by Tobin's Q. Multiple regression analysis for the study showed that environmental disclosure had no effect on firm value.

Social Disclosure and Firm Value

Extant studies have reported conflicting findings on the effect of social disclosure on firm value. For instance, Suretno et al. (2022) examined 27 firms listed on the Indonesian Stock Exchange from 2016 to 2020. Social disclosure was measured using metrics from the RefinitivEikon database, while Tobin's Q served as a proxy for firm value. The study found that social disclosure had a significant and positive effect on firm value. Similarly, Susbiyani et al. (2022) analysed 24 firms registered on the Indonesia Sharia Stock Index from 2018 to 2019. Social disclosure was assessed using content analysis based on six predetermined themes, while Tobin's Q was used to measure firm value. Using path analysis, the study likewise showed that the effect of social disclosure on firm value was significant and positive.

Focusing on the pharmaceutical industry, Kong et al. (2023) examined 78 firms in Central and Southern Africa from 2009 to 2022. Firm value was measured using stock price, while social disclosure was assessed through content analysis based on the ESG performance index. The study employed the Generalised Method of Moments (GMM) for analysis, and the results indicated that social disclosure had a significant positive effect on firm value. Conversely, Júnior et al. (2024) found a significant negative effect of social disclosure on firm value. Their study analysed 50 listed organisations in the educational sector across 13 countries over a 10-year period (2012–2021). Firm value was measured using Tobin's Q and market-to-book value, while social disclosure was assessed using metrics from the RefinitivEikon database.

Using multiple regressions, Muthia et al. (2024) examined eight firms in the energy sector listed on the Indonesian Stock Exchange from 2017 to 2021. Social disclosure was assessed using metrics provided by the Global Reporting Initiative (GRI), while firm value was measured using Tobin's Q. The findings indicated that social disclosure had no effect on firm value. Conversely, Javanshir et

al. (2024) analysed 106 Iranian companies listed on the Tehran Stock Exchange. Social disclosure was evaluated through content analysis, qualitative analysis via questionnaires, and Delphi forecasting methods. Multiple regressions were also employed for analysis, and the results showed that social disclosure had a significant positive effect on firm value.

Governance Disclosure and Firm Value

Constantinescu et al. (2021) examined 67 of the top 100 firms in the energy sector using data from Thomson Reuters from 2015 to 2018. Governance disclosure was measured using Thomson Reuters metrics, while Tobin's Q served as the proxy for firm value. The findings revealed that governance disclosure had a significant positive effect on firm value. In contrast, Ersoy et al. (2022) analysed 151 U.S. commercial banks from 2016 to 2020, employing linear regression for analysis. Governance disclosure, based on self-reported information, showed no effect on market value. Similarly, Suretno et al. (2022) examined 27 firms listed on the Indonesian Stock Exchange from 2016 to 2020, using governance disclosure metrics from RefinitivEikon. Regression analysis indicated that while governance disclosure had a significant effect on firm value (measured by Tobin's Q), the effect was negative.

Kong et al. (2023) examined 78 pharmaceutical firms in Central and Southern Africa from 2009 to 2022. Governance disclosure was assessed using content analysis based on the ESG performance index, while stock price served as the proxy for firm value. Using the Generalised Method of Moments (GMM) for analysis, the study found that governance disclosure had no effect on firm value. Muthia et al. (2024) focused on eight energy sector firms listed on the Indonesian Stock Exchange from 2017 to 2021. Governance disclosure was measured using GRI indicators; while firm value was assessed using Tobin's Q. Multiple regression analysis for the study showed that governance disclosure had a significant but negative effect on firm value. Additionally, Júnior et al. (2024) analysed 50 listed educational organisations from 13 countries over a 10-year period (2012–2021). Governance disclosure was evaluated using RefinitivEikon metrics, with firm value measured by Tobin's Q and Market-to-Book Value. The findings showed that governance disclosure had no significant effect on the proxies of firm value.

Executive Compensation and Firm Value

Existing studies have provided evidence on the effect of executive compensation on firm value, confirming its suitability as a moderating variable. For instance, Utomo et al. (2021) examined 60 manufacturing firms from two Association of Southeast Asian Nations (ASEAN) countries: 30 Indonesian firms and 30 Singaporean firms, covering the period from 2016 to 2020. Anchored on agency theory, the study used cash-based managers' compensation as a proxy for executive compensation (EC) and Tobin's Q as a proxy for firm value (FV). Employing partial least squares (PLS) and structural equation modelling (SEM) for analysis, the findings revealed a significant positive effect of EC on FV. Similarly, Abudy et al. (2020) analysed 20 financial institutions listed on the Tel Aviv Stock Exchange in Israel from 2014 to 2016 using multiple regression. The study measured EC using total recorded executive compensation, while firm value was assessed through market capitalisation and market-to-book value. The results indicated that EC had a significant effect on both proxies of FV in this context.

Wang et al. (2021) examined 121 global energy companies listed in Standard & Poor's (S&P) Global 250 from 2010 to 2019. The study, underpinned by agency theory, tournament theory, and social network theory, used cash payments as a proxy for executive compensation (EC) and Tobin's Q as a measure of market value. Regression analysis for the study showed that EC had a significant positive effect on performance in terms of market value. Similarly, Zik-Rullahi and Farouk (2021) focused on 14 listed commercial banks in Nigeria from 2007 to 2018 using multiple regression, with agency theory as the theoretical framework. CEO pay and compensation to chairmen and the highest-paid directors were used as proxies for EC, while Tobin's Q served as a proxy for firm value (FV). The study compared the effects of these EC proxies on the value of both high- and low-levered banks in Nigeria. The findings indicated that CEO pay had a significant positive effect on the FV of both categories of banks.

Moderating Role of Executive Compensation

Empirical literature on the moderating role of executive compensation (EC) in the effect of environmental, social, and governance (ESG) disclosures on firm value remains sparse. While a few studies have employed EC as a moderating variable, they have primarily focused on variables other than ESG and firm value. For instance, Pucheta-Martínez and Gallego-Álvarez (2021) examined the effect of CEO power on corporate social responsibility (CSR) reporting, with CEO compensation as a moderating variable. The study analysed 1,811 firms from the Thomson Reuters database spanning 2009 to 2018, and the findings indicated that CEO compensation played a significant and positive moderating role in the effect of CEO power on CSR reporting.

Similarly, Siddiqui and Iqbal (2022) explored the impact of CSR on financial performance (FP), with EC as a moderating factor. Their study focused on 15 Pakistani banks from 2009 to 2020 and found that EC significantly and positively moderated the effect of CSR on FP. Additionally, Zhang and Xu (2023) examined listed A-share manufacturing firms from 2014 to 2021, investigating the moderating effect of EC on the effect of digital transformation on absorption capacity. The results showed that EC had a positive and significant moderating effect in this context.

Based on the preceding review, there is a clear paucity of empirical literature examining the moderating role of executive compensation in the effect of environmental, social, and governance (ESG) disclosures on firm value. Therefore, this study examined both the direct and indirect effects of individual ESG disclosure elements on firm value, with executive compensation as a moderating variable.

3. METHODOLOGY

The population for this study comprises 21 consumer goods firms listed on the Nigerian Exchange (NGX). A purposive sampling approach was used to select 16 firms based on their listing period and the availability of annual reports in the NGX database. Secondary data were obtained from firms' annual reports, the official NGX database, and other relevant sources. Content analysis was employed to assess environmental, social, and governance (ESG) disclosures. The ESG disclosure items were structured around themes derived from RefinitivEikon (2022), encompassing three main pillars: environmental, social, and governance, further categorised into ten categories and 25 themes.

The environmental pillar comprises ten themes: emissions, waste, biodiversity, environmental management systems, product innovation, green revenues, research and development, capital expenditures, water and energy use, sustainable packaging, and the environmental supply chain. These themes are categorised into three main areas: emissions, innovation, and resource use. The social pillar consists of nine themes: community engagement, human rights, responsible marketing, product quality, data privacy, diversity and inclusion, career development and training, working conditions, and health and safety. These themes are grouped into four categories: community, human rights, product responsibility, and workforce. The governance pillar includes six themes: CSR strategy, ESG reporting and transparency, structure (independence, diversity, and committees), compensation, shareholder rights, and takeover defences. These themes fall under three broad categories: strategy, management, and shareholders.

This study employed multiple regressions alongside diagnostic and post-estimation tests such as multicollinearity, normality, heteroscedasticity and Hausman specification tests. To address missing values, the study utilised the Multiple Imputation (MI) technique, which enhances the accuracy of estimation by identifying missingness patterns and imputing values accordingly. This approach follows the methodologies outlined by Allison (2002), Murray (2018), and Enders (2022). The dependent variable for the study is firm value measured by Price to Book Value (PBV). The independent variables are Environmental Disclosure (ENVD), Social Disclosure (SOCD) and Governance Disclosure (GOVD). The moderating variable is Executive Compensation (EXCOM); while the firm-specific control variable for the study is Firm Size (FMZ). The regression models for this study are as follows:

$$FV_{i,t} = \beta_0 + \beta_1 ENVD_{i,t} + \beta_2 SOCD_{i,t} + \beta_3 GOVD_{i,t} + \beta_4 FMZ_{i,t} + \epsilon_{i,t} \dots \dots \dots (1)$$

$$FV_{i,t} = \beta_0 + \beta_1 EXCOM_{i,t} + \beta_2 ENVD_{i,t} * EXCOM_{i,t} + \beta_3 SOCD_{i,t} * EXCOM_{i,t} + \beta_4 GOVD_{i,t} * EXCOM_{i,t} + \epsilon_{i,t} \dots \dots \dots (2)$$

Where:

FV: Firm Value (measured by Price to book value- PBV)

ENVD: Environmental disclosure

SOCD: Social disclosure

GOVD: Governance disclosure

EXCOM: Executive compensation

FMZ: Firm size

β_0 : Intercept

$\beta_1 - \beta_4$: Coefficients of independent, moderating and control variables

i,t: Individual firms at time t

ϵ : Error term

Table 1
 Summary of Variables and Measurements

Variables	Abbrev.	Measurement	Source
Dependent Variable:			
FV			
Price to Book Value	PBV	Ratio of market price per share to book value per share	Jihadi et al. (2021)
Independent Variables:			
Environmental Disclosure	ENVD	Number of environmental items disclosed divided by total number of environmental indicators	Wulaningrum and Kusrihandayani (2020)
Social Disclosure	S OCD	Number of social items disclosed divided by total number of social indicators	Utomo et al. (2020), Alta'any et al. (2024)
Governance Disclosure	GOVD	Number of governance items disclosed divided by total number of governance indicators	Kong et al. (2023)
Moderating Variable:			
Executive Compensation	EXCOM	Total annual monetary compensation to executives	Ata'inal and Aybars (2018), Saidu and Lawal (2020)
Control Variable:			
Firm Size	FMZ	Natural logarithm of total assets	Saidu and Lawal (2020), Jihadi et al. (2021).

Source: Authors' compilation

4. RESULTS AND DISCUSSION

This section presents the results of the data analysis and the study's findings under relevant headings.

Table 2
 Summary of Descriptive Statistics

Variable	Obs	Mean	S/Dev.	Min Mean	Max Mean	Skewness	Kurtosis
Pbv	288	0.844	0.653	-1.374	1.316	-2.609	7.956
Envd	288	0.255	0.334	0.000	1.000	1.146	2.889
Socd	288	0.507	0.230	0.000	1.000	-0.375	2.947
Govd	288	0.577	0.179	0.167	0.833	-0.955	3.158
Excom (Pre-MI)	276	18.148	1.717	13.436	22.489	-0.334	3.259
Excom (post-MI)	288	18.048	1.766	13.436	22.489	-0.308	3.082
Fmz	288	10.111	2.102	4.048	13.589	-0.921	3.629

Source: Data proceeds with STATA 14.2

The data distribution in Table 2 comprises 288 firm-year observations, representing 16 consumer goods firms over an 18-year period. As shown in the table, the average PBV is 0.844, indicating a relatively low firm value among the sampled firms. Additionally, the highest and lowest PBV values are 1.316 and -1.374, respectively. The negative minimum value is due to some firms reporting negative equity during the reviewed period. The mean, minimum, and maximum values for ENVD are 0.255, 0.000, and 1.000, respectively. This indicates that, on average, the sampled firms disclosed 25% of the total environmental indicators over the 18-year period. Some firms fully disclosed all environmental indicators, as reflected in the maximum value of 1.000. Conversely, the minimum value of 0.000 signifies that certain firms made no environmental disclosures during the reviewed period.

Focusing on SOCD, the mean value of 0.507 indicates that, on average, the sampled firms disclosed 50% of the total social disclosure items during the period. The minimum value of 0.000 suggests that some firms did not provide any social disclosure, while the maximum value of 1.000 indicates that at least one firm fully disclosed all social information in its annual reports. Similarly, GOVD has a mean, minimum, and maximum of 0.577, 0.167, and 0.833, respectively. This implies that, on average, governance disclosure by the sampled firms was 57% of the total indicators, with the lowest disclosure at 16% and the highest at 83%.

This study employed Multiple Imputation (MI) to address missing values in the EXCOM observations. Out of 288 firm-year observations, 12 values were missing due to a particular firm not reporting its executive compensation for 12 years. MI imputes missing values by drawing from a predictive distribution, ensuring a more precise and robust dataset. Table 5 presents the EXCOM observations before and after MI. Pre-MI, there were 276 observations with 12 missing values, whereas post-MI, the dataset was complete with 288 observations. The maximum EXCOM value in natural logarithm over the 18 years was 22.489 for both pre- and post-MI, while the minimum was 13.436. Additionally, the average annual executive compensation was 18.148 pre-MI and 18.048 post-MI. Regarding FMZ, firm size, expressed as the natural logarithm of total assets, had a mean of 10.111. The sampled firms varied significantly in size, with the smallest firm having an asset base of 4.048 and the largest reaching 13.589.

Using the coefficient of variation to assess the spread between the mean and standard deviation, the data distributions of PBV and ENVD exhibit high dispersion, with standard deviations of 0.653 and 0.334, respectively. Conversely, SOCD and GOVD display moderate variability, with standard deviations of 0.230 and 0.179, respectively. EXCOM (both pre- and post-MI) and FMZ have low standard deviations of 1.717, 1.766, and 2.102, respectively, indicating that these variables are closely clustered around their means. Furthermore, based on the thresholds of ± 2 for skewness and ± 7 for kurtosis, as suggested by Hair et al. (2022), the data distributions for all study variables fall within these acceptable limits, except for PBV, which exhibits a skewness value of -2.609 and a kurtosis value of 7.959.

Table 3
 Result from Multicollinearity Test

Model 1		
Variables	VIF	1/VIF
Envd	2.870	0.348
Socd	1.810	0.550
Govd	2.270	0.440
Fmz	1.620	0.617
Mean VIF	2.140	

Source: Data proceeds with STATA 14.2

From Table 3, the results of the multicollinearity test indicate that the Variance Inflation Factors (VIFs) for all variables in Model 1 are below 3, with a mean VIF of 2.140. Additionally, the tolerance values (1/VIF) for each variable exceed 0.100, confirming the absence of multicollinearity among the independent and control variables in the study.

Table 4
 Post Estimation Tests

Model 1		
Tests	Chi ² /F-test	Prob>chi ² / Prob>F
Heteroscedasticity	19.900	0.000
Hausman Specification	31.550	0.001
F-test	22.970	0.000

Source: Data proceeds with STATA 14.2

The Breusch-Pagan test for heteroscedasticity in Model 1 yields a significant probability value (p-value) of 0.000, indicating the presence of heteroscedasticity in the model. The Hausman specification test also produces a p-value of 0.000, which is significant at the 5% level, suggesting that the fixed effects estimation is more appropriate for Model 1. This finding is further supported by the F-test, which is significant at the 5% level, with a value of 22.970.

Table 5
 Summary Regression Results

	Model 1		Model 2	
Variables	Robust Fixed Effect		Moderated Regression	
	Coeff.	P-Val.	Coeff.	P-Val
Envd	0.045	0.000		
Socd	0.561	0.001		
Govd	0.023	0.022		
Fmz	-0.024	0.132		
Excom			-0.098	0.000
Envd*Excom			0.003	0.000
Socd*Excom			0.031	0.000
Govd*Excom			0.002	0.000

Constant	0.686	0.020	0.932	0.000
R ²	0.873			
Average RVI			0.045	
Largest FMI			0.174	
Complete DF			283	
Prob> F		0.000		0.000

Source: Data proceeds with STATA 14.2

The R² value for the model indicates that 87% of the variance in PBV is explained by the independent variables, with the remaining 13% attributable to factors not included in this study. The F-statistic is significant (p-value = 0.000), confirming the overall fit of the model.

The regression analysis indicates that environmental disclosure (ENVD) has a significant positive effect on price-to-book value (PBV), with a p-value of 0.000 and a coefficient of 0.045. This suggests that for each unit increase in ENVD, there is an associated 4.5% increase in firm value, assuming all other variables remain constant. This finding is consistent with previous studies, such as those by Okpa et al. (2019), Yang et al. (2020), and El-Deeb et al. (2023), which also reported significant positive effect of environmental disclosure on firm value. However, it contrasts with research by Kolsi and Attayah (2018), Ogachi and Zoltan (2020), Wahua and Ezeilo (2021), Hidayat et al. (2023), Júnior et al. (2024), and Muthia et al. (2024), which found no significant effect of environmental disclosure on firm value. These results underscore the importance of environmental disclosure in enhancing firm value, suggesting that stakeholders may perceive transparent environmental practices as indicative of better management and future performance.

The analysis of social disclosure (SOCD) reveals a significant positive effect on firm value, with a coefficient of 0.561. This indicates that, all else being equal, an increase in social disclosure correlates with an increase in firm value. This finding aligns with previous studies, such as those by Suretno et al. (2022), Susbiyani et al. (2022), Kong et al. (2023), and Javanshir et al. (2024), which also reported significant positive effect of social disclosure on firm value. Conversely, this result contrasts with the findings of Júnior et al. (2024), which observed a significant negative effect of social disclosure on firm value, and that of Muthia et al. (2024), which found no significant effect.

Governance disclosure (GOVD) has a significant positive effect on firm value, with a p-value of 0.022 and a coefficient of 0.023, indicating that a 1% increase in governance disclosure corresponds to a 2.3% increase in firm value, all else being equal. This finding is in line with the study of Constantinescu et al. (2021), which found a positive and significant relationship between governance disclosure and firm value. However, it differs from the results of Suretno et al. (2022) and Muthia et al. (2024), which reported a significant negative effect, and those of Ersoy et al. (2022), Kong et al. (2023), and Júnior et al. (2024), which found no significant effect. Firm size (FMZ) shows a significant negative effect on firm value, with a p-value of 0.000.

This Based on the outcome of model 1, this study therefore rejects hypotheses H₀₁, H₀₂ and H₀₃ of the study, which state that Environmental disclosure, social disclosure and governance disclosure (respectively) do not have significant effect on the value of listed consumer goods firms in Nigeria.

In Model 2, the average Relative Variance Increase (RVI) is 0.045, and the average Fraction of Missing Information (FMI) is 0.174, both below 1. These low values suggest that the missing data minimally impact the precision of our estimates. With 288 total observations and 283 degrees of freedom (DF), the high DF indicates minimal information loss due to missing data and the subsequent application of Multiple Imputation (MI). As shown in Table 5, Executive Compensation (EXCOM) significantly affects Price-to-Book Value (PBV), qualifying it as a suitable moderator; however, this effect is negative.

The moderating role of executive compensation (EXCOM) on the effect environmental disclosure (ENVD) on firm value (FV) is both significant and positive, indicating that EXCOM enhances the effect of ENVD on FV by 0.3%. Similarly, EXCOM significantly strengthens the effects of social disclosure (SOCD) and governance disclosure (GOVD) on FV by 3% and 0.2%, respectively. These findings suggest that appropriate executive compensation can amplify the positive effect of social and governance disclosures on firm value. Consequently, based on the results from Model 2, this study rejects Hypotheses H₀₄, H₀₅, and H₀₆, which posited that executive compensation has no significant moderating effect on environmental, social, and governance disclosures, respectively, on the value of listed consumer goods firms in Nigeria.

This study infers that environmental, social, and governance (ESG) disclosures have significant positive effects on firm value (FV); moreover, executive compensation (EXCOM) enhances these effects. These findings align with instrumental stakeholder theory, which posits that ethical and cooperative relationships with stakeholders lead to positive performance outcomes. By prioritising the interests of instrumental stakeholders, firms can foster synergistic relationships and receive positive feedback from investors and other stakeholders, ultimately enhancing firm value.

5. CONCLUSION AND RECOMMENDATIONS

In light of the preceding findings, this study concludes that environmental, social, and governance (ESG) disclosures are instrumental in determining firm value. Furthermore, executive compensation moderates the effects of these disclosures on firm value, thereby strengthening their effect. The study recommends that firms should continue to expand and implement sustainable activities in terms of ESG, especially in endeavours that resonate with instrumental stakeholders. This approach can enhance a firm's reputation, transparency, and competitive advantage, ultimately optimizing its value. Additionally, firms should be cautious and authentic in disclosing information related to ESG commitments to mitigate undue scrutiny. Leveraging stakeholder feedback can also help address gaps in ESG information disclosure.

Aligning executive compensation with environmental, social, and governance (ESG) commitments can incentivise executives to achieve a firm's sustainability targets. To ensure effectiveness, compensation levels should be justifiable and reflective of executives' contributions to ESG goals and overall firm value. Incorporating long-term incentives, such as stock options, can align executives' interests with those of the firm, promoting sustained commitment to ESG objectives. However, it's crucial to balance compensation structures; excessive pay can lead to negative outcomes, including increased inequality and potential misalignment with stakeholder interests, while inadequate compensation may fail to motivate executives effectively. Regular reviews of

compensation schemes can help maintain this balance. Additionally, leveraging executives' skills and expertise in promoting ESG disclosures can be facilitated through appropriate compensation structures.

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