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Financial Cash Flow Management Practice and Corporate Social Responsibility Quality: Evidence from Listed Consumer Goods Firms in Nigeria

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Abstract

The study examined the effect of financial cash flow management on corporate social responsibility quality in Nigeria. Specifically, this study focused on consumer goods firms listed on the Nigerian Exchange Group, with dataset covering the period 2015 to 2024. This study's population consisted of twenty-one consumer goods firms listed on the Nigerian Exchange Group. Using ex-post facto research design approach, purposive sampling technique provided sixteen firms that met the selection criteria, and panel data regression analysis was ulilised for data analysis. The result revealed that cash flow from operating activities had a statistically significant negative effect on CSR quality. Further analysis revealed that cash flow from activities of financing, investing and cash flow per share each exhibited statistically insignificant effects on CSR information quality, suggesting that such financial dimensions did not meaningfully influence CSR transparency in the Nigerian consumer goods sector during the period under investigation. This study concluded that in Nigeria's weakly regulated CSR environment, internal financial mechanisms, particularly operational cash flows, play a selective but critical role in shaping CSR information disclosure quality. Therefore, this study carefully recommends among others the inclusion of institutionalizing mandatory CSR-linked budgeting tied to operational cash flows, deprioritizing financing-based and investment-based CSR policies, and avoiding reliance on per-share cash performance as a CSR determinant.

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1 INTRODUCTION

The nexus between internal financial management and sustainability practices has gained increasing attention in corporate governance and CSR literature. As firms face volatile and resource-constrained environments, effective cash flow management has become central to their ability to meet corporate social responsibility (CSR) obligations (Reverte, 2009; Michelon & Parbonetti, 2012). In this context, financial cash flow practices are critical determinants of CSR quality; particularly in highly visible sectors such as consumer goods.

Cash flow from operations is a key indicator of liquidity generated from core business activities and serves as the primary funding source for CSR initiatives. Strong operational cash flow enhances a firm's capacity to integrate and report meaningful CSR activities, while weak cash flow constrains financial flexibility and may lead to superficial CSR engagement (Jo & Harjoto, 2012; Luo et al., 2015; Thuy, 2025; Jain, 2024). Similarly, cash flow from investing reflects long-term commitments to sustainability through expenditures on innovation, cleaner technologies, and social infrastructure. However, inconsistent or misaligned investment patterns may signal reactive CSR behavior and reduce disclosure quality (Cheng et al., 2014).

Corporate Social Responsibility (CSR) refers to the commitment of firms to operate ethically and contribute to social, environmental, and economic development while considering the interests of stakeholders. CSR includes activities such as environmental protection, employee welfare, community development, and ethical business practices. It is closely linked to Stakeholder Theory, which emphasizes that firms should satisfy both shareholders and other stakeholders (Freeman, 1984).

CSR can influence a firm's financial cash flow because socially responsible practices affect operating, investing, and financing activities. Effective CSR practices may improve corporate reputation, attract investors, increase customer loyalty, and enhance profitability, thereby improving cash flow performance (Carroll, 1991). However, CSR activities may also increase operational costs in the short run due to expenditures on environmental protection, employee welfare, and social development initiatives (Truong et al., 2024).
Financing cash flow also influences CSR outcomes by shaping a firm's capital structure and funding capacity. Highly leveraged firms, particularly in developing economies like Nigeria, may prioritize debt obligations over CSR spending due to financial constraints such as high interest rates and inflation (Achua, 2008; Chen, Dong, & Ma, 2024). This limits their autonomy in fulfilling stakeholder expectations and affects the consistency of CSR disclosures (Szabó & Sørensen, 2017; Richards, 2023).

Furthermore, cash flow per share provides insight into how efficiently firms generate distributable value, indicating the availability of resources for CSR investments. Higher cash flow per share supports stronger CSR engagement, while lower values suggest financial rigidity and reduced credibility in CSR reporting (Cormier et al., 2011; Samet & Jarboui, 2017; Al-Shaer et al., 2023).

In Nigeria's consumer goods sector, weak institutional enforcement and regulatory ambiguity contribute to inconsistent CSR practices. Many firms adopt CSR symbolically rather than strategically (Guzmán & Becker-Olsen, 2017). As a result, internal financial capacity particularly effective cash flow management becomes a key driver of CSR quality. Firms with strong liquidity and disciplined financial management are better positioned to implement credible CSR initiatives, while financially constrained firms tend to engage in minimal or symbolic disclosures (Bharti, 2022).

From a theoretical standpoint, stakeholder theory and the resource-based view (RBV) emphasize that financial decisions are fundamental to creating stakeholder value (Freeman, Dmytriyev, & Phillips, 2021; Sodhi, 2015). Similarly, Van Aaken et al. (2013) highlight that effective cash flow management determines the availability of resources for CSR activities. This is especially important in Nigeria's consumer goods sector, where firms face inflation, high borrowing costs, and economic instability (Sulaiman et al., 2019; Egbe et al., 2021).

Existing Nigerian studies have largely focused on CSR outcomes such as profitability, firm value, reputation, and corporate image rather than the financial mechanisms that drive CSR quality (Uadiale & Fagbemi, 2011; Oba, 2009; Gunu, 2008; Ahmad, 2015; Ojo, 2007; Nzekwe et al., 2020). This creates a significant gap, as internal financial factors like cash flow allocation may influence the consistency, scope, and credibility of CSR activities. Therefore, this study is motivated by the need to bridge this theoretical and empirical gap by examining how cash flow management practices influence CSR quality.

The specific objectives of this study are to examine the effect of cash flow management on corporate social responsibility quality in Nigeria. Specifically, this study seeks to investigate the effect of cash flow from operation activities, cash flow from financing, cash flow from investment activities and cash flow per share on corporate social responsibility quality of listed consumer goods in Nigeria.

2 LITERATURE REVIEW

2.1 CSR Information Quality

The concept of Corporate Social Responsibility (CSR) quality has emerged as a multidimensional construct that transcends mere CSR disclosure to encompass the accuracy, depth, transparency, timeliness, and relevance of information reported to stakeholders. CSR quality, refers to the extent to which disclosed CSR activities reflect meaningful engagement, accountability, and adherence to global best practices (Nwaigwe, Ofoegbu & Dibia, 2022). Scholars increasingly recognize CSR quality not just as a checklist of activities performed, but as a measure of how well firms fulfill their social obligations in substance, not just in form (Abubakar & Yusuf, 2020). Within this framework, CSR quality is viewed through the lens of both voluntary and regulated disclosures that align with international reporting frameworks such as GRI Standards, UN Global Compact, and ISO 26000, while contextualized for national environments. Literature emphasizes the need to move from quantity-focused disclosure (e.g., total number of CSR items) to qualitative richness, including stakeholder inclusiveness, sustainability impact, and materiality (Nwaigwe et al., 2022). Therefore, CSR quality is not merely about reporting, but about the depth of corporate accountability to social and environmental concerns in the eyes of its stakeholders.

Methodologically, various studies have adopted both binary and weighted scoring systems to capture CSR quality. Binary measurement assigns a score of "1" for the presence and "0" for the absence of specific CSR disclosures, creating a simple but potentially superficial index. For instance, Chinda (2024) utilized a binary index to analyze CSR disclosure practices among Nigerian firms, highlighting whether companies report on dimensions such as environmental responsibility or employee welfare. However, critics argue that binary approaches often ignore the extent or credibility of disclosure. Studies incorporate weighted indexes that assign greater importance to disclosures with deeper societal relevance or verifiability, offering a deeper picture (Iorun, Abanyam & Iorlaha, 2023). These weights can be based on regulatory priorities, stakeholder preferences, or international frameworks. In the Nigerian context, agencies like the Financial Reporting Council (FRCN), Corporate Affairs Commission (CAC), and the Securities and Exchange Commission (SEC) have been instrumental in promoting CSR disclosure through regulatory codes, particularly the Nigerian Code of Corporate Governance (2018) and sustainability disclosure guidelines. These initiatives aim to enhance the credibility and comparability of CSR reporting, thereby pushing firms toward higher CSR quality standards beyond symbolic compliance.

2.2 Financial Cash Flow Management Practice

Financial cash flow management practice refers to the systematic planning, monitoring, and control of cash inflows and outflows within an organization to ensure liquidity, operational stability, and financial sustainability. It is a core component of financial management because cash represents the most liquid asset required for meeting short-term obligations and supporting long-term strategic investments (Jain, 2024). Effective cash flow management ensures that firms maintain adequate liquidity to finance daily operations, avoid financial distress, and exploit investment opportunities as they arise (Thuy, 2025).

Cash flow management is typically examined through three main components: operating, investing, and financing cash flows. Cash flow from operating activities reflects the cash generated from core business operations and is considered the most reliable indicator of financial performance and sustainability. Firms with strong operating cash flows are better positioned to meet working capital needs without relying heavily on external financing (Jo & Harjoto, 2012). Cash flow from investing activities, on the other hand, captures capital allocation decisions such as acquisition of assets and investment in long-term projects. Efficient management of this component signals strategic financial planning and long-term value creation (Cheng, Ioannou & Serafeim, 2014). Financing cash flow reflects the inflows and outflows related to debt, equity, and dividend decisions, and it highlights how firms balance internal and external funding sources to sustain operations (Chen, Dong, & Ma, 2024).

2.3 Theoretical Framework

2.3.1 Slack Resource Theory

Slack Resource Theory, developed by Cyert and March (1963) and refined by Bourgeois (1981), explains how surplus organizational resources influence managerial decisions and corporate social responsibility (CSR) outcomes. The theory posits that firms with excess resources beyond operational needs possess greater flexibility to respond to environmental pressures and undertake discretionary activities such as CSR initiatives (Bansal et al., 2015). Financial cash flows from operations, investments, financing, and cash flow per share reflect the availability of slack resources that support CSR disclosures. Resource availability determines the extent of socially beneficial activities firms can pursue, as financially flexible firms are more likely to invest in CSR and sustainability reporting (Mattingly & Olsen, 2018; Lin et al., 2020). Strong financial performance enhances CSR engagement (Waddock & Graves, 1997; Cheng, Ioannou, & Serafeim, 2014), while effective liquidity management improves CSR disclosure quality and supports proactive environmental and social strategies (Sharma, 2000).

2.4 Empirical Review

Idehen et al. (2025) examined the effect of cash flow management on asset growth among listed industrial goods firms in Nigeria. The data used covered a period of six years from (2018 to 2023). The study employed ex-post facto research design, using purposive sampling to select eleven out of fifteen listed industrial goods firms, resulting in fifty-four firm-year observations. Panel data analysis was conducted using the multi-level mixed effect regression technique. The findings revealed that cash flow from operations, investing, and financing activities each had a statistically significant positive influence on asset growth, while cash flow per share showed no significant effect.

Khalafi (2025) investigated the effect of corporate social responsibility performance on investment-cash flow sensitivity among firms listed on the Tehran Stock Exchange. The study adopted a descriptive-correlational research design with a causal-analytical approach and utilized pooled panel data from 210 non-financial firms covering the period from 2018 to 2023. Random effects regression analysis was employed based on the outcome of the Hausman and Limer's F-tests. The findings revealed that corporate social responsibility performance had a significant negative effect on investment-cash flow sensitivity, indicating that socially responsible firms rely less on internal cash flows for investment decisions. However, agency cost did not significantly moderate the relationship.

Ukolobi et al. (2025) examined the effect of cash flow management on financial performance of non-financial firms listed on the Nigerian Exchange Group between 2011 and 2023. The study adopted an ex post facto research design and selected 74 firms through purposive sampling. Ordinary Least Squares multiple regression analysis was used to test the hypotheses. The study found that operating cash flow significantly improved return on equity, while financing cash flow had no significant effect on financial performance.

Truong et al. (2024) studied the influence of environmental, social, and governance performance on firm value, profitability, and financing cash flows of publicly listed companies in Southeast Asia between 2014 and 2022. The study adopted panel research design and utilized a fixed-effects regression model on data obtained from 630 firms. The findings showed that environmental and social performance negatively affected firm value, profitability, and financing cash flows, while governance performance had no significant effect.

Adam and Aliyu (2024) assessed the effect of cash flow management on the financial performance of listed financial service firms in Nigeria from 2012 to 2022. The study adopted an ex-post facto research design and employed descriptive statistics, Pearson correlation, and Ordinary Least Squares regression analysis using Stata software. The findings indicated that operating cash flow positively affected financial performance, while financing cash flow negatively influenced earnings per share, return on assets, and return on equity.

Dash and Sethi (2024) examined the impact of economic policy uncertainty on investment-cash flow sensitivity among Indian manufacturing firms between 2012 and 2022. The study adopted a dynamic panel research design and applied the two-step system Generalized Method of Moments regression technique to address endogeneity issues. The findings revealed that economic policy uncertainty significantly reduced investment and increased firms' dependence on internal cash flow financing.

Ugwa et al. (2024) investigated the effect of sustainability reporting on cash flow performance of listed oil and gas firms in Nigeria for the period 2012 to 2022. The study adopted an ex-post facto research design and utilized robust least square regression analysis. The findings showed that environmental reporting negatively affected cash flow performance, whereas social and economic reporting positively influenced cash flow performance.

Rostami Mazouei (2024) examined the relationship between cash flow management and firm performance among firms listed on the Tehran Stock Exchange between 2017 and 2022. The study adopted a descriptive-applied research design and utilized Ordinary Least Squares regression analysis with moderating models for business cycle effects. The findings revealed that accounts receivable turnover days negatively affected firm performance, while cash conversion cycle positively influenced performance. The study further established that cash flow management negatively affected firms during recession periods but positively influenced performance during economic boom periods.

Overall, the reviewed studies mainly adopted ex-post facto, descriptive, and panel research designs, while regression-based analytical techniques such as Ordinary Least Squares, fixed effects, random effects, robust least squares, and Generalized Method of Moments were commonly used for analysis. The studies generally agreed that cash flow management significantly influences firm performance, although the direction and magnitude of the effect vary across sectors, countries, and economic conditions.

3 RESEARCH METHODOLOGY

Descriptive and ex-post facto research designs was adopted for the study. The population of this study consisted of twenty-one (21) consumer goods firms listed on the floor of the Nigerian Exchange Group (NGX) during the 2015-2024 period out of which sixteen (16) were selected using purposeful sampling techniques. Panel regression analysis was used for the data analysis

Model Specification

The study modifies the model of Ni et al. (2019) to suit the purpose of establishing the effect of the independent variables on the dependent variable captured in this study. The econometric form of the model is expressed as follows.

Model CSR Information Quality Disclosure

$$CSRQUA_{it} = \partial 0 + \partial 1\ CASHFO_{it} + \partial 2\ CASHFI_{it} + \partial 3\ CASHFF_{it} + \partial 4\ CFPS_{it} + \partial 4\ CFPS_{it} + \partial 4\ CFPS_{it} + \mu i \quad \ldots\ldots (1)$$

Where:

CSRQUA	=	CSR Information Quality
CASHFO	=	Cash Flow from Operations
CASHFI	=	Cash Flow from Investing
CASHFF	=	Cash Flow from Financing
CFPS	=	Cash Flow per Share
$\partial 0$	=	Constant
$\partial 1$- $\partial 6$	=	Slope Coefficient
	=	Stochastic disturbance
i	=	ith company
t	=	period

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4 RESULTS AND DISCUSSION

4.1 Data Analysis

Table 1: Descriptive Statistics Result

Variable	Obs	Mean	Std. Dev.	Min	Max
CSRQUA	160	.335	.183	0	.79
CASHFO	160	.127	.143	-.33	.59
CASHFF	160	-.033	.132	-.5	.55
CASHFI	160	-.076	.071	-.35	.04
CFPS	160	6.136	15.146	-26.08	94.14
OWNSTRC	160	65.425	13	20	87
BSTRC	160	10.35	2.89	4	18

Source: Authors' Computation 2026 (Stata Version 17)

The CSR quality (CSRQUA) has a low mean of 33.5% with high variability (SD = 0.1826), indicating generally weak and inconsistent disclosure practices. In terms of financial performance, firms rely mainly on operational cash flows (mean = 12.69%), while cash flows from financing (-3.31%) and investing (-7.61%) are negative, suggesting persistent outflows due to debt servicing and limited investment. The relatively high variability in operational cash flow (SD = 0.143) indicates uneven efficiency across firms. Cash flow per share (mean = ₦6.14; SD = ₦15.15) shows significant disparities in firm performance, implying that while some firms are financially strong enough to support CSR activities, others face constraints.

From a governance perspective, ownership is highly concentrated (mean = 65.4%), which may limit CSR responsiveness due to dominant shareholder control. Board size averages 10.35 members with low variation (SD = 2.89), indicating structural uniformity across firms.

Table 2: Data Normality Analysis Result

Variable	**Obs**	**W**	**V**	**z**	**Prob>z**
CSRQUA	160	0.988	1.487	0.903	0.183
CASHFO	160	0.982	2.207	1.801	0.036
CASHFF	160	0.894	13.038	5.841	0.000
CASHFI	160	0.916	10.308	5.307	0.000
CFPS	160	0.598	49.411	8.872	0.000
OWNSTRC	160	0.921	9.718	5.173	0.000
BSTRC	160	0.988	1.470	0.877	0.190

Source: Authors' Computation 2026 (Stata Version 17)

The Shapiro–Wilk test shows a mixed pattern of normality across the variables. CSR quality ($z = 0.903$, $p = 0.183$) and board structure ($z = 0.877$, $p = 0.190$) are normally distributed, indicating symmetric and relatively homogeneous patterns among firms. In contrast, cash flow from operations ($z = 1.801$, $p = 0.035$) slightly deviates from normality, suggesting the presence of skewness or outliers linked to variations in operational performance.

Stronger departures from normality are evident in cash flow from financing ($z = 5.841$, $p = 0.000$), cash flow from investing ($z = 5.307$, $p = 0.000$), cash flow per share ($z = 8.872$, $p < 0.000$), and ownership structure ($z = 5.173$, $p = 0.000$). These variables are highly non-normal, reflecting volatility, extreme values, and concentrated ownership patterns typical of Nigerian firms. Despite this, the study employs parametric regression because the normality assumption applies to residuals rather than the variables themselves. Following Andrew F. Hayes (2018), regression analysis is considered robust to non-normality when the focus is on examining relationships rather than prediction.

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Table 3: Correlation Analysis Result

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1) CSRQUA	1.000						
(2) CASHFO	-0.051	1.000					
(3) CASHFF	0.007	-0.462	1.000				
(4) CASHFI	0.001	-0.267	0.001	1.000			
(5) CFPS	0.009	0.700	-0.358	-0.063	1.000		
(6) OWNSTRC	0.061	-0.172	0.226	-0.026	-0.166	1.000	
(7) BSTRC	0.329	-0.116	0.213	-0.254	0.180	0.124	1.000

Spearman rho = 0.124

Source: Authors' Computation 2026 (Stata Version 17)

The Spearman rank correlation results show that the relationships between corporate social responsibility (CSR) information quality and firm-level variables among Nigerian consumer goods firms are generally weak. CSR quality has a very slight negative relationship with cash flow from operations (rho = -0.0515), indicating that higher operational cash does not necessarily translate into greater CSR disclosure. Similarly, CSR quality shows negligible positive relationships with cash flow from financing (rho = 0.0068) and investing activities (rho = 0.0011), suggesting that these cash flow components have little influence on CSR reporting.

A weak positive association exists between CSR quality and board structure (rho = 0.3289), implying that firms with larger boards tend to disclose slightly more CSR information, consistent with governance theories linking board characteristics to transparency. Ownership structure also shows a weak positive relationship (rho = 0.0608), indicating that concentrated ownership may slightly encourage CSR disclosure, though the effect is minimal. In addition, CSR quality has virtually no relationship with cash flow per share (rho = 0.0091), reinforcing the idea that CSR reporting is not strongly tied to firm financial performance in emerging economies.
Regarding multicollinearity, the highest correlation is between cash flow per share and cash flow from operations (rho = 0.7002), which remains below the 0.80 threshold and therefore does not indicate a collinearity problem. All other correlations are much lower, confirming that the variables can be included in regression analysis without significant multicollinearity bias.

4.2 Regression Analyses

Evidenced from table 4, the fixed effect regression model reveals a within R-squared value of 0.1023, indicating that approximately 10% of the variation in financial sustainability within consumer goods firms over time is associated with variations in the four cash flow indicators of interest. The F-statistic value of 2.62 with a Prob > F value of 0.0195 confirms that, jointly, the explanatory variables have a strong association with CSR information quality information disclosure within consumer goods firms. Notably, the F test that all $u_i = 0$ reports an F (15, 138) = 12.74 with a Prob > F = 0.0000, of the fixed effect model strongly reject the null hypothesis that all group-specific effects are equal to zero. This suggests the presence of significant group-level heterogeneity and implies that the pooled ordinary least square model (which assumes no such group effects) is not appropriate, thereby supporting the use of fixed effect estimator.

Further, the random effect model also demonstrates a comparable between R-squared value of 0.0679, with a Wald chi-squared statistic value of 15.79 and a Prob > chi2 value of 0.0149, indicating that the model is well-specified. The Breusch and Pagan Lagrangian multiplier test for random effects reports a chibar² (01) value of 172.10 with a Prob > chibar2 of 0.0000. This result rejects the null hypothesis that the variance of the random effect is zero, implying that the pooled ordinary least square model is inappropriate. Hence, in this study, the use of a random or fixed effect model rather than a pooled regression approach is strongly supported.

To select which model better performs in terms of efficiency and consistency, the Hausman specification test procedure is employed. Specifically, the Hausman specification test returns a chi-square value of 6.60 with a Prob > chi2 = 0.3590. Since the probability value is greater than the 5% significance level, this study accepts the null hypothesis that the difference in coefficients is not systematic. Therefore, the random effects model is preferred, as it is both efficient and consistent under the null hypothesis.

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The test for cross-sectional dependency using the Breusch-Pagan LM (Lagrange Multiplier) test reveals a substantial departure from the assumption of independence across panel units in the estimated model. The test yields a chi-square statistic of 302.323 with 120 degrees of freedom and a corresponding p-value of 0.0000. This result provides strong statistical evidence against the null hypothesis of cross-sectional independence, indicating that the residuals across panel units are correlated. In other words, the model suffers from cross-sectional dependence, suggesting that unobserved shocks or omitted variables may be shared across firms, potentially due to sectoral linkages, regulatory commonalities, or macroeconomic influences inherent in the Nigerian consumer goods industry. This finding is particularly critical in the context of panel data analysis, as ignoring such interdependencies can lead to downward-biased standard errors, overstatement of significance levels, and misleading inferences (Hoechle, 2007).

The presence of cross-sectional dependence violates one of the core assumptions of traditional panel data estimators such as random effects, which presume that errors are independently and identically distributed across cross-sectional units. When this assumption is breached, the estimators remain consistent, but the standard errors become inefficient and unreliable, thus compromising the validity of hypothesis testing. This issue is further compounded by the structure of the dataset, which comprises only 10 complete time observations per panel unit, amplifying the susceptibility of the model to such correlation effects. These empirical realities necessitate methodological adjustment to correct for the inherent correlation structure in the error terms and preserve the reliability of inferential procedures.

To overcome the limitations posed by cross-sectional dependence, the study employed Driscoll-Kraay standard errors estimator, which is specifically designed to yield robust standard errors in the presence of both heteroskedasticity and cross-sectional dependence, especially in short time panels. The decision to employ the Driscoll-Kraay estimator therefore ensures more accurate hypothesis testing and enhances the robustness of the study's conclusions regarding the effect of corporate cash flow dynamics and social responsibility practices.

Table 4: CSR Information Disclosure Quality Regression Analysis Result

	Fixed Effect	*Random Effect*	*Driscoll-Kraay Fixed Effect Method*
CONS	*-0.094*	*-0.034*	*-0.034*
	(0.476)	*(0.776)*	*(0.851)*
CASHFO	*-0.042*	*-0.051*	*-0.051*
	(0.669)	*(0.597)*	***(0.048)*
CASHFF	*0.023*	*0.006*	*0.006*
	(0.801)	*(0.943)*	*(0.879)*
CASHFI	*0.058*	*0.083*	*0.083*
	(0.741)	*(0.627)*	*(0.483)*
CFPS	*-0.0009*	*-0.0007*	*-0.0007*
	(0.448)	*(0.549)*	*(0.556)*
OWNSTRC	*0.004*	*0.003*	*0.003*
	***(0.012)*	***(0.026)*	*(0.113)*
BSTRC	*0.016*	*0.016*	*0.016*
	***(0.028)*	***(0.009)*	*(0.183)*
F-Stat/Wald Stat	*2.62*	*15.79*	*114.28*
	*** (0.0195)*	*** (0.0149)*	****(0.0000)*
R- Squared	*0.1023*	*0.0679*	*0.0744*

VIF TEST = 1.32				
Hausman Test Chi2 = 6.60, Probability = 0.3590	***Test for Fixed Effects Errors*** *= F- test 12.74, Prob > F = ***0.0000*	***Test for Random Effects Errors*** *= 172.10 ***(0.0000)*	***Breusch-Pagan LM test of Cross-Sectional Independence:*** *Chi2(120) = 302.323 Pr = (0.0000) ****	***Wooldridge test for Autocorrelation in Panel Data*** *= Prob F 0.0651*

NOTE: **(1) Bracket () are P-values; (2) **, ***, Implies Statistical Significance at 5% and 1% Levels Respectively**

Source: Authors' Computation 2026 (Stata Version 17)

4.3 Test of Hypotheses and Discussion of Findings

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Ho_1: Cash flow from operating activities has no significant effect on CSR quality of listed consumer goods firms in Nigeria.

The result from the Driscoll-Kraay standard errors regression analysis, as presented in Table 4.4, reveals that cash flow from operations negatively affects corporate social responsibility information quality, with a coefficient value of –0.051 at significant 5% level ($p = 0.048$), implying that, all else being equal, higher levels of operational cash flow among Nigerian listed consumer goods firms are, on average, linked to lower quality of CSR information disclosure during the period under review. This outcome leads to the rejection of the null hypothesis that operational cash flow has no significant effect on CSR disclosure quality within this industry segment.

While this result may appear counterintuitive, it aligns with observations from prior studies in emerging markets where the presence of strong cash flow positions does not necessarily translate into enhanced social responsibility practices. Uwuigbe, Uwuigbe, and Ajayi (2018) using Nigerian data found that firms with higher profitability and cash reserves demonstrated weaker CSR disclosure tendencies, possibly due to weaker stakeholder pressure or the prioritization of reinvestment over transparency initiatives. In contrast, Olayiwola (2021) reported a weak negative effect of internal financial metrics including operational cash flow on CSR quality.

Ho_2: Cash flow from financing activities has no significant effect on CSR quality of listed consumer goods firms in Nigeria.

Test of hypothesis involving the effect of cash flow from financing activities using the Driscoll-Kraay standard errors regression analysis, as shown in Table 4.4, reveals that this variable [coef. = 0.0065 ($p = 0.879$)] does not exhibit a statistically significant effect on corporate social responsibility information quality. According to the ceteris paribus principle, this outcome suggests that variations in financing-related cash flows, such as proceeds from debt or equity issuance, do not significantly align with changes in the quality of CSR disclosures among listed consumer goods firms in Nigeria. Consequently, the study accepts the null hypothesis that cash flow from financing activities does not have a statistically significant effect on CSR information quality in this context. This outcome is similar to that of Appiah, Awunyo-Vitor, and Agyemang (2020), who reported a weak statistically insignificant effect of financing structures on CSR disclosures among Ghanaian publicly listed firms. Their study argued that financing decisions are often driven by strategic capital needs or external investor pressure, rather than by motivations tied to CSR transparency. Further, this result also aligns with the broader CSR-finance literature in emerging economies, which frequently finds that CSR commitment is more closely linked to governance structures, stakeholder expectations, or institutional mandates than to the firm's financing behavior.

Ho_3: Cash flow from investment activities has no significant effect on CSR quality of listed consumer goods firms in Nigeria.

Test of hypothesis concerning cash flow from investing activities, as analyzed using the Driscoll-Kraay standard errors regression model in Table 4.4, shows that this variable [coef. = 0.0832 ($p = 0.483$)] does not have a statistically significant effect on corporate social responsibility information quality. According to the ceteris paribus principle, this indicates that variations in the investment-related cash flows of listed consumer goods firms in Nigeria do not significantly explain changes in the quality of CSR disclosures. Consequently, the study accepts the null hypothesis that cash flow from investing activities does not have a statistically significant effect on CSR quality.

This finding is in agreement with the results of Adegboyegun, Alade, and Ben-Caleb (2020), who examined Nigerian listed firms and reported that investment intensity and capital expenditure did not significantly link with levels of CSR reporting. They posited that in contexts where regulatory enforcement is weak and sustainability practices are not embedded within capital budgeting frameworks, firms may prioritize expansion or asset acquisition without embedding CSR disclosure obligations into investment decisions. Thus, this outcome aligns with the broader narrative in emerging market literature that investment cash flow, while critical to firm growth, is not a standalone driver of CSR transparency.

Ho4: Cash flow per share has no significant effect on CSR quality of listed consumer goods firms in Nigeria.

Test of hypothesis related to cash flow per share, as assessed using the Driscoll-Kraay standard errors regression model presented in Table 4.4, reveals that the variable [coef. = –0.0007 (p = 0.556)] has an insignificant effect on corporate social responsibility information quality. Based on the ceteris paribus assumption, this suggests that variations in cash flow per share do not significantly affect the quality of CSR disclosures of listed consumer goods firms in Nigeria. As a result, the study accepts the null hypothesis that cash flow per share does not have a statistically significant effect on CSR information quality within the evaluated context. This finding supports the conclusion drawn by Chijoke-Mgbame, Mgbame, Akintoye, and Ohalehi (2020), who reported that cash-based financial performance indicators had limited explanatory power in predicting CSR disclosure levels in Nigerian and South African firms. They emphasized that while cash flow metrics may reflect internal financial strength, they are not consistently aligned with stakeholder accountability mechanisms or disclosure incentives in the absence of regulatory pressure or reputational concerns. Thus, this result aligns with emerging evidence that cash-based earnings measures, such as cash flow per share, may not serve as reliable predictors of CSR reporting quality in developing economies.

5 CONCLUSIONAND RECOMMENDATION

5.1 Conclusion

In Nigeria's consumer goods sector, where operations are labor-intensive and publicly visible, weak institutional enforcement of corporate social responsibility (CSR) leads to uneven disclosure quality. This study emphasizes the critical role of internal financial mechanisms, particularly cash flow management, in driving CSR engagement amid limited external regulation. Using the Driscoll-Kraay regression framework, it examines how cash flows from operating, financing, and investing activities, as well as cash flow per share, influence CSR information quality. The results show that while some aspects of liquidity significantly affect CSR disclosure, others do not, suggesting that financial flows shape CSR selectively. Overall, the study concludes that in Nigeria's weakly regulated environment, CSR disclosure quality largely depends on how strategically firms manage operational cash flows and internal financial discipline.

5.2 Recommendations

This study carefully presents its recommendations on the bases of the outcomes obtained from the regression estimator which was employed to test the stated hypotheses. Therefore,

1. The stakeholders are to institutionalize mandatory CSR-linked budgeting policies, whereby a fixed proportion of operational cash flow is contractually allocated to CSR initiatives and their transparent disclosure. Regulatory bodies, in collaboration with industry associations, should establish sector-specific CSR thresholds tied to cash flow benchmarks, ensuring that firms with stronger financial capacities are not permitted to disengage from social accountability simply due to weak enforcement or misaligned governance incentives.

2. The stakeholders are advised not to prioritize cash flow from financing investments as a mechanism for enhancing CSR disclosure practices. Instead, policy attention should shift toward more structurally impactful levers like governance reforms.

3. The stakeholders should refrain from formulating CSR policies that hinge on capital investment. Redirecting focus toward governance mechanisms, or disclosure mandates is likely to yield more substantive.

4. The stakeholders should avoid using per-share cash flow metrics as a basis for designing or evaluating CSR policies. Instead, efforts should be redirected toward deeper analysis of structural or governance-related determinants of CSR disclosure.

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