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THE IMPACT OF ESG DISCLOSURE, INVESTMENT DECISIONS, AND FINANCING DECISIONS ON FIRM VALUE: THE MODERATING ROLE OF CASH HOLDINGS

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Abstract: This study examines the effect of ESG disclosure, investment decisions, and financing decisions on firm value, with cash holdings acting as a moderating variable in the food and beverage subsector listed on the Indonesia Stock Exchange. Grounded in signaling and agency theory, the research a provide empirical evidence on how strategic financial and sustainability-related decisions influence market valuation. The study employs a quantitative approach using panel data regression based on 132 firm-year observations from 33 companies during the 2021–2024 period. Model estimation was conducted using the Fixed Effect Model following specification tests, while moderating effects were analyzed through interaction terms. The findings indicate that ESG disclosure and investment decisions proxied by capital expenditure have a positive and significant impact on firm value, whereas financing decisions measured by long-term debt do not exhibit a significant effect. Furthermore, cash holdings do not moderate the relationship between ESG disclosure and investment decisions with firm value; however, they significantly weaken the effect of financing decisions on firm value, suggesting the presence of financial inefficiency when liquidity is excessive. These results highlight the importance of sustainability transparency and capital allocation strategies in enhancing firm valuation while emphasizing the contextual role of liquidity management in corporate financing outcomes.

Keywords: *ESG Disclosure, Investment Decision, Financing Decision, Cash Holdings, Firm Value*

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1. Introduction

The growing global orientation toward sustainable investment has intensified attention on Environmental, Social, and Governance (ESG) practices as a determinant of corporate value creation. Assets managed under ESG considerations are projected to increase from USD 18.4 trillion in 2021 to USD 33.9 trillion by 2026, representing a substantial share of global managed assets (PwC, 2022). This trend indicates that investors increasingly evaluate firms based on their ability to manage long-term risks, maintain governance transparency, and ensure operational sustainability (OECD, 2020). Consequently, corporate strategic orientation has evolved beyond short-term financial performance toward resilience and multidimensional risk

management in response to economic uncertainty, geopolitical pressure, and environmental challenges (Duan, 2025;Rohim, 2025; Kurznack et al., 2021). Within Indonesia, ESG integration has been institutionalized through Financial Services Authority Regulation No. 51/POJK.03/2017 and the Sustainable Finance Roadmap 2021–2025, requiring listed companies to disclose sustainability information (OJK, 2017; OJK, 2021).

Despite regulatory reinforcement and high reporting compliance among listed firms, ESG implementation remains largely compliance-oriented and insufficiently embedded within strategic financial decision-making processes (IDXChannel, 2024). From a Signaling Theory perspective, ESG disclosure serves as an informational signal of managerial quality and long-term risk management commitment, potentially enhancing investor confidence and firm valuation. Meanwhile, Agency Theory suggests that transparency through ESG reporting may reduce information asymmetry between managers and shareholders by strengthening accountability in resource allocation. Empirical evidence generally supports a positive association between ESG disclosure and firm value through improved stakeholder trust (Xaviera et al., 2023; Aliyu et al., 2024; Hardi et al., 2023). CSR and green finance disclosures have been shown to enhance firm performance and value, highlighting the importance of non-financial factors in market valuation (Malini, 2021). However, inconsistent findings have been reported when investors prioritize financial fundamentals or when disclosure quality varies, highlighting an unresolved gap in understanding ESG disclosure as a financial signal interacting with managerial decision-making, particularly in emerging markets (Negara et al., 2024).

The urgency of examining this relationship is particularly evident in the food and beverage sector, characterized by capital intensity, intense competition, and exposure to sustainability-related operational risks (FAO, 2022). Indonesia generates approximately 23–48 million tons of food waste annually, producing significant economic implications (Bappenas, 2021), and food waste constitutes a substantial portion of total national waste generation (SIPSN, 2024). These structural pressures influence investment requirements and risk perceptions, positioning ESG disclosure as a potential mechanism for strengthening stakeholder legitimacy and valuation outcomes (Li et al., 2023; Rohendi et al., 2024; Ahmed & Khalaf, 2025), although empirical evidence across emerging markets remains mixed.

Beyond sustainability disclosure, firm value creation is strongly influenced by core financial decisions. Investment decisions reflected through capital expenditure signal expansion capability and growth prospects (Allman et al., 2021; Islamiyah & Fidiana, 2024). Under Signaling Theory, efficient investment communicates expectations of future cash flows and strategic competence, potentially enhancing valuation (Ardatiya et al., 2022). Nevertheless, contradictory findings show that investment decisions may not significantly affect firm value when associated with heightened uncertainty or insufficient profitability support (Amaliyah & Herwiyanti., 2020;Sari & Darmawati, 2021). From an Agency Theory viewpoint, excessive investment may reflect managerial overinvestment misaligned with shareholder interests. Such divergence reveals a research gap regarding the valuation implications of investment policy within broader financial strategy contexts.

Financing decisions through capital structure also play a strategic role in determining firm value by balancing funding access and financial risk exposure (Habib et al., 2021; (Rahman et al., 2024; Bui et al., 2023). Debt utilization may signal managerial confidence and financial discipline according to Signaling Theory (Yulianti & Sundari, 2023), yet Agency Theory emphasizes potential conflicts and bankruptcy risk arising from excessive leverage (Tirtanata & Rahma, 2025). Empirical findings remain context-dependent, showing positive valuation

effects in expansion-oriented sectors (Hidayah et al., 2025) but insignificant relationships under volatile conditions or when sustainability factors dominate investor evaluation (Rahmania & Haryati, 2025). Additionally, evidence indicating that financing impacts valuation primarily through financial performance mediation (Pradana & Imelda, 2023) underscores limitations in existing integrated strategic analyses.

Cash holdings represent an important contextual financial factor reflecting liquidity capacity to sustain operations and support strategic policies (Yuan et al., 2025; Habib et al., 2021). From a Signaling Theory perspective, adequate liquidity signals financial strength and may reinforce the effects of ESG disclosure, investment decisions, and financing policies on firm value through enhanced strategic flexibility (Liu et al., 2023; Zhuang et al., 2022). However, Agency Theory suggests that excessive cash reserves may lead to inefficiencies and managerial opportunism, weakening valuation outcomes (Wu et al., 2022; Chireka & Moloi, 2024). Empirical evidence further indicates that the valuation role of cash holdings is contingent upon firm and sectoral context (Muadz et al., 2025), supporting its conceptual relevance as a moderating variable within financial decision frameworks

This study is grounded in signaling theory and agency theory to explain how markets interpret corporate decisions. Signaling theory suggests that ESG disclosure and investment activities communicate managerial confidence regarding future prospects (Spence, 1973), while agency theory emphasizes transparency and financial discipline as mechanisms to mitigate conflicts between managers and shareholders (Jensen & Meckling, 1976). Empirical literature provides mixed evidence regarding the effects of ESG disclosure, capital expenditure, and financing structure on firm value, reinforcing the need for further investigation within sector-specific contexts. Accordingly, this study develops hypotheses proposing that ESG disclosure, investment decisions, and financing decisions positively influence firm value, and that cash holdings moderate these relationships. By integrating sustainability disclosure and financial policy analysis within a single model, this research contributes to financial management literature by providing sector-specific empirical evidence on how strategic transparency and capital allocation interact in shaping corporate valuation within an emerging market environment.

2. Research Method

This study adopts a quantitative research approach to examine the effect of ESG disclosure, investment decisions, and financing decisions on firm value with cash holdings as a moderating variable. The research focuses on food and beverage companies listed on the Indonesia Stock Exchange (IDX) during the 2021–2024 period. Secondary data are obtained from annual reports, sustainability reports, and financial statements published by the companies. The population includes all firms within the subsector, and purposive sampling is applied based on listing consistency, sustainability report availability, and financial reporting in Indonesian Rupiah. The final sample consists of 33 firms with 132 firm-year observations. Panel data regression analysis is employed to test the hypotheses using EViews software. Moderated Regression Analysis (MRA) is used to evaluate interaction effects between variables. The research models are specified as follows:

$$FV_{it} = \alpha + \beta_1 ESG_{it} + \beta_2 INV_{it} + \beta_3 FIN_{it} + \varepsilon_{it} \text{ ..... Model (1)}$$

$$FV_{it} = \alpha + \beta_1 ESG_{it} + \beta_2 INV_{it} + \beta_3 FIN_{it} + \beta_4 CH_{it} + \beta_5 (ESG \times CH)_{it} + \beta_6 (INV \times CH)_{it} + \beta_7 (FIN \times CH)_{it} + \varepsilon_{it} \text{ ..... Model (2)}$$

Variable Key:
FV : Firm Value
ESG : ESG Disclosure
INV : Investment Decision
FIN : Financing Decision
CH : Cash Holdings
ε : Residual

Table 1. Operational Definition of Variables

Variable	Definition	Measurement
Firm Value (Y)	Firm value in this study is proxied by Tobin's Q, a market-based ratio reflecting investor perception by comparing the market value of the firm to its asset value. Tobin's Q is widely used as an indicator of firm valuation in financial research (Jamaludin, 2025).	Tobin's Q = (Market Value of Equity + Book Value of Debt) / Total Assets
ESG Disclosure (X1)	ESG disclosure is proxied using the Global Reporting Initiative (GRI Standards), which assesses the extent to which firms report environmental, social, and governance information. Higher disclosure reflects stronger commitment to transparency, sustainability, and stakeholder accountability (Global Reporting Initiative, 2021)	ESG Disclosure Index based on Global Reporting Initiative (GRI) scoring
Investment Decision (X2)	Investment decisions are proxied by the Capital Expenditure to Total Assets ratio (CapEx/TA), indicating the proportion of long-term asset investment relative to firm size. Capital expenditure represents spending on acquiring or improving fixed assets that provide multi-period benefits and is reflected in property, plant, and equipment and investing cash flows (Istiqomah & Ismanto, 2025).	Capital Expenditure / Total Assets
Financing Decision (X3)	Financing decisions are measured using the Long-Term Debt to Total Assets ratio, representing the role of long-term external financing in the capital structure. Long-term debt includes obligations due beyond one year such as bank loans, bonds, and notes payable used for strategic investment and expansion (Gunawan et al., 2024; Pradana & Imelda, 2023).	Long-Term Debt / Total Assets
Cash Holdings (Z)	Cash holding is measured as the proportion of cash and cash equivalents to total assets, reflecting corporate liquidity flexibility for operations and short-term investment (Ahmad et al., 2020).	Cash and Cash Equivalents / Total Assets

3. Results and Discussion

3.1. Results

Model Selection

Before estimating the regression, model selection was conducted to determine the most suitable panel data specification among the common, random, and fixed effect models. This process involved applying the Chow test to identify the model that best fits the data.

a. Uji Chow

The Chow test was applied to compare the common and fixed effect models. Since the cross-section chi-square probability was below 0.05, the fixed effect model was selected. Subsequently, the Hausman test was performed to evaluate whether this model was more appropriate than the random effect specification.

Table 2. Results of the Chow Test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	56.913828	(32,95)	0.0000
Cross-section Chi-square	396.560290	32	0.0000

Source: Results of eviews data processing

b. Uji Hausman

The Hausman test results indicate a cross-section probability value below 0.05 (0.0189), suggesting that the fixed effect model is the most suitable specification for this study.

Table 3. Results of the Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	9.590466	4	0.0479

Source: Results of eviews data processing

Classical Assumption Test

a. Multicollinearity Test

The multicollinearity test aims to detect strong linear relationships among independent variables in the regression model. High multicollinearity can lead to unstable coefficients and reduce interpretability (Ghozali, 2021). Therefore, testing is necessary to ensure that each independent variable contributes uniquely to explaining the dependent variable (Napitupulu, 2021).

Table 4. Results of the Multicollinearity Test

	X1	X2	X3
X1	1.000000	0.175727	-0.079283
X2	0.175727	1.000000	-0.046537
X3	-0.079283	-0.046537	1.000000

Source: Results of eviews data processing

Based on the correlation matrix, the correlation values between X1–X2, X1–X3, and X2–X3 are 0.1757, −0.0793, and −0.0465, respectively. Since all correlation coefficients are below the threshold of 0.85, it can be concluded that multicollinearity is not present. Therefore, the independent variables are appropriate for inclusion in the regression model.

b. Heteroscedasticity test

The heteroskedasticity test was conducted to assess whether the error variance in the regression model remained constant. A reliable model is expected to exhibit homoskedastic errors, ensuring efficient and unbiased coefficient estimation (Ghozali,

2021). Using the Glejser method, the significance values for all independent variables exceeded 0.05—X1 (0.2768), X2 (0.0770), X3 (0.9340), and Z (0.5983) indicating no significant relationship with the absolute residuals. This result suggests the absence of heteroskedasticity and confirms that the error variance can be considered constant.

Table 5. Results of Heteroscedasticity Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.074967	0.022516	3.329513	0.0012
X1	-0.080942	0.066941	-1.209168	0.2296
X2	1.43E-05	0.014598	0.000978	0.9992
X3	-0.014060	0.091157	-0.154237	0.8778
Z	-0.157520	0.151233	-1.041572	0.3003

Source: Results of eviews data processing

Regression Results

This section presents the estimation results of the panel data regression models used to examine the influence of the independent variables on firm value. The estimation is performed using the Fixed Effect Model selected in the previous testing stage. Panel regression is considered appropriate as it captures both cross-sectional heterogeneity and time dynamics more effectively than pure time-series or cross-sectional approaches.

Hypothesis testing is conducted through two model specifications. The first is the basic regression model, which evaluates the direct effects of the independent variables on the dependent variable. The second is the Moderated Regression Analysis (MRA) model, which incorporates interaction terms to assess the moderating role of the designated variable. These two models provide a comprehensive evaluation of both direct and moderated relationships within the study framework.

a. Basic Regression Model

Table 6. Results of Basic Regression Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.305917	0.042971	7.119080	0.0000
X1	0.391309	0.134650	2.906125	0.0045
X2	0.237116	0.029474	8.045061	0.0000
X3	0.333529	0.186564	1.787745	0.0770

Source: Results of eviews data processing

- **Regression Coefficient Test (t-test)**

  The t-test was performed to examine the partial effect of each independent variable on the dependent variable. The results, presented in Table 4.7, indicate that X1 and X2 have significant influences on Y, while X3 does not show a statistically significant effect. The significance values for X1 and X2 are 0.0045 and 0.0000, respectively, both below the 0.05 threshold, whereas X3 records a probability value of 0.0770, exceeding the critical level.

  Accordingly, two conclusions can be drawn. First, the hypothesis stating that X1 affects Y is supported. Second, the hypothesis proposing that X2 affects Y is also supported. However, the hypothesis suggesting that X3 has an influence on Y is not supported due to its lack of statistical significance.

Table 7. Results of R-Squared Test & F-Test

R-squared	0.960234	Mean dependent var	0.836808
Adjusted R-squared	0.945736	S.D. dependent var	0.301471
S.E. of regression	0.070227	Akaike info criterion	-2.247176
Sum squared resid	0.473452	Schwarz criterion	-1.460957
Log likelihood	184.3136	Hannan-Quinn criter.	-1.927693
F-statistic	66.23208	Durbin-Watson stat	2.579327
Prob(F-statistic)	0.000000		

Source: Results of eviews data processing

- **Coefficient of Determination Test (R^2)**

  The coefficient of determination is used to evaluate how well the independent variables explain the variation in the dependent variable. The results presented in Table X show an R-squared value of 0.960234 and an adjusted R-squared of 0.945736. This indicates that approximately 94.57% of the variation in Y can be explained by X1, X2, and X3 included in the model, while the remaining 5.43% is attributed to other factors outside the scope of this study. Therefore, the model demonstrates strong explanatory power.

- **Significance Test (F-Test)**

  The F-test assesses whether the independent variables jointly influence the dependent variable. As shown in Table X, the F-statistic is 66.23208 with a probability value of 0.000000, which is below the 0.05 significance level. This result confirms that the regression model is statistically significant and suitable for further analysis, indicating that X1, X2, and X3 simultaneously affect.

b. Moderated Regression Analysis (MRA)

Table 8. Results of Moderated Regression Analysis Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.320036	0.101138	3.164362	0.0507
X1	0.172901	0.106804	1.618853	0.2039
X2	0.232616	0.034234	6.794851	0.0065
X3	1.053430	0.421804	2.497442	0.0879
Z	-0.146003	1.479091	-0.098711	0.9276
X1_Z	0.555633	0.627715	0.885168	0.4413
X2_Z	0.109740	0.199757	0.549371	0.6210
X3_Z	-1.534148	0.404993	-3.788087	0.0323

Source: Results of eviews data processing

- **Regression Coefficient Test (t-test) - Moderated Model**

  The t-test was conducted to evaluate the moderating effects represented by the interaction terms in the MRA model. The results in Table X show that the interaction between X1 and Z (X1_Z) and between X2 and Z (X2_Z) are not statistically significant, with probability values of 0.4413 and 0.6210, respectively, both exceeding the 0.05 threshold. These findings indicate that Z does not moderate the relationships between X1 and Y or between X2 and Y.

However, the interaction term between X3 and Z (X3_Z) is statistically significant, with a probability value of 0.0323 below 0.05. This suggests that Z moderates the effect of X3 on Y. Therefore, the hypothesis proposing a moderating role of Z in the relationship between X3 and Y is supported, while the moderating hypotheses involving X1 and X2 are not supported.

Table 9. Results of R-Squared Test & F-Test

R-squared	0.965510	Mean dependent var	0.836808
Adjusted R-squared	0.950890	S.D. dependent var	0.301471
S.E. of regression	0.066809	Akaike info criterion	-2.328924
Sum squared resid	0.410631	Schwarz criterion	-1.455348
Log likelihood	193.7090	Hannan-Quinn criter.	-1.973943
F-statistic	66.03772	Durbin-Watson stat	2.765349
Prob(F-statistic)	0.000000		

Source: Results of eviews data processing

- **Coefficient of Determination Test (R^2)**

  The coefficient of determination evaluates how well the independent variables explain the variation in the dependent variable. As presented in Table X, the model produces an R-squared value of 0.965510 and an adjusted R-squared of 0.950890. This indicates that approximately 95.09% of the variation in Y can be explained by the independent variables included in the model, while the remaining 4.91% is influenced by factors outside the model. These results demonstrate that the regression model has strong explanatory power.

- **Significance Test (F-Test)**

  The F-test is used to assess whether the independent variables jointly affect the dependent variable. Based on Table X, the F-statistic is 66.03772 with a probability value of 0.000000, which is below the 0.05 significance level. Therefore, the regression model is statistically significant and appropriate for further analysis, indicating that the independent variables collectively influence Y.

3.2. Discussion

Based on the findings of this study, ESG disclosure is shown to positively influence firm value among food and beverage companies listed on the Indonesia Stock Exchange. This suggests that enhanced transparency in sustainability reporting strengthens corporate valuation and investor confidence. The result is consistent with signaling theory, where ESG disclosure communicates managerial quality and long-term strategic commitment that reduces information asymmetry, and with agency theory, where transparency reduces conflicts between managers and shareholders (Spence, 1973; Jensen & Meckling, 1976). Empirical evidence also indicates that ESG disclosure contributes to firm value improvement and market-based valuation indicators (Ahmed & Khalaf, 2025; Rohendi et al., 2024), although its impact may vary in emerging markets where investor orientation remains short-term (Negara et al., 2024). Within the food and beverage sector, ESG practices are particularly relevant because sustainability challenges such as food safety, nutrition, and waste management shape operational risk and corporate reputation (FAO, 2020; Rohendi et al., 2024). Firms capable of demonstrating ESG commitment are therefore perceived as more stable and credible, leading to stronger investor appreciation (Ahmed & Khalaf, 2025).

The results further demonstrate that investment decisions proxied by capital expenditure positively influence firm value, indicating that expansion in productive assets signals growth

potential and future cash flow generation. This finding aligns with signaling theory, which interprets investment spending as an indicator of corporate prospects, and with agency theory, which views productive resource allocation as reducing managerial opportunism (Spence, 1973; Jensen & Meckling, 1976). Evidence from prior studies similarly shows that capital expenditure enhances valuation when supported by effective financial governance and monitoring practices (Ullah et al., 2023;Suriawinata et al., 2023). In the food and beverage subsector, investment plays a strategic role in expanding capacity and modernizing production systems to maintain competitiveness (Munawaroh & Munandar, 2024), and asset-intensive industries often receive favorable market responses to increased capital expenditure (Santoso, 2019). These findings reinforce the importance of investment efficiency in shaping market perception of firm value.

In contrast, financing decisions measured through long-term debt are not found to significantly influence firm value. Although leverage can theoretically signal financial discipline and monitoring mechanisms consistent with signaling and agency perspectives (Spence, 1973; Jensen & Meckling, 1976), investors appear cautious in interpreting debt expansion as value enhancing. This outcome is consistent with prior empirical evidence showing that leverage may fail to improve valuation due to concerns over financial risk (Bui et al., 2023), and with findings from Indonesian firms indicating similar insignificance (Indriasari et al., 2023). In the food and beverage industry, characterized by demand fluctuations and raw material price volatility, investors tend to prioritize operational stability and profitability over leverage growth, limiting the valuation relevance of financing structure signals.

Regarding moderating effects, cash holdings are not found to strengthen the relationship between ESG disclosure and firm value. This suggests that liquidity does not function as complementary information when investors interpret sustainability transparency. Similarly, cash holdings do not alter the relationship between investment decisions and firm value, indicating that capital expenditure remains the dominant signal considered by the market. These findings are consistent with studies showing that cash retention does not necessarily enhance valuation outcomes or moderate financial relationships (Dinarjito, 2025; Anggraini & Lestari, 2024; Salma et al., 2024). In the food and beverage sector, liquidity is primarily associated with operational needs such as working capital for procurement and distribution rather than strategic signaling (Gallucci et al., 2025; Aydoğmuş et al., 2022), resulting in independent investor evaluation of sustainability and investment signals.

However, cash holdings are found to significantly influence how financing decisions relate to firm value by weakening the perceived benefits of leverage. This pattern reflects a pure moderating role, where liquidity interacts with financing decisions rather than directly affecting valuation (Murwaningsari et al., 2025). From an agency perspective, the coexistence of high debt and large cash reserves may indicate inefficient capital allocation or managerial discretion over idle resources (Jensen & Meckling, 1976). Empirical findings similarly suggest that excessive liquidity can reduce firm value or undermine leverage signals (Habib et al., 2021; Eriawati et al., 2025). Within the food and beverage industry, investors often interpret excess cash as underutilized capital rather than strategic flexibility, thereby weakening the positive perception of leverage expansion.

Overall, the findings highlight that sustainability transparency and strategic investment decisions serve as primary drivers of firm value, while financing signals are interpreted more cautiously and liquidity plays a contextual rather than dominant role. These results contribute to the financial management literature by demonstrating how sustainability signaling,

investment allocation, and liquidity interaction shape corporate valuation within sector-specific emerging market settings.

4. Conclusion

This study examines the influence of ESG disclosure, investment decisions, and financing decisions on firm value with cash holdings as a moderating variable among food and beverage subsector firms listed on the Indonesia Stock Exchange. The research employs a quantitative panel-data approach covering the period 2021–2024, consisting of 132 observations from 33 companies selected through purposive sampling. The estimation model applies panel regression using the Fixed Effect Model (FEM) implemented in EViews12.

The findings indicate that ESG disclosure and investment decisions proxied by capital expenditure (CAPEX) positively and significantly enhance firm value, suggesting that sustainability transparency and productive capital allocation function as effective value-creation mechanisms in financial markets. In contrast, financing decisions measured through long-term debt do not exhibit a significant impact on firm value, implying that leverage expansion alone does not necessarily improve market valuation without clear operational performance signals. Furthermore, cash holdings do not moderate the relationship between ESG disclosure or investment decisions and firm value, indicating that liquidity levels are not interpreted by investors as complementary signals when evaluating sustainability commitments or capital expansion strategies. However, cash holdings significantly moderate the relationship between long-term debt and firm value in a negative direction. This suggests that higher liquidity weakens the valuation relevance of leverage, reflecting potential inefficiencies in capital allocation when firms simultaneously maintain debt and excess cash reserves. Based on the interaction characteristics, cash holdings act as a negative moderator and fall under the pure moderator category, as the interaction effect is significant while its direct effect remains insignificant.

Recommendations

Based on the findings and limitations of this study, several recommendations are proposed for future research development:

- This study covers a four-year observation period (2021–2024) with 132 observations, which may not fully capture long-term market dynamics and industry cycle fluctuations. Future studies are encouraged to extend the observation horizon to produce more stable results and better reflect sectoral characteristics over time.
- The sample is limited to the food and beverage subsector, which restricts generalizability. Future research may expand the analysis to other sectors or conduct cross-industry comparisons to examine the consistency of findings across different market structures.
- Future studies may incorporate more granular ESG assessments across environmental, social, and governance dimensions to provide deeper insights into how each component individually influences firm value within a corporate finance context.

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