



# BEYOND FINANCIAL METRICS: CAN ESG ACTIVITIES ATTENUATE FINANCING ANOMALIES IN SHARIA-INDEXED FIRMS?

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**Abstract:** *When making investment decisions, investors are increasingly taking into account environmental, social, and governance (ESG) elements as non-financial metrics, whose scores indicate a firm's ESG-related activities. As debt financing rises, stakeholders are putting more pressure on firms to integrate ESG into their business operations. To date, various studies have provided empirical evidence concerning financing anomalies. This study aims to expand the existing literature on this topic by examining the effects of ESG on financing anomalies in non-financial firms included in the Indonesia Sharia Stock Index (ISSI) from 2018 to 2022 using panel data regression. The results confirm the existence of financing anomalies. Furthermore, ESG activities have been found to reduce financing anomalies, thereby mitigating the negative impact of debt financing on long-term stock performance. This demonstrates the moderating role of ESG on financing anomalies. Since ESG standards align with Sharia principles, the issuance of Sharia-compliant stock indices is, therefore, essential to protect investors, particularly those who adhere to these principles.*

**Keywords:** Financing Anomaly, Debt Financing, Long-term Stock Performance, ESG

## INTRODUCTION

Financing anomalies are critical issues in finance literature, highlighting the discrepancy between the efficient market hypothesis and actual capital market conditions. Theoretically, a firm's financing decisions should not affect its value or long-term performance in an efficient market. Nonetheless, numerous empirical studies have shown that firms that increase their financing activities typically achieve lower long-term stock returns. Such anomalies raise questions about how the market processes information relating to financing decisions, encouraging research to identify their sources or causes.

Most studies on this topic have indicated a strong correlation between financing anomalies and misvaluation, which can arise from investors' or analysts' overoptimism about long-term profitability, as well as from limited attention, overconfidence, and differences of opinion (Bradshaw et al., 2006; Chandra & Schneible, 2019; Lee & Loughran, 1998; Ritter, 1991). Studies on financing anomalies also reveal a negative relationship between

financing activities and long-term operational performance. In this regard, earnings management practices and agency-related overinvestment by companies engaging in financing activities distort financial information, causing investors to misestimate future profit potential (Papanastasopoulos et al., 2011).

Prior studies have also examined the relationship between financing anomalies and other anomalies, such as the value-growth anomaly, the accruals anomaly, the investment anomaly, and post-earnings announcement drift. According to Papanastasopoulos et al. (2013), the difference between the financing anomaly and the value-growth anomaly can be partially eliminated if the free cash flow yield associated with accruals is regarded as a measure of the value-growth anomaly. Meanwhile, Chandra and Schneible (2019) reveal that the financing anomaly is a different phenomenon and not subsumed within the accrual anomaly. The findings of their study, however, suggest that companies expanding their financing activities tend to engage in earnings management to promote overvaluation. Similarly, Sullivan and Zhang (2011) also show that financing anomalies differ from investment anomalies, and Daniel et al. (2020) demonstrate that financing anomalies are not related to corrections of unexpected earnings. Based on these studies, financing activities expose management's confidential information about the company's intrinsic value, thus indicating a link between them and misvaluation signals.

Companies that increase their financing activities may encourage misvaluation, specifically overvaluation, to optimize the outcomes of their financing decisions. Meanwhile, misvaluation caused by accruals that cannot be realized in the future, as well as erroneous investment decisions that affect future operational performance, will result in a reversal in long-term stock performance. The effects of such financing anomalies can be mitigated by linking financing policies to other investment plans, such as accrual-based strategies (high/low) and value/growth stocks. Nevertheless, studies on factors that can alleviate the impact of misvaluation-generated financing anomalies remain very limited. In addition, to the best of our knowledge, no studies have examined the association between financing anomalies and ESG-related strategies, which can positively influence long-term performance.

According to Chen and Chang (2025), companies that integrate ESG strategies into their operations can reduce credit risk and foster long-term value. The implementation of ESG activities signals that a company can maintain accrual quality and achieve greater investment effectiveness from financing activities. Consequently, the market will reward the company with higher valuations and returns (Zhang & Zhang, 2026). This suggests that ESG may mitigate the negative impact of financing activities on long-term stock performance. Empirical evidence also shows a growing investor interest in ESG-based investment instruments, and the number of ESG-based investment products has increased 194-fold over the past decade (Prihatini & Widyanti, 2025). This implies that ESG is becoming a more significant factor in the business world.

In the context of high levels of external debt, both public and private (RI, 2022), debt financing can potentially cause financing anomalies. Such anomalies have been found in several cases—such as those of SRIL (Purwanti, 2022), GIAA (CNN Indonesia, 2021), and other construction companies, including WSKT (Sudarwan, 2020). If investors adopt the correct investment strategies, financing anomalies can provide market participants with opportunities to achieve abnormal returns. These anomalies, however, carry the risk of increasing potential losses. In an effort to minimize investment risks, the government has released various stock indices that investors can use as references when selecting stocks for their investment portfolios.

In Indonesia, where the majority of the population is Muslim, controversy exists over investments in the capital markets due to the presence of elements—such as *riba*, *taghrir*, *dharar*, *gharar*, *ghabn*, and *bai' al-ma'dum*—that pose potential risks and losses to investors. Currently, approximately 10,000 new Sharia investors enter the market each year, an increase of over 20 percent, but they have not benefited from Sharia-compliant investment products due to their limited knowledge of them (Putri, 2025). Before making decisions on which equity-based investment instruments to choose, investors can refer to the Sharia Securities List (DES), namely the Indonesia Sharia Stock Index (ISSI), published by the Indonesian government.

Stocks included in ISSI must comply with Sharia principles as outlined in the fatwas of the Indonesian Ulema Council (*Majlis Ulama Indonesia*/MUI), the Regulation of the Financial Services Authority (*Peraturan Otoritas Jasa Keuangan*/POJK), and the Decision of the Chairman of Capital Market and Financial Institutions Supervisory Agency (*Badan Pengawas Pasar Modal dan Lembaga Keuangan*/Bapepam-LK), and are subject to restrictions on interest income and other non-halal income, as well as debt ratios (POJK, 2025), enabling companies to mitigate their reliance on debt and uncertainty risks. This study examines how debt financing activities affect the long-term stock performance of firms consistently included in ISSI over one year to assess their impacts on financing anomalies. Most studies on financing anomalies have focused on financial and non-financial firms (Bradshaw et al., 2006; Daniel et al., 2020; Hardouvelis et al., 2012; Papanastasopoulos et al., 2013; Papanastasopoulos, 2017;

Ritter, 1991; Sullivan & Zhang, 2011; Yang et al., 2022). No studies have investigated the presence of financing anomalies within the sharia-compliant stock group.

Sharia principles themselves are relevant to ESG standards. Therefore, this study makes three substantial contributions. First, it enriches the academic discourse on financing anomalies by involving ESG as a moderating variable. Second, the findings provide empirical evidence that ESG is a positive signal that can mitigate the adverse effects of financing activities, which are often associated with misvaluation, thereby generating positive stock returns in the future. Third, it provides specific insights to protect investors, especially those who adhere to ESG-aligned Sharia principles, as Sharia-compliant companies must meet certain debt ratio limits and demonstrate a commitment to long-term, non-metric performance.

## **THEORETICAL FRAMEWORK AND HYPOTHESES**

### **Misvaluation Hypothesis**

In companies that engage in financing activities, transactions are driven by their stock market valuation. The basic assumption of this model is that certain businesses are valued incorrectly due to inefficient financial markets. On the other hand, managers are completely rational, recognize the stock market's inefficiency, and exploit it by promoting overvaluation (Shleifer & Vishny, 2003).

### **Signaling Theory**

The signaling theory, first introduced by Spence (1973), holds that management sends signals to investors. These signals help reduce information asymmetry, enabling investors to make informed investment decisions in uncertain situations. In this regard, management must decide whether and how to communicate information (send signals), and investors must figure out how to interpret those signals (Connelly et al., 2011).

### **Financing Anomaly**

Financing anomaly is a negative relationship between corporate financing and long-term stock performance (Chandra & Schneible, 2019). Its sources/causes have been extensively investigated in numerous prior studies, most of which have provided evidence for the presence of financing anomalies by supporting the misvaluation hypothesis and rejecting the risk-based explanation and the wealth transfer hypothesis (Bradshaw et al., 2006; Chou et al., 2009; Daniel et al., 2020; Lee & Hwang, 2025; Ritter, 1991; Spiess & Affleck-Graves, 1999; Yang et al., 2022).

According to Butler et al. (2011), financing anomalies are caused by investment factors. Sullivan and Zhang (2011) also showed that the overinvestment hypothesis explains the anomaly. Financing anomalies are also believed to have a close connection with value growth (Bali et al., 2010), which also takes into account accruals and earnings management (Hardouvelis et al., 2012; Papanastopoulos et al., 2013).

### **Environmental, Social, and Governance (ESG)**

Recent literature has explored the relationship between a firm's ESG activities and its performance (Bang et al., 2023), motivated by the rise in global ESG issues, which leads to growing stakeholder demands for companies to report on their ESG practices. ESG disclosure standards cover various forms of data beyond financial figures, including environmental conservation strategies, ethical corporate governance practices, and social activities (Krueger et al., 2024). This offers a broader perspective through the analysis of non-financial metrics to shape stakeholder perceptions and influence investor decisions (Alshiban & Al-Adeem, 2022). Recognizing the importance of ESG disclosure for attaining market stability and sustainable development, regulators worldwide have established mandatory ESG reporting requirements (Darnall et al., 2022).

The core principles of ESG closely align with the foundations of Islamic finance, namely Sharia principles, which include the prohibition of interest, avoidance of uncertainty, and investment in activities that benefit society. According to various empirical studies, ESG and Islamic finance share a commitment to ethical behavior, risk management, and sustainable value creation (Judijanto et al., 2025).

### **Hypothesis Development**

Bradshaw et al. (2006) argue that companies that rely on debt financing will face greater risks, which ultimately lead to a decline in their long-term stock performance. According to the misvaluation hypothesis, these risks encourage companies to mislead investors by overstating the values of their financial statements (Chandra & Nayar, 2008). When a company fails to meet investor expectations due to its inability to realize accruals or make appropriate investment decisions on the financing proceeds, investors will adjust their valuations in the future. Such an adjustment will result in a decline in the company's long-term stock performance (Chandra & Schneible, 2019). Therefore, the first hypothesis is proposed as follows:

H1: Debt financing activities negatively impact long-term stock performance.

Financing activities indicate that a company is overvalued (Papanastasopoulos, 2017). In this regard, investors typically place a higher value on a company than its intrinsic value due to optimistic projections of its future performance, influenced by accruals in the financial statements. If the company fails to meet these investor expectations, its long-term stock performance will decline.

Companies that publish their ESG scores, on the other hand, send a credible signal to investors regarding their commitment to the ESG agenda. Businesses with a stronger commitment to ESG, as reflected in their non-financial metrics, will strengthen risk management, improve corporate governance, optimize relationships with stakeholders, send positive market signals, and enhance corporate reputation, thereby creating a stronger financial foundation and reducing credit risk (Chen & Chang, 2025). Furthermore, private information contained in ESG components will help investors reduce monitoring costs and encourage higher firm value (Wong et al., 2021). According to the signaling theory, higher ESG scores indicate a company's ability to further reduce the misvaluation that typically occurs following financing activities, since it is committed to maintaining long-term performance through various good mechanisms. Thus, the second hypothesis is constructed as follows:

H2: Higher ESG scores reduce the negative impact of debt financing activities on long-term stock performance.

## RESEARCH METHODS

### Data and Sample

The research population is all non-financial firms listed on the Indonesia Stock Exchange (IDX) and included in the ISSI. Samples were selected using a purposive sampling technique with the following inclusion criteria: firms that were consistently included in the ISSI for 1 year, were listed on the IDX during the 2018–2022 period (calculations for dependent variables require data up to 2024), submitted financial reports, had ESG scores, and had complete data for all research variables. The study took accounting figures from financial reports and obtained stock prices from IDX's official website.

### Research Models and Variable Measurement

This study examines the impact of ESG on financing anomalies, with the dependent variable being long-term stock performance, calculated using the formula proposed by Papanastasopoulos (2017) as follows:

$$SAR_i = \prod_{t=1}^{\tau} (1 + R_{i,t}) - \prod_{t=1}^{\tau} (1 + R_{benchmark,t})$$

where size-adjusted returns (SAR<sub>i</sub>) are the difference between raw annual returns (R) and benchmark annual returns (R<sub>benchmark</sub>), and  $\tau$  is the investment period in months. Raw annual returns were measured using compounded annual buy-and-hold returns, including dividends and other distributions, beginning with the fourth month after the end of the fiscal year in which the debt financing activity occurs. Meanwhile, benchmark annual returns are the annual buy-and-hold returns of all other firms in the same market-capitalization-based portfolio decile to which the firm is assigned.

The independent variable in this study is debt financing (DFin), measured using the formula by Hardouvelis et al. (2012) as follows:

$$\Delta DEBT_t = \Delta (STD_t + LTD_t) / \text{Average Total Assets}$$

where

$\Delta DEBT$  = net total debt;

$\Delta (STD)$  = net short-term debt;

$\Delta (LTD)$  = net long-term debt.

Furthermore, this study involves ESG as a moderating variable, measured using the Bloomberg ESG score.

The model is controlled by variables of cash flow from operations, discretionary accruals (Dechow et al., 1995), default that reflects financial distress (Altman & Saunders, 1998), firm size as proxied by market value, price-to-sales ratio as one of the key indicators in compiling the Sharia stock index, and industry.

In this study, panel data regression was used in the analysis. Three regression equations were formulated to examine the effect of debt financing on long-term stock performance (Equation 1), the effect of debt financing and ESG on long-term stock performance (Equation 2), and the effect of debt financing on long-term stock performance moderated by ESG (Equation 3), as follows:

$$SAR_{i,t+1} = \beta_0 + \beta_1 DFin_{i,t} + \beta_2 CFO_{i,t} + \beta_3 DACC_{i,t} + \beta_4 FD_{i,t} + \beta_5 SIZE_{i,t} + \beta_6 PSR_{i,t} + \beta_{7-16} Ind_{i,t} + \varepsilon_{i,t} \quad (1)$$

$$SAR_{i,t+1} = \beta_0 + \beta_1 DFin_{i,t} + \beta_2 ESG_{i,t} + \beta_3 CFO_{i,t} + \beta_4 DACC_{i,t} + \beta_5 FD_{i,t} + \beta_6 SIZE_{i,t} + \beta_7 PSR_{i,t} + \beta_{8-17} Ind_{i,t} + \varepsilon_{i,t} \quad (2)$$

$$SAR_{i,t+1} = \beta_0 + \beta_1 DFin_{i,t} + \beta_2 ESG_{i,t} + \beta_3 Dfin * ESG_{i,t} + \beta_4 CFO_{i,t} + \beta_5 DACC_{i,t} + \beta_6 FD_{i,t} + \beta_7 SIZE_{i,t} + \beta_8 PSR_{i,t} + \beta_{9-18} Ind_{i,t} + \varepsilon_{i,t} \quad (3)$$

where SAR is long-term stock performance; DFin is debt financing; ESG is environmental, social, and governance; CFO is cash flow from operations; DACC is discretionary accruals; FD is default; SIZE is market value; PSR is price-to-sales ratio; Ind is industry;  $\varepsilon$  represents error term.

## RESULTS AND DISCUSSION

### Descriptive Statistical Analysis

The research population comprised 1,864 firm-year observations. After applying the inclusion criteria, the final sample size was 321 observations. Among all industries, the Basic Materials sector has the highest proportion of firms with ISSI-indexed shares and ESG scores, while the Transportation & Logistics sector has the lowest. Table 2 provides a description of the sample data for all ISSI-indexed non-financial firms with ESG scores.

Table 1. Number of Firm-Year Observations

Industry	Firm-Year Observations	
	Number	Percentage (%)
Basic Materials	64	20.00%
Consumer Non-Cyclicals	60	19.00%
Consumer Cyclicals	48	15.00%
Energy	42	13.00%
Property & Real Estate	36	11.00%
Infrastructure	29	9.00%
Healthcare	26	8.00%
Industrials	13	4.00%
Technology	3	1.00%
Transportation & Logistics	0	0.00%
Total	321	100.00%

Source: Data processing, 2025

The long-term stock performance of the sample firms shows a median value of -0.0483, indicating that half of the sample data have negative long-term stock performance. Meanwhile, debt financing has a mean and median value exceeding zero, at 0.0189 and 0.0010, respectively. This implies that the average sample and half of the sample data increased their debt financing, demonstrating that sample firms are also at risk of experiencing a decline in their long-term stock performance after engaging in activities that increase debt financing.

CFO has a positive mean and median. Thus, the average sample and more than half of the sample data can generate positive operating cash flow. Similarly, the mean and median values of discretionary accruals are also positive, signifying that most of the sample data perform earnings management that increases the value of abnormal accruals. The minimum Altman Z-Score is 0.3941, with the mean and median exceeding zero, showing that most of the sample firms are not in default. Lastly, the mean and median values of price-to-sales ratios exceed 1, indicating that most of the sample firms are overvalued.

Table 2. Descriptive Statistics

Variable	Obs.	Mean	Median	Sta. Dev.	Min	Max
SAR	321	0.0163	-0.0483	0.3741	-0.5235	0.9308
DFin	321	0.0189	0.0010	0.0958	-0.2184	0.7368
ESG	321	44.3692	44.3517	12.0781	19.2637	75.7972
CFO	321	0.1067	0.0842	0.1137	-0.1191	0.7575
DACC	321	0.4380	0.3633	0.4330	-0.6272	3.8326
FD	321	8.2963	7.3677	3.6334	0.3941	21.9027
SIZE	321	13.1315	13.1746	0.6294	11.5789	14.8451
PSR	321	3.3166	1.2203	12.5826	0.1136	134.9335

Source: Data processing, 2025

### Correlation Structure

Table 3 shows the pairwise correlation coefficients of  $< 0.8$ , indicating no serious multicollinearity problems (Gujarati & Porter, 2009, p. 338). Similarly, the results of the multicollinearity test, as measured by variance inflation factor (VIF) values, across all research models also reveal no multicollinearity problems.

Table 3. Pairwise Correlation

Variable	DFin	ESG	FD	CFO	DACC	SIZE	PSR
DFin	1.0000						
ESG	0.0487	1.0000					
FD	-0.0845	0.0410	1.0000				
CFO	-0.0858	-0.0285	0.2844	1.0000			
DACC	0.0781	0.0479	-0.1927	-0.0498	1.0000		
SIZE	-0.0582	-0.0425	-0.0339	-0.0866	-0.1200	1.0000	
PSR	0.0221	0.0258	0.2688	0.2540	0.1246	0.0312	1.0000

Source: Data processing, 2025

### Regression Analysis

Table 4 presents the results of the panel data regression analysis with robust standard errors (Ghozali & Ratmono, 2013, p. 115), indicating a negative effect of debt financing on long-term stock performance. This confirms the presence of financing anomalies in firms with ISSI-indexed stocks and ESG scores, thereby supporting H1. Furthermore, the interaction between debt financing and ESG has a significant positive effect on long-term stock performance, thus supporting H2.

Table 4. Regression Results

Variable	Model 1		Model 2		Model 3	
DFin	-1.9104 (0.000)	***	-1.9107 (0.000)	***	-2.1270 (0.000)	***
ESG			0.0013 (0.422)		0.0020 (0.072)	*
DFin*ESG					0.0516 (0.000)	***
CFO	-0.2964 (0.079)	*	-0.2869 (0.098)	*	-0.0013 (0.990)	
DACC	0.1667 (0.000)	***	0.1640 (0.000)	***	0.1576 (0.000)	***
FD	-0.0057 (0.150)		-0.0057 (0.150)		0.0045 (0.109)	
SIZE	-0.0046 (0.676)		-0.0045 (0.686)		-0.0050 (0.561)	
PSR	-0.0001 (0.983)		-0.0004 (0.954)		-0.0153 (0.022)	**
Constant	0.0615 (0.115)		0.1209 (0.171)		0.0407 (0.440)	
Ind	No		No		No	
Est. Model	Fixed effect		Fixed effect		Fixed effect	
Obs.	321		321		321	
R Squared	0.7174		0.7193		0.8148	
F	203.24		175.54		296.73	
Prob.	0.0000		0.0000		0.0000	

Note: significant at \*\*\*1%; \*\*5%; \*10%

Source: Data processing, 2025

The hypothesis testing results for H1 show that debt financing negatively affects long-term stock performance, supporting the misvaluation hypothesis. The study findings confirm those of prior studies (Bradshaw et al., 2006; Chandra & Schneible, 2019; Daniel et al., 2020; Lee & Hwang, 2025; Yang et al., 2022). Financing activities that intensify debt financing will result in an increase in distress risk (Bradshaw et al., 2006). Therefore, companies will employ various strategies to induce misvaluation, specifically overvaluation. The positive correlation between debt financing and the price-to-sales ratio ( $r=0.0221$ ) indicates that companies tend to increase financing activities when they are overvalued. Overvaluation reduces the cost of debt (Kothari et al., 2007, p. 163) and optimizes financing returns, thereby reducing distress risk and improving financial performance. However, companies that fail to meet investor expectations about future fundamental performance due to their inability to realize accruals in line with investor expectations will have less profitable investment returns from financing activities, ultimately leading to a decline in their long-term stock performance.

ESG-related activities are anticipated by management and investors to enhance corporate value. The positive correlations between debt financing and ESG ( $r=0.0487$ ) suggest that companies increasing their debt financing are more likely to send a positive signal through the implementation of ESG policies and strategies.

However, these findings are unclear because the impact of ESG on long-term stock performance is inconsistent across sampled firms. Model 2 shows that ESG has an insignificant positive effect on long-term stock performance. This is likely because companies need to strike a strategic balance between various conflicting objectives to maximize the benefits of ESG integration. Over-prioritizing ESG impacts without strict financial oversight often leads to diminishing returns and resource depletion, resulting in a negative relationship between ESG and operating cash flow. This is particularly evident when the company cannot realize the accruals included in its financial statements.

Model 3, on the other hand, shows a significant positive effect of ESG—as a non-financial metric—on long-term stock performance. The hypothesis testing results for H2 indicate that the interaction between debt financing and ESG has a significant positive impact on long-term stock performance. This suggests that the positive effect of ESG on long-term stock performance is influenced by debt financing. Higher ESG scores signify the company's stronger commitment to integrating ESG into its business activities. This will drive sustainable investment and operational decisions, improve corporate governance, and thus foster greater stakeholder trust. Companies can achieve higher operational performance, realize their accruals to cash flows, and sustain profits, thereby exceeding investors' high expectations of their long-term performance. Thus, positive ESG signals can reduce misvaluation by enabling companies to meet or even exceed investor expectations.

Correlation analysis also shows that companies with higher ESG scores have lower operating cash flows ( $r=0.0285$ ) as they allocate more cash to ESG activities. However, the Altman Z-Score of  $> 0$  ( $\text{min}=0.3941$ ) indicates that these companies do not experience financial distress. This is likely due to the optimization of ESG activities, which supports improvements in the companies' long-term operational performance. Hence, the findings of this study suggest that ESG is a strategy for mitigating the negative impact of debt financing—which is typically associated with overvaluation—on long-term stock performance, as it signals a company's commitment to achieving sustainable performance.

### **Robustness Check**

The results in Models 1, 2, and 3 are in line with those of an analysis that provides robust empirical evidence, using industry-adjusted stock returns (Spiess & Affleck-Graves, 1999) as a proxy for long-term stock performance and the price-to-book ratio, which is usually used in previous studies in place of the price-to-sales ratio as a control variable. An analysis of a sample of ISSI-indexed non-financial firms, both with and without ESG scores, also confirms the financing anomaly.

### **CONCLUSION**

The study findings confirm the financing anomaly. This study also tested the moderating effect of ESG on the relationship between debt financing and long-term stock performance in ISSI-indexed firms, revealing that the financing anomaly phenomenon weakens and eventually disappears. Firms with higher ESG scores signal a greater commitment to integrating ESG into their operations. This commitment improves good governance and encourages efficient firm operations, thus increasing stakeholder confidence and ultimately enabling the firm to achieve sustainable earnings power. Therefore, ESG promotes better long-term stock performance.

This study carries theoretical implications for the literature on financing anomalies by linking them to sustainability through ESG principles, aiming to reduce the misvaluation that often follows increased financing activities. ESG is a strong predictor of sustainable long-term stock performance, allowing the company to meet and even exceed investor expectations. In addition, this study has practical implications for investors making investment decisions, especially those who adhere to Sharia principles, to choose investment instruments from Sharia-compliant companies with ISSI-indexed stocks and ESG scores. This is because ESG standards align with broader Sharia principles. Despite its valuable implications, however, this study has several limitations. To allow for a more in-depth analysis of financing anomalies, future studies are recommended to examine the moderating effect of ESG on financing anomalies using long-term operational performance rather than focusing solely on long-term stock performance.

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