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DO GREEN BONDS MATTER? EVIDENCE FROM STOCK MARKET RESPONSES IN ASEAN DEVELOPING COUNTRIES

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Abstract

This study examines the stock market reaction to corporate green bond issuance announcements in emerging ASEAN economies using an event study approach. The findings show no statistically significant abnormal returns around the announcement dates, suggesting that investors do not yet regard green bond issuances as value-relevant information capable of influencing stock prices. This limited market response may reflect the weak integration of environmental, social, and governance (ESG) considerations into investment decisions, inadequate sustainability disclosure, limited transparency regarding the use of proceeds, and concerns over the credibility of corporate environmental commitments. The results further indicate that the signaling effect of green bonds remains constrained by institutional weaknesses, insufficient regulatory support, and low investor confidence. These findings offer important implications for policymakers, regulators, and issuers by highlighting the need to strengthen sustainable finance frameworks through harmonized ESG reporting standards, enhanced disclosure quality, credible third-party verification, and investor education to improve market confidence and ESG awareness. While green bonds have significant potential to support the low-carbon transition in ASEAN, their current influence on equity markets remains limited. Future studies should employ larger cross-country samples, longer observation periods, and additional variables, including ESG performance, green bond certification, corporate governance, and environmental policy stability, to better explain investor responses to sustainable finance initiatives.

Keyword:

Green bonds, Abnormal return, event study, market efficiency, ESG integration

INTRODUCTION

Climate change has become one of the most pressing challenges facing the global economy, prompting governments, businesses, and financial institutions to integrate sustainability into economic and investment decisions. In response to this challenge, green bonds have emerged as one of the most widely adopted sustainable finance instruments. Unlike conventional bonds, green bonds are issued exclusively to fund projects that deliver measurable environmental benefits, such as renewable energy development, energy-efficient technologies, sustainable waste management, and climate change mitigation and adaptation programs (Climate Bonds Initiative, 2022). Consequently, these securities provide investors with an opportunity to earn financial returns while supporting environmentally responsible investments.

Despite increasing global interest in sustainable finance, many developing countries continue to experience difficulties in mobilizing sufficient capital for environmentally sustainable infrastructure. Conventional financing sources often fail to meet the long-term funding requirements of green projects because of their high capital intensity and relatively greater investment risks. In this context, green bonds have become an important financing alternative capable of attracting private investment toward sustainable development. The rapid expansion of this market demonstrates its growing acceptance among investors. According to the Climate Bonds Initiative (2023), cumulative global green bond issuance has surpassed US\$3 trillion since the introduction of the market in 2007, highlighting the increasing preference for financial instruments that simultaneously promote economic value and environmental responsibility.

Indonesia has also participated in this global transition toward sustainable finance. A major milestone occurred in 2018 when the government successfully launched the world's first sovereign Green Sukuk, raising approximately US\$1.25 billion to finance environmentally focused development projects (Asian Development Bank, 2024). Since then, the use of green bonds has gradually expanded among both public institutions and private corporations to support climate action and national sustainability objectives. Nevertheless, compared with larger Asian economies such as China and Japan, the scale of Indonesia's corporate green bond market remains relatively limited, indicating substantial room for further market development (Asian Development Bank, 2022).

A growing body of literature has examined the economic and financial implications of green bond issuance. Previous studies generally suggest that issuing green bonds can strengthen a firm's corporate reputation, enhance its sustainability profile, and attract a wider range of investors interested in ESG-related investments. However, scholars have also highlighted several limitations associated with this market. One of the most frequently discussed concerns is the possibility of greenwashing, whereby firms promote environmentally friendly activities without sufficient evidence of genuine sustainability performance. Furthermore, Baker et al. (2022) demonstrated that investor responses to green bond announcements vary considerably across firms, depending on factors such as governance quality, disclosure transparency, and compliance with internationally recognized sustainability frameworks.

Empirical findings regarding the impact of green bonds also remain inconclusive across different regions. Argandoña et al. (2022) reported that green bond financing contributes positively to economic growth in Latin American and Caribbean countries, as reflected in higher gross domestic product (GDP). Conversely, Lebellet et al. (2020) found that green bond issuance may generate unfavorable effects within developed financial markets. Evidence from Europe, however, suggests that green bonds have recently outperformed conventional bonds in terms of market performance, indicating that investor preferences may differ according to market maturity and institutional characteristics (Gianfrate & Peri, 2019).

Within Asia, sustainable finance continues to receive increasing policy support as governments and financial institutions promote investments aligned with environmental, social, and governance (ESG) objectives (Azhgaliyeva et al., 2020). Research also indicates that green bonds issued in Asian markets frequently offer more attractive yields than comparable conventional bonds, making them increasingly appealing to investors (Taghizadeh-Hesary et al., 2021). Within the Chinese market, Wang et al. (2020) found that green bond issuance has played an important role in accelerating the development of the country's sustainable finance market. Considering the continued expansion of green finance alongside the urgency of addressing climate-related risks, this study investigates whether green bond issuance generates significant abnormal stock returns in emerging ASEAN economies. Specifically, the analysis examines market reactions surrounding green bond announcements and evaluates their effects on each country's composite stock market index.

THEORETICAL FRAMEWORK

Green bonds represent debt instruments issued exclusively to finance projects that deliver positive environmental impacts. The funds raised are directed toward activities such as renewable energy generation, energy conservation, sustainable transportation, and waste management initiatives (Climate Bonds Initiative, 2022). Although their financial characteristics are largely comparable to those of conventional bonds, green bonds are distinguished by the requirement that the proceeds be allocated solely to environmentally sustainable investments (Flammer, 2021). In Indonesia, the green bond market gained substantial momentum following the government's issuance of the world's first sovereign Green Sukuk in 2018, which successfully raised approximately USD 1.25 billion. The initiative was designed to support the country's low-carbon development strategy while reinforcing its commitment to achieving the objectives of the Paris Agreement.

The relationship between green bond issuance and stock market performance has attracted considerable attention in the academic literature. Existing studies generally suggest that the announcement of green bond issuance can influence investors' perceptions of issuing firms. Flammer (2021) found that companies issuing green bonds often experience positive abnormal stock returns immediately after the announcement, indicating that investors perceive these issuances as credible signals of corporate commitment to sustainability. However, empirical evidence remains mixed. Baker et al. (2022) argued that the magnitude of market reactions depends heavily on factors such as corporate governance practices and the quality of sustainability disclosures. Firms with limited transparency or weak ESG reporting are less likely to receive favorable responses from investors. In addition, Zerbib (2019) proposed the concept of the *greenium*, which refers to the tendency of green bonds to offer slightly lower yields than comparable conventional bonds because strong demand from sustainability-oriented institutional investors increases their market value.

Within the Indonesian setting, Sari & Widodo (2021) employed an event study approach and found that firms issuing green bonds generated positive cumulative abnormal returns (CAR) during the ± 10 -day event window surrounding the issuance announcement. However, these positive market reactions were more pronounced among companies with stronger corporate governance practices. Green bond issuance has also been linked to improvements in firms' long-term financial performance. Tang & Zhang (2020) found that companies issuing green bonds tend to achieve higher Return on Assets (ROA) and Return on Equity (ROE) over time, particularly when supported by comprehensive sustainability strategies. Likewise, Rahmawati et al. (2023) demonstrated that issuers with superior Environmental, Social, and Governance (ESG) performance attract greater investor interest and experience lower stock price volatility. These findings indicate that investors increasingly incorporate environmental considerations into their investment decisions.

However, Ghosh et al. (2021) observed that investors in emerging markets, including Indonesia, continue to show stronger preferences for conventional bonds because green bonds are often perceived as carrying greater risk while offering lower yields due to the *greenium* effect. Signaling Theory explains that corporate policies and strategic decisions function as signals that convey information to investors regarding a firm's quality and future prospects (Choudhury, 2024). From this perspective, the issuance of green bonds represents a positive signal of a company's commitment to environmental sustainability and sound corporate governance, thereby strengthening investor confidence and potentially attracting additional investment.

Supporting this theoretical argument, Flammer (2021) concluded that green bond issuance sends favorable signals to financial markets, leading to positive stock price reactions. Similarly, Baker et al. (2022) found that investors generally respond positively to firms issuing

green bonds because such firms are perceived to face lower environmental risks and demonstrate stronger sustainability commitments.

Event study methodology provides an appropriate framework for evaluating capital market reactions to corporate events. According to (Kane, 2006), an event study enables researchers to measure the impact of specific events on stock price movements. Hartono (2017) further explained that this method is widely used to analyze market responses by comparing stock performance before and after a particular event. A crucial element of this methodology is the event window, which defines the observation period to minimize interference from unrelated events, while the event date represents the exact day on which the event occurs.

Previous event study research has reported mixed evidence regarding market reactions to major events. documented positive and statistically significant abnormal returns on several days within the event window, with the strongest effect occurring on the third trading day after the event ($t+3$). Nevertheless, they found no significant variation in trading volume activity, suggesting that the event did not substantially alter investors' trading intensity. Different results were reported by Kusumo et al. (2020), who observed no significant differences in abnormal returns among pharmaceutical and food and beverage companies surrounding the first announcement of COVID-19 cases in Indonesia on March 2, 2020. Significant market reactions only became evident after the government issued a subsequent announcement on March 30, 2020. Likewise, Soraya (2023) concluded that the Russia-Ukraine conflict generated only a limited overall response in the Indonesian capital market, although abnormal returns were statistically significant in specific sectors, including mining, financial services, consumer goods, and property. The variation in these empirical findings indicates that stock market responses depend largely on the nature of the event, investor perceptions, and industry-specific characteristics. Drawing on these theoretical arguments and prior empirical evidence, this study formulates the following research hypothesis.

H1 : There is a significant abnormal return on the day around the launch of green bonds in developing countries.

H2 : There is a difference in abnormal returns before and after the launch of green bonds in developing countries.

METHODOLOGY

This study employs daily closing stock price data from the composite stock market indices of ASEAN emerging countries, together with the MSCI ASEAN Index as the benchmark market index. The required data were collected from the financial information platform www.investing.com. The study population consists of all emerging ASEAN countries that have issued green bonds, namely Indonesia, Vietnam, the Philippines, Thailand, and Malaysia.

The analysis uses daily stock closing prices within a 21-day event window, covering ten trading days before the event date and ten trading days after the event date ($t-10$ to $t+10$). This observation period was selected to capture the capital market's response to green bond issuance while reducing the possibility that unrelated events outside the event window could influence the results. In addition to the event window, the study incorporates an estimation period of 60 trading days, spanning from $t-60$ to $t-11$. The estimation window is used to calculate the expected return, which serves as the benchmark for measuring abnormal returns generated in response to the event being examined.



Figure 1 : Estimation Period And Event Window For Green Bonds Launching

This study estimates abnormal returns through a sequence of analytical procedures. The first stage involves calculating the abnormal return, which represents the difference between the actual return earned by a stock and its expected return. The abnormal return is computed as follows:

$$AR_{it} = R_{it} - E(R_{it}) \quad (1)$$

where AR_{it} denotes the abnormal return of security i during event period t , R_{it} refers to the realized return, and $E(R_{it})$ represents the expected return for the same security and period. The expected return is estimated using the market-adjusted model, which assumes that the expected return equals the market return during the corresponding event period. The estimation is expressed as:

$$E(R_{it}) = R_{Mt} \quad (2)$$

where R_{Mt} is the market return, the market return is derived from the change in the MSCI ASEAN Index between two consecutive trading periods using the following equation:

$$R_{Mt} = \frac{MSCI\ ASEAN_t - MSCI\ ASEAN_{t-1}}{MSCI\ ASEAN_{t-1}} \quad (3)$$

In this equation, $MSCI\ ASEAN_t$ is the index value in the current period, while $MSCI\ ASEAN_{t-1}$ represents the index value in the preceding period. The realized return for each stock is calculated based on the percentage change in its closing price between two consecutive trading periods:

$$R_{it} = \frac{P_t - P_{t-1}}{P_{t-1}} \quad (4)$$

where P_t is the stock price in period t , and P_{t-1} is the stock price in the previous period. Finally, the Average Abnormal Return (AAR) is determined by averaging the abnormal returns of all sampled securities for each event day. The calculation is expressed as:

$$AAR_t = \frac{\sum AR_{i,t}}{n} \quad (5)$$

where AAR_t denotes the average abnormal return on day t , $AR_{i,t}$ represents the abnormal return of stock i on the same day, and n is the total number of firms included in the sample.

The data analysis was performed through several sequential stages. First, descriptive statistical analysis was applied to summarize and present the general characteristics of the research data. Subsequently, the normality of the data distribution was assessed using the Kolmogorov–Smirnov test to determine whether the dataset followed a normal distribution. The selection of the hypothesis testing procedure was based on the results of the normality test. When the data met the assumption of normality, differences between variables were examined using the paired sample t -test. However, if the data were found to be non-normally distributed, the hypothesis was tested using the non-parametric Wilcoxon Signed Rank test, which is more appropriate for analyzing paired observations that do not satisfy the normality assumption.

RESULT AND DISCUSSION

This study examines market reactions by analyzing the Average Abnormal Return (AAR) during the event window surrounding green bond issuance in emerging ASEAN countries. The observation period extends from ten trading days prior to the issuance date ($t-10$) to ten trading days after the event ($t+10$). The resulting AAR values for each trading day within the event window are presented below.

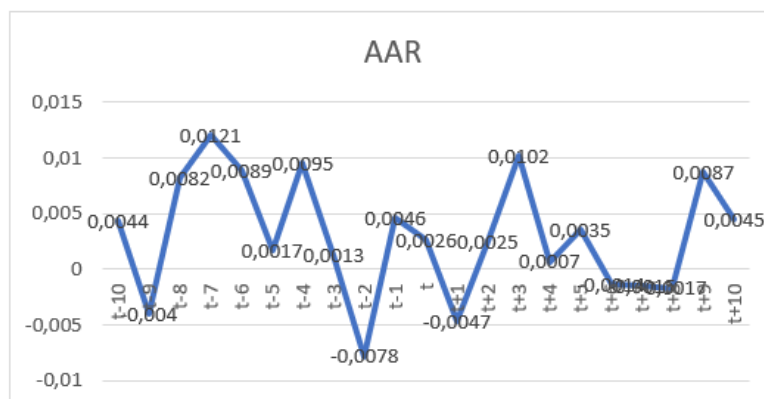


Figure 2. AAR change graph

Figure 2 illustrates the movement of the Average Abnormal Return (AAR) throughout the event window, which spans from ten trading days before the green bond issuance ($t-10$) to ten trading days after the event ($t+10$). During the pre-event period, the AAR exhibited noticeable fluctuations, indicating variations in market behavior before the issuance announcement. As the event date approached, the AAR declined from 0.0046 on day $t-1$ to 0.0026 on the issuance date (t_0). Following the event, the AAR increased substantially, reaching its highest value of 0.0102 on the third trading day ($t+3$), before gradually declining over the subsequent days. This pattern suggests that investors reacted positively to the announcement of green bond issuance in emerging ASEAN countries, particularly during the early post-event period. To examine whether the research data satisfied the assumption of normality, the One-Sample Kolmogorov–Smirnov Test was employed. The results of the normality test are presented in the following table.

Table 1. Data Normality Test

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
TMIN10	.238	5	.200*	.932	5	.607
TMIN9	.265	5	.200*	.876	5	.290
TMIN8	.194	5	.200*	.976	5	.914
TMIN7	.276	5	.200*	.872	5	.275
TMIN6	.389	5	.013	.744	5	.026
TMIN5	.329	5	.081	.834	5	.149
TMIN4	.232	5	.200*	.917	5	.509
TMIN3	.260	5	.200*	.855	5	.211
TMIN2	.280	5	.200*	.913	5	.485
TMIN1	.223	5	.200*	.968	5	.861
TNOL	.227	5	.200*	.964	5	.835
TPLUS1	.235	5	.200*	.931	5	.605
TPLUS2	.312	5	.125	.890	5	.357
TPLUS3	.170	5	.200*	.972	5	.888

TPLUS4	.211	5	.200*	.953	5	.756
TPLUS5	.314	5	.121	.856	5	.213
TPLUS6	.193	5	.200*	.963	5	.830
TPLUS7	.224	5	.200*	.876	5	.291
TPLUS8	.287	5	.200*	.819	5	.114
TPLUS9	.252	5	.200*	.923	5	.552
TPLUS10	.184	5	.200*	.937	5	.644
AARbefore	.316	5	.115	.841	5	.167
AARafter	.255	5	.200*	.942	5	.679

The results presented in the table indicate that the Average Abnormal Return (AAR) values are generally associated with significance levels greater than 0.05, suggesting that the data are normally distributed. An exception occurs during period t–6, where the significance value falls below 0.05, indicating that the data for this period do not satisfy the normality assumption. Consequently, datasets that meet the normality assumption are analyzed using the One-Sample *t*-Test, whereas data that are not normally distributed are examined using the non-parametric Wilcoxon Signed Rank Test. To evaluate the first hypothesis, statistical testing was conducted using a significance level of 5% ($\alpha = 0.05$). The results of the first hypothesis test are presented below.

Table 2. First hypothesis testing results

Data	Sig	Conclusion
t-10	0,503	There is no significant AR
t-9	0,438	
t-8	0,122	
t-7	0,095	
t-6	0,893	
t-5	0,573	
t-4	0,1	
t-3	0,792	
t-2	0,453	
t-1	0,354	
t	0,601	
t+1	0,356	
t+2	0,856	
t+3	0,21	
t+4	0,578	
t+5	0,326	
t+6	0,827	
t+7	0,654	
t+8	0,748	
t+9	0,087	
t+10	0,142	
AARbefore	0,456	
AARafter	0,419	

The results presented in the table indicate that the significance values for the first hypothesis on the days surrounding the green bond issuance are all greater than 0.05. Accordingly, the first hypothesis is not supported, suggesting that no significant abnormal

returns were observed around the issuance date. These findings imply that the green bond issuance did not generate a statistically significant market reaction during the event window.

The second hypothesis proposes that a significant difference exists between the abnormal returns of the MSCI ASEAN Index before and after the issuance of green bonds. It is expected that the market will respond favorably to the issuance announcement. Based on the results of the normality test, the abnormal return data for both the pre-event and post-event periods are normally distributed, indicating that parametric analysis is appropriate. The statistical results for testing the second hypothesis are presented below.

Table 3. Second hypothesis testing results	
AARafter - AARbefore	
Sig 2-tailed	0,568

Table 3 indicates that the two-tailed significance value is 0.568, which exceeds the 0.05 significance threshold. Therefore, the second hypothesis (H2) is not supported, indicating that no statistically significant difference exists in abnormal returns before and after the announcement of green bond issuance. These findings are consistent with the results reported by Kusumo et al. (2020) and (Soraya, 2023). However, they differ from the findings of (Flammer, 2021) and (Wang et al., 2020), who documented significant market responses following green bond issuance.

The absence of significant abnormal returns suggests that the market did not react strongly to the green bond announcement, resulting in no substantial changes in stock prices during the event window. This finding is consistent with the semi-strong form of the Efficient Market Hypothesis, which argues that publicly available information is rapidly incorporated into security prices, leaving little opportunity for investors to earn abnormal returns (Ferreira et al., 2019). Accordingly, information regarding green bond issuance may have already been anticipated by market participants before the official announcement.

Another possible explanation is the relatively limited awareness and understanding of sustainable financial instruments among investors, particularly in emerging capital markets. Although sustainable investing has gained increasing global attention, many investors continue to prioritize traditional financial indicators rather than environmental considerations when making investment decisions (Flammer, 2021). As a result, the issuance of green bonds may not yet constitute a sufficiently strong signal to alter investors' expectations regarding firm value or future performance.

The credibility and transparency of the issuing entity also play an important role in determining market reactions. Gianfrate & Peri (2019) argued that green bonds can enhance an issuer's reputation only when investors perceive a credible commitment to implementing environmentally sustainable projects. Conversely, inadequate disclosure regarding the allocation and utilization of green bond proceeds may raise concerns about greenwashing, thereby weakening investor confidence (Wang et al., 2020). Under such circumstances, green bond issuance is unlikely to produce meaningful changes in investors' assessments of risk or future growth prospects.

Furthermore, differences in industry characteristics may explain the insignificant market response observed in this study. Tang & Zhang (2020) found that firms operating in industries where sustainability initiatives are already expected do not necessarily experience positive stock market reactions following green bond issuance. Consequently, the lack of significant differences in abnormal returns identified in this study may reflect several interacting factors, including market efficiency, heterogeneous investor perceptions toward sustainable finance,

and the importance of issuer credibility and transparency in communicating environmental commitments.

The findings of this study provide several practical implications. First, companies in emerging ASEAN economies intending to issue green bonds should improve the quality and transparency of sustainability disclosures by providing detailed information on financed green projects, measurable environmental outcomes, and robust governance mechanisms for monitoring the use of proceeds. Such disclosures are expected to strengthen investor confidence and enhance the credibility of green bonds as sustainable investment instruments. Second, policymakers, capital market regulators, and financial institutions across the ASEAN region should continue strengthening the sustainable finance ecosystem through supportive regulatory frameworks, fiscal incentives, and investor education initiatives that promote the integration of environmental considerations into investment decisions. Finally, future studies are encouraged to broaden the scope of analysis by incorporating a larger sample of ASEAN countries and additional explanatory variables, such as ESG ratings, green bond certification standards, and the stability of environmental policies, to provide a more comprehensive understanding of capital market responses to green bond issuance across the region.

Country-Level Discussion

The findings highlight a notable contrast in Indonesia's sustainable finance landscape. Although the country pioneered the issuance of sovereign green sukuk on the global stage, corporate green bond activity remains relatively limited. The lack of a statistically significant market reaction suggests that investors may not yet perceive green bond issuance as a sufficiently credible value-enhancing signal. This condition may stem from several factors, including inconsistent sustainability reporting practices, the limited influence of ESG-oriented institutional investors in the domestic capital market, and continuing skepticism regarding greenwashing risks.

Previous evidence suggests that in emerging economies such as Indonesia, ESG-related announcements are unlikely to influence stock prices unless accompanied by credible third-party assurance and measurable environmental outcomes (Yoo & Managi, 2022). In addition, the absence of comprehensive reporting standards and meaningful fiscal incentives weakens the signaling value of green bond issuance in the capital market. These findings imply that regulatory support alone is insufficient to strengthen investor confidence without robust governance mechanisms and credible sustainability disclosures.

Vietnam's capital market is still undergoing structural transformation, with trading activity dominated by retail investors who generally possess limited familiarity with ESG-related investment considerations. Although the government has initiated efforts to establish a national green taxonomy and align sustainability reporting with international standards, mandatory ESG disclosure requirements and independent verification mechanisms remain limited. Consequently, investors may perceive green bond announcements as lacking sufficient credibility or informational value. Furthermore, Vietnam's financial system continues to rely heavily on bank financing, reducing the relative importance of the equity market as a source of corporate funding. These institutional characteristics diminish the effectiveness of green bond issuance as a credible signal capable of influencing investor expectations and stock prices.

The Philippines faces significant environmental vulnerabilities while operating within a relatively small and concentrated capital market. Despite the country's high exposure to climate-related risks, green finance initiatives continue to be driven primarily by banking institutions, multilateral development agencies, and a limited number of large corporations. The relatively low frequency and modest size of corporate green bond issuances reduce their visibility among market participants and limit their potential influence on investor behavior. Moreover, ESG integration into investment strategies remains at an early stage due to the

absence of comprehensive reporting standards and established green bond registries. Under these conditions, green bond announcements are unlikely to provide investors with new or value-relevant information, resulting in an insignificant market response.

Among ASEAN countries, Thailand has developed one of the more advanced regulatory environments for sustainable finance. The Securities and Exchange Commission (SEC) has introduced dedicated green bond guidelines, while government-linked enterprises and major corporations have increasingly participated in the Green, Social, and Sustainability (GSS) bond market. Nevertheless, this study finds that equity investors exhibit only limited reactions to green bond announcements. One possible explanation is that investors continue to question the credibility of corporate environmental claims despite improvements in the regulatory framework. In addition, discrepancies between formal regulatory requirements and their implementation at the corporate level may reduce the signaling effectiveness of green bond issuance. Without comprehensive post-issuance reporting and reliable third-party verification, investors may remain unconvinced that green financing will generate meaningful long-term value.

Malaysia has long been recognized as a regional leader in sustainable finance through the establishment of comprehensive green sukuk regulations and advanced ESG disclosure frameworks. High levels of institutional investor participation, transparent regulatory oversight, and greater awareness of sustainability issues contribute to a relatively mature capital market. Therefore, the absence of significant abnormal returns surrounding green bond announcements may reflect market efficiency rather than a lack of investor interest in sustainability. In a more efficient market, sustainability-related information is likely incorporated into stock prices before the official announcement, meaning that green bond issuance no longer represents unexpected or value-enhancing information. Consequently, investors may place greater emphasis on factors such as project quality, implementation effectiveness, issuance size, industry characteristics, and long-term environmental performance when assessing the financial implications of green bond issuance.

CONCLUSION

Indonesia offers a unique case in the advancement of sustainable finance. Despite being internationally acknowledged as the first country to issue sovereign green sukuk, the domestic corporate green bond market has yet to achieve substantial growth. The absence of a significant stock market response observed in this study may be attributed to several structural factors, such as insufficient transparency in sustainability disclosures, the still-limited involvement of institutional investors with ESG-oriented investment strategies, and persistent skepticism regarding the credibility of green financing due to potential greenwashing. Consistent with prior studies, ESG-related announcements in emerging markets, including Indonesia, tend to generate limited investor response when they are not supported by independent verification and demonstrable environmental performance (Yoo & Managi, 2022). Furthermore, the lack of well-established sustainability reporting frameworks and effective fiscal incentives reduces the informational and signaling value of green bond issuance for market participants. These results indicate that regulatory initiatives, while important, are unlikely to enhance investor confidence unless they are complemented by stronger corporate governance practices and reliable sustainability reporting mechanisms.

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