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Stock Market Reaction To The Announcement Of Sustainability Bond Issuance In Indonesia

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Abstract

This study aims to analyze the stock market reaction to the announcement of sustainability bond issuance by companies listed on the Indonesia Stock Exchange. The announcement of sustainability bonds is considered important information as it reflects the company's commitment to financing projects that generate environmental and social impacts. Therefore, this research seeks to examine whether such information is responded to by investors through changes in stock prices around the announcement date. This research employs a quantitative approach using the event study method. Market reactions are measured through Abnormal Return (AR), Average Abnormal Return (AAR), Cumulative Abnormal Return (CAR), and Cumulative Average Abnormal Return (CAAR). The observation period covers eleven trading days, from t−5 to t+5 surrounding the event date. The research sample is determined using purposive sampling based on the availability of stock price data and the absence of confounding events during the observation window. The data used are secondary data consisting of daily closing stock prices and the Composite Stock Price Index (IHSG) as a proxy for market returns. Statistical testing is conducted using a one-sample t-test to determine whether the abnormal returns differ significantly from zero. The findings indicate that, at the daily level, the Average Abnormal Return is not statistically significant, suggesting that the market does not react immediately to the announcement. However, at the individual cumulative level, the Cumulative Abnormal Return is significant, implying that investors adjust prices gradually after the information is released. Meanwhile, the Cumulative Average Abnormal Return is not significant, indicating that investor responses vary across firms and tend to offset one another. These results suggest that sustainability bond announcements contain relevant information for investors, yet their ability to generate a collective market reaction remains limited.

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Keywords: sustainability bond, stock market reaction, event study, abnormal return, Indonesian capital market.

INTRODUCTION

Climate change has become a global challenge that demands fundamental transformation in economic and financial practices. The financial sector plays an important role in driving the transition to a low-carbon economy. One financial instrument that is growing rapidly and is considered to have great potential in supporting the financing of environmentally friendly projects is sustainability bonds.

According to In line with these developments, the concept of sustainable finance is gaining increasing attention from regulators, market participants, and investors. Sustainable finance emphasizes the importance of integrating ESG aspects into financing and investment decisions to support sustainable development. One of the instruments that has developed within the framework of sustainable finance is sustainability bonds, which are debt instruments designed to raise funds to finance a combination of environmentally friendly and social projects. According to Flammer (2021), this instrument can not only be used as a source of funding, but also as a tool for strategic communication to show that the company is committed to remaining in the capital market.

In capital market practice, the issuance of sustainable bonds not only serves as a source of funding, but is also seen as a signal of the company's commitment to sustainability to investors. However, announcements of the issuance of sustainability-oriented financial instruments are not always responded to uniformly by the market. Several studies show that market reactions to announcements of sustainability instruments can be positive, weak, or even insignificant, depending on the market context and investors' perceptions of the issuer's credibility (Tang & Zhang, 2020).

In Indonesia, the issuance of sustainable bonds has begun to grow in line with the strengthening of the sustainable finance regulatory framework. However, empirical evidence on how the Indonesian stock market responds to announcements of sustainable bond issuances is still limited. A study by Abdurrahim (2025) shows that sustainable bonds in Indonesia have not yet had a fully positive impact on company performance in the short term, indicating that the market is still in the process of adapting to sustainable financing instruments.

Sustainable bonds are one of the sustainable financing instruments that have developed within the framework of sustainable finance. These instruments are designed to raise funds that are exclusively used to finance projects that have a positive

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environmental and social impact. Mocanu, Constantin and Cernat-Gruici (2021) define sustainable bonds as bonds whose proceeds are allocated specifically to finance a combination of environmentally friendly and social projects. With this scope, sustainable bonds not only serve as a source of funding, but also as a means of communicating the company's commitment to sustainability to the capital market.

Mathew and Sivaprasad (2024) explain that the main characteristic of sustainable bonds lies in the principle of use of proceeds, whereby the funds raised must be used exclusively to support integrated sustainability goals, such as climate change mitigation, renewable energy development, social welfare improvement, and strengthening community inclusion and development. The growth of sustainable bond instruments is driven by the increasing need for project financing that is aligned with the Sustainable Development Goals (SDGs) and investor demands for responsible and long-term business practices. Thus, sustainable bonds have a broader scope than other sustainability instruments because they have the ability to bridge environmental and social goals as well as serve as financing instruments.

According to the International Capital Market Association (ICMA) (2018), sustainable bonds are bonds whose proceeds are used exclusively to refinance green projects and social projects. This instrument is not only a financing mechanism, but also a strategic communication tool for companies to demonstrate their commitment to sustainability to investors. With the increasing awareness of ESG (Environmental Social Governance), ICMA emphasizes the importance of transparency, reporting, and accountability in the use of funds so that sustainable bonds can function as a credible financing instrument that investors can trust.

Ordonez-Borrallo, Ortiz-de-Mandojana, and Delgado-Ceballos (2025) found through an event study that the announcement of sustainable bond issuance can cause changes in the stock market because investors view sustainable bonds as evidence of a company's commitment to sustainability, although the strength of the reaction is not always significant and depends on the market context. Mocanu, Constantin, and Cernat-Gruici (2021) found that the stock market reaction to the announcement of sustainable bonds tends to be negative and, in some cases, shows a stronger negative response. These findings indicate that investors do not always view sustainable bonds as a positive signal but also consider the uncertainty of implementing sustainability projects.

To test whether announcements of sustainable bond issuances contain information that is relevant to investors, the event study method is considered the most appropriate approach. Although sustainable bonds are developing as a promising

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sustainability financing instrument, empirical evidence, especially in emerging markets such as Indonesia, still shows varying stock market reactions to announcements of their issuance. Therefore, this study uses an event study approach to examine announcements of sustainable bond issuance in Indonesia to determine how investors respond to sustainability that combines social and environmental objectives. Market reactions are analyzed through Abnormal Return (AR), Average Abnormal Return (AAR) as indicators of daily market reactions, as well as Cumulative Abnormal Return (CAR) and Cumulative Average Abnormal Return (CAAR) as indicators of cumulative market reactions during the observation period (event window).

LITERATURE REVIEW

Efficient Market Hypothesis

The Market Efficiency Theory proposed by Fama (1970) states that stock prices in the capital market reflect all information available to investors. In an efficient market, new information will be immediately responded to by market participants so that changes in stock prices occur quickly and rationally. Market efficiency is divided into three forms, namely weak-form efficiency, semi-strong form efficiency, and strong-form efficiency. In weak-form efficiency, stock prices reflect historical information, while in strong efficiency, prices reflect all private information. Semi-strong form efficiency explains that stock prices reflect all relevant public information.

In the context of this study, the most relevant form of market efficiency is semi-strong form efficiency, because this study analyzes market reactions to public information in the form of announcements of the issuance of sustainability bonds. If investors consider such announcements to contain information, the market will respond through changes in stock prices reflected in abnormal returns around the date of the event.

The efficient market theory forms the basis for the use of the event study approach in this study because event studies can measure whether public information elicits a significant market reaction. This reaction can be observed through abnormal returns (AR) and cumulative measures such as cumulative abnormal returns (CAR). Thus, market efficiency theory supports this study to examine whether the announcement of continuous bond issuance is processed as relevant information that affects stock price formation.

Mocanu, Constantin and Cernat-Gruici (2021) found that announcements of sustainable bond issuance generate significant abnormal returns, although the magnitude is relatively small and varies across markets. These findings indicate that the market

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responds to information on sustainable bond issuance, thus supporting the semi-strong form of market efficiency assumption.

Ordonez-Borrallo, Ortiz-de-Mandojana, and Delgado-Ceballos (2025) found that stock prices reacted significantly around the announcement. The study confirmed that announcements of sustainable bonds are processed by the market as relevant information in stock price formation. Thus, market efficiency theory became the main basis in this study to explain the mechanism of how information on the issuance of sustainable bonds is reflected in abnormal stock returns.

Signaling Theory

Signaling theory was developed by Spence (1973), which explains that parties with information (company management) can send signals to parties without information (investors) through certain actions. Companies use certain actions to send signals to the market regarding their quality, commitment, and prospects. In this context, the issuance of sustainable bonds is considered a signal that the company is committed to sustainability, transparency, and environmentally friendly business practices. Investors then interpret this signal in their decision-making, which can have an impact on stock prices.

Mathew and Sivaprasad (2024) emphasize that sustainable bonds serve as credible signals because issuers must clearly explain the use of proceeds and the sustainability goals they want to achieve. The study shows that the stock market tends to respond more positively to sustainable bonds issued by companies with strong ESG reputations, indicating that investors pay attention to the quality of the signals sent by companies, not just the bond label.

Shimauchi et al. (2025) explain that sustainable bonds have a clearer signaling mechanism than other sustainability instruments such as sustainability-linked bonds, because their use of funds is limited to specific projects. This reduces information uncertainty and increases the credibility of the signals received by investors. Thus, based on signaling theory, the announcement of the issuance of sustainable bonds can influence investor perceptions and have an impact on changes in company stock prices.

Stakeholder Theory

The stakeholder theory according to Freeman et al. (1984) states that corporate value is shaped by the interactions and perceptions of various stakeholders, including investors, regulators, the community, and financial institutions. Companies are not only

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accountable to shareholders, but also to other stakeholders such as the community, the environment, the government, and consumers. In this context, the issuance of sustainable bonds is a form of corporate response to stakeholder expectations regarding sustainability.

By issuing sustainable bonds, companies seek to build social legitimacy, attract ESG-conscious investors, and strengthen their long-term reputation. This theory provides social and ethical justification for the financial actions taken by companies. Research by Mocanu, Constantin, and Cernat-Gruici (2021) shows that investors not only consider financial aspects but also assess the social and environmental impact of sustainable bonds. These findings indicate that stakeholder preferences play a role in shaping market responses to sustainable bond instruments. Mathew and Sivaprasad (2024) found that sustainable bonds issued by companies with strong stakeholder engagement tend to receive better market responses, reflecting investor confidence in the company's sustainability commitments.

These findings are in line with the principle of stakeholder theory that corporate actions aligned with stakeholder interests can increase corporate value. Therefore, stakeholder theory provides a conceptual basis for understanding why the issuance of sustainable bonds has the potential to influence stock market reactions, especially in markets that are increasingly considering sustainability aspects in investment decisions.

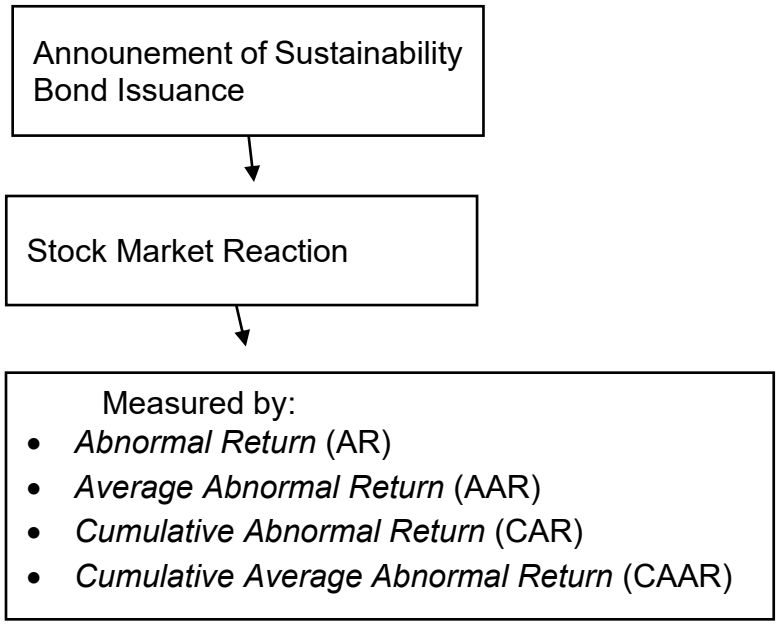
METHODOLOGY

This study uses a quantitative approach with the event study method, which is a method used to test the capital market's reaction to an event that contains information. The event analyzed in this study is the announcement of the issuance of sustainability bonds by companies listed on the Indonesia Stock Exchange (IDX). Through the event study approach, this study observes whether the event causes a market reaction reflected in abnormal return changes around the date of the event.

The data used in this study is secondary data obtained from official and credible sources, including the Indonesia Stock Exchange (IDX), the Financial Services Authority (OJK), and market data provider websites such as Investing.com and company documents in the form of annual reports and sustainability reports. This data is used to obtain information about the event date (t0), daily stock prices, and market index data as the basis for calculating returns and abnormal returns.

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RESULTS AND DISCUSSION

Daily Stock Return Analysis

The initial stage of this study is to calculate the daily return of shares for each issuer included in the research sample. The return calculation is carried out during the event window period, which is from t−5 to t+5 relative to the date of the announcement of the issuance of sustainable bonds (t0). The purpose of this measurement is to determine the changes in share value that occur before, during, and after the information is published to the market.

Stock returns are calculated based on changes in the closing price from one trading day to the next. The return value reflects the level of profit or loss earned by investors on a given day. If the stock price increases compared to the previous day, the return is positive. Conversely, if there is a decline in price, the return will be negative. The return calculation is performed on all issuers included in the research sample. However, to facilitate understanding of the calculation process, this section presents one issuer as an illustration, while the complete results for all companies are presented in the appendix.

As an illustration, the following shows an example of the daily return calculation for PT Adhi Karya (Persero) Tbk around the date of the event.

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Table 1 Calculation of ADHI's Daily Stock Return

t	Date	Stock Price	Ri
-5	05/18/2022	623	-0.0032
-4	05/19/2022	618	-0.00803
-3	05/20/2022	613	-0.00809
-2	05/23/2022	600	-0.02121
-1	05/24/2022	627	0.045
0	05/25/2022	627	0
1	05/27/2022	655	0.044657
2	05/30/2022	668	0.019847
3	05/31/2022	664	-0.00599
4	06/02/2022	664	0
5	06/03/2022	668	0.006024

Based on the illustration in Table 1, it can be seen that stock returns fluctuated during the observation period. This pattern of movement was also found in most other issuers, where there were days with positive and negative returns. This variation indicates that changes in stock prices are not only influenced by announcements of continuous bonds, but also by various other factors occurring at the same time. The daily stock return values obtained are then used as the basis for calculating abnormal returns, by comparing them to market returns (IHSG) on the same day.

Market Return Analysis (IHSG)

Market return is used as a benchmark to determine whether stock price changes occur normally in line with market movements, or are a specific reaction to the announcement of a continuous bond issuance. Market return is calculated during the event window period, which is from t−5 to t+5 relative to the event date. Market return is calculated by comparing the JCI value on day t with the JCI value on the previous day. If the JCI increases, the market return is positive. Conversely, if the JCI decreases, the market return is negative.

To illustrate the calculation process, the following is an illustration of market return in one observation period. Complete data for the entire period is available in the appendix.

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Table 2 Market Return Calculation (IHSG)

t	Date	close shares	Ri	IHSG Close	Rm
-5	05/18/2022	623	-0.0032	6793.41	0.022416
-4	05/19/2022	618	-0.00803	6823.33	0.004404
-3	05/20/2022	613	-0.00809	6918.14	0.013895
-2	05/23/2022	600	-0.02121	6840.77	-0.01118
-1	05/24/2022	627	0.045	6914.14	0.010725
0	05/25/2022	627	0	6883.5	-0.00443
1	05/27/2022	655	0.044657	7026.26	0.020739
2	05/30/2022	668	0.019847	7037.56	0.001608
3	05/31/2022	664	-0.00599	7148.97	0.015831
4	06/02/2022	664	0	7148.33	-3.5E-05
5	06/03/2022	668	0.006024	7182.41	0.00479

Based on the calculations in Table 2, market returns proxied using the IHSG show a fluctuating pattern during the event window period. On some trading days, the market recorded positive returns, indicating a strengthening of the index, while on other days there were declines, reflected in negative returns. This dynamic illustrates that during the observation period, the Indonesian capital market was active and influenced by various information circulating outside the scope of the study.

These fluctuations in market returns are important to note because changes in issuer stock prices do not originate solely from the announcement of continuous bond issuance, but can also be influenced by macroeconomic sentiment, global conditions, and other sectoral factors. Therefore, this study uses a market-adjusted model approach to separate the general market influence from the specific reaction that arises due to the announcement event.

By subtracting the actual stock return from the market return on the same day, an abnormal return is obtained that reflects the pure response of investors to the information on the issuance of sustainable bonds. This step allows for a more accurate and unbiased analysis of market reactions to overall market movements.

Abnormal Return Analysis (AR)

Abnormal return is the difference between the actual return on a stock and the market return on the same day. This measurement aims to determine whether a stock

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provides returns above or below general market conditions after the announcement of a continuous bond issuance. In this study, abnormal returns are calculated using a market-adjusted model, which subtracts the stock return from the IHSG return on the same day. A positive abnormal return indicates that the stock has outperformed the market. Conversely, a negative abnormal return indicates that the stock has underperformed the market.

Abnormal returns are calculated for all issuers and for all days within the event window. To illustrate the calculation process, one issuer is presented in this section, while the complete results are available in the appendix. As an illustration, the following is an example of the calculation of abnormal returns for PT Adhi Karya (Persero) Tbk.

Table 3 Calculation of Abnormal Return (AR) for ADHI Shares

t	Date	Close Shares	Ri	IHSG Close	Rm	AR
-5	05/18/2022	623	-0.0032	6793.41	0.022416	-0.02562
-4	05/19/2022	618	-0.00803	6823.33	0.004404	-0.01243
-3	05/20/2022	613	-0.00809	6918.14	0.013895	-0.02199
-2	05/23/2022	600	-0.02121	6840.77	-0.01118	-0.01002
-1	05/24/2022	627	0.045	6914.14	0.010725	0.034275
0	05/25/2022	627	0	6883.5	-0.00443	0.004431
1	05/27/2022	655	0.044657	7026.26	0.020739	0.023918
2	05/30/2022	668	0.019847	7037.56	0.001608	0.018239
3	05/31/2022	664	-0.00599	7148.97	0.015831	-0.02182
4	06/02/2022	664	0	7148.33	-3.5E-05	3.5E-05
5	06/03/2022	668	0.006024	7182.41	0.00479	0.001234

Based on the illustration in Table 3, it can be seen that the abnormal return value of stocks changed from day to day during the event window period. On several observation days, stocks generated positive abnormal returns, indicating that stock performance was better than the general market movement. Conversely, on other days, the abnormal return was negative, meaning that stocks underperformed the market return.

This movement pattern shows that investor responses to information circulating around the date of the announcement of the issuance of sustainable bonds are not uniform. The difference in the direction of abnormal returns reflects variations in

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perception among market participants. Some investors may view the issuance of sustainable bonds as a positive signal of the company's commitment to sustainability practices, while other investors may view it as a potential increase in debt burden or project implementation risk.

In addition, abnormal return fluctuations also indicate that the market does not always react instantly on the day of the announcement. Reactions may occur several days before or after the event date, in line with the possibility of information leakage or investment decision adjustment processes that take time.

Thus, measuring abnormal returns is important because it captures changes in stock values that are specifically related to announcement events, after eliminating the influence of general market movements. The abnormal returns obtained from all sample companies are then averaged to produce the Average Abnormal Return (AAR), and accumulated in the form of Cumulative Abnormal Return (CAR) and Cumulative Average Abnormal Return (CAAR) to see the broader and more comprehensive impact of market reactions.

Analysis of Average Abnormal Return (AAR)

Average Abnormal Return (AAR) is the average abnormal return value of all issuers on each day within the event window. AAR is used to see how the market collectively responds to the announcement of a continuous bond issuance. If the AAR value is positive, then on average the stocks in the sample provide returns above the market. Conversely, a negative value indicates that in general the stocks underperform the market.

The following are the AAR calculation results during the observation period.

Table 4 Calculation of Average Abnormal Return (AAR)

t	AAR
-5	0.000702383
-4	0.002261949
-3	0.001940604
-2	0.002428998
-1	0.000361255
0	-0.000663575
1	0.001358533

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2	-0.00042371
3	0.00424688
4	0.004171288
5	-0.08087108

Based on the calculations in Table 4, it can be seen that the Average Abnormal Return (AAR) during the event window period shows a fluctuating pattern around zero. On several observation days, the AAR was positive, indicating that, on average, the stocks in the sample were able to generate returns above the market return. Conversely, on other days, the AAR shows a negative value, reflecting that the aggregate performance of the stocks is below market conditions. The largest AAR value is seen on day t+5, indicating an increase in market reaction several days after the announcement of the continuous bond. This condition may indicate that some investors do not immediately respond to the information on the day of the announcement but need time to analyze the available information before making investment decisions.

These fluctuations illustrate that investor reactions to the announcement of sustainable bond issuance are not uniform across all issuers. These differences in direction indicate that some market participants interpret the information as a positive signal regarding the company's commitment to sustainability, while others may still be cautious, considering the additional risks that may arise from the issuance of these debt instruments.

In addition, the relatively small value of AAR on most observation days indicates that the impact of the information received by the market tends to be limited. This may occur because investors have anticipated the issuance of continuous bonds in advance, so that the information content that appears on the announcement date no longer provides a significant surprise to the market.

This finding confirms that despite positive and negative movements, statistical significance testing is required to ensure that changes in the average abnormal return truly reflect a meaningful market reaction. The AAR value is then used as the basis for calculating the Cumulative Abnormal Return (CAR) and Cumulative Average Abnormal Return (CAAR) to understand the impact of the announcement over a longer period of time.

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Cumulative Abnormal Return Analysis (CAR)

Cumulative Abnormal Return (CAR) is the sum of abnormal returns during the event window period. CAR is used to see the total impact of the announcement of continuous bond issuance on each stock during the observation period. Through CAR, it can be determined whether an issuer as a whole has gained or lost after taking into account all market reactions around the announcement date. The following are the CAR values at the end of the event window period (t+5).

Table 5 Calculation of Cumulative Abnormal Return (CAR)

No	Issuer	Announcement Date	CAR t+5
1	ADHI	25-Mei-22	-0.009741285
2	ADHI	10-Jul-24	0.175457184
3	ADMF	17-Feb-25	-0.056659743
4	ADMF	09-Jul-25	0.010674678
5	ADMF	22-Okt-25	-0.00728314
6	AGII	11-Okt-23	-0.084157791
7	AGII	23-Des-21	0.037488366
8	AGII	07-Jul-21	0.129674076
9	BBKP	01-Sep-25	0.245701365
10	BBKP	07-Jul-25	0.027772152
11	BBKP	10-Sep-21	-0.094069023
12	BBNI	07-Jul-25	-0.046676543
13	BBRI	30-Jun-25	-0.016387567
14	BBRI	21-Mar-24	-0.036258141
15	BBRI	18-Okt-23	0.013675976
16	BBTN	15-Des-25	-0.006409785
17	BBTN	25-Mei-22	-0.072126903
18	BCAP	03-Jul-24	0.20737169
19	BCAP	13-Jan-25	0.106679003
20	BCAP	13-Jun-25	0.021852145
21	BFIN	16-Jun-23	0.033636158
22	BFIN	26-Sep-24	-0.066407111
23	BFIN	18-Jun-25	-0.075671374
24	BJBR	10-Jun-22	-0.015204051

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25	BJBR	08-Jul-24	0.015553445
26	BJBR	11-Des-24	-0.003987182
27	BJTM	02-Okt-25	-0.005109336
28	BMRI	05-Jul-23	0.021458663
29	BMRI	26-Mar-25	0.121700837
30	BMRI	22-Des-25	0.042386163
31	BMTR	07-Jul-23	0.129878142
32	BMTR	24-Jun-24	-0.08030431
33	BMTR	25-Jun-25	0.018429334
34	BNII	11-Jul-22	-0.002497297
35	BRPT	29-Nov-23	0.243481294
36	BRPT	17-Jul-24	-0.038878993
37	BRPT	11-Jul-25	0.342979817
38	BSDE	08-Apr-22	-0.072271604
39	BSDE	24-Sep-25	-0.081790753
40	BSDE	18-Des-25	-0.014496663
41	BTPN	08-Jul-24	-0.008156257
42	BTPN	18-Des-24	-0.002478039
43	BTPN	03-Sep-25	-0.01318357
44	BUMI	09-Jul-25	0.023240276
45	BUMI	25-Sep-25	0.380488682
46	BUMI	16-Des-25	0.463821503
47	BVIC	19-Jun-25	-0.039364459
48	BVIC	07-Jul-25	-0.010864211
49	BVIC	29-Sep-25	-0.046582733
50	BWPT	27-Feb-25	0.062671034
51	CUAN	07-Jul-25	0.343830804
52	CUAN	27-Okt-25	-0.066821942
53	DART	03-Jul-25	-0.003463693
54	DSSA	06-Jun-24	0.087832918
55	DSSA	28-Nov-24	0.033112604
56	DSSA	10-Okt-25	-0.024850007
57	EXCL	17-Okt-18	-0.026141684

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58	EXCL	11-Feb-19	0.173306858
59	EXCL	02-Sep-22	-0.010898305
60	HRTA	28-Nov-24	-0.063493631
61	HRTA	25-Apr-25	0.041889383
62	IATA	09-Okt-23	0.062825673
63	INKP	13-Mar-25	0.01936545
64	INKP	13-Jun-25	-0.040911584
65	INKP	01-Okt-25	0.011491392
66	ISAT	06-Mar-19	-0.1232918
67	ISAT	24-Jul-19	0.176716794
68	ISAT	27-Okt-22	0.054189958
69	ISSP	05-Apr-23	-0.026907844
70	ISSP	24-Apr-25	-0.067767462
71	JSMR	09-Sep-20	-0.091023886
72	JSMR	08-Jul-24	0.034169517
73	JSMR	04-Sep-25	0.030785655
74	LTLS	15-Nov-21	0.131913426
75	LTLS	05-Jul-24	-0.143723952
76	MBMA	09-Jul-25	0.193771267
77	MBMA	21-Agu-25	0.020350806
78	MBMA	10-Des-25	-0.022366149
79	MDKA	31-Jul-24	-0.061867125
80	MDKA	27-Des-24	-0.180995387
81	MDKA	26-Feb-25	-0.129138921
82	MEDC	15-Feb-24	0.098314021
83	MEDC	08-Jan-25	0.074631088
84	MEDC	26-Jun-25	-0.087459497
85	MYOR	08-Jul-24	0.024705181
86	MYOR	11-Sep-25	-0.054253065
87	MYOR	24-Des-25	-0.013130861
88	NISP	04-Jul-25	-0.012245257
89	PALM	14-Feb-25	-0.086370356
90	PALM	27-Agu-25	0.117953804

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91	PALM	22-Des-25	-0.020169016
92	PJAA	11-Feb-21	-0.374602298
93	PJAA	10-Jul-24	-0.122073014
94	PNBN	08-Jul-24	-0.130591724
95	PNBN	09-Okt-24	-0.024759289
96	PNBN	08-Sep-25	-0.140501969
97	PPRE	01-Jul-22	-0.356545155
98	PPRO	03-Sep-21	-0.408161945
99	PTPP	25-Apr-22	-0.2570204
100	PTPP	12-Apr-23	-0.208395965
101	PTPP	01-Jul-24	0.065992498
102	PTRO	16-Des-24	0.146119799
103	PTRO	24-Mar-25	-0.780721693
104	PYFA	09-Mar-22	-0.248991404
105	PYFA	28-Feb-24	-0.278375801
106	PYFA	10-Jul-25	0.074286162
107	RMKE	10-Jul-25	-0.250315225
108	SGER	11-Jul-24	-0.222347375
109	SGER	16-Okt-25	0.194068045
110	SGRO	18-Mar-21	-0.413705708
111	SGRO	04-Mar-22	-0.294420466
112	SGRO	07-Jul-25	-0.185483044
113	SMAR	17-Feb-22	-0.269627522
114	SMAR	07-Jul-22	-0.336617704
115	SMAR	04-Jul-25	-0.250450848
116	SMGR	29-Mei-19	-0.382371789
117	SMGR	10-Nov-22	-0.305066043
118	SMMA	20-Jan-25	-0.170984434
119	SMMA	22-Agu-25	-0.175574108
120	SMMA	24-Okt-25	-0.124708192
121	SMRA	11-Jul-22	-0.32861358
122	SMRA	20-Okt-23	-0.416688411
123	SMRA	05-Jun-24	-0.257771076

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124	TBIG	24-Mar-25	-0.479892477
125	TBIG	09-Jul-25	-0.328750635
126	TBIG	05-Des-25	-0.069568368
127	TELE	20-Sep-19	-0.557464978
128	TOBA	09-Jul-25	-0.179209364
129	TPIA	01-Mar-23	-0.347855538
130	TPIA	29-Sep-23	-0.24675234
131	TPIA	04-Mar-24	0.144671962
132	TRIM	03-Jul-25	-0.257906099
133	TRIM	09-Okt-25	0.078640634
134	TRIM	08-Des-25	-0.028968503
135	WIKA	09-Sep-21	-0.28894567
136	WIKA	21-Feb-22	-0.363137958
137	WIKA	04-Nov-22	-0.206156571
138	WOMF	12-Apr-23	-0.260445633
139	WOMF	03-Jul-24	-0.284688291
140	WOMF	25-Jun-25	-0.214948213
141	WOOD	28-Mar-22	-0.20911448

Based on the calculations in Table 5 at the end of the event window period (t+5), it can be seen that market responses vary considerably between issuers. Some companies recorded positive CARs, indicating that during the observation period, their shares gained cumulatively above market movements. However, there were also issuers that showed negative CARs, meaning that their share prices declined relative to general market conditions.

These differences in direction show that the impact of the announcement of the issuance of sustainable bonds was not uniformly accepted by investors. This diverse reaction may be due to differences in company characteristics, the level of market confidence in sustainability commitments, and the fundamental conditions of each issuer at the time of the announcement. In other words, investors not only consider the sustainability label of the instrument issued, but also evaluate the company's ability to manage funds and its potential economic benefits in the future.

Interestingly, even within the same companies, CAR values can vary depending on the timing of issuance. This shows that investor perceptions are dynamic and heavily

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influenced by market context, economic sentiment, and other information surrounding the announcement period. Therefore, even if a company receives a positive reaction in one period, a similar response is not guaranteed in the next issuance.

This finding confirms that continuous bond announcements do contain information for investors, but the strength and direction of the response greatly depend on how the market assesses the company's credibility and prospects. To obtain an overview of the overall market response, the next step is to calculate the Cumulative Average Abnormal Return (CAAR) as an aggregate measure of investor response.

Cumulative Average Abnormal Return Analysis (CAAR)

Cumulative Average Abnormal Return (CAAR) is the accumulation of AAR during the event window period, reflecting the overall market reaction to the announcement of a continuous bond issuance. The CAAR measurement is important because investor responses to information do not always occur immediately on the day of the announcement. In many cases, market reactions can emerge gradually and accumulate over several days before and after the event. The following are the CAAR values during the event window period.

Table 6 Calculation of Cumulative Average Abnormal Return (CAAR)

t	CAAR
-5	0.000702383
-4	0.002964332
-3	0.004904937
-2	0.007333935
-1	0.00769519
0	0.007031614
1	0.008390147
2	0.007966437
3	0.012213317
4	0.016384605
5	-0.064486474

Based on the calculations in Table 6, it can be seen that the Cumulative Average Abnormal Return (CAAR) changed gradually throughout the event window period. At the

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beginning of the observation period, CAAR showed an upward trend, indicating an accumulation of positive abnormal returns in aggregate. This condition can be interpreted as meaning that in the early stages, some investors responded to the announcement of the issuance of sustainable bonds as information that had positive value for the company.

However, towards the end of the observation period, there was a sharp decline in CAAR, resulting in a negative value. This change in direction indicates that the abnormal returns that had previously accumulated were unable to be sustained over a longer period of time. This means that despite initial positive indications, this sentiment did not continue consistently until the end of the event window.

This phenomenon indicates that the market reaction to the announcement of sustainable bonds tends to be temporary and not strong enough to form a sustained upward trend in stock prices. Investors are likely to readjust their expectations after evaluating further information about risks, debt burdens, and the prospects for implementing the sustainability projects to be financed.

In addition, unstable changes in CAAR also indicate that the Indonesian capital market is still in the learning stage in assessing sustainability-based financial instruments. Thus, even though the announcement of sustainable bonds contains information, not all investors respond uniformly, so that the cumulative effect at the aggregate level is limited.

Therefore, to ascertain whether the CAAR change pattern truly reflects a significant market reaction, further statistical testing is required. The significance test results will provide a stronger basis for assessing whether the research hypothesis regarding the existence of market reactions can be accepted or rejected.

Significance Analysis of Average Abnormal Return (AAR)

To test the first hypothesis (H1), this study tested the significance of the Average Abnormal Return (AAR) value on each day during the event window period. The test was conducted using a one-sample t-test to determine whether the average abnormal return was significantly different from zero. If the AAR value is proven to be significant at a 5% confidence level (p-value ≤ 0.05), it can be concluded that the market reacted to the announcement of the issuance of sustainable bonds on that day. Conversely, if the p-value is greater than 0.05, the abnormal return that occurred is considered insufficient to indicate a meaningful market reaction. This test aims to see whether the published information contains information that can influence investor decisions in the short term.

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Table 7 Average Abnormal Return Significance Test Results (AAR)

Variabel	Mean	t-count	p-value	decision
AAR	-0.005862407	-0.779898343	0.453513937	Not Significant

Based on the significance test results in Table 7, the AAR p-value of 0.4535 is greater than the significance level of 5%, so it can be concluded that the average abnormal return around the announcement date is not significantly different from zero. This shows that on a daily basis, the market does not respond strongly enough to information about the issuance of sustainable bonds.

Thus, the first hypothesis (H1), which states that there is a significant Average Abnormal Return around the announcement date, cannot be accepted. This condition can be interpreted as meaning that information about the issuance of sustainable bonds may have been anticipated by investors before the official announcement date, so that when the information was published, the market no longer reacted significantly. In addition, investors may need time to evaluate the economic impact of these instruments before making adjustments to their portfolios. Thus, on a daily basis, the announcement of sustainable bond issuance has not been able to trigger significant changes in aggregate stock prices.

Analysis of Cumulative Abnormal Return Significance (CAR)

The second hypothesis (H2) was tested using Cumulative Abnormal Return (CAR) to determine whether there was a significant cumulative impact during the event window period. The test was conducted by comparing the CAR value to zero using a one-sample t-test.

Table 8 Cumulative Abnormal Return Significance Test Results (CAR)

Variabel	Mean	t-count	p-value	decision
CAR	-0.064486474	-4.124303136	6.34564E-05	Significant

Unlike the AAR results, testing of the Cumulative Abnormal Return (CAR) shows that several issuers had significant values during the event window period. This indicates that although the reaction does not always appear immediately on a particular day, the accumulation of stock price movements over several days can produce a meaningful impact. The CAR p-value of 0.000063 is less than 0.05, which means that there is a

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significant Cumulative Abnormal Return during the observation period. These results indicate that even though the market does not react strongly on a daily basis, the accumulation of stock price movements over several days produces a meaningful impact.

Significance at the individual level shows that investor responses to sustainable bond announcements are not always the same across companies. Market reactions tend to be influenced by the characteristics of the company issuing the bonds. Companies with a good reputation, strong fundamentals, and a track record of implementing sustainable programs are generally more trusted by investors. This trust can increase market confidence that the funds obtained from the bonds will actually be used for sustainable projects and provide added value for the company in the future. Conversely, for companies with a lower sustainability reputation or weaker fundamentals, information about the issuance of sustainable bonds may not be responded to significantly by the market. Therefore, differences in company characteristics can affect how investors assess this information. Thus, the second hypothesis (H2), which states that there is a cumulative market reaction, can be accepted.

Significance Analysis of Cumulative Average Abnormal Return (CAAR)

The third hypothesis (H3) aims to see whether the market as a whole responds to the announcement of continuous bond issuance. For this purpose, the Cumulative Average Abnormal Return (CAAR) measure is used. The test is conducted by comparing the CAAR value to zero.

Table 9 Cumulative Average Abnormal Return Significance Test Results CAAR)

Variabel	Mean	t-count	p-value	decision
CAAR	0.001039804	0.000782271	0.882761931	Not Significant

The results of testing the Cumulative Average Abnormal Return (CAAR) show that the CAAR p-value of 0.8828 is greater than the significance level of 5%. In aggregate, this value is not significantly different from zero. This means that when viewed from the entire sample, the announcement of sustainable bond issuance has not been able to generate a consistent and collective market reaction.

This finding indicates that although there are several companies that have experienced changes in their share prices, the direction of movement between issuers tends to cancel each other out when averaged. This condition shows that investors in the Indonesian capital market still have diverse perceptions of sustainable bond instruments.

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In addition, the insignificance of CAAR may reflect that sustainability factors are not yet a major consideration in short-term investment decisions. Investors may still prioritize traditional financial indicators over ESG-based information. Thus, the third hypothesis (H3) cannot be accepted.

CONCLUSION

This study aims to analyze stock market reactions to announcements of sustainable bond issuances in Indonesia using an event study approach. Market reactions are measured through Average Abnormal Return (AAR), Cumulative Abnormal Return (CAR), and Cumulative Average Abnormal Return (CAAR) during the event window period from t−5 to t+5. Based on the results of statistical tests that have been conducted, several conclusions were obtained as follows.

First, testing of the Average Abnormal Return (AAR) shows that the average abnormal return on a daily basis is not significantly different from zero. This indicates that the market does not provide a strong immediate response on the days surrounding the announcement date. Thus, the first hypothesis (H1) is rejected.

Second, the results of testing the Cumulative Abnormal Return (CAR) show significant values during the observation period. This finding indicates that even though the reaction does not appear instantly, investors make gradual price adjustments so that the impact is seen in the accumulation of returns. Therefore, the second hypothesis (H2) is accepted.

Third, at the aggregate level, the Cumulative Average Abnormal Return (CAAR) does not show statistical significance. This indicates that the direction of reaction among companies in the sample is not uniform, so that when averaged, the impact becomes insignificant. Thus, the third hypothesis (H3) is rejected.

In general, the results of this study indicate that announcements of sustainable bond issuance do contain information for investors, but market responses tend to take time and are not formed collectively across all companies.

REFERENCES

Abdurrahim, M.F. (2025) *Abstract The Impact Of Sustainable Bonds On The Financial Performance Of Listed Companies In Indonesia*.

Brown, S.J. and Warner, J.B. (1985) *The Case of Event Studies**, *Journal of Financial Economics*. North-Holland Using Daily Stock Returns.

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

Edward Freeman, R. *et al.* (1984) *A Stakeholder Approach to Strategic Management*. Available at: http://papers.ssrn.com/paper.taf?abstract_id=263511.

Etikan, I. (2016) "Comparison of Convenience Sampling and Purposive Sampling," *American Journal of Theoretical and Applied Statistics*, 5(1), p. 1. Available at: https://doi.org/10.11648/j.ajtas.20160501.11.

Fama, E.F. (1970) "Fama-Efficient-capital-markets-1970."

Flammer, C. (2021) "Corporate green bonds," *Journal of Financial Economics*, 142(2), pp. 499–516. Available at: https://doi.org/10.1016/j.jfineco.2021.01.010.

Gupta, A. and Arya, P.K. (2020) "Impact of splits on stock splits ratios around announcement day: Empirical evidence from india," *Investment Management and Financial Innovations*. LLC CPC Business Perspectives, pp. 345–359. Available at: https://doi.org/10.21511/imfi.17(3).2020.26.

ICMA (2018) "green-bonds-principles-june-2018-270520."

Khotari, S.P. and Warner, J.B. (2006) *"Econometrics of Event Studies."*

Mackinlay, A.C. (1997) "MacKinlay-1996-Event-Studies-in-Economics-and-Finance."

Mathew, S. and Sivaprasad, S. (2024) "An empirical analysis of corporate sustainability bonds," *Business Strategy and the Environment*, 33(4), pp. 3299–3316. Available at: https://doi.org/10.1002/bse.3663.

Mocanu, M., Constantin, L.G. and Cernat-Gruici, B. (2021) "Sustainability bonds. An international event study," *Journal of Business Economics and Management*, 22(6), pp. 1551–1576. Available at: https://doi.org/10.3846/jbem.2021.15372.

Ningrum, R.K. and Usman (2024) "Return on Equity dan Cumulative Abnormal Return Pada Perusahaan Perbankan," *Jurnal Ilmiah Manajemen Dan Bisnis*, 25(2), pp. 86–105. Available at: https://doi.org/10.30596/jimb.v25i2.21896.

Ordonez-Borrallo, R., Ortiz-de-Mandojana, N. and Delgado-Ceballos, J. (2025) "Environmental, Social, and Governance Bonds and Stock Market Reactions: An Event Study," *Business Strategy and the Environment* [Preprint]. Available at: https://doi.org/10.1002/bse.70214.

Poggensee, J. (2025) "Generating shareholder value through the announcement of sustainability-linked bond issuance," *Journal of Climate Finance*, 10. Available at: https://doi.org/10.1016/j.jclimf.2024.100057.

Setiawan, A. *et al.* (2024) "Event Study Of The New Economy Board On Abnormal Return And Trading Volume Activity Of Company Shares In The Indonesia Stock Exchange This work is licensed under a Creative Commons Attribution-ShareAlike

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4.0 International," *Eduvest-Journal of Universal Studies*, 4(08). Available at: http://eduvest.greenvest.co.id.

Shimauchi, T. *et al.* (2025) "Sustainability bond, sustainability-linked bond, and firms' environmental performance," *International Review of Financial Analysis*, 102. Available at: https://doi.org/10.1016/j.irfa.2025.104127.

Spence, M. (1973) *Job Market Signaling*, *Source: The Quarterly Journal of Economics*.

Tang, D.Y. and Zhang, Y. (2020) "Do shareholders benefit from green bonds?," *Journal of Corporate Finance*, 61. Available at: https://doi.org/10.1016/j.jcorpfin.2018.12.001.

Yuan, M. (2024) *Beyond green bonds: Stock market reactions to ESG bond announcements and issuances in Japan*.

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