Market Reactions to Economic, Social, and Environmental Contributions Post-COVID-19 a Study on ESG-Based Index Constituents

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ABSTRACT: A company's value in relation to its economic, social, and environmental performance is measured by market reactions, which are represented by anomalous returns. As evidenced by abnormal returns, corporate performance that promotes sustainability can boost investor confidence in the stock market. Using abnormal returns as a stand-in, this study attempts to examine how market reactions are affected by economic and social contributions per share as well as economic contributions per share. The research sample consists of companies that have consistently been constituents of the SEG index, which includes SRI-Kehati, ESG Sector Leaders IDX KEHATI, and ESG Quality 45 IDX KEHATI, as well as companies in other indices such as LQ45, IDX80, and Kompas1000, from 2021 to 2023. Purposive sampling was used in the sample selection process, and 119 businesses were chosen to serve as the study subjects. Using Eviews, multiple linear regression is the analytical method employed. The analysis concludes that economic contributions have an impact on market reactions, but social and environmental contributions per share do not significantly affect them. The study's managerial implications highlight how crucial it is for managers to creatively convey to the public the company's environmental and social accomplishments in quantifiable financial terms. The value, purpose, and advantages of the company's donations are highlighted by this method, which also makes it easier for the public to accept and comprehend corporate social contributions.

KEYWORDS: SCPS, EPS, Abnormal return

I. INTRODUCTION

This study examines the reaction of the Indonesian stock market after the end of the COVID-19 pandemic and whether companies committed to Corporate Social Responsibility (CSR) were affected. The research focuses on companies that are constituents of ESG (Environmental, Social, and Governance)-based indices, including the SRI-KEHATI Index, ESG Sector Leaders IDX KEHATI, and ESG Quality 45 IDX KEHATI, as well as companies included in LQ45, IDX80, and Kompas100. Companies listed in LQ45, IDX80, and Kompas100 are known for their good liquidity and large market capitalization, supported by solid company fundamentals [1]. An event study approach is applied to test the changes in stock prices of companies after the government announced the end of the COVID-19 pandemic in Indonesia. According to the Presidential Decree of the Republic of Indonesia No. 17 of 2023 regarding the End of the COVID-19 Pandemic Status in Indonesia, the pandemic was declared over as of June 21, 2023 [2]. The World Health Organization (WHO) also lifted the global COVID-19 emergency status on May 5, 2023, based on the low transmission rates of COVID-19 and global vaccination achievements.

As commercial entities, businesses use a variety of resources to accomplish financial objectives and must take social and environmental factors into account. Such focus is the cornerstone of a business's long-term viability. Other obligations include compliance with regulations and laws, as well as social and environmental practices, which reflect responsible business practices [3]. Investors observe and evaluate the business practices of organizations, including their economic performance and social and environmental impact [4]. Organizations present reports that include financial performance and transparent disclosures of environmental and social contributions as sources of information on corporate sustainability.

The development of impact investing with ESG (Environmental-Social-Governance) principles, or green investing, shows a general global increase[5]. In fact, investments in ESG indices have grown more rapidly compared to conventional investments. Corporate Social Responsibility (CSR) is a concept or strategy that emphasizes a company's commitment to act ethically regarding the impact of its planning and operational activities on the environment and society [6]. Investors observe and pay attention to the business practices of organizations, including their economic performance, governance, and social responsibility[4]. Leins, S argues that environmental, social, and governance performance allows financial analysts to understand factors related to corporate responsibility as market signals and use them to support their investment narratives [7]. Engaging in CSR is a way for companies to create businesses that benefit many people. CSR is a company's investment to enhance its image in the eyes of the public and create a competitive advantage [8].

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Corporate Social Responsibility (CSR) is a concept or strategy that emphasizes a company's commitment to acting ethically regarding the impact of its planning and operational activities on the environment and society [8]. Investors observe and pay attention to the business practices of organizations, including their economic performance, governance, and social responsibility[4]. Leins, S argues that environmental, social, and governance performance enables financial analysts to understand factors related to corporate responsibility as market signals and use them to support their investment narratives[8]. CSR refers to economic, legal, ethical, and organizational community expectations regarding corporate initiatives. To participate in social responsibility, companies must be accountable not only to their shareholders but also to customers, employees, suppliers, and investors [9].

.The implementation of CSR in Indonesia is influenced by global CSR trends[10]. Jalal (2010) further emphasizes that the oil and gas sector, along with banking, clearly has a global industry connection that will compel stakeholders to enforce responsible business practices. Problems arise in medium and small-sized enterprises that are still focused on short-term financial gains and where local industry relationships have not yet encouraged companies to integrate CSR as part of a sustainable business management strategy [8].

A stock index is a statistical measure that reflects the overall price movement of a selected group of stocks based on specific criteria and methodologies, and it is periodically evaluated. Its purpose is to measure market sentiment, assess and model investment returns, systematic risk, and risk-adjusted performance. The Indonesia Stock Exchange publishes the "IDX Stock Index Handbook," which provides a concise overview of the indices offered by the IDX [1]. The stock indices used in this study are those referring to ESG (Environmental, Social, and Governance) criteria, including the SRI-KEHATI Index, ESG Sector Leaders IDX KEHATI, ESG Quality 45 IDX KEHATI, as well as LQ45, IDX80, and Kompas100.

This study aims to provide relevant findings on this issue based on the lifting of the COVID-19 emergency status by the Government of the Republic of Indonesia through the Ministry of Health, declaring the COVID-19 pandemic in Indonesia to have ended as of June 21, 2023. Using an event study method, the research questions formulated in this study are:

1. Are market responses impacted by social and environmental factors?
2. Is there an effect of economic contributions on market reactions?
3. Does the market respond more strongly to environmental and social contributions or weaker when companies have better or worse economic contributions?

2. LITERATURE REVIEW

2.1. Corporate Social Responsibility (CSR)

According to Kotler & Lee [11], companies engaging in business practices and investments must support social objectives to enhance the well-being of surrounding communities and protect the environment. Corporate social responsibility is an ethical practice carried out by companies to maintain productivity while considering the impacts on the company's environment. Wagner & Tsukamoto [12] state that economic performance and social responsibility are integrated into the strategic objectives of a company, which are divided into several dimensions: the systemic dimension of the market economy, the constitutional legal dimension, and the stock market dimension.

The guidelines for Social Responsibility for business organizations globally have been established in the International Standard Operating (ISO) 26000. The ISO 26000 guidelines were set based on the resolutions from the World Summit on Sustainable Development held at the "Rio Earth Summit on Environment" in 1992 and the "World Summit on Sustainable Development" in 2002. The purpose of establishing ISO 26000 is to serve as a standard for organizational practices in implementing social responsibility. In Indonesia, CSR regulations are outlined in Law No. 20 of 2007 concerning Limited Liability Companies, Article 1, Clause 3, which defines social and environmental responsibility (TJSL) as the commitment of a company to participate in sustainable economic development to improve the quality of life and the environment, benefiting the company itself, the local community, and society in general.

2.2. Economic Contribution

CSR is a company investment rather than an expendable cost; it is an investment aimed at enhancing the company's image, distinguishing it from others, or increasing its competitive advantage [8]. The emphasis on CSR has increased among governments, businesses, non-profits, and society. Gelp and Strawser [13] suggest that companies with better CSR performance have higher levels of information disclosure in their financial reports.

Earnings per share (EPS) is a proxy for economic contribution. According to Margaretha [14], the earnings per share (EPS) formula is as follows.:

$$EPS = \frac{\text{Earnings Available to Common Shareholders}}{\text{Number of Outstanding Common Shares}}$$

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2.3. Social and Environmental Contribution (SCVPS)

The implementation of corporate social responsibility policies is a fundamental motivation for companies to express their economic, social, and environmental contributions. The formulation of Social Contribution Value Per Share (SCVPS) is based on three main theories: Stakeholder Theory, Resource Dependence Theory, and Legitimacy Theory [15]. According to these three main theories, a company's social contributions are not limited to society and the environment; obligations to the state through taxes, creditors, and employees also fall under social contributions [16].

The measurement tool used to assess a company's social contribution is Social Contribution Value Per Share (SCVPS)[16], which provides information to companies and investors about the sustainability practices they undertake. SCVPS represents the total value of economic, social, and environmental contributions based on the value per share. The economic contribution value is represented by EPS, and the performance of social and environmental contributions is calculated based on the value per share or Social Contribution Value Per Share (SCVPS). The SCVPS formula used in this research is shown in the equation below:

SCPS = CVSP / TSC

SCPS = Social Contribution per Share

CVSP = Tax Payment + Employee Expense + Interest Expense + Donation & Community Investment.

TSC = Total Number of Shares at the end of Fiscal Year

2.4. Market Reaction

Market reactions arise from the disclosure of events or new information that causes changes in a company's value, leading to investor reactions in the form of either an increase or decrease in stock prices, which results in gains from the rise in stock prices, known as abnormal returns. Cumulative Abnormal Return, or CAR, is a measure of excess returns over what investors would typically anticipate and is used to proxy market reactions. Jogiyanto [17], in his book Portfolio Theory and Investment Analysis, describes CAR as the sum of abnormal returns from the period of days before and after the information disclosure. The content of information regarding an announcement can be seen in the following diagram.
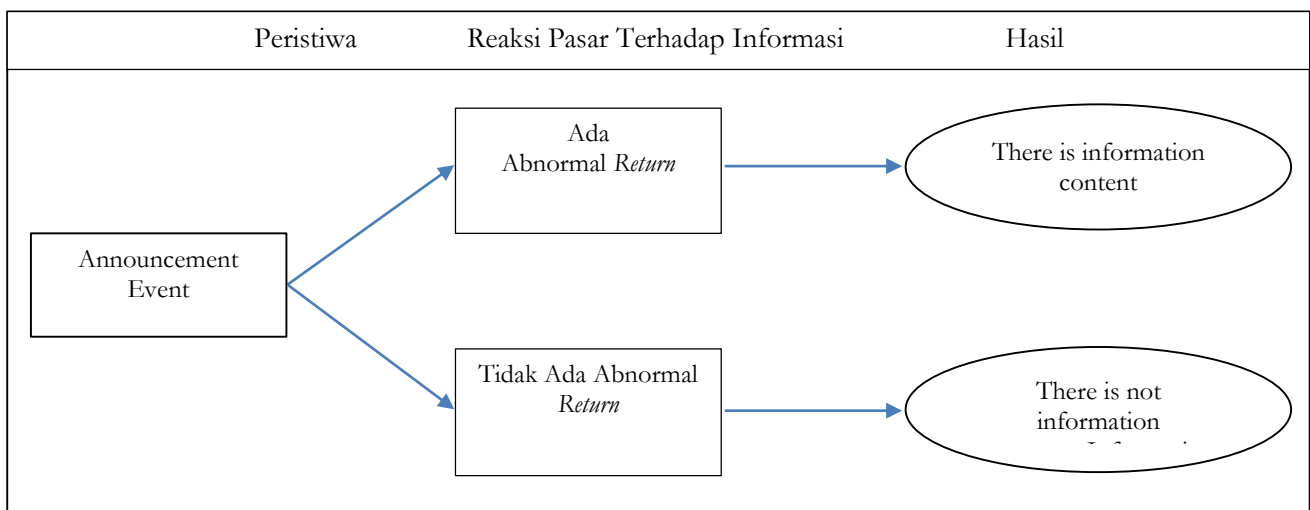
The model to measure abnormal returns or abnormal returns (RTN) occurring after the announcement of performance disclosure by the company is as follows [17]:

$$RTN_{i.t} = R_{i.t} - E[R_{i.t}]$$

dimana:

$RTN_{i.t}$ = *Return* tak normal sekuritas ke-i pada periode peristiwa ke-t

$R_{i.t}$ = *Return* realisasi yang terjadi untuk sekuritas ke-i pada periode peristiwa ke-t

$E[R_{i.t}]$ = *Return* ekspektasi sekuritas ke-i pada periode peristiwa ke-t

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Untuk mengukur *Cummulative Abnormal Return (CAR)* atau Akumulasi

Return Tak Normal (ARTN) sebagai berikut :

$$ARTN_{i.t} = \sum_{a=t3}^{t} RTN_{i.a}$$

3. METHODOLOGY
3.1. Research Subjects and Objects
This study is an event study, which is a research design used to examine the effects, relationships, or impacts of a particular event on certain dependent variables, which can be responded to by the capital market through specific indicators, including stock price movements [14]. The event study in this research is used to calculate abnormal returns (AR) in the stock market resulting from the event of the lifting of the COVID-19 pandemic status in Indonesia, effective from June 21, 2023.

When estimating AR in a model, it is necessary to select a time period to construct the expected model, known as the estimation period. The period that may be influenced by an event is referred to as the event period or event window.

Secondary data from sustainability and yearly reports is the sort of data used, and stock index data for companies that are constituents of the SEG index, including SRI-Kehati, ESG Sector Leaders IDX KEHATI, ESG Quality 45 IDX KEHATI, as well as companies listed in other indices such as LQ45, IDX80, and Kompas1000. Other data sources include statistical bulletins, government publications, information published or unpublished from within or outside the company, data available from previous research, case studies and library documents, online data, company websites, and the internet [17].

The sample for this study consists of companies that are constituents of the SRI-Kehati, ESG Sector Leaders IDX KEHATI, and ESG Quality 45 IDX KEHATI indices for the period of March to May 2023, as well as other indices such as LQ45, IDX80, and Kompas1000 for the period of February to July 2023, as listed on the Indonesia Stock Exchange. The sample was selected using purposive sampling because the researcher chose the sample based on specific criteria, which are:

1. Companies that are constituents of the SEG indices, namely SRI-Kehati, ESG Sector Leaders IDX KEHATI, and ESG Quality 45 IDX KEHATI, for the period of March to May 2023.
2. Companies that are constituents of the LQ45, IDX80, and Kompas1000 indices for the period of February to July 2023.
3. Companies that are constituents of the SEG indices, namely SRI-Kehati, ESG Sector Leaders IDX KEHATI, and ESG Quality 45 IDX KEHATI, which have published audit reports for three consecutive years (2020 - 2023).
4. Companies that are constituents of the LQ45, IDX80, and Kompas1000 indices, which have published sustainability reports for three consecutive years (2020 - 2022).
5. Companies that do not meet these criteria are excluded from the sample.Based on these criteria, a sample of 119 companies was obtained. The criteria for sample selection are presented in Table 1 below.

Table 1: Criteria for Sample Selection

No.	Description	Issuers
1.	ESG Sector Leaders IDX KEHATI, ESG Quality 45 IDX KEHATI, LQ45, IDX80, Kompas1000, and SRI-Kehati index members' number	144
2.	Number of companies not meeting the criteria	(25)
3.	Number of sample companies for the study	119

Table 2: List of Samples

No.	Company Code	Company Name	No.	Company Code	Company Name	No.	Company Code	Company Name
1	AALI	Astra Agro Lestari Tbk.	41	DRMA	DHARMA POLIMETAL Tbk	81	NCKL	Latinusa Tbk
2	ABMM	ABM Investama Tbk.	42	DSNG	Dharma Satya Nusantara Tbk.	82	PGAS	Perusahaan Gas Negara Tbk.
3	ACES	Ace Hardware Indonesia Tbk.	43	ELSA	Elnusa Tbk.	83	PGEO	Tourindo Guide Indonesia Tbk
4	ADHI	Adhi Karya (Persero) Tbk.	44	EMTK	Elang Mahkota Teknologi Tbk.	84	PNBN	Bank Pan Indonesia Tbk
5	ADMR	Adaro Minerals Indonesia Tbk.	45	ENRG	Energi Mega Persada Tbk.	85	PNLF	Panin Financial Tbk.
6	ADRO	Adaro Energy Indonesia	46	ERAA	Erajaya Swasembada	86	POWR	Cikarang Listrindo Tbk

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		Tbk.			Tbk.			
7	AGII	Samator Indo Gas Tbk.	47	ESSA	Surya Esa Perkasa Tbk.	87	PRDA	Prodia Widyahusada Tbk
8	AGRO	Bank Raya Indonesia Tbk.	48	EXCL	XL Axiata Tbk.	88	PTBA	Bukit Asam Tbk.
9	AKRA	AKR Corporindo Tbk.	49	GGRM	Gudang Garam Tbk.	89	PTPP	PP (Persero) Tbk.
10	AMRT	Sumber Alfaria Trijaya Tbk.	50	GOTO	GoTo Gojek Tokopedia Tbk.	90	PWON	Pakuwon Jati Tbk.
11	ANTM	Aneka Tambang Tbk.	51	HEAL	Medikaloka Hermina Tbk.	91	RAJA	Rukun Raharja Tbk.
12	APIC	Pacific Strategic Financial Tbk.	52	HMSP	H.M. Sampoerna Tbk.	92	RMKE	RMK Energy Tbk.
13	ARTO	Bank Jago Tbk.	53	HRUM	Harum Energy Tbk.	93	SCMA	Surya Citra Media Tbk.
14	ASII	Astra International Tbk.	54	ICBP	Indofood CBP Sukses Makmur Tbk.	94	SGER	Sumber Global Energy Tbk.
15	ASRI	Alam Sutera Realty Tbk	55	IMPC	Impack Pratama Industri Tbk	95	SIDO	Industri Jamu dan Farmasi Sido Muncul Tbk.
16	ASSA	Adi Sarana Armada Tbk.	56	INCO	Vale Indonesia Tbk.	96	SILO	Siloam International Hospitals Tbk
17	AUTO	Astra Otopart Tbk	57	INDF	Indofood Sukses Makmur Tbk.	97	SMDR	Samudera Indonesia Tbk.
18	AVIA	Avia Avian Tbk.	58	INDY	Indika Energy Tbk.	98	SMGR	Semen Indonesia (Persero) Tbk.
19	BABP	Bank MNC Internasional Tbk.	59	INKP	Indah Kiat Pulp & Paper Tbk.	99	SMRA	Summarecon Agung Tbk.
20	BBCA	Bank Central Asia Tbk.	60	INTP	Indocement Tunggal Prakarsa Tbk.	100	SMSM	Selamat Sempurna Tbk
21	BBHI	Allo Bank Indonesia Tbk.	61	IPPE	Indo Pureco Pratama Tbk.	101	SRTG	Saratoga Investama Sedaya Tbk.
22	BBKP	Bank KB Bukopin Tbk.	62	ISAT	Indosat Tbk.	102	SSIA	Surya Semesta Internusa Tbk
23	BBNI	Bank Negara Indonesia (Persero) Tbk.	63	ITMG	Indo Tambangraya Megah Tbk.	103	SSMS	Sawit Sumbermas Sarana Tbk
24	BBRI	Bank Rakyat Indonesia (Persero) Tbk.	64	JPFA	Japfa Comfeed Indonesia Tbk.	104	TAPG	Triputra Agro Persada Tbk.
25	BBTN	Bank Tabungan Negara (Persero) Tbk.	65	JSMR	Jasa Marga (Persero) Tbk.	105	TBIG	Tower Bersama Infrastructure Tbk.
26	BFIN	BFI Finance Indonesia Tbk.	66	JTPE	Jasundo Tiga Perkasa Tbk	106	TINS	Timah Tbk.
27	BJBR	Bank Pembangunan Daerah Jawa Barat dan Banten, Tbk	67	KLBF	Kalbe Farma Tbk.	107	TKIM	Pabrik Kertas Tjiwi Kimia Tbk.
28	BMRI	Bank Mandiri (Persero) Tbk.	68	LPPF	Matahari Department Store Tbk.	108	TLKM	Telkom Indonesia (Persero) Tbk.
29	BMTR	Global Mediacom Tbk.	69	LSIP	PP London Sumatra Indonesia Tbk.	109	TOBA	TBS Energi Utama Tbk.
30	BRIS	Bank Syariah Indonesia Tbk.	70	MAPA	Map Aktif Adiperkasa Tbk	110	TOTL	Total Bangun Persada Tbk
31	BRMS	Bumi Resources Minerals Tbk.	71	MAPI	Mitra Adiperkasa Tbk.	111	TOWR	Sarana Menara Nusantara Tbk.
32	BRPT	Barito Pacific Tbk.	72	MDKA	Merdeka Copper Gold Tbk.	112	TPIA	Chandra Asri Petrochemical Tbk.
33	BSDE	Bumi Serpong Damai Tbk.	73	MEDC	Medco Energi Internasional Tbk.	113	TRIM	Trimegah Sekuritas Tbk
34	BSSR	Baramulti Suksessarana Tbk.	74	MIKA	Mitra Keluarga Karyasehat Tbk.	114	UNTR	United Tractors Tbk.
3	BTPS	Bank BTPN Syariah	75	MLPL	Multipolar Tbk.	115	UNVR	Unilever Indonesia Tbk.

5		Tbk.						
3 6	BUKA	Bukalapak.com Tbk.	76	MNCN	Media Nusantara Citra Tbk.	116	WIFI	Solusi Sinergi Digital Tbk.
3 7	CPIN	Charoen Pokphand Indonesia Tbk	77	MPMX	Mitra Pinasthika Mustika Tbk.	117	WIKA	Wijaya Karya (Persero) Tbk.
3 8	CTRA	Ciputra Development Tbk.	78	MTEL	Dayamitra Telekomunikasi Tbk.	118	WIRG	Wir Asia Tbk
3 9	DMAS	Puradelta Lestari Tbk	79	MTMH	Murni Sadar Tbk.	119	WSKT	Waskita Karya (Persero) Tbk.
4 0	DOID	Delta Dunia Makmur Tbk.	80	MYOR	Mayora Indah Tbk.			

3.1. Analysis Methods

Using SCVPS (Social Contribution Value per Share), this study attempts to investigate the effects of economic, social, and environmental contribution values on firm value. Firm value is assessed based on market reactions to securities performance, measured by abnormal return (AR) and cumulative abnormal return (CAR)[17].

The event window selection, based on prior research, includes 7 days before and 7 days after the announcement, specifically June 21, 2023, as the event window. The next stage involves a causal study, which includes conducting statistical tests by analyzing data using eViews.

The next step is to conduct a causal study, which involves testing through statistical methods by analyzing data using eViews, with the following steps:

1. Classical Assumption Test
2. Normality Test
3. Multicollinearity Test
4. Hypothesis Test

4. RESULT AND DISCUSSION

4.1. Descriptive Statistics

This study's descriptive statistical analysis incorporates information on both independent and dependent variables, with the following summary of the values for each variable

Table 4: Descriptive Statistics

Date: 08/02/24 Time: 21:30 Sample: 1 119				
	CAR	SCPS	EPS	SCPS*EPS
Mean	0.042992	430.6518	14134.25	1754178.
Median	0.030700	137.5000	75.50000	8892.000
Maximum	0.320675	6755.000	1032715.	98107925
Minimum	-0.208800	1.000000	-34.00000	-1394.000
Std. Dev.	0.128247	877.8835	109068.4	10825408
Skewness	0.213261	5.074409	8.302037	7.499274
Kurtosis	3.039789	33.12689	73.54142	62.05632
Jarque-Bera	0.856355	4716.265	24508.34	17325.49
Probability	0.651696	0.000000	0.000000	0.000000
Sum	4.815150	48233.00	1583036.	1.96E+08
Sum Sq. Dev.	1.825652	85545415	1.32E+12	1.30E+16
Observations	112	112	112	112

Source: Processed Data

Referring to Table 3, the CAR variable for 112 companies has an average value of 0.042992, with a minimum value of -0.208800 and a maximum value of 0.320675. The standard deviation of the CAR variable is 0.128247.

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For the SCPS variable among the 112 companies, the average value is 430.6518, with a minimum of 1.000 and a maximum of 6755.0000. The standard deviation of the SCPS variable is 877.8835.

The EPS variable for 112 companies has an average value of 14,134.25, with a minimum of -34.000 and a maximum of 10,327.15. The standard deviation of the EPS variable is 109,068.40.
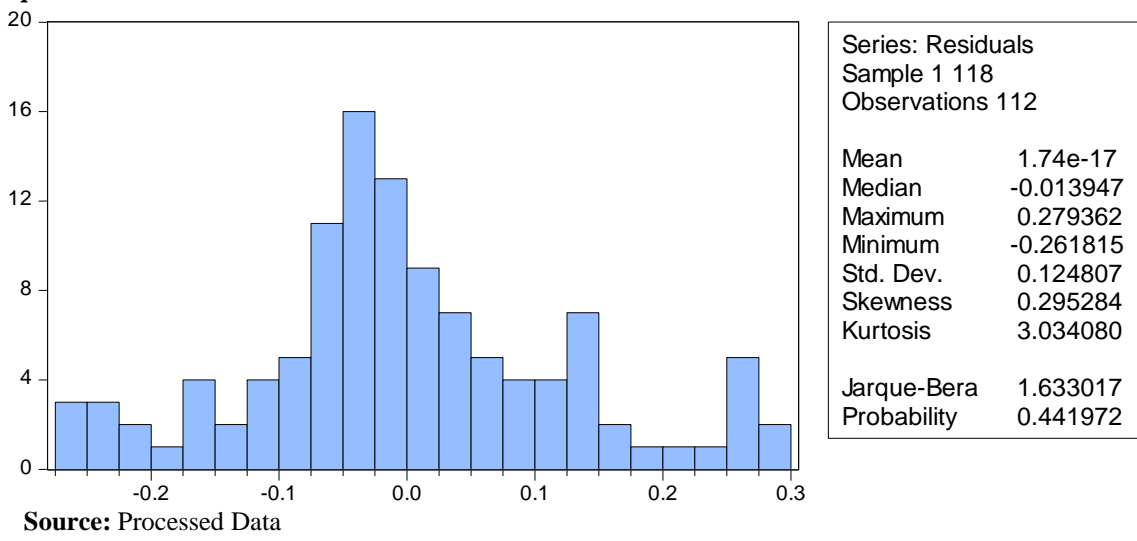
The interaction variable SCPS*EPS has an average value of 1,754,178, with a minimum value of -1,394,000 and a maximum value of 98,107,925.

4.2. Classical Assumption Test
4.2.1. Normality Test

In this study, the Jarque-Bera test is used to detect whether the residuals are normally distributed. The results of the normality test using the Jarque-Bera test are shown in the following Figure 1:

Table 5: Jarque-Bera Test

Series: Residuals	
Sample 1 118	
Observations 112	
Mean	1.74e-17
Median	-0.013947
Maximum	0.279362
Minimum	-0.261815
Std. Dev.	0.124807
Skewness	0.295284
Kurtosis	3.034080
Jarque-Bera	1.633017
Probability	0.441972

Source: Processed Data

The p-value of 0,441972 is more than 0.05, which is greater than 0.05, we accept the null hypothesis (H0), indicating that the residuals are normally distributed. Therefore, the assumption of normality is met.

4.2.2. Multikolinearitas Test (F Test)

One common method to detect multicollinearity is by examining the tolerance values and variance inflation factors (VIF). Typically, multicollinearity is indicated by a tolerance value less than 0.10 or a VIF value greater than 10[18]. Below is the multicollinearity detection using the correlation matrix of independent variables

Table 6: Multikolinearitas Test

	SCPS	EPS	SCPS*EPS
SCPS	1.000000	-0.045659	0.101962
EPS	-0.045659	1.000000	0.966191
SCPS*EPS	0.101962	0.966191	1.000000

Source: Processed Data

Table 7: Variance Inflation Factor (VIF) Test

Variance Inflation Factors		
Date: 08/02/24 Time: 21:29		
Sample: 1 119		
Included observations: 112		
Coefficient	Uncentered	Centered

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Variable	Variance	VIF	VIF
C	0.008737	1.294917	NA
SCPS	1.31E-08	1.835993	1.477287
EPS	1.26E-11	22.36458	21.99192
SCPS*EPS	1.29E-15	22.76419	22.17663

Source: Processed Data

Table 6 shows the VIF (Variance Inflation Factor) and tolerance values in the collinearity statistics. A model is considered free from multicollinearity if the average VIF value is less than 10. Table 8 indicates that there is evidence of multicollinearity among some of the independent variables, as VIF values exceed 10 and tolerance values are less than 0.1. Therefore, the model has multicollinearity issues. However, in this study, the multicollinearity problem can be ignored because it arises due to the effects of the moderating variable. Addressing this multicollinearity issue could eliminate the moderating variable, making it a limitation of this research [19].

4.2.3. Heteroskedastisity Test
In this study, the heteroscedasticity test is conducted using the Glejser method, which involves regressing the independent variables against the absolute residuals. Heteroscedasticity is indicated if most of the partial t-test p-values are less than 0.05 and the p-value of the F-test is less than 0.05.

Table 8: Heteroskedastisity Test

Heteroskedasticity Test: Glejser			
F-statistic	0.355355	Prob. F(3,108)	0.7854
Obs*R-squared	1.094742	Prob. Chi-Square(3)	0.7783
Scaled explained SS	1.235068	Prob. Chi-Square(3)	0.7446

Test Equation:
Dependent Variable: ARESID
Method: Least Squares
Date: 08/02/24   Time: 21:31
Sample: 1 118
Included observations: 112

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.093703	0.008827	10.61490	0.0000
X1	4.66E-06	1.08E-05	0.431996	0.6666
X2	3.16E-07	3.35E-07	0.943659	0.3475
X1*X2	-3.41E-09	3.39E-09	-1.004630	0.3173

R-squared	0.009774	Mean dependent var	0.094205
Adjusted R-squared	-0.017732	S.D. dependent var	0.081378
S.E. of regression	0.082096	Akaike info criterion	-2.126784
Sum squared resid	0.727901	Schwarz criterion	-2.029694
Log likelihood	123.0999	Hannan-Quinn criter.	-2.087391
F-statistic	0.355355	Durbin-Watson stat	1.540890
Prob(F-statistic)	0.785354		

Source: Processed Data

Based on Table 8 above, all the variables have a partial t-value p-value (PROB) > 0.05, indicating that we accept H0. Additionally, the p-value for the F-test is 0.7854, which is greater than 0.05, so we also accept H0. Therefore, the model does not exhibit problems with heteroscedasticity and meets the requirement of homoscedasticity.

4.2.4. Hypothesis Test

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Table 10: Results of Serial Correlation Testing

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	0.140853	Prob. F(2,106)	0.8688
Obs*R-squared	0.296863	Prob. Chi-Square(2)	0.8621

Test Equation:
Dependent Variable: RESID
Method: Least Squares
Date: 08/02/24   Time: 21:32
Sample: 1 118
Included observations: 112
Presample and interior missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.000247	0.013725	0.018019	0.9857
X1	-9.75E-07	1.69E-05	-0.057809	0.9540
X2	-1.20E-08	5.21E-07	-0.022984	0.9817
X1*X2	1.34E-10	5.28E-09	0.025451	0.9797
RESID(-1)	0.039646	0.098664	0.401825	0.6886
RESID(-2)	-0.040708	0.100471	-0.405171	0.6862

R-squared	0.002651	Mean dependent var	1.74E-17
Adjusted R-squared	-0.044394	S.D. dependent var	0.124807
S.E. of regression	0.127548	Akaike info criterion	-1.228570
Sum squared resid	1.724452	Schwarz criterion	-1.082936
Log likelihood	74.79991	Hannan-Quinn criter.	-1.169482
F-statistic	0.056341	Durbin-Watson stat	2.077076
Prob(F-statistic)	0.997911		

Source: Processed Data

F-Statistic Value: 0.140853 with a p-value or Prob.F: 0.8688 > 0.05. This indicates that there is no serial correlation, and the assumption of autocorrelation is satisfied.

Table 11: Hasil Regresi

Dependent Variable: Y_W				
Method: Least Squares				
Date: 08/02/24 Time: 21:30				
Sample (adjusted): 1 118				
Included observations: 112 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.054370	0.013605	3.996319	0.0001
SCPS	-2.38E-05	1.66E-05	-1.430431	0.1555
EPS	4.37E-07	5.16E-07	0.845652	0.3996
SCPS*EPS	-4.17E-09	5.22E-09	-0.797339	0.4270

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R-squared	0.052922	Mean dependent var	0.042992
Adjusted R-squared	0.026614	S.D. dependent var	0.128247
S.E. of regression	0.126529	Akaike info criterion	-1.261630
Sum squared resid	1.729035	Schwarz criterion	-1.164541
Log likelihood	74.65128	Hannan-Quinn criter.	-1.222238
F-statistic	2.011654	Durbin-Watson stat	2.004182
Prob(F-statistic)	0.116612		

Source: Processed Data

Hypothesis 1

The purpose of the first hypothesis is to determine whether a positive effect exists of Social and Environmental Contribution (SCPS) on market reaction (CAR). The hypothesis is tested as follows:

- **H0**: There is no positive effect of SCPS on CAR.
- **Ha**: There is a positive effect of SCPS on CAR.

Table 12 shows that the coefficient for SCPS is -2.38×10^{-5}, with a t-statistic of -1.430431, which is less than 0.05. Therefore, H0 is accepted, meaning that SCPS does not have a significant effect on CAR.

Hypothesis 2

The second hypothesis aims to test whether there is a positive effect of Economic Contribution (EPS) on market reaction (CAR). The hypothesis is tested as follows:

- **H0**: There is no positive effect of EPS on CAR.
- **Ha**: There is a positive effect of EPS on CAR.

Table 12 shows that the coefficient for EPS is 4.37×10^{-7}, with a t-statistic of 0.845652, which is greater than 0.05. Therefore, H0 is accepted, meaning that EPS does not have a significant effect on CAR.

Hypothesis 3

The third hypothesis aims to determine whether the market reaction (CAR) to Social and Environmental Contribution (SCPS) becomes stronger or weaker when a company has better or worse Economic Contribution (EPS). The hypothesis is tested as follows:

- **H0**: There is no positive effect of SCPS and EPS on CAR.
- **Ha**: There is a positive effect of SCPS and EPS on CAR.

Table 12 shows that the coefficient for SCPS*EPS is -4.17×10^{-9}, with a t-statistic of -0.797339, which is less than 0.05. Therefore, H0 is accepted, meaning that there is no significant effect of the interaction between SCPS and EPS on CAR. The interaction between SCPS and EPS does not have a meaningful impact on CAR.

5. CONCLUSION

1. The Effect of SCPS on CAR

The findings of the study show that SCPS, a proxy for the company's social and environmental contribution, does not have a significant impact on CAR, which is a proxy for market reaction as shown through stock performance. This implies that the importance of environmental and social factors made by the company does not influence investors in their decision-making regarding the company's stock. Investors do not use information on social and environmental contributions, including total tax expenses, employee-related costs, interest expenses, and voluntary donations to society and the environment, as a basis for investment decisions. This study does not support Cheng et al.[20], which found that CSR disclosure significantly affects abnormal returns, indicating that investors consider CSR information for decision-making. Similarly, it contradicts previous research by Noronha et al. [16], where SCPS as a proxy for social performance had a positive and significant effect on market value (CAR). The announcement of the termination of the COVID-19 emergency status through the Indonesian Presidential Decree No. 17 of 2023, stating that the COVID-19 outbreak ended on June 21, 2023, did not positively impact the company's stock performance. Management should make efforts to inform shareholders and the public that within the company's social contributions, there are quantifiable contributions from investors in terms of value per share. Market participants (investors) need comprehensive information about these contributions as additional benefits (social), apart from the economic benefit represented by earnings per share (EPS).

2. The Effect of EPS on CAR

The research results indicate that the economic contribution variable of the company, proxied by EPS, has an insignificant effect on CAR, which serves as a proxy for the company's market value based on stock performance. This suggests that the economic

contribution value (EPS) of the company does not influence investors' decisions regarding investment in the company's stock. Investors did not use information on economic contribution as a basis for stock investment decisions during the announcement of the termination of the COVID-19 emergency status in Indonesia. This finding aligns with Cahyani et al.[21], which stated that EPS does not affect stock abnormal returns. However, this study contradicts Noronha et al. [16], where EPS as a proxy for economic performance had a positive and significant effect on CAR. Kumar[22] concluded in his study that earnings per share is a strong and significant predictor of stock market prices

3. Interaction of SCPS and EPS on CAR

The research results show that the interaction between SCPS and EPS is statistically insignificant, indicating that the interaction between SCPS and EPS does not have a meaningful impact on CAR.

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