MARKET REACTION TO ECONOMIC PERFORMANCE, GOVERNANCE AND CORPORATE SOCIAL ENVIRONMENTAL RESPONSIBILITY (Study on SRI-Kehati Index Constituents)

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Abstract: Market reactions, proxied by abnormal returns, are used as a measure of company value concerning economic, social, and environmental performance, in conjunction with corporate governance. Company performance that supports sustainability, coupled with quality governance and ethical principles, can enhance investor confidence in the stock market, as reflected by abnormal returns. This research aims to analyze the influence of social and environmental contributions per share value, economic contribution per share, governance, size, and sales growth on market reactions using abnormal return proxies, with governance acting as a moderator of the relationship between social and environmental contributions and market reactions. The sample for this research comprises companies that have consistently remained constituents of the SRI-KEHATI BEI index from 2015 to 2019. Sample selection utilized purposive sampling, resulting in 18 companies and a total of 90 observed research objects. The analysis technique employed is multiple linear regression on panel data, utilizing Eviews. Based on the analysis results, it is concluded that the value of social and environmental contributions per share does not significantly affect market reactions, while economic contributions do. Governance and company size do not significantly affect market reactions, whereas sales growth has a positive impact. Furthermore, governance does not moderate the relationship between the value of social and environmental contributions and market reactions, nor does economic contributions moderate this relationship. The moderation of economic contributions on governance and market reactions yields a negative effect. The managerial implication of this research underscores the importance for managers to innovatively communicate the value of the company's social and environmental contributions to the public in quantifiable financial terms. This approach enables the measurement of the company's social contribution and facilitates public acceptance and understanding, thereby emphasizing the values, goals, and benefits of the company's contributions.

Keywords: SCPS, EPS, CGI, size, growth, abnormal return

1. Introduction

Companies, as business organizations, utilize various resources to achieve economic goals and are obligated to consider environmental and social conditions. This consideration forms the primary foundation for company sustainability. Another obligation is adherence to rules and regulations, social norms, and environmental standards as a manifestation of responsible business conduct (Landi and Sciarelli, 2018). Investors scrutinize and take note of the business practices of organizations, including economic performance, governance, and social responsibility (Armstrong, 2020). Leins (2020) argues that environmental, social, and governance performance enables financial analysts to comprehend factors associated with corporate responsibility as market indicators, which they use to reinforce their investment narratives.

2. Literature Review

2.1. Corporate governance

Governance is an internal system comprising policies, processes, and a group of individuals responsible for directing and controlling management activities for the benefit of stakeholders, ensuring good business practices,
objectivity, and integrity (Man and Wong, 2013). When investors establish their investment policies for a company, one of the key indicators they evaluate is the quality of corporate governance. Suhadak et al. (2018) concluded that higher quality corporate governance, characterized by the composition of independent commissioners and the level of ownership concentration, leads to increased company value.

2.2 Social Contribution

Landi and Sciarelli (2018), in their study on companies listed on the Financial Times Stock Exchange Milano Indice in Borsa (FTSE MIB) index in Italy, found that investors are increasingly interested in corporate social responsibility (CSR) and sustainability practices adopted by companies. This interest stems from companies' ability to demonstrate excellence in environmental, social, and governance (ESG) performance assessments. Similarly, companies listed on the Shanghai Stock Exchange (SSE) in China have recognized the importance of transparently disclosing economic, social, and environmental performance. As a result, standardized social performance metrics have been introduced, such as the Social Contribution Value per Share (SCVPS), aimed at providing standardized financial quantification to the public. This enables measurement of corporate social responsibility performance and facilitates comparison of CSR contributions (Noronha, C., Guan, J., & Fan, 2018). Zhang, R., Noronha, and Guan (2020) conducted a literature review of the criteria and methodology used by SCVPS, comparing it with social performance measurement tools in other countries, such as the Domini 400 Social Index, FTSE4 Good Index, and The Dow Jones Sustainability Index (DJSI). They opined that SCVPS is a popular tool for measuring social performance (Measurements of Corporate Social Performance/MCSPs) due to its simplicity, transparency, high comparability, and accessibility among potential investors.

The development of the global impact investment landscape, utilizing ESG (Environmental-Social-Governance) principles or more commonly known as green investment, has generally shown an increase. In fact, investment growth with the ESG index has outpaced ordinary investment. According to reports in the mass media, 2,400 financial asset managers and owners have signed the UN commitment for sustainable investment (UN-PRI), with assets totaling US$ 86 trillion. Sustainable assets in developed countries grew to 30.7 trillion US dollars, based on a survey by the Global Sustainable Investment Alliance (Kehati, 2020; Alexander, 2020). The potential for green investment in Indonesia is substantial, estimated at IDR 65 trillion in the energy sector, IDR 46 trillion in agriculture and fisheries, and IDR 31 trillion in the water sector. When combined, these three sectors amount to a total of IDR 142 trillion (Dimas Jarot Bayu, 2020). Responding to investor interest in shares of companies included in Environmental Social and Governance (ESG) assessments, the Indonesian government, through the Indonesian Stock Exchange (BEI), established the ESG Leaders index in 2022.

2.3. SRI-KEHATI Index

Indonesia recognizes the need to accommodate investor interest in companies that prioritize sustainable performance. In 2009, it adopted a stock index based on Sustainable and Responsible Investment (SRI). The Indonesian Stock Exchange, in collaboration with the Kehati Foundation, launched a stock index known as the SRI-Kehati Index. It is one of the thematic indexes on the Indonesian Stock Exchange, consisting of 25 constituents selected based on three criteria: (1) Core business aspects that exclude the pesticide, nuclear, weapons, tobacco, alcohol, pornography, gambling, and genetic engineering sectors; (2) Financial and Market Aspects with indicators such as a market capitalization of more than IDR 1 trillion, assets of more than IDR 1 trillion based on the last audited financial report, a free float ratio of 10% based on public ownership shares on the Stock Exchange, and positive PER for the last 6 months; and (3) Fundamental Aspects comprising Corporate Management, Environment, Community Involvement, Business Practices, Human Resources, and Human Rights (IDX Stock Index Handbook, 2019). The following data illustrates the performance development of the SRI-Kehati Index alongside the IHSG and LQ45 indices for the period 2009 – 2019.
2.4. Market Reaction

The SCVPS formula (Noronha et al., 2018; Zhang et al., 2020) can complement the assessment of the SRI-Kehati Index regarding issues of transparency and selection bias in measuring the value of a company's economic, social, and environmental contributions. This is due to several reasons: (1) SCVPS employs a transparent calculation method and is highly accessible to the public; the SCVPS value can be derived from financial report data and the company's annual sustainability report. (2) Three main theories are applied to explain the motivation of companies to engage in socially responsible behavior, namely stakeholder theory (ST), legitimacy theory (LT), and resource dependence theory (Noronha et al., 2018; Zhang et al., 2020). In this research, SCVPS is adapted to the context of annual corporate sustainability reporting in Indonesia, focusing on ISO 26000 core subjects (The Environment and Community involvement and development), as well as GRI (Global Reporting Initiative) disclosure 201-1 of economic value produced and distributed and social disclosure.

The research variables used remain consistent; however, the SCVPS indicator was developed with a different research object, namely companies listed on the Indonesia Stock Exchange, which have successively become constituents of the SRI-Kehati Index for the period 2015 - 2019. Market reaction analysis utilizes share prices as a measure of company value within constituent companies of the SRI-Kehati index concerning the disclosure of economic, social, environmental, and corporate governance performance. Market reaction is proxied by Cumulative Abnormal Return (CAR), which represents the excess that occurs over the normal return expected by investors. Consequently, abnormal return (AR) is the difference between the actual level of profit and the expected level of profit (Hartono, 2019).

This research also highlights the significance of good corporate governance quality. Companies with better governance (CG) quality tend to implement more social responsibility practices. Suhadak, S., Kurniati, K., Handayani, S. R., & Rahayu (2019) concluded in their research that the higher the quality of corporate governance, including the composition of independent commissioners and the level of ownership concentration, the higher the company value.

3. Methodology

3.1. Research Subjects and Objects

This research uses a quantitative approach with regression analysis, combining time series and cross-sectional data (panel data). It utilizes eight independent variables: Economic Performance (EPS), Social and Environmental Performance (SCPS), Corporate Governance (CGI), Company Size (Size), Company Growth (Growth),...
SCPSCGI, SCPSEPS, and CGI*EPS as moderating variables, along with one dependent variable, Company Value (CAR). The data used are secondary data obtained from various sources, including annual reports, sustainability reports, and stock index data of constituent companies of the SRI-Kehati index. Additionally, data are sourced from statistical bulletins, government publications, published or unpublished information from both internal and external sources, previous research, case studies, library documents, online sources, company websites, and the internet (Sekaran and Bougie, 2017).

This research is a modification of previous studies on the influence of social performance, along with the interaction of corporate governance, on the value of companies listed on the Shanghai Stock Exchange (SSE) in China using SCVPS (Noronha et al., 2018). The limitations of this research are as follows:

1. Samples were drawn from companies listed on the Indonesian Stock Exchange, specifically the SRI-Kehati Index Constituents for the period 2015 – 2019.
2. The samples consist of companies that have been constituents of the SRI-Kehati index for five consecutive years and have published annual reports and sustainability reports.
3. Secondary data from the companies’ Annual Reports and Sustainability Reports for the years 2015 – 2019 were used in the research.
4. The research aims to address the weaknesses of the SRI-Kehati index in terms of bias and transparency.
5. This research expands upon the theoretical basis of SCVPS by incorporating the core subjects of ISO 2600 and GRI.
6. The independent variables include SCVPS, with dimensions of Earning Per Share (EPS) and Social Contribution Value Per Share (SCPS). The second independent variable is Corporate Governance, with indicators such as Ownership Concentration (CON), percentage of Independent Directors (IND BOD%), and BOD Size. The Dependent Variable is Firm Value, measured by Abnormal Return (AR).

Tables 1 and 2 below outline the sample selection criteria and provide a list of sample companies, consisting of 13 companies selected from a pool of 65 observations for the period 2015 - 2019.

Table 1 Sample Selection Criteria

<table>
<thead>
<tr>
<th>No.</th>
<th>Information</th>
<th>Issuer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Number of companies that are constituents of the SRI-Kehati index for the 2015-2019 period</td>
<td>34</td>
</tr>
<tr>
<td>2.</td>
<td>Number of companies that do not meet the criteria during the 2015 - 2019 period</td>
<td>(16)</td>
</tr>
<tr>
<td>3.</td>
<td>Number of research sample companies</td>
<td>18</td>
</tr>
</tbody>
</table>

Source: Data Processing

Table 2 Sample List

<table>
<thead>
<tr>
<th>No.</th>
<th>Company Code</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>ADHI</td>
<td>Adhi Karya Persero Tbk</td>
</tr>
<tr>
<td>2.</td>
<td>ASII</td>
<td>Astra Internasional Tbk</td>
</tr>
<tr>
<td>3.</td>
<td>BBCA</td>
<td>Bank Central Asia Tbk</td>
</tr>
<tr>
<td>4.</td>
<td>BBNI</td>
<td>Bank Negara Indonesia Persero Tbk</td>
</tr>
<tr>
<td>5.</td>
<td>BBRI</td>
<td>Bank Rakyat Indonesia Persero Tbk</td>
</tr>
<tr>
<td>6.</td>
<td>BMRI</td>
<td>Bank Mandiri Persero Tbk</td>
</tr>
<tr>
<td>7.</td>
<td>INDF</td>
<td>Indofood Sukses Makmur Tbk</td>
</tr>
<tr>
<td>8.</td>
<td>JPFA</td>
<td>Japfa Comfeed Indonesia Tbk</td>
</tr>
<tr>
<td>9.</td>
<td>JSMR</td>
<td>Jasa Marga Persero Tbk</td>
</tr>
<tr>
<td>10.</td>
<td>KLBF</td>
<td>Kalbe Farma Tbk</td>
</tr>
</tbody>
</table>
3.1.1. Corporate Social and Environmental Contribution

The company's social contribution is measured using SCVPS (Social Contribution Value Per Share). The SCVPS concept, based on the guidelines of the Shanghai Stock Exchange (SSE), employs two variables: EPS and SCPS. In the context of companies in Indonesia, the equation is \( SCVP_S = CVEP + \frac{CVSP}{TSC} \), where CVEP represents the contribution value of economic performance represented by EPS, CVSP is the social performance contribution value, and TSC is the total share capital. Therefore, EPS is utilized to represent the economic contribution (profitability) made by the company to society, while SCPS represents the social contribution the company makes beyond an economic perspective \( SCPS = CVSP/TSC \) (Noronha et al., 2018). The formula for calculating the social contribution per share using SCVPS (Noronha et al., 2018) is as follows:

\[
SCVP_S = EPS + \frac{Tax\ Payment + Employee\ Expense + Interest\ Expense + Donation}{Total\ Number\ of\ Shares\ at\ the\ end\ of\ Fiscal\ Year}
\]

Note:
- SCVPS : Social Contribution Value Per Share
- EPS : Earning Per Share

3.1.2. Company Economic Contribution.

Economic contribution value (CVEP) is proxied by earnings per share (EPS). The earnings per share (EPS) equation based on Margaretha (2011) is as follows:

\[
EPS = \frac{Profits\ available\ to\ common\ shareholders}{Number\ of\ ordinary\ shares\ outstanding\ (outstanding)}
\]

3.1.3. Corporate Governance

Radyati (2010; 2014) states that governance can be employed as an organizational strategy by determining the board composition so that the organization can maintain and obtain its capital sources. This research measures the quality of corporate governance using the dimensions of ownership concentration (CON), the size of independent directors (IND BOD), and the number of directors (board of directors - BOD SIZE) (Black et al., 2006; Noronha et al., 2018). In line with Noronha et al. (2018), the measurements of CG quality are as follows:

\[
CGI = (1 - CON) + \% IND BOD + BOD SIZE
\]

Note:
- CON = \( \frac{\sum\ Largest\ share\ ownership}{\sum\ Outstanding\ company\ shares} \times 100\%
- IND BOD = \( \frac{\text{independent\ director}}{\sum\ BOD\ Size} \times 100\%
- BOD Size = The\ size\ of\ the\ board\ of\ directors\ is\ measured\ by\ the\ number\ of\ members\ of\ the\ board\ of
3.1.4. Company Size

Firm Size (ΔSIZE) is measured by transforming the company's total asset ratio for two consecutive years into natural log form, which represents the value of changes in the company's total assets. Therefore, the formulation for ΔSize used is as follows:

$$\Delta SIZE = \ln \left( \frac{Asset_{it}}{Asset_{i(t-1)}} \right); \text{natural log of total assets ratio}$$

3.1.5. Company Growth

Company growth is measured using revenue or sales growth. Sales growth percentage refers to the increase in sales and services between the current year and the previous year (Carvalho & Costa, 2014). Company growth (growth) is measured by the natural log of the sales ratio for two consecutive years, representing the company's sales growth (Ashbaugh-Skaife et al., 2006; Noronha et al., 2018). Therefore, the sales growth formulation used is as follows:

$$\text{Growth} = \ln \left( \frac{Sales_{it}}{Sales_{i(t-1)}} \right); \text{natural log of sales ratio}$$

3.1.6. Market Reaction (CAR)

The model used to quantify abnormal returns (RTN) subsequent to a company's performance disclosure announcement is as outlined by Jogiyanto (2019):

$$\text{RTN}_{i.t} = \text{R}_{i.t} - \text{E}[\text{R}_{i.t}]$$

in which:

$$\text{RTN}_{i.t} = \text{abnormal return of the i-th security in the event period t}$$

$$\text{R}_{i.t} = \text{return on the realization of the i-th security in the t event period}$$

$$\text{E}[\text{R}_{i.t}] = \text{expected return of the i-th security in the event period t}$$

Formula $\text{R}_{i.t}$ and $\text{E}[\text{R}_{i.t}]$ as follows:

$$\text{R}_{i.t} = \frac{(P_{i.t} - \text{Pi.t} - 1)}{\text{Pi.t} - 1}$$

To calculate expected return $\text{E}[\text{R}_{i.t}]$, it used market model as follows:

$$\text{E}[\text{R}_{i.t}] = \alpha_i + \beta_i * \text{E} [\text{R}_{\text{mkt}}]$$

where:

$$\alpha_i = \text{intercept for the i-th security}$$

$$\beta_i = \text{slope coefficient which is the beta of the i-th security}$$

$$\text{E}[\text{R}_{\text{mkt}}] = \text{market index return (R_{mkt}) in the t event period}$$

to measure cumulative abnormal return (CAR) or Accumulated Abnormal Return (ARTN) as follows:

$$\text{ARTN}_{i.t} = \sum_{a=t}^{t} \text{RTN}_{i.a}$$
3.1.7. SCPS to CAR Moderated by CGI

Enhanced governance quality strengthens positive market reactions to social performance disclosures, while weakening reactions are observed in companies with poorer governance standards. The formulation depicting the interplay between SCPS and CAR moderated by governance quality (CGI) is outlined as follows:

\[
CAR = \ln \Delta \text{SCPS} \times \text{CGI}
\]

3.1.8. SCPS and CAR Moderated by EPS

According to Wagner & Tsukamoto (2019), economic performance and social responsibility are integrated into a company's strategic objectives across various dimensions, including the systemic dimension of the market economy, legal-constitutionsal dimension, and dimensions of market exchange. Thus, the formulation to elucidate the relationship between social performance represented by SCPS and CAR with economic performance moderation (EPS) (Noronha et al., 2018) is presented below:

\[
CAR = \ln \Delta \text{SCPS} \times \ln \Delta \text{EPS}
\]

3.1.9. CGI on CAR Moderated by EPS

Noronha et al. (2018) demonstrated that economic performance (EPS) moderates the influence of corporate governance quality (CGI) on CAR, indicating that superior economic performance enhances the positive impact on abnormal returns (AR). The formulation to articulate the relationship between economic contribution represented by EPS and CAR moderated by governance (CGI) is detailed as follows:

\[
CAR = \ln \Delta \text{EPS} \times \text{CGI}
\]

3.2. Analysis Methods

This study conducts observations using time series data and cross-sectional data simultaneously, focusing on the constituent companies of the SRI-Kehati index during the period 2015 - 2019. The combination of time series and cross-sectional data is referred to as panel data. The research aims to investigate the impact of economic, social, and environmental (ESL) contribution values calculated per share and the quality of corporate governance on company value. Company value is evaluated based on market reactions to securities performance, specifically abnormal returns (AR) and cumulative abnormal returns (CAR) (Jogiyanto, 2019). The quality of corporate governance (CG) is assessed using the corporate governance index (CGI), which comprises three dimensions: ownership concentration (CON), percentage of independent commissioners (% IND COM), and board of directors' size (BOD SIZE) (Noronha et al., 2018).

The contribution of a company's economic performance and its social and environmental performance is measured using earnings per share (EPS) and social contribution per share (SCPS), respectively. Additionally, the variables ΔSize and Growth are included in the equation model to account for company-level characteristics that may influence share prices under various circumstances (Rezee et al., 2012). ΔSize is calculated as the natural log of the total assets ratio over two consecutive years, representing the change in the company's total assets (Ashbaugh-Skaife et al., 2006). Growth is determined by the natural log of the sales ratio over two consecutive years, indicating sales growth.

The following regression model is used to assess the relationship between economic-based corporate contribution policies, ESG, investor reactions, and the influence of governance quality and corporate profits (Noronha et al., 2018).

\[
\begin{align*}
\text{CAR}_{it} = \alpha_0 + \alpha_1 \Delta \text{SCPS}_{it} + \alpha_2 \text{CGI}_{it} + \alpha_3 \Delta \text{EPS}_{it} + \alpha_4 \Delta \text{SCPS}_{it} * \text{CGI}_{it} \\
+ \alpha_5 \Delta \text{SCPS}_{it} * \Delta \text{EPS}_{it} + \alpha_6 \text{CGI}_{it} * \Delta \text{EPS}_{it} + \alpha_7 \Delta \text{SIZE}_{it} + \alpha_8 \text{GROWTH}_{it} + \epsilon
\end{align*}
\]

in which:
\[ \text{CAR} = \text{Cumulative abnormal returns}; \]
\[ \Delta \text{SCPS} = \ln[\text{SCPS}/\text{SCPS}_{(t-1)}], \text{log } n \text{ of lagged social contribution ratio}; \]
\[ \text{CGI} = (1 - \text{CON}) + \% \text{IND COM} + \text{BOD SIZE} \]
\[ \Delta \text{EPS} = \ln[(\text{EPS}_i/\text{EPS}_{(t-1)}], \text{natural log of earnings per share ratio}; \]
\[ \Delta \text{SIZE} = \ln[(\text{Asset}_i/\text{Asset}_{(t-1)}], \text{natural log of total assets ratio}; \]
\[ \text{Growth} = \ln[(\text{Sales}_i/\text{Sales}_{(t-1)}], \text{natural log of sales ratio}. \]
\[ \epsilon = \text{Error} \]

4. Result and Discussion

4.1. Descriptive Statistics

Descriptive statistical analysis in this research encompasses data on dependent, independent, and control variables. A description of the value of each variable is as follows:

Table 3: Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>0.017083</td>
<td>0.096320</td>
<td>1.778561</td>
<td>0.010659</td>
<td>0.163168</td>
<td>0.015745</td>
<td>0.005257</td>
<td>0.142557</td>
<td>0.098391</td>
</tr>
<tr>
<td>Maximum</td>
<td>0.230100</td>
<td>0.961487</td>
<td>2.128453</td>
<td>1.457557</td>
<td>1.608531</td>
<td>0.472834</td>
<td>2.580208</td>
<td>0.882362</td>
<td>0.744884</td>
</tr>
<tr>
<td>Minimum</td>
<td>-0.107550</td>
<td>-1.531827</td>
<td>1.349998</td>
<td>-1.815290</td>
<td>-2.960241</td>
<td>-0.241116</td>
<td>-3.131372</td>
<td>-0.114777</td>
<td>-0.441098</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>0.054322</td>
<td>0.275884</td>
<td>0.171022</td>
<td>0.518383</td>
<td>0.499584</td>
<td>0.109067</td>
<td>0.916306</td>
<td>0.160609</td>
<td>0.174879</td>
</tr>
<tr>
<td>Obs</td>
<td>89</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cross sections</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Processed Data

4.2. Model Selection and Evaluation

In this research, model selection utilized the Chow test and Hausman test to ensure the appropriate model. The Chow Test was used to determine whether the model utilized pooled least squares or fixed effects.

Ho: Common Effect
Ha: Fixed effect

Table 4: The result of the Chow Test

<table>
<thead>
<tr>
<th>Effects Test</th>
<th>Statistic</th>
<th>d.f.</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section Chi-square</td>
<td>20.862101</td>
<td>17</td>
<td>0.02325</td>
</tr>
</tbody>
</table>

Source: Processed Data

The Redundant Fixed Test CAR model yields a Cross-section Chi-square probability value of 0.02325, which is smaller than \( \alpha = 0.05 \), indicating significance. Therefore, Ho is rejected, and Ha is accepted, confirming that the Fixed Effect Model (FEM) is appropriate.
The Hausman test is conducted to determine whether the model employed is Random Effect or Fixed Effect.

Ho: Random Effect Model
Ha: Fixed effect Model

Table 5: The result of Hausman Test

<table>
<thead>
<tr>
<th>Test Summary</th>
<th>Chi-Sq. Statistic</th>
<th>Chi-Sq. d.f.</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section random</td>
<td>7.495271</td>
<td>8</td>
<td>0.04843</td>
</tr>
</tbody>
</table>

Source: Processed Data

The Hausman test results for the CAR model yield a cross-section probability value of 0.04843, which is smaller than α 0.05, indicating significance. Therefore, Ho is rejected, and Ha is accepted, confirming that the accepted model is the Fixed Effect Model (FEM).

4.2.1. CAR Model Goodness of Fit Test

The adjusted R-Square value is 0.295585 or 29.5585%, indicating that the variation in the independent variables SCPS, CGI, EPS, SCPSCGI, SCPSEPS, CGIEPS, Size, and Growth in explaining the dependent variable CAR is 29.5585%, while the remainder is 70.4415%, ceteris paribus.

Table 6: Model Feasibility Test

<table>
<thead>
<tr>
<th>Model</th>
<th>Adjusted R-Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAR</td>
<td>0.295585</td>
</tr>
</tbody>
</table>

Source: Processed Data

4.2.2. Simultaneous Test (F Test)

Ho: β1 = β2 = β3 = β4 = β5 = β6 = β7 = β8 = 0

Taken together, there is no significant influence of the independent variables SCPS, CGI, EPS, SCPSCGI, SCPSEPS, CGIEPS, Size, and Growth on the dependent variable CAR, ceteris paribus.

Ha: β1 ≠ β2 ≠ β3 ≠ β4 ≠ β5 ≠ β6 ≠ β7 ≠ β8 ≠ 0

This implies that there is a significant influence of at least one independent variable (SCPS, CGI, EPS, SCPSCGI, SCPSEPS, CGIEPS, Size, Growth) on the dependent variable CAR, ceteris paribus.

Table 6: Simultaneous Test Results

<table>
<thead>
<tr>
<th>Model</th>
<th>Sig F Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAR</td>
<td>0.001948</td>
</tr>
</tbody>
</table>

Source: Processed Data
The simultaneous test results, indicated by the calculated significance F value of 0.001948, are smaller than α 0.05. Therefore, Ho is rejected, and Ha is accepted, signifying that there is a significant influence of at least one independent variable (SCPS, CGI, EPS, SCPSCGI, SCPSEPS, CGIEPS, Size, Growth) on the dependent variable CAR.

Individual Hypothesis Test (t-test) Panel Model Multiple Linear Regression

\[
\text{CAR}_{it} = \beta_0 + \beta_1 \Delta SCPS_{it} + \beta_2 CGI_{it} + \beta_3 \Delta EPS_{it} + \beta_4 \Delta SCPS_{it} \ast CGI_{it} + \\
\beta_5 \Delta SCPS_{it} \ast \Delta EPS_{it} + \beta_6 \Delta CGI_{it} \ast \Delta EPS_{it} + \beta_7 \Delta SIZE_{it} + \beta_8 \Delta GROWTH_{it} + \epsilon_{it}
\]

Table 7. Fixed Effect Model Output

<table>
<thead>
<tr>
<th>Variabel</th>
<th>Coefficient</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-0.104291</td>
<td>-0.797691</td>
<td>0.4280</td>
</tr>
<tr>
<td>SCPS?</td>
<td>-0.023456</td>
<td>-0.125614</td>
<td>0.9004</td>
</tr>
<tr>
<td>EPS?</td>
<td>0.371780</td>
<td>3.086465</td>
<td>0.0030</td>
</tr>
<tr>
<td>CGI?</td>
<td>0.072048</td>
<td>0.992048</td>
<td>0.3250</td>
</tr>
<tr>
<td>SCPSCGI?</td>
<td>0.015756</td>
<td>0.150997</td>
<td>0.8805</td>
</tr>
<tr>
<td>SCPSEPS?</td>
<td>-0.064835</td>
<td>-0.925491</td>
<td>0.3582</td>
</tr>
<tr>
<td>CGIEPS?</td>
<td>-0.188085</td>
<td>-2.656168</td>
<td>0.0100</td>
</tr>
<tr>
<td>SIZE?</td>
<td>-0.093865</td>
<td>-2.909684</td>
<td>0.0050</td>
</tr>
<tr>
<td>GROWTH?</td>
<td>0.044205</td>
<td>2.170999</td>
<td>0.0337</td>
</tr>
</tbody>
</table>

Source: Processed Data

The Panel Model Multiple Linear Regression Equation based on table 7 is as follows:

\[
\text{CAR}_{it} = -0.104291 - 0.023456 \Delta \text{SCPS}_{it} + 0.072048 \text{CGI}_{it} + 0.371780 \Delta \text{EPS}_{it} + \\
0.015756 \Delta \text{SCPS}_{it} \ast \text{CGI}_{it} - 0.064835 \Delta \text{SCPS}_{it} \ast \Delta \text{EPS}_{it} - 0.188085 \\
\text{CGI}_{it} \ast \Delta \text{EPS}_{it} - 0.093865 \Delta \text{SIZE}_{it} + 0.044205 \text{GROWTH}_{it} + \epsilon_{it}
\]

Hypothesis 1: testing the positive influence of Social and Environmental Contributions on market reactions. Table 7 shows that the SCPS coefficient value is negative at 0.023456, with a sig t statistic value of 0.4502 (0.9004/2), which is greater than α 0.05. This indicates that there is no positive influence of SCPS on CAR.

Hypothesis 2: testing the positive influence of Economic Contribution (EPS) on market reactions. Table 7 shows that the EPS coefficient value is positive at 0.371780, with a sig t statistic value of 0.0030 (0.0030/2), which is smaller than α 0.05. Thus, there is a positive influence of EPS on CAR. If EPS increases by 1, then CAR will increase by 0.37178 ceteris paribus.

Hypothesis 3: testing the positive influence of CGI on market reactions. Table 7 shows that the CGI coefficient value is positive at 0.072048, with a sig t statistic value of 0.1625 (0.3250/2), which is greater than α 0.05. This implies that there is a positive influence of CGI on CAR as evidenced by the coefficient value, but it is not statistically significant.
Hypothesis 4: testing whether positive market reactions to social contributions become stronger when the company has better CG quality. Table 7 shows that the SCPSCGI coefficient value is positive at 0.015756, with a statistical sig t value of 0.44025 (0.8805/2), which is greater than \( \alpha 0.05 \). This suggests that there is a positive influence of SCPSCGI on CAR as evidenced by the coefficient value, but it is not statistically significant.

Hypothesis 5: testing whether positive market reactions to social contributions become stronger when the company has a better economic contribution (EPS). Table 7 shows that the SCPSEPS coefficient value is negative at 0.064835, with a statistical sig t value of 0.44025 (0.8805/2), which is greater than \( \alpha 0.05 \). This means there is no positive influence of SCPSEPS on CAR.

Hypothesis 6: testing whether positive market reactions to corporate governance become stronger when companies have better economic performance. The hypothesis tested is as follows: Table 7 shows that the CGISEPS coefficient value is negative at 0.188085, with a sig t statistic value of 0.005 (0.0100/2), which is smaller than \( \alpha 0.05 \). This indicates a significant influence of CGISEPS on CAR. However, the sign test is not accepted because there should be a positive influence of CGIEPS on CAR. The results of this study show that CGIEPS has a negative effect of 0.188085, meaning that if CGIEPS increases by 1, CAR will decrease by 0.188085, ceteris paribus.

Hypothesis 7: testing the positive influence of company size on market reaction. Table 7 shows that the Size coefficient value is negative at 0.093865, with a sig t statistic value of 0.0025 (0.0050/2), which is smaller than \( \alpha 0.05 \). This indicates a significant negative effect of size on CAR. The research results prove that size has a negative effect of 0.093865, meaning that if size increases by 1, CAR will decrease by 0.093865, ceteris paribus.

Hypothesis 8: testing the positive influence of sales growth (growth) on market reactions. Table 7 shows that the growth coefficient value is positive at 0.044205, with a sig t statistic value of 0.01685 (0.0337/2), which is smaller than \( \alpha 0.05 \). This indicates a positive influence of growth on CAR. The resulting positive influence is 0.044205, meaning that if growth increases by 1, CAR will increase by 0.044205, ceteris paribus.

5. Conclusion

Analysis regarding the impact of Economic Contribution, represented by the EPS variable, Social and Environmental Contribution, represented by the SCPS variable, and Governance Index (CGI) on market reaction (CAR), with EPS acting as a moderating factor for SCPS and CGI on company value, as well as CGI as a moderating factor for the relationship between SCPS and firm value, yields several conclusions:

1. Social and environmental contribution per share (SCPS) does not influence market reactions as indicated by CAR. Investors do not utilize information on corporate social responsibility contributions, including total tax costs, employee costs, interest costs, and the value of voluntary donations to society and the environment, as a basis for stock investment decisions at the time of the SRI-Kehati index announcement by the Indonesian Stock Exchange (IDX). This finding is corroborated by Landi and Sciarelli (2019) and Putri et al. (2020).
2. Economic contribution (EPS) exhibits a positive and significant effect on market reactions as reflected by CAR.
3. The governance index (CGI) demonstrates a positive but insignificant effect on market reactions as observed through CAR. This result aligns with Bauer et al. (2004), Sugiarto (2010), and Wardhana et al. (2017), who suggest that corporate governance does not significantly impact stock returns. The lack of significance and the negative influence may stem from institutional ownership as a measure of GCG. Institutional investors typically comprise affiliated holding companies (Sugeng, 2010).
4. The governance index (CGI) does not moderate the relationship between social and environmental contribution per share (SCPS) and market reactions as represented by CAR.
5. Economic contribution (EPS) does not moderate the relationship between social and environmental contribution per share (SCPS) and market reactions as indicated by CAR.
6. Economic contribution (EPS) does not positively moderate the relationship between Governance (CGI) and market reactions as depicted by CAR.
7. Company size (size) exerts a negative and significant impact on market reaction as reflected by CAR.
8. Sales growth (growth) demonstrates a positive and significant effect on market reactions as represented by
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