

Market Reaction on the Announcement of SRI-KEHATI and FTSE4GBM Indices

Lydia I Kumajas¹, Sri Murni², Maryam Mangantar³, Ivonne S Saerang⁴, Joy E Tulung⁵

Universitas Sam Ratulangi^{1,2,3,4,5}

Bahu, Malalayang, Manado City, North Sulawesi, Indonesia

Correspondence email: lydia.kumajas@unima.ac.id

ORCID ID: <https://orcid.org/0000-0002-4423-7160>

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ABSTRACT

Sustainability is vital for long-term goal achievement involving environmental and human sustainability, the primary key to a company's operational sustainability. Sustainable finance, ESG, and business attract investors and increase company value, as shown by their reactions during the sustainability index crisis. This study aims to determine the market reaction to the announcement of additional shares on the SRI-KEHATI and FTSE4Good Index during the Covid-19 of 2020 and 2021. The indicator of market reaction is observed through Trading Volume Activity. The results show that there is a significant TVA around the announcement date on both observed indices, this study uses an event study.

Keywords: F4GBM, Finance Sustainable, Market Reaction, SRI-KEHATI, Trading Volume Activit

INTRODUCTION

Sustainability is the company's long-term goal. Its achievement is also related to environmental and human sustainability, which is the main key to the company's operational sustainability. The company's management is not only related to the interests of the owners, creditors, debtors, employees, suppliers, customers, and the community but also the company's concern for the environment as a unitary business ecosystem. In the end, it is not only aimed at improving the welfare of company owners and company value but also how to make company policies consider the balance of people, planet, and profit (The Triple Bottom Line), implying company responsibility (Distiawati, Wardhana, & Handayati, 2021). Investments in sustainable corporate stocks assume that sustainability is contrary to modern portfolio theory, where companies that implement sustainability in their activities require higher costs, thereby reducing shareholder returns (Langbein & Posner, 1980).

The policy of implementing sustainable finance and environmental, social and governance (ESG), and business attract investors and increase company value, as seen in their reactions during the crisis of the sustainability index. Roca (2013), in his research using the Dow Jones Sustainability World Index (DJSWI) Asia Pacific 2002 to 2010 data, found an increase in the trading volume of companies removed or added from DJSWI. The group of companies removed from the index was more significant than the group that was added. The data used in this study includes data from 2008 during the global financial crisis. However, this study did not make comparisons before and during the crisis. Another study using data from 2001 and 2007/2009, when the financial crisis occurred in the United States and several other countries, showed that Socially Responsible Investing (SRI) equity mutual funds performed better than conventional mutual funds during the crisis (Nofsinger & Varma 2014). Research during the global crisis due to Covid-19 showed that the market reaction (change in trading volume) in the High ESG group of companies was lower than that in the Low ESG group of companies (Broadstock, Chan, Cheng, & Wang, 2021). This occurs because investors in companies implementing ESG are calmer in the face of Covid-19 and are not in a hurry to sell their shares. Also, the investors believe that ESG companies can deal with the crisis due to Covid-19. This provides an overview of increasing investor confidence in companies oriented toward ESG and sustainability implementation.

Different understandings and views regarding sustainable finance may influence investor reactions. Sandberg, Juravle, Hedesström, and Hamilton (2009) stated that heterogeneity in Sustainable Responsible Investment (SRI) includes cultural and ideological differences between regions, values, norms, and ideologies between various SRI stakeholders and the SRI market. This may lead to different market reactions to sustainable finance. Malaysia and Indonesia are cognate countries, borderland country with similar cultures, geographical conditions, and problems with tropical forests and renewable energy. Malaysia and Indonesia stock market was concern on sustainable finance. Indonesia Stock Exchange (IDX) with SRI-KEHATI index was launched in June 2009. It measures the performance of 25 companies that perform well in encouraging sustainable businesses. The companies must implement environmental, social, good corporate governance (ESG) in their business operations and SRI. The Sustainability Index in Malaysia using the SRI or ESG category A is the FTSE4Good Bursa Malaysia (F4GBM) Index started at the end of 2014. Though both of country have a common culture and environmental and energy issues, there are differences in the achievement score of the Sustainable Development Goals (SDGs)

In previous studies, there were differences in stock market reactions that added to the composition of the Sustainable FTSE4Good Bursa Malaysia and SRI-KEHATI Indonesia stock indexes. Targanski and Murhadi (2021), in their research in the days after the announcement of the SRI-KEHATI index composition, found stocks added to the index has significantly negative abnormal returns; on the other hand, stocks added to the FTSE4Good index were significantly positive on the day after the announcement of the additions to the index. There are different investor reactions to the shares added to the two indexes as they respond differently to the additional stock information. The data used in this study is data before Covid-19, namely SRI-KEHATI 2009 to 2018 and data from 2014 to 2018 FTSE4Good. In addition to abnormal returns, trading volume is used to measure market reactions. Research by Kappou, Brooks, and Ward (2008) supported the hypothetical theory of information content with market reactions through changes in the trading volume of companies added or removed from the index.

The SRI-KEHATI index, when compared to other indices on the Indonesia Stock Exchange has a better performance. Putra and Husein (2021), using data from 2015 to 2019 of SRI-KEHATI index, index performance of SRI-KEHATI with risk-adjusted returns is better than the LQ-45 and JII indexes. In addition to improving the performance of SRI-KEHATI, there was an increase in Indonesia's ranking in achieving SDGs. Based on the value of Indonesia's SDGs, there was an increase in the value from 2016 with a value of 54.38 to 66.3 in 2021, and an increase in ranking from 102 in 2019 to 97 in 2021. Improved performance of SRI-KEHATI and FTSE4Good indexes, as well as the increase in the SDGs scores of Indonesia and Malaysia are signals of increasing private sector sustainability performance and achieving the country's sustainable development goals.

Based on previous research, there was an increase the performance of the SRI-KEHATI index, the resilience of the sustainability index during the global financial and economic crisis, and likewise an increase in Malaysia and Indonesia's SDGs. Researchers assume that there is a significant market reaction to the SRI-KEHATI index stock during the Covid-19 period, especially the stocks added to the SRI-KEHATI index, the investor responses to the FTSE4Good sustainability index. This study aims to obtain empirical evidence of market reaction to stocks added to the SRI-KEHATI and FTSE4Good Indexes during the Covid 19 period 2020 and 2021 using Trading Volume Activity (TVA).

LITERATURE REVIEW

Signaling theory is often associated with market reactions to information related to issuers. Issuers can signal the implementation of ESG or sustainable finance policies implemented through a sustainability report (Sustainable Report) and the company's registered in the composition of the sustainability index. This information can be used by other parties to make decisions, including buying or selling shares of the issuers. The Efficient Market Hypothesis (EMH) assumes that the price of a security usually reflects all information available to investors about the value of a security. According to this hypothesis, when new information about a security becomes available, the security quickly adjusts so that the security equals the security's value every time. One of the information investors can obtain is the listing of issuers on certain stock indexes in this study is the sustainability index.

Shares included in the SRI-KEHATI index must meet several criteria. They must be eligible shares to be considered as index constituent candidates. First, the company does not have a core business in the nine negative screening sectors of KEHATI. The negative sectors are pesticides, nuclear, weapons, tobacco, alcohol, pornography, gambling, and genetically modified organisms. Second, financial and liquidity screening

by considering market capitalization, total assets, net income, free float, and average trading value. The third is the calculation of the ESG value of shares, where sustainable performance includes aspects of the environment, social, and governance. From the results of the assessment, the 25 best stocks were selected. With the assessment criteria, the announcement of shares included in the SRI-KEHATI index list can be positive information, signalling that the company attends to people, the planet, and profit in carrying out company operations. The index in Malaysia that uses the ESG criteria is the FTSE4Good Bursa Malaysia (F4GBM). The F4GBM Index Constituents are taken from companies on the FTSE Bursa Malaysia EMAS Index, which is then assessed for the application of ESG. The index is in collaboration with FTSE Russel.

Hypothesis Selection Criteria suggests that the impact of changes in the composition of the index based on the established criteria describes the company's performance. According to Bechmann (2004), Hypothesis Selection Criteria explain the observed market reaction to changes in index composition. The existence of periodic changes in the equity index indicates that changes in the index's composition affect the market performance stock of companies added or deleted from the index. There are various reactions to changes in index composition. However, according to Afego (2017) this happens due to asymmetric information among investors. Sandberg et al. (2009) stated that SRI has heterogeneity, including cultural and ideological differences between regions, values, norms, and ideologies between various SRI stakeholders and the SRI market. Indonesia and Malaysia have cultural and geographical similarities, thus enabling the same market reaction to changes in the index in each country. As such, we hypothesized:

H1 : There is a significant trading volume activity around the day of the composition announcement of the SRI-KEHATI index on companies added to the index list.

H2: There is a significant trading volume activity around the day of the composition announcement of the FTSE4Good Bursa Malaysia (F4GBM) index on companies added to the index list.

RESEARCH METHOD

This study used a purposive sampling of stocks added to the SRI-KEHATI Index of the Indonesia Stock Exchange and the FTSE4Good Bursa Malaysia (F4GBM). The years of observation are 2020 and 2021. The data were the announcements of changes in index composition and trading volume data for each index. The two indices announce changes in index composition twice a year. The companies added to the SRI-KEHATI index were 12 companies, and FTSE4Good was 23. The data volume was five trading days before the announcement of the index composition, during the announcement, and five trading days after the announcement. Data in the form of the number of shares traded and outstanding shares were obtained from www.idx.co.id, www.bursamalaysia.com, and the company's official website. The data were then used to calculate the Trading Volume Activity (TVA) with the following formula:

$$\text{TVA} = \frac{\sum \text{stock}(i) \text{traded on day } t}{\sum \text{stock}(i) \text{ listed on day } t} \quad (1)$$

This study applied an event study by studying the market reaction to the announcement of shares added to the index. After the data were grouped in time order, the normality test was carried out. If it is not normally distributed then use the One sample T-test. If the data is not normally distributed, we use the One-Sample Wilcoxon.

RESULTS

SRI-KEHATI Index

The normality test results using Shapiro Wilk on the SRI-KEHATI data on the second day after the announcement of the index composition indicated that the data were normally distributed and were not normally distributed on the other days. Hypothesis testing was carried out by the One Sample T-test on the second day after the announcement and One-Sample Wilcoxon on other observation days. Table 1 below presents the results of processing using SPSS 24.

Table 1. One Sample T-test Results of SRI-KEHATI

| Days | t | df | Sig. (2-tailed) | Mean Difference | 95% Confidence Interval of the Difference | |
|------|------|----|-----------------|-----------------|---|----------|
| | | | | | Lower | Upper |
| +2 | 4.13 | 11 | 0.002 | 0.9341667 | 0.436366 | 1.431968 |

Source: Processed Data (2022)

As seen in Table 1, the results of the One sample T-test highlight a significant Trading Volume Activity on the second day after the announcement. Another day around the announcement, the One-Sample Wilcoxon Signed Rank test results in the rejected null hypothesis and received hypothesis 1 (see Table 2). There is a significant Trading Volume Activity (TVA) around the announcement day on stocks added to the SRI-KEHATI index list. This means that the market reactions to the announcement is important. Table 2 presents the results One-Sample Wilcoxon Signed Rank test for that period.

Table 2. One-Sample Wilcoxon Results of SRI-KEHATI

| Days | Sig. | Decision |
|------|-------|----------------------------|
| -5 | 0.002 | Reject the null hypothesis |
| -4 | 0.002 | Reject the null hypothesis |
| -3 | 0.002 | Reject the null hypothesis |
| -2 | 0.003 | Reject the null hypothesis |
| -1 | 0.002 | Reject the null hypothesis |
| 0 | 0.002 | Reject the null hypothesis |
| 1 | 0.002 | Reject the null hypothesis |
| 3 | 0.002 | Reject the null hypothesis |
| 4 | 0.002 | Reject the null hypothesis |
| 5 | 0.002 | Reject the null hypothesis |

Source: Processed Data (2022)

FTSE4Good Bursa Malaysia Index

Based on the normality test results, on the third day before the announcement of the index list, the data of FTSE4Good Bursa Malaysia were normally distributed and not normally distributed on the other days. Thus, the hypothesis test used for the third day before the announcement was the One Sample T-test and One-Sample Wilcoxon for the other day.

Table 3. One Sample T-test Results of FTSE4Good

| Days | t | df | Sig. (2-tailed) | Mean Difference | 95% Confidence Interval of the Difference | |
|------|-------|----|-----------------|-----------------|---|------------|
| | | | | | Lower | Upper |
| -3 | 5.124 | 22 | 0.000 | 1.352459816 | 0.80509764 | 1.89982200 |

Source: Processed Data (2022)

In this study, the results of the market reactions to the announcement of stocks added to the sustainability index in Malaysia and Indonesia get the same results. Based on table 3, there is a significant Trading Volume Activity (TVA) on the third day before the announcement of shares added to the FTSE4Good Bursa Malaysia index. The market reactions on other days are shown in Table 4; the results are the same. The null hypothesis is rejected, meaning that there is significant trading volume activity around the announcement of the composition of the FTSE4Good index on companies added to the index list.

Table 4. One-Sample Wilcoxon Results of FTSE4Good

| Days | Sig. | Decision |
|------|-------|----------------------------|
| -5 | 0.000 | Reject the null hypothesis |
| -4 | 0.000 | Reject the null hypothesis |
| -2 | 0.003 | Reject the null hypothesis |
| -1 | 0.002 | Reject the null hypothesis |
| 0 | 0.000 | Reject the null hypothesis |
| 1 | 0.000 | Reject the null hypothesis |
| 1 | 0.000 | Reject the null hypothesis |
| 3 | 0.002 | Reject the null hypothesis |
| 4 | 0.000 | Reject the null hypothesis |
| 5 | 0.000 | Reject the null hypothesis |

Source: Processed Data (2022)

DISCUSSION

This study shows a significant Trading Volume Activity (TVA) on the days around the announcement of the SRI-KEHATI index. Contrastingly, Wijaya, Noviyanti, and Mahayu (2019) highlighted insignificant results in their six observations of 2013, 2014, and 2016. Lindananti and Soedarman (2015) found that in 2009, 2010, and 2011. The market reaction to the announcement of the Sri-Kehati index using TVA six days before and six days after the announcement was insignificant. In 2012 there was a reaction to the announcement. However, in both studies, the samples used were stocks on the SRI-KEHATI Index list. This differs from this study, which only used companies added to the index composition as a sample. Consolandi, Jaiswal-Dale, Poggiani, & Vercelli (2009) examined companies in Europe added to the Dow Jones Sustainability Stoxx Index (DJSSI) and obtained significant TVA reactions after the company added to the index. This study contradicts Broadstock et al. (2021) but corroborates Roca (2013).

Stock information added to the SRI-KEHATI index received the same reactions as the addition of shares to the FTSE4Good index, marked by a significant Trading Volume Activity (TVA) on the day before and after the announcement on both indexes. This result negates Targanski and Murhadi (2021), stating that the announcement of the SRI-

KEHATI index was responded to negatively. Indonesian investors in the study considered the shares added to the SRI index bad news.

On the other hand, FTSE4GBM is significantly positive. This indicates that the market reaction to the SRI-KEHATI index was significant on the day around the announcement, which is in contrast to previous studies due to differences in the year of observation. The research measures the reaction using abnormal returns and suggests further research using other variables, including the volume used by researchers in this study. Targanski and Murhadi (2021) conducted research on SRI-KEHATI data in 2009. In that year, Indonesia's SDG sustainability achievement score was deep below Malaysia. This could reduce investor confidence in the SRI-KEHATI Index.

The Sustainable Development Goals (SDGs) are a United Nations (UN) global program, which was agreed upon at the UN General Assembly in September 2015, an Agenda of 2030, namely the Sustainable Development Goals (SDGs). The SDGs aim to maintain sustainable improvement in the economic welfare of the community, maintain the sustainability of community social life, maintain environmental quality, as well as inclusive development and implementation of government that can maintain the environmental quality improvement of life from one generation to the next. This study used data or observation time of 2020 and 2021, where the value of Indonesia's SDGs was better. Achieving the SDGs requires the cooperation of the private sector and investor commitment. Aust, Morais, and Pinto (2020) found foreign investors' contribution to the SDGs implementation.

In addition to the increase in the SGD score, this study was conducted amidst the Covid 19 pandemic, which caused the global economic crisis. However, this raises awareness of the importance of healthy human-environment interactions and sustainability. Facing the financial crisis due to Covid-19, several studies have shown that the return on investment in sustainable companies has proven to be more resilient in the crises (e.g., Sun & Small, 2022; Lööf, Sahamkhadam, & Stephan, 2022). Meanwhile, in Indonesia, if the sustainability index of SRI-KEHATI showed better market performance than other indices during the Covid-19 pandemic (Rahmadini & Yumma, 2022; Tinungki et al., 2022). Since 2017, the Financial Services Authority Regulation number 51/POJK.03/2017 concerning the Implementation of Sustainable Finance for Financial Services Institutions, Issuers, and Public Companies encourages the sustainable finance principles application in corporate governance.

The increase in the performance of the SRI-KEHATI Index during Covid 19 and Indonesia's SDGs score could increase stock market confidence in the SRI-KEHATI Index. The announcement of the index composition was responded to with a significant Trading Volume Activity reaction. There was a change in response to stocks added to the SRI-KEHATI index. The literature regarding the market response to stocks added to the FTSE4Good Bursa Malaysia index is limited. The results of this study add to the literature related to the market response to stocks added to the FTSE4Good index

CONCLUSION

This study observed the stock market response to the announcement of stocks added to the sustainable stock index. The study was conducted in the period Covid 19 of 2020 and 2021, using TVA as a proxy for a stock market response, obtaining different results from previous studies. The announcement of the addition of stock in the SRI-KEHATI sustainability index was positively responded by the market. Utilizing the event study method, we underlined a significant TVA in the observation period around the

announcement of the index composition list. In FTSE4Good Bursa Malaysia, the results are consistent with previous studies in different years of observation. In this study, the announcement of the addition of shares in the sustainability index of two cognate countries, Malaysia and Indonesia, is considered by investors as important information.

Research on the FTSE4Good Bursa Malaysia index related to the stock market response is still limited in contrast to that on the SRI-KEHATI index. These are the results of the SRI-KEHATI index launched in 2009 and the FTSE4Good Bursa Malaysia Index formed in 2014. Growth in the sustainability development of Indonesia, Malaysia, and other countries allows for more excellent attractiveness to the sustainability index in the future, especially with the various environmental problems and the consequences of global warming, which worsens if not anticipated and handled together with the private sector and government. In the future, information on these two stock indices and other sustainability stock indices will be important information that can affect the stock market.

The importance of environmental issues and the balance between people, planet, and profit requires serious attention from all parties. With the sustainability index, investors can get information about companies that carry out ESG well so that investors can implement Sustainable Responsible Investment decisions. Research related to sustainability in the future can be carried out on other sustainability indices, which is limited by using stock market reaction indicators or other financial performance variables with different research methods.

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DECLARATION OF CONFLICTING INTERESTS

We declare no potential conflicts of interest concerning the study, authorship, and/or publication of this article.

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