

Return of socially-responsible stock index amid the pandemic

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Abstract

This research aims to investigate the impact of the COVID-19 pandemic on socially responsible investment, specifically the SRI-KEHATI stock index on the Jakarta Stock Exchange. The study utilizes secondary data comprising 11,175 observations from 35 public companies, spanning from March 2, 2020, to December 31, 2021. Panel data regression is employed to examine the relationship between stock returns and confirmed COVID-19 cases, serving as the independent variable. The model is controlled for market capitalization, market-to-book ratio, and firm size. Additionally, Indonesia's lockdown policy is incorporated as a dummy variable. The findings reveal a significant negative impact of confirmed cases on SRI-KEHATI stock returns.

Keywords: COVID-19; stock return; social-responsible investment



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1. Introduction

In November 2019, the Wuhan City Health Commission reported the first case of pneumonia caused by a coronavirus. On March 11, 2020, the World Health Organization declared coronavirus disease (COVID-19) as a global pandemic (Nurcahyono et al., 2021). In response to this public health emergency, the Indonesian government implemented large-scale social restrictions (Agustin, 2021), resulting in significant economic impacts both domestically and globally (Agustin, 2021). Job losses, business downturns, and increased healthcare expenditures by governments became prevalent as measures to combat the pandemic (Albaity et al., 2022). Furthermore, studies have shown that the COVID-19 pandemic has adversely affected stock markets. Prior literature indicates that information related to COVID-19 significantly influences stock market prices (Al-Awadhi et al., 2020; Ashraf, 2020; Akhtaruzzaman et al., 2020; Albulescu, 2021; Agustin, 2021). This impact is attributed to the typical responsiveness of stock returns to market events (Robin, 2021) and economic shocks such as natural disasters and political events (Insaiddoo et al., 2021). Alba et al. (2022) also noted that the COVID-19 pandemic has negatively impacted the stock market due to increased uncertainty and a global decline in stock returns, leading to reduced capital flows. This condition has further contributed to market integration, wherein shocks in one country or asset contagiously affect others.

Interestingly, during the COVID-19 pandemic, there has been an observed increase in trading activities among investors. Ortmann et al. (2020) reported that as the number of COVID-19 cases doubled, investors' weekly average trading intensity rose by 13.9%. Investors added funds to their accounts and opened new positions on average. This behavior is partly attributed to the necessity of rebalancing asset allocation during the economic downturn to maintain an optimal portfolio. Alba et al. (2022) mentioned that investors tend to seek haven assets rather than diversifiers during market shocks, a phenomenon known as flight to safety or quality behavior.

Agustin (2022) further emphasized the need for a more resilient and socially responsible investment approach in the recovery phase. Socially responsible assets exclude companies involved in the production or distribution of environmentally unfriendly products such as alcohol, tobacco, weapons, or gambling, as these factors can impact a company's financial indicators and capital market reputation. Socially responsible stocks represent a company's commitment to long-term sustainability as an integral part of its operations. Although some investors view these assets primarily as goodwill initiatives, the growing global awareness of environmental and governance issues is driving an increase in socially responsible investing.

Several studies have shown that socially responsible stock portfolios outperform their conventional counterparts (Auer & Schuhmacher, 2016; Badía et al., 2020; Vinodkumar & Alarifi, 2020). Sustainable investment, which considers environmental, social, and governance (ESG) factors, has emerged as a distinct avenue for stock market participants (Jain et al., 2019; Rehman et al., 2016). Rubbaniy et al. (2021) found a significant and positive correlation between global and emerging market ESG index returns and the global COVID-19 fear index, suggesting that ESG stocks can serve as haven assets during the pandemic. Singh (2020) demonstrated that ESG portfolios exhibit lower downside risk and better long-term performance.

Additionally, [Engelhardt et al. \(2021\)](#) observed that companies with superior ESG performance achieved significantly higher cumulative abnormal returns and displayed lower idiosyncratic volatility in early 2020, based on a sample of 1,452 firms from 16 European countries.

Meanwhile, [Lee and Lu \(2021\)](#) discovered that although COVID-19 cases affect the socially responsible stock market, these stocks are less impacted compared to conventional stocks. ESG stocks have shown relative resilience and quick recovery. Moreover, companies with high ESG scores tend to uphold ethical standards and produce reliable financial reports, fostering investor trust in these stocks. This research examines the impact of COVID-19, specifically the influence of confirmed cases in Indonesia, on the stock returns of the SRI-KEHATI index.

Our study contributes to the existing literature in two key ways. Firstly, while numerous studies have investigated the effects of the pandemic on conventional stock returns ([Al-Awadhi et al., 2020](#); [Ashraf, 2020](#); [Akhtaruzzaman et al., 2020](#); [Albulescu, 2021](#); [Agustin, 2021](#)), our research explores the influence on the socially responsible stock market. Secondly, we incorporate specific restriction regulations implemented in Indonesia as independent variables. The results of this study will provide valuable insights for investors and hedge fund managers seeking to manage their portfolios during the COVID-19 pandemic and other future periods of uncertainty.

2. Method

This study employs panel data regression to examine the relationship between the dependent and independent variables. Panel regression is a regression model that combines time series and cross-section data, known as panel data. The study considers three panel regression models: the Common Effect Model, which assumes constant slope and intercept; the Fixed Effect Model, which assumes a constant slope coefficient but varying intercept(s); and the Random Effect Model, which assumes that both slope and intercept are not constant. The selection of the best model is based on three tests: the Chow Test, Hausman Test, and Lagrange Multiplier Test, following the methodology of [Hung et al. \(2021\)](#).

To construct a robust model, this study includes three control variables: Market Capitalization, Market-To-Book Ratio, and firm size measured by total assets. Additionally, a dummy variable is used to assess the impact of lockdown measures, with 0 indicating no social restriction policy and 1 indicating the implementation of social restriction policies. The model follows equation (1).

Daily data variables were collected from March 2, 2020, to December 31, 2021. Data sources include Yahoo Finance for daily stock closing prices, Our World in Data for COVID-19 cases, and IDX for annual financial statements. The SRI-KEHATI Index was selected as the object of analysis due to its representation of ESG investment trends and being the first eligible ESG stock index in Indonesia. Purposive sampling was employed in this study, with two main criteria: 1) companies listed in the SRI-KEHATI index during the COVID-19 period and 2) companies with complete daily stock closing prices data and annual financial statements for 2020-2021. The final sample consists of 35 public companies that meet these criteria.

$$SR_{it} = \beta_0 + \log\beta_1 CC_t + \log\beta_2 MC_t + \beta_3 MTB_t + \beta_4 SZ_t + \beta_5 DV_t + e_t \quad (1)$$

Notes: SR is Stock Return, CC is Confirmed Cases, MC is Market Capitalization, MTB is Market-To-Book Ratio, SZ is firm size, DV is the dummy variable for lockdown, and e is the error term.

3. Empirical Result

The preferred model for our analysis is the Fixed Effect Model, and the results are presented in Table 1. The findings indicate a significant negative impact of confirmed COVID-19 cases on stock returns. This result is consistent with previous studies by [Ashraf \(2020\)](#), [Al-Awadhi et al. \(2020\)](#), [Agustin \(2021\)](#), [Agustin & Suryati \(2022\)](#), [Hung et al. \(2021\)](#), [Nurcahyono et al. \(2021\)](#), [Romeo et al. \(2022\)](#), and [Robin \(2021\)](#). The findings suggest that investors have experienced anxiety and fear due to the escalating number of new cases and the death toll ([Robin, 2021](#)). [Agustin \(2021\)](#) also highlighted that investors react to announcements regarding the daily increase in confirmed cases.

Table 1. Regression result

Variable(s)	Coefficient	F Statistic (Prob)
CC	-0.008*	
MC	0.033*	
MTB	-0.000	89.554044 (0.000)
SZ	-0.003*	
Lockdown	0.006*	

Notes: *, **, *** consecutively Sig. at alpha 0.00, 0.05, and 0.1.

Furthermore, market capitalization exhibits a significant positive effect, indicating that larger companies are more resilient in the face of shocks, including the COVID-19 pandemic. However, this relationship does not hold true for firm size, as it is inversely proportional to the rate of return. This suggests that company size alone does not guarantee positive sentiment from market participants. However, when a large firm size is combined with high market capitalization, it is likely to significantly boost the share price. On the other hand, the market-to-book ratio has a negative impact, albeit with a small coefficient. We consider this to be a natural occurrence, as investors tend to avoid overvalued stocks not only during times of uncertainty but also under relatively normal conditions.

An interesting phenomenon arises with the implementation of lockdown measures. Our model indicates that the lockdown has led to an increase in the rate of return for the SRI-KEHATI stock index, aligning with global stock market trends and the Jakarta Composite Index (JCI). At the onset of the pandemic, many stock markets worldwide experienced severe shocks, but they quickly recovered, and ultimately, several indices reached all-time highs, including the JCI. Therefore, although this finding may be surprising, it does not imply that the responsible stock index alone exhibited abnormal movement; rather, it moved in conjunction with other stock markets.

4. Conclusions

This study demonstrates that confirmed cases of COVID-19 have a significant adverse impact on stock returns. Interestingly, the implementation of lockdown measures appears to increase the rate of return on the SRI-KEHATI index. However, it is important to note that during the pandemic, the Jakarta Composite Index (JCI) also reached an all-time high. Therefore, this finding should not be used as evidence that the socially responsible index is inherently more resilient during uncertain times. Furthermore, the study finds that market capitalization has a significant positive effect on stock returns. In contrast, firm size has a negative impact. The market-to-book ratio, on the other hand, does not exhibit a significant effect on stock returns.

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Authors' Contributions: All authors contributed equally to the conception and design of the study

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