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**DOI:** [10.22219/jrak.v15i3.38808](https://doi.org/10.22219/jrak.v15i3.38808)

**Citation:**

Darsono, S. N. A. C., Mareta, S. N. (2025). The Effect of Dow Jones Sustainability Index, Geopolitical Risks, BI Rate, Exchange Rates and Commodity Prices on Sustainable Stock Market Index in Indonesia. *Jurnal Reviu Akuntansi Dan Keuangan*, 15(3), 758-773.

**Article Process**

**Submitted:**

December 30, 2024

**Reviewed:**

January 31, 2025

**Revised:**

June 22, 2025

**Accepted:**

July 25, 2025

**Published:**

September 29, 2025

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P-ISSN: 2615-2223

E-ISSN: 2088-0685

Article Type: Research Paper

## THE EFFECT OF DOW JONES SUSTAINABILITY INDEX, GEOPOLITICAL RISKS, BI RATE, EXCHANGE RATES AND COMMODITY PRICES ON SUSTAINABLE STOCK MARKET INDEX IN INDONESIA

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### ABSTRACT

**Purpose:** This study analyzes the factors influencing the SRI-KEHATI Stock Price Index, focusing on commodity prices, the BI rate, the Dow Jones Sustainability Index (DJSI), Geopolitical Risk (GPR), and exchange rates.

**Methodology/Approach:** Using secondary time series data from 2019–2023 and the Autoregressive Distributed Lag (ARDL) model, the study examines both short- and long-run dynamics.

**Findings:** Results show that global oil prices positively and significantly affect the SRI-KEHATI index in both the short and long run, while global gold prices matter only in the long run. In contrast, DJSI, GPR, and exchange rates exert negative and significant effects in both horizons. The BI rate influences the index negatively, but only in the short run.

**Practical Implications:** The findings underscore the need for investors and policymakers to account for time dynamics when designing investment strategies and policies supporting the sustainable growth of the SRI-KEHATI index. Monitoring global and domestic drivers is essential to anticipate risks and exploit opportunities in Indonesia's financial markets.

**Originality/Value:** This study extends prior research by focusing on a sustainability-based index rather than conventional stock indices. The use of ARDL allows for capturing both short- and long-run effects, providing fresh evidence on how global shocks and domestic factors interact in shaping sustainable investment in Indonesia.



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**Keywords:** Commodity Prices, Dow Jones Sustainability Index, Geopolitical Risk (GPR), Macro Variables, SRI-KEHATI, Sustainable Investment

**ABSTRAK**

**Tujuan:** Penelitian ini menganalisis faktor-faktor yang mempengaruhi Indeks Harga Saham SRI-KEHATI, dengan fokus pada harga komoditas, BI rate, Dow Jones Sustainability Index (DJSI), Geopolitical Risk (GPR), dan nilai tukar.

**Metodologi/Pendekatan:** Menggunakan data deret waktu sekunder dari 2019–2023 dan model Autoregressive Distributed Lag (ARDL), penelitian ini meneliti dinamika jangka pendek dan panjang.

**Temuan:** Hasil penelitian menunjukkan bahwa harga minyak dunia berpengaruh positif dan signifikan terhadap indeks SRI-KEHATI baik dalam jangka pendek maupun jangka panjang, sementara harga emas dunia hanya berpengaruh dalam jangka panjang. Sebaliknya, DJSI, GPR, dan nilai tukar memberikan pengaruh negatif dan signifikan pada kedua horizon. Suku bunga BI berpengaruh negatif terhadap indeks, tetapi hanya dalam jangka pendek.

**Implikasi Praktis:** Temuan ini menggarisbawahi perlunya investor dan pembuat kebijakan untuk mempertimbangkan dinamika waktu ketika merancang strategi dan kebijakan investasi yang mendukung pertumbuhan berkelanjutan indeks SRI-KEHATI. Pemantauan faktor pendorong global dan domestik sangat penting untuk mengantisipasi risiko dan memanfaatkan peluang di pasar keuangan Indonesia.

**Orisinalitas/Nilai:** Studi ini memperluas penelitian sebelumnya dengan berfokus pada indeks berbasis keberlanjutan, alih-alih indeks saham konvensional. Penggunaan ARDL memungkinkan untuk menangkap efek jangka pendek dan jangka panjang, memberikan bukti baru tentang bagaimana guncangan global dan faktor domestik berinteraksi dalam membentuk investasi berkelanjutan di Indonesia.

**Kata kunci:** Commodity Prices, Dow Jones Sustainability Index, Geopolitical Risk (GPR), Macro Variables, SRI-KEHATI, Sustainable Investment

**JRAK**

**15.3 INTRODUCTION**

In today's free market era, capital markets have become one of the most important elements in the global economy. The capital market is also a major component in a

country's financial system, supporting economic growth, resource allocation, and fundraising (Utama & Puryandani, 2020). Funds earned from participation in the capital market can be used as a source of costs for business development, while the capital market also serves as a platform for people who want to invest (Utama & Puryandani, 2020). According to Darsono et al. (2022), A country can be considered modern if the capital market is advanced, because the capital market is the driving force for economic growth. Investment has now become a common practice in various walks of life. Investment plays an important role in the economy by increasing production capacity, driving business expansion, and creating job opportunities (Darsono et al., 2024). Investment is also a driving force for economic growth, with environmental, social, and governance considerations as priorities in sustainable investment (Stobierski, 2021). The green investment growth program is one of the efforts to create conditions that support sustainable environmental management (Darsono et al., 2022). Astuti et al., (2022) indicates that companies that implement sustainability and have reliable financial information tend to be more attractive to investors, thereby increasing their willingness to invest. And the implementation of sustainability can have an impact on a company's image (Darsono & Ma'la, 2024) One example of a stock index that applies the principle of sustainability is SRI-KEHATI. In Figure 1 of the SRI-KEHATI Index since it was first introduced, this index has shown consistency in providing superior performance compared to other indices reaching 49.76 percent, while JCI is 41.40 percent and LQ45 is only 13.69 percent. Not only compared to the Composite Stock Price Index (JCI) or LQ45, but also with other indices such as JII and so on (Muchlisina & Riskayanto, 2023).

**Figure 1.**  
Price  
Comparison  
of SRI-  
KEHATI,  
JCI, LQ45



SRI-KEHATI is an index that carries the concept of sustainability in a company operating in Indonesia. The word SRI itself stands for *Sustainable and Responsible Investment* which refers to the meaning of environmentally friendly stocks. The SRI-KEHATI Index is an index that assesses the stock price performance of 25 companies that show excellent performance in supporting business sustainability and have high awareness of environmental, social, and corporate governance aspects. This index is also known as Sustainable and Responsible Investing (SRI) (Utama & Puryandani, 2020). The index is expected to provide additional information to investors interested in investing in companies that have demonstrated excellent performance in support of sustainable principles. In addition, these companies are expected to have awareness of environmental issues and implement good corporate governance.

Commodity prices, such as crude oil and gold, play an important role in Indonesia's economy and investment market. Indonesia, as a major commodity producer, is particularly affected by fluctuations in world crude oil prices. In addition, gold also acts as an

alternative investment when stocks are not profitable, and supports the growth of the stock price index of mining companies ([Hanitha et al., 2022](#); [Darsono et al., 2025](#)). Global stock markets, such as the Dow Jones Industrial Sustainability Index (DJSI), also have a significant impact on the Indonesian stock market. This index focuses on sustainability so that it tends to be more stable and has a lower rate of fluctuation than conventional indices, especially in crisis situations such as the COVID-19 pandemic ([Sanz-Martin, 2025](#)). This condition reflects that investors consider sustainable companies to have less risk, so they are able to recover from negative pressures more quickly and stably ([Martínez & Cervantes, 2021](#)).

According to the [Databoks website \(2022\)](#), Indonesia's exports to the United States increased by 4.44 percent in December 2020, indicating a high dependence on export products to the country. Indonesia's contribution to the value of imports from the United States reached 5.74 percent of total imports, reflecting the importance of trade relations between the two countries.

One of the macro variables is the change in the Bank Indonesia Rate, also known as the central bank's policy rate, has great potential to affect stock prices because it has an impact on the interest rates on deposits and banking loans ([Ratri & Munawar, 2022](#)), and has a negative and significant influence on stock prices ([Rachmawati, 2018](#)). The relationship between the BI rate and stock prices is complex and is influenced by factors such as monetary policy, market sentiment, and global economic conditions. In this case, the BI rate has a close relationship with the USD exchange rate against the rupiah. When the BI rate rises, the rupiah strengthens and vice versa. A good understanding of the dynamics of the BI rate and the rupiah exchange rate can help investors make more informed investment decisions. In addition, higher Geopolitical Risk (GPR) tends to increase the likelihood of stock price declines with more frequent frequency ([Fiorillo et al., 2024](#)). The impact of GPR on companies is reflected in the SRI-KEHATI Index, which is a benchmark for sustainability and corporate social responsibility. Therefore, geopolitical risk management is key in strengthening sustainability practices and maintaining company performance in the SRI-KEHATI Index.

The difference between the previous research and this study is that several new variables were added to the variables such as the *Dow Jones Sustainability* Stock Index and *Global Geopolitical Risk* (GPR). In addition, the period used covers 2019 to 2023, which was specifically chosen because it coincides with a number of global events that have a significant impact on the financial markets, such as the COVID-19 pandemic and the geopolitical conflict between Russia and Ukraine. These two events not only affect global economic stability but also encourage changes in investor perception of sustainable investment instruments. Thus, because there is also quite little research on SRI-KEHATI, the researcher considers that further research is necessary related to the variables of global stock indices and commodity prices on SRI-KEHATI.

## METHOD

The object of this research is the SRI-KEHATI stock price index, which will be investigated for its influence on various external factors. This research covers the period 2019-2023 and involves monthly data related to world oil commodity prices, world gold prices, sustainable global stock price indices such as Dow Jones Sustainability, Geopolitical Risk (GPR), and macro variables (BI rate and USD exchange rate against Rupiah). The data used is secondary data in numerical form, consisting of a series of monthly data from January 2019 to December 2023. This data was obtained from various sources, including

the SRI-KEHATI stock price index, world oil prices, world gold prices, the Dow Jones Sustainability stock price index, BI Rate, the Geopolitical Risk (GPR) stock price index, and the USD exchange rate against the Rupiah.

Data collection is carried out through a quantitative approach on a monthly scale and using documentary data collection methods. The main data sources are from Investing.com, Bank Indonesia website, and Policyuncertainty.com to ensure relevant, accurate, and realistic research results.

The data analysis method used is the Autoregressive Distributed Lag (ARDL) Model, which is a regression model that takes into account the relationship between dependent and independent variables in the long and short term. The ARDL model consists of an autoregressive (AR) model and a distributed lag model, which describes the influence of independent variables on dependent variables over a given time. *The Autoregressive Distributed Lag (ARDL) model is a regression method that combines lag from dependent and independent variables simultaneously (Pesaran & Shin, 1998).* ARDL aims to analyze the influence of exogenous variables on endogenous variables over time, including the influence of Y variables from the past on present Y values. In the guidelines for the use of Eviews 10 (2016), the ARDL offers alternative procedures in the selection of lag, such as the AIC (*Akaike Information Criterion*) and SBC (*Schwarz Bayesian Criterion*) criteria, to determine the most optimal model. Smaller AIC values indicate the advantages of a better model, so lag order specifications are selected based on the lowest AIC lag. The equation model in this study consists of Equation 1 which represents the model in the long term.

$$\begin{aligned} SRIKEHATI_t = & \alpha + \sum_{l=1}^p \beta_0 OIL_{t-1} + \sum_{l=1}^q \beta_1 GOLD_{t-1} + \sum_{l=1}^q \beta_2 DJSI_{t-1} \\ & + \sum_{l=1}^q \beta_3 BIRATE_{t-1} + \sum_{l=1}^q \beta_4 GPR_{t-1} + \sum_{l=1}^q \beta_5 EXCHANGERATE_{t-1} \\ & + \varepsilon_{it} \dots \quad (1) \end{aligned}$$

Sedangkan, Persamaan 2 merepresentasikan model dalam jangka pendek.

$$\begin{aligned} SRIKEHATI_t = & \alpha + \left( \begin{array}{l} SRIKEHATI_{t-1}^{-1} OIL_{t-1}^{-2} GOLD_{t-1}^{-3} DJSI_{t-1}^{-4} \\ BIRATE_{t-1}^{-5} GPR_{t-1}^{-6} EXCHANGERATE_{t-1} \end{array} \right) \\ & + \sum_{l=1}^p \beta_0 OIL_{t-1} + \sum_{l=1}^q \beta_1 GOLD_{t-1} + \sum_{l=1}^q \beta_2 DJSI_{t-1} \\ & + \sum_{l=1}^q \beta_3 BIRATE_{t-1} + \sum_{l=1}^q \beta_4 GPR_{t-1} + \sum_{l=1}^q \beta_5 EXCHANGERATE_{t-1} \\ & + \varepsilon_{it} \dots \quad (2) \end{aligned}$$

Description of the variables used in this study: SRIKEHATI is the price of the SRI-KEHATI Stock Index, OIL represents the price of world oil commodities, and GOLD represents the price of world gold commodities. The DJSI refers to the price of the Dow Jones Sustainability Stock Index, while BIRATE describes interest rates. The GPR reflects global geopolitical risks, and the EXCHANGERATE shows the USD exchange rate against the Rupiah. The time variable in this model is expressed as  $t$ , while  $\varepsilon$  is an error term. The coefficients in the model are denoted by  $\beta_0, 1, 2, 3, 4, 5, 6$ , and 7.

## RESULTS AND DISCUSSION

**A. Statistics Descriptive**

The statistical description of research data involves techniques to understand the basic characteristics of the data. This includes calculating averages, medians, and modes, as well as measuring data distributions such as ranges, variances, and standard deviations.

| <i>Variable</i> | <i>Mean</i> | <i>Median</i> | <i>Max.</i> | <i>Min.</i> | <i>Std. Dev.</i> | <i>Obs.</i> |
|-----------------|-------------|---------------|-------------|-------------|------------------|-------------|
| SRI KEHATI      | 5.9385      | 5.9654        | 6.0999      | 5.652       | 0.1238           | 60          |
| OIL             | 4.1511      | 4.2076        | 4.742       | 2.9359      | 0.3553           | 60          |
| GOLD            | 7.4637      | 7.4913        | 7.6361      | 7.1637      | 0.1258           | 60          |
| DJSI            | 8.0195      | 8.0566        | 8.2647      | 7.6938      | 0.1639           | 60          |
| BIRATE          | 4.6416      | 4.5           | 6.0         | 3.5         | 1.0190           | 60          |
| GPR             | 105.85      | 97.32         | 318.95      | 58.42       | 43.1504          | 60          |
| EXCHANGERATE    | 9.5890      | 9.5803        | 9.6989      | 9.5214      | 0.0376           | 60          |

**Table 1.**  
Results of  
Statistics  
Descriptive

The results of the descriptive analysis in table 1 show that from 60 observations, the SRI-KEHATI index value has an average of 5.9385, with a maximum value of 6.0999 and a minimum value of 5.6520, as well as a standard deviation of 0.1238. The world oil price has an average of 4.1511, with the highest price reaching 4.7420 and the lowest price 2.9359, and the standard deviation of 0.3553. Meanwhile, the world gold price has an average of 7.4637, with the highest price reaching 7.6361 and the lowest price 7.1637, as well as the standard deviation of 0.1258. The *Dow Jones Sustainability* Index has an average of 8.0195, with a maximum value of 8.2647 and a minimum value of 7.6938, and a standard deviation of 0.1639. Bank Indonesia's interest rate averaged 4.6416, with a maximum value of 6 and a minimum value of 3.5, and a standard deviation of 1.0190. Global geopolitical risk has an average of 105.851, with a maximum value of 318.95 and a minimum value of 58.42, as well as a standard deviation of 43.15. And the USD exchange rate against the Rupiah has an average of 9.58, with a maximum value of 9.69 and a minimum value of 9.52, as well as a standard deviation of 0.0376.

**B. Results and Data Analysis**

**1. Stationarity Test**

The first step in the analysis of time series data is to run a stationary test using the *Augmented Dickey-Fuller* method (ADF test) to determine whether the variables being tested have stationary properties. If the test results show that the variable is not stationary at the level, the next step is to differentiate first by reducing the data in the current period with the data in the previous period. This process is repeated until all variables reach a similar stationary level. The assessment of whether or not the data is stationary can be done by checking whether the statistical value t exceeds the relevant critical value.

| <i>Variable</i> | <i>Unit Root Test</i> |             |                                  |             |
|-----------------|-----------------------|-------------|----------------------------------|-------------|
|                 | <i>Level</i>          |             | <i>1<sup>st</sup> Difference</i> |             |
|                 | <i>t-statistic</i>    | <i>Prob</i> | <i>t-statistic</i>               | <i>Prob</i> |
| SRIKEHATI       | -1.52                 | 0.5166      | -6.307                           | 0           |
| OIL             | -1.755                | 0.3987      | -6.649                           | 0           |
| GOLD            | -1.832                | 0.3615      | -8.145                           | 0           |

**Table 2.**  
Results of  
Stationarity  
Test

|              |        |        |        |   |
|--------------|--------|--------|--------|---|
| DJSI         | -1.55  | 0.5014 | -8.255 | 0 |
| VIX          | -3.609 | 0.0084 | -9.418 | 0 |
| GPR          | -3.061 | 0.0351 | -8.145 | 0 |
| EXCHANGERATE | -2.917 | 0.0494 | -8.399 | 0 |

2. Optimal Lag Test

The next step in this study is to determine the optimal lag, which is the most appropriate time frame for data analysis. Optimal lag determination is carried out using the Akaike Information Criteria (AIC) method. This approach aims to select the right amount of lag or time interval to analyze the research variables. This process helps researchers to better understand patterns and relationships between variables. The following are the results of the AIC calculation that show the lag-lag that is considered optimal:

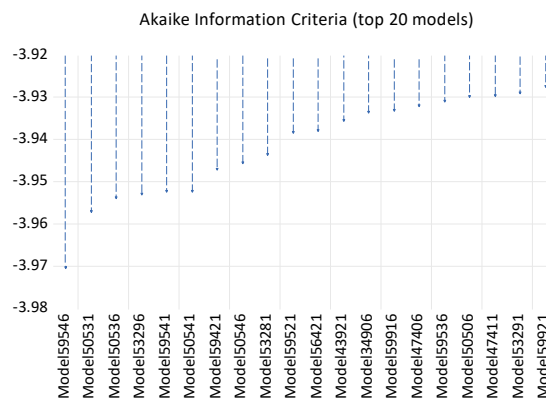


Figure 2. The Best Model

Based on Figure 2, there are 20 top models and appropriate models for the ADRL method in this study, namely the model that has the least Akaike Information Criteria (AIC). Model 59546 is the leftmost model that has optimal lag in ADRL (1, 0, 4, 3, 3, 0, 4) will be the best model for the ADRL method to be used. All of this shows the optimal lag of the seven variables in this study, namely the SRI-KEHATI Index, world crude oil prices, world gold prices, BI rate, Dow Jones Sustainability Index, Geopolitical Risk, and the USD exchange rate against the Rupiah.

3. Bounds Test

The next step is to conduct a Bounds Test cointegration test to evaluate the long-term relationship between variables in the study. This test determines the upper and lower limits of the long-term relationship, which indicates the presence or absence of cointegration between variables. The results of this test are important to assess the existence of a significant long-term relationship between the variables studied.

| Statistic Test | Score  | K |
|----------------|--------|---|
| F - Statistic  | 4,0775 | 6 |

Table 3. Results of Bounds Test

| Signifcancy | <i>1(0) Lower Bound</i> | <i>1(1) Upper Bound</i> |
|-------------|-------------------------|-------------------------|
| 10%         | 1,99                    | 2,94                    |
| 5%          | 2,27                    | 3,28                    |
| 2.5%        | 2,55                    | 3,61                    |
| 1%          | 2,88                    | 3,99                    |

Based on Table 3, the results of the *Bounds Test show* that the F-statistical value of 4.369 was obtained. The F-statistical value obtained with a significance level of 5 percent is above the values I(0) and I(1), which are 2.27 and 3.28. So it can be concluded that there is a cointegration between the variables of the SRI-KEHATI Index, world crude oil prices, world gold prices, BI rate, Dow Jones Sustainability Index, Geopolitical Risk, and the exchange rate of the USD against the rupiah in the long term.

#### 4. Short Term Estimation

ARDL (*Autoregressive Distributed Lag*) estimation is a method of econometric analysis to evaluate the short-term relationships between variables in a model. This involves determining the exact order of lag, building an ARDL model, and using the OLS (*Ordinary Least Squares*) technique for estimation. The results provide a deeper understanding of the relationship of variables in the short term, used for policy analysis and economic forecasting. The following are the results of the ARDL estimation test.

| Variable            | Coefficient            | Proba  |
|---------------------|------------------------|--------|
| DLOG(GOLD)          | 0,0876<br>-0.1013      | 0,3931 |
| DLOG(GOLD(-1))      | -0,3084***<br>(0,1001) | 0,0041 |
| DLOG(GOLD(-2))      | -0,3914***<br>(0,1046) | 0,0007 |
| DLOG(GOLD(-3))      | -0,3130***<br>(0,1063) | 0,0058 |
| DLOG(DJSI)          | -0,2833**<br>(0,1156)  | 0,0248 |
| D(DJSI(-1))         | -0,1917*<br>(0,0961)   | 0,0542 |
| D(DJSI(-2))         | -0,3250***<br>(0,0995) | 0,0025 |
| D(GPR)              | -5,81<br>(0,0001)      | 0,6203 |
| D(GPR(-1))          | 0,0004*<br>(0,0002)    | 0,0008 |
| D(GPR(-2))          | 0,0006***<br>(0,0001)  | 0,0000 |
| DLOG(EXCHANGE RATE) | -1.3566***             | 0,0000 |

**Table 4.**  
Results of  
Short-Term  
Estimation

|                                    |                        |        |
|------------------------------------|------------------------|--------|
|                                    | (0,0001)               |        |
| DLOG(EXCHANGE RATE (-1))           | -0,7481***<br>(0,1173) | 0,0002 |
| DLOG(EXCHANGE RATE (-2))           | -1,0188***<br>(0,1874) | 0,0000 |
| DLOG(EXCHANGE RATE(-3))            | -0,5782***<br>(0,1586) | 0,0009 |
| CointEq(-1)*                       | -0,2878***<br>(0,0459) | 0,0000 |
| <i>R-squared</i> : 0,8217          |                        |        |
| <i>Adjusted R-squared</i> : 0,7609 |                        |        |

Note : ( ) is standard error, \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Based on Table 4, the results of the short-term estimation test show that the CointEq variable has an important role in the model. The CointEq coefficient of -0.2878 indicates the cointegration between the variables in the model, with the interpretation that any one-unit increase in the cointegration variable at lag -1 will cause a decrease of 0.287 in the dependent variable. This value is statistically significant with a p-value of less than 0.01. The speed of adjustment to equilibrium is determined by the value of the ECT coefficient(-1), which in this case is -0.287, indicating that the SRI-KEHATI index adjustment process takes place in less than a month.

In the short term, the variable world oil price (OIL) has no effect on the SRI-KEHATI index. Meanwhile, the world gold price variable (GOLD) has a negative and significant influence on the SRI-KEHATI index at lag 1, 2, and 3. The coefficient values are -0.308, -0.391, and -0.313, respectively with probabilities of 0.0041, 0.0007, and 0.0058 at a significance level of 1%. This means that the increase in world gold prices causes a decline in the SRI-KEHATI index in the short term. However, in the long term, the GOLD variable has no effect on the SRI-KEHATI index, as indicated by the probability value of 0.1921.

The price variable of the Dow Jones Sustainability Index (DJSI) also affects the SRI-KEHATI index in the short term. Initially, the DJSI had a negative and significant influence with a coefficient of -0.258 and a probability value of 0.0248 at a significance level of 5%. This shows that a five percent increase in the price of DJSI will cause a decrease in the SRI-KEHATI index by 0.2585 percent per month. However, at lag 1, 2, and 3, the DJSI variable had a positive and significant effect on the SRI-KEHATI index with coefficients of 1.228, 0.515, and 0.371, respectively at a significance level of 1% for lag 1 and 3, and 5% for lag 2, respectively.

In addition, the Geopolitical Risk (GPR) variable has a positive and significant influence on the SRI-KEHATI index in the short term at lag 1 and 2. The coefficient values are 0.0004 and 0.0006 respectively with a probability of 0.0008 and 0.0000 at a significance level of 10%. In other words, an increase in GPR by ten percent will encourage an increase in the SRI-KEHATI index. Finally, the exchange rate variable has a negative and significant influence on the SRI-KEHATI index in the short term. A coefficient of -1.3566 with a

probability of 0.0000 at a significance level of 1% indicates that an increase in the exchange rate of one percent will cause a decrease in the SRI-KEHATI index by 1.3566 percent per month. However, at lag 1, 2, and 3, the exchange rate had a positive and significant influence on the SRI-KEHATI index, with coefficients of -0.7481, -1.0188, and -0.5782, respectively, at a significance level of 1%.

**5. Long Term Estimation**

Long-term estimation is the projection of future outcomes for a longer period, important in business, economics, science, and technology. In business, it helps in strategic planning and decision-making, while in economics it influences government policies and the economic direction of a country. In science and technology, it helps to plan future projects. However, long-term estimates tend to have a high level of uncertainty because many variables can change over a longer period of time, and often rely on certain assumptions that may change over time.

ARLD (2, 2, 1, 4, 0, 4, 4) Based on AIC Value  
Dependent Variable: SRI KEHATI Index

| Variable         | Coefficient           | Prob   |
|------------------|-----------------------|--------|
| C                | -1,796<br>(8,867)     | 0,8407 |
| D(OIL)           | 0,4545**<br>(0,1700)  | 0,0036 |
| D(GOLD)          | 0,6952<br>(0,5223)    | 0,1921 |
| D(DJSI)          | -0,8589*<br>(0,4475)  | 0,0634 |
| D(BIRATE)        | 0,0546**<br>(0,0250)  | 0,0365 |
| GPR              | -0,0009*<br>(0,0013)  | 0,4787 |
| D(EXCHANGE RATE) | 0,7790***<br>(1,0862) | 0,8407 |

Note : ( ) is standard error, \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

The long-term estimation test is a method to analyze the impact of independent variables on dependent variables in the long term and evaluate their significance. The full results of the estimates are presented in Table 5.

**Table 5.**  
Long-Term  
Estimation  
Test Results

$$\text{SRIKEHATI} = -1,796 + 0,4545\text{OIL} + 0,6952\text{GOLD} - 0,8589\text{DJSI} + 0,0546\text{BIRATE} - 0,0009\text{GPR} + \epsilon$$

Based on Table 5, the results of the long-term estimation test show that the OIL variable has a positive and significant influence on the SRI-KEHATI index. This is evidenced by the value of the coefficient of 0.4545 and the probability of 0.0115 which is below the significance level of 5%, so that a one percent increase in world oil prices will increase the SRI-KEHATI index by 0.4545 percent. Meanwhile, the GOLD variable does not have a significant influence on the SRI-KEHATI index in the long run, as shown by a probability value of 0.1921 which is greater than 0.1. On the other hand, the DJSI variable showed a negative and significant influence on the SRI-KEHATI index with a coefficient of -0.8589 and a probability of 0.0634 which was smaller than the significance level of 10%. Thus, the increase in DJSI will lower the SRI-KEHATI index by 0.8589 percent.

In addition, the BI rate variable has a positive and significant influence on the SRI-KEHATI index in the long term, with a coefficient value of 0.0546 and a probability of 0.0365 which is smaller than the significance level of 5%. This means that an increase in the BI rate by one percent will increase the SRI-KEHATI index by 0.0546 percent. On the other hand, the variables GPR and exchange rate do not have a significant influence on the SRI-KEHATI index in the long term. This is evidenced by the probability values of 0.4734 and 0.4787, respectively, which are greater than the significance limit of 0.1.

## Discussion

### The Effect of World Oil Prices on the SRI-KEHATI Index

Based on the results of the ARDL test that has been carried out, it can be concluded that the world oil price (*OIL*) variable has no effect in the short term. However, it has a positive and significant influence on the SRI-KEHATI index in the long term. This means that the current increase in world oil prices will lead to an increase in the price of the SRI-KEHATI index, in a short period of time. These findings are consistent with the results of previous studies, as reported by [Hanitha et al., \(2022\)](#), which also concluded that crude oil prices have a significant impact on SRI-KEHATI. These findings are also in line with research conducted by [Sreenu, \(2022\)](#), which states that variations in crude oil prices have a significant impact on stock market returns. This is because the increase in world oil prices can have a positive impact on the performance of companies involved in the energy sector, especially companies that focus on renewable energy or green technology.

### The Influence of World Gold Prices on the SRI-KEHATI Index

Based on the ARDL analysis that has been carried out, it was found that the world gold price variable (*GOLD*) has a negative and significant influence on the SRI-KEHATI index in the short term. This means that when the world gold price falls on, it will cause an increase in the price of the SRI-KEHATI index. These findings are consistent with research conducted by [Putra & Robiyanto \(2019\)](#), which confirms that the price of crude oil has a significant impact on SRI-KEHATI. However, in the long term, world gold prices have no influence on the SRI-KEHATI index. These findings are in line with research conducted by [Utama & Puryandani, \(2020\)](#) and [Darsono et al. \(2024\)](#) which concluded that the gold price did not significantly affect the return of SRI KEHATI shares. So, overall, the world gold price variable has a different influence on the SRI-KEHATI index depending on the observed time frame, which is negative and significant in the short term, but not significant in the long term. That's because gold prices tend to rise when there is economic or geopolitical uncertainty. This could be because investors turn to gold as a haven when market conditions are volatile. However, companies included in the SRI Kehati index may

focus on sustainable and socially responsible business practices, so their performance can be influenced by different factors.

### **The Influence of *the Dow Jones Sustainability Index* on the SRI-KEHATI Index**

From the results of the ARDL test that has been carried out, it is revealed that the *Dow Jones Sustainability Index* (DJSI) variable has a negative and significant influence on the SRI-KEHATI index both in the short and long term. In this context, it indicates that when the price of the *Dow Jones Sustainability Index* increases at this time, it will cause a decrease in the value of the SRI-KEHATI index. This phenomenon is also supported by findings in research [Hanitha et al., \(2022\)](#), which confirms that the *Dow Jones Industrial Index* has a significant impact on the performance of the SRI-KEHATI Index. Thus, the alignment between the results of the study showing the negative influence of *the Dow Jones Sustainability Index* on SRI-KEHATI and the previous study linking the *Dow Jones Industrial Index* to SRI-KEHATI confirms a similar trend. The significant negative influence of the Dow Jones Sustainability Index on SRI Kehati can occur because companies listed in the Dow Jones Sustainability Index (DJSI) tend to have high environmental, social, and corporate governance (ESG) standards. If the companies within SRI Kehati do not meet the same ESG standards, investors may be more likely to shift their investments to companies listed in the DJSI, leading to a decrease in interest in the stocks included in SRI Kehati.

### **The Effect of BI *Rate* on the SRI-KEHATI Index**

Based on the results of the *Autoregressive Distributed Lag* (ARDL) test that has been conducted, it was found that the variable Bank Indonesia interest rate (BI *rate*) does not show a significant influence on changes in the SRI-KEHATI index in the short term. These findings are in parallel with research conducted by [Hermawan & Purwohandoko, \(2020\)](#), which noted that BI's interest rate does not have a significant impact on fluctuations in the SRI KEHATI index. Nevertheless, in the long-term perspective, the influence of BI's interest rate on the SRI-KEHATI index has proven to be positive and significant. In other words, in the longer term, BI's interest rate hike in the current period is likely to lead to a decline in the value of the SRI-KEHATI index. These findings are also in line with the results of research conducted by [Utama & Puryandani, \(2020\)](#), which states that BI's interest rate has a significant positive effect on the return of SRI KEHATI shares. This is because the BI Rate hike can indicate that the central bank is trying to stabilize the economy and control inflation. This can increase investor confidence in overall economic and financial stability, including investment sustainability. Investors who pay attention to the principles of SRI Kehati may be more interested in investing in projects or companies that comply with environmental, social, and corporate governance (ESG) standards.

### **The Influence of *Global Geopolitical Risk* (GPR) on the SRI-KEHATI Index**

According to the results of the ARDL test that has been carried out, it was found that the Geopolitical Risk variable (GPR) has a positive and significant impact on the SRI-KEHATI index in the short and long term has no effect. This means that both in the short term the increase in Geopolitical Risk (GPR) causes an increase in the SRI-KEHATI Index. These findings are also consistent with research conducted by [Sohag et al. \(2022\)](#), which states that there is a connection between the US and Chinese stock markets which also affects geopolitical risks, especially in the upper and middle quantiles of synchronization and the upper quantile of GPR. This is because when there is geopolitical uncertainty, investors often look for a safer place to allocate their funds. Companies included in the SRI Kehati index typically have sustainable and socially responsible

business practices, so they can be considered a relatively safe place to invest during such periods of uncertainty. In the context of SRI KEHATI, which is an index that reflects the performance of stocks related to the environment and sustainability in Indonesia, increased geopolitical risks such as power competition between countries such as the United States, China, Russia, and Europe can create geopolitical tensions that have an impact on global security. For example, a territorial dispute in the South China Sea or tensions between the United States and Russia in Ukraine can lead to a decline in the value of a company's shares related to environmental sustainability.

### **The Effect of the USD Exchange Rate on the Rupiah on the SRI-KEHATI Index**

The results of the analysis from the ARDL test show that the variable exchange rate between USD and Rupiah (*Exchange Rate*) has a significant and negative impact on the SRI-KEHATI index in the short term. This means that the increase in the USD exchange rate against the Rupiah in the current period has the potential to cause a decrease in the value of the SRI-KEHATI index. These findings are in line with research conducted by [Utama & Puryandani, \(2020\)](#), which also concluded that the exchange rate of USD against the Rupiah had an effect on the change in the SRI-KEHATI Index. In addition, similar findings were also found in the study [Hermawan & Purwohandoko, \(2020\)](#), which resulted in the same conclusion regarding the negative effect of the USD exchange rate against the Rupiah on the SRI-KEHATI index. However, in the long-term perspective, the effect of the exchange rate on the SRI-KEHATI index is not significant. This is because the decline in the rupiah exchange rate against the US dollar can make import costs increase for companies that depend on the import of certain raw materials or components. This can increase production costs and reduce the profitability of these companies, which can negatively impact the performance of their stocks. so that this will encourage investors to sell their shares, if many investors do selling, it will encourage SRI-KEHATI to decline.

### **CONCLUSION**

In this discussion, we evaluate the influence of several factors on the SRI-KEHATI index which results in the conclusion that world oil prices (*OIL*) have a positive and significant effect on the SRI-KEHATI index, in the long term but not in the short term. The world gold price (*GOLD*) has a negative and significant influence on the SRI-KEHATI index in the short term. However, there is no significant effect in the long run. The *Dow Jones Sustainability Index* (DJSI) variable has a negative and significant influence on the SRI-KEHATI index, both in the short and long term. Bank Indonesia's interest rate (BI Rate) does not have a significant effect on the SRI-KEHATI index in the short term, but it has a positive and significant effect in the long term. Geopolitical risk (GPR) has a positive and significant impact on the SRI-KEHATI index, both in the short term, but not in the long term.

The exchange rate of the USD against the Rupiah has a negative and significant impact on the SRI-KEHATI index, in the short term. However, there is no significant effect in the long run.

Advice to investors should pay attention to world oil price movements as an important indicator to guide investment decisions and economic policies that support sustainable business practices. The availability of stable and sustainable energy is a key factor in long-term economic growth and investment. And companies can pay attention to the movement of the Dow Jones Sustainability Index and integrate an evaluation of its impact on stock value and company performance in the context of sustainable investment. This allows

companies to respond quickly to changing market trends and adjust their business strategies. While, the government and monetary authorities closely monitor the movement of the BI Rate to manage its impact on financial market stability and sustainable investment. Proper monetary policy can help maintain healthy economic growth and boost investor confidence.

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