

Green Investment and Iran-Israel Escalation: Potrait of Share Price of Environmentally Based Company in ASEAN and The Views Sharia Investment on Energy Scarcity

Ilyas Adhi Purba

IAI Badrus Sholeh Kediri, Jl. Raya Purwoasri No. 86 Kediri, Indonesia

*corresponding author:

ilyasadhi28@gmail.com

Article Information

Abstract

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Research aim : This research aims to analyze the impact of the escalation of the Iran–Israel conflict on share price movements of environmentally based companies in the ASEAN region, as well as assessing whether this event has significant information content for investors in the context of green investment. Apart from that, this research also aims to examine this phenomenon from a sharia investment perspective, especially in understanding the issue of energy scarcity and the importance of sustainability in resource management.

Design/Method/Approach : This research uses a quantitative design with an event study approach to analyze the stock market reaction to the escalation of the Iran–Israel conflict. This approach was chosen because it is able to directly measure the information content of an event through changes in abnormal returns on shares of environmentally based companies in the ASEAN region.

Research Finding : Based on an analysis of the capital market reaction of four environmentally based companies in the ASEAN region, all of them did not have a significant influence on stock returns due to the Iran–Israel escalation. Environmentally based companies have better resilience to global external risks. Investments in the renewable energy sector not only support environmental sustainability, but also provide stability in conditions of geopolitical uncertainty.

Theoretical contribution/Originality : This research provides a theoretical contribution by expanding the literature on the relationship between geopolitical risk, green investment, capital market reaction and sharia investment.

Practitionel/Policy implication : This research provides practical implications for investors, market players and policy makers in understanding the dynamics of green investment amidst global geopolitical risks.

Research limitation : The event study method used focuses on quantitative stock price data, so it does not fully consider company fundamental factors or other macroeconomic conditions. And the analysis of the sharia investment perspective in this research is still conceptual and has not been tested empirically using specific sharia financial data.

Keywords : Green Investment; Iran–Israel Escalation; Share Price; ASEAN; Sharia Investment.

1. Introduction

The escalation of the geopolitical conflict between Iran and Israel in 2026 has given rise to major shocks in the global energy system, especially after the disruption to the Strait of Hormuz as the main route for world oil distribution. The Strait of Hormuz is known to channel around 20–25% of global oil supplies every day, so its closure has a direct impact on disrupting the international energy supply chain. This impact is reflected in a decrease in global oil supplies of up to millions of barrels per day as well as a significant spike in oil prices, increasing more than 50% since the start of the conflict and potentially reaching the highest level in modern history.

This condition not only triggers energy shortages, but also causes global inflationary pressures, financial market instability, and increases the risk of economic crisis in various countries, especially in the Asian region which is highly dependent on energy imports. This phenomenon shows that dependence on fossil energy and certain distribution channels makes the global energy system very vulnerable to geopolitical conflict, thus encouraging the urgency to examine more sustainable investment alternatives, such as green investment, as well as how the sharia investment perspective views the energy scarcity phenomenon.

Previous research shows that green investment and geopolitical dynamics have a complex relationship and are not yet completely consistent, especially in the context of the ASEAN region. Recent studies by Durohman & Khoirunnisa (2026) found that investment in renewable energy and green finance can significantly reduce carbon emissions in ASEAN countries, but its effectiveness is greatly influenced by external factors such as geopolitical risks which can actually hinder the energy transition[1]. Correspondingly, Azam, et al. (2025) shows that geopolitical risks have a negative impact on the development of green financial instruments, although the quality of institutions can strengthen the resilience of the sector [2]. On the other hand, study of Dong, et al. (2023) emphasized that increasing investment in renewable energy and energy innovation contributes to environmental improvement, but is not always accompanied by financial market stability [3].

In addition, recent studies in the Asia-Pacific region also show that geopolitical conflicts can actually encourage an accelerated energy transition as countries seek to reduce dependence on fossil energy, although the impact on stock markets is still heterogeneous. In the context of ASEAN, the investment report shows that although green investment flows continue to increase and become a strategic sector, the region still faces funding gaps, regulatory uncertainty and pressure from the global crisis which affects investment stability.

Although various studies have examined the relationship between green investment, geopolitical risk, and sustainable development, there is still a research gap, especially in looking at the stock market reaction of environmentally based companies at a micro (firm-level) to specific geopolitical events such as the Iran–Israel escalation. Most studies still focus on the macro level (country or region) and aggregate environmental or investment indicators, not on abnormal stock returns of green energy companies in the ASEAN region. Apart from that, previous studies have not integrated much of the sharia investment perspective, especially in explaining how the issue of energy scarcity and geopolitical conflict is viewed within the

framework of Islamic economic values such as sustainability (istislah) and the prohibition of over-exploitation. Therefore, this article is important to fill this gap by empirically examining how the capital market responds to the Iran-Israel escalation of environmentally based companies in ASEAN, while linking it to a sharia investment perspective on the issue of energy scarcity.

In contrast to previous research which generally focuses on macro analysis such as the relationship between geopolitical risk and green finance at the country level, this study presents a micro approach based on event study by measuring abnormal returns (AAR) and cumulative abnormal returns (CAR) in renewable energy companies around the Iran–Israel escalation event. Apart from that, this research also offers a conceptual contribution by linking these empirical findings into an Islamic economic framework, especially in looking at how the phenomenon of energy scarcity and market stability is understood through the principles of maqashid sharia, efficiency (maslahah), and the prohibition of excessive speculation (gharar). Thus, this research not only enriches the literature on green investment and geopolitics, but also presents an interdisciplinary perspective that connects modern finance with sharia values, which are still relatively rarely discussed in previous empirical studies, especially in the context of the ASEAN capital market.

Thus, this article not only focuses on examining market reactions, but also contributes in explaining how green investment and sharia principles can be an alternative framework in dealing with global uncertainty and the issue of the energy crisis.

1.1. Statement of Problem

1. Geopolitical risks are known to disrupt energy stability, increase price volatility, and hinder the global clean energy transition. However, it is not clear whether this impact is also reflected directly in the share performance of environmentally based companies in the ASEAN region.
2. Policy uncertainty and pressure from global dynamics, this raises the question of whether capital markets in ASEAN are sensitive enough to global geopolitical events, or whether they show resilience to external shocks, especially for environmentally based companies.
3. There is an empirical gap in understanding how investors respond to global conflict information at the company level (firm-level).
4. Islam emphasizes the importance of sustainability, fair distribution of resources, and the prohibition of excessive speculation in facing crises. Therefore, a fundamental question arises regarding how geopolitical conflicts that have the potential to trigger energy scarcity are viewed within the framework of sharia investment.

1.2. Research Objectives

1. Analyze the influence of the Iran–Israel escalation on stock returns of environmentally based companies in ASEAN, specifically by measuring the Average Abnormal Return (AAR) around the event period.
2. Examining this phenomenon from a sharia investment perspective, especially regarding the principles of sustainability (maslahah), fair distribution of resources, as well as responses to the issue of energy scarcity due to geopolitical conflicts.

2. Method**Types and Research Approaches**

This research uses a quantitative approach with the event study method. Event study is used to test the capital market reaction to a particular event by looking at changes in stock returns around the date of the event. This method is commonly used to assess whether an event has information content that influences stock prices. This research aims to analyze the impact of the Iran–Israel escalation on the share prices of environmentally based companies in the ASEAN region and relate it to a sharia investment perspective.

Data Types and Sources

This research uses secondary data, namely:

1. Daily share prices of environmentally based companies in ASEAN
2. Market index as a comparison
3. Data is taken from financial platforms such as Yahoo Finance, Bloomberg, or IDX

Data collection technique

Data collection methods are carried out by:

1. Documentation, namely collecting historical stock price data
2. Literature study, to obtain theory and previous research

Determination of the Observation Period

This research uses:

1. Event date (t_0):
Date of first Iran–Israel conflict: February 28, 2026.
2. Event window:
 $t-3$ to $t+3$: 25, 26, 27, 28 February - 1, 2, 3 March 2026.

Determination of Observation Samples

In this research, the sampling technique uses purposive sampling, namely selecting samples based on certain criteria that are relevant to the research objectives. The criteria for companies used as samples are as follows:

1. The company operates in the renewable energy sector
The selected company must have main activities in the field of environmentally based energy, such as solar, wind, hydro, biomass or other clean energy. This is important because this sector is a major part of green investment that supports the energy transition in the ASEAN region.
2. Environmentally based companies that have a large scale or are among the largest in their country
The samples were selected from companies that have a significant role in the development of renewable energy in each ASEAN country, both in terms of production capacity, investment value, and contribution to the regional energy transition. This is in

line with the condition that ASEAN countries are encouraging large companies as motors for the clean energy transition.

3. The company has gone public (listed on the stock exchange)
The company must be listed on a stock exchange (eg IDX, SET Thailand, PSE Philippines, etc.) so that share price data can be obtained and analyzed using the event study method. Going public status allows measuring market reactions through stock returns.
4. Stock price data is available and easy to access
The selected company must have complete daily stock price data available during the research period, which can be accessed via platforms such as Yahoo Finance, Bloomberg, or the official stock exchange website.

Researchers determined 4 companies from 4 countries in the ASEAN region that met the above criteria, namely:

Name	Origin	Business
Pertamina Geothermal Energy	Indonesia	Companies operating in the renewable energy sector, especially geothermal energy. This company's main business focuses on utilizing geothermal sources to produce environmentally friendly electrical energy.
Tenaga Nasional Berhad	Malaysia	The largest electric utility company in Malaysia engaged in the generation, transmission and distribution of electrical energy. Apart from that, TNB is also starting to develop a renewable energy business as part of the transition to clean energy.
Energy Absolut Public Company Limited	Thailand	Thailand's largest renewable energy company focused on developing clean energy and sustainable technologies. Different from conventional energy companies, EA is known as a pure renewable energy company.
Maxeon Solar Technologies	Singapore	A global renewable energy company that focuses on solar energy technology. The company is known as a manufacturer of high-quality solar panels with strong technological innovation in the clean energy sector.

Data Analysis Techniques (Event Study)

1. Calculating Stock Returns

$$R_{it} = \frac{P_t - P_{t-1}}{P_{t-1}}$$

Information:

R_{it} : return of stock i at time t

P_{it} : stock price at time t

P_{it-1} : previous share price

2. Calculating Expected Return

$E(R_i)$ = Total return

3. Calculating Abnormal Return (AR)

Abnormal return is the difference between stock returns and expected returns:

$$AR_{it} = R_{it} - E(R_{it})$$

Abnormal returns show whether a stock provides returns above normal due to an event.

4. Calculating Cumulative Abnormal Return (CAR)

CAR is the accumulated abnormal return during the event period:

$$CAR = \sum AR_t$$

CAR used to see the total impact of an event on shares.

5. Calculating Average Abnormal Return (AAR)

$$AAR_t = \frac{\sum AR_{it}}{n}$$

Information:

n : number of companies

6. Calculating Standard Deviation

Standard deviation used to measure the level of data deviation:

$$\sigma = \sqrt{\frac{\sum (AR_t - \bar{AR})^2}{n - 1}}$$

7. Test T (Significance Test)

To test whether abnormal returns are significant or not, the t test is used:

$$t = \frac{AAR}{SD/\sqrt{n}}$$

Then compared with the t table ($\alpha = 5\%$)

criteria:

1. If $t_{hitung} > t_{tabel} \rightarrow$ significant
2. If $t_{hitung} < t_{tabel} \rightarrow$ not significant

Hypothesis

H_0 : The Iran–Israel escalation has no significant effect on the abnormal stock returns of environmentally based companies in ASEAN.

H_1 : The Iran–Israel escalation has a significant effect on abnormal stock returns of environmentally based companies in ASEAN.

Sharia Perspective Approach

Apart from quantitative analysis, this research also uses a conceptual approach to:

1. Analyze energy scarcity from a sharia investment perspective
2. Review the principles of distributional justice and sustainability (maslahah)

3. Results and Discussion

Potrait of Share Price of Environmentally Based Company in ASEAN

A. Indonesia: Pertamina Geothermal Energy

1. Share Price Prices and Conversion to USD

**Table 1. Pertamina Geothermal Energy Share Price
Period t-3 to t+3 Iran-Israel escalation**

Period	Time	Share Price (IDR)	Share Price (USD)
t-3	25 February	Rp. 1.115	0,065 \$
t-2	26 February	Rp. 1.100	0,065 \$
t-1	27 February	Rp. 1.085	0,064 \$
T	28 February	Rp. 1.090	0,064 \$
t+1	1 March	Rp. 1.085	0,064 \$
t+2	2 March	Rp. 1.090	0,064 \$
t+3	3 March	Rp. 1.090	0,064 \$

Source: <https://www.google.com/finance/quote/PGEO:ID>

2. Stock Returns

**Table 2. Pertamina Geothermal Energy StockReturn
Period t-3 to t+3 Iran-Israel escalation**

Period	Ri
t-2	$(0.065-0.065)/0.065 = 0.000$
t-1	$(0.064-0.065)/0.065 = -0.0154$
T	$(0.064-0.064)/0.064 = 0.000$
t+1	$(0.064-0.064)/0.064 = 0.000$
t+2	$(0.064-0.064)/0.064 = 0.000$
t+3	$(0.064-0.064)/0.064 = 0.000$

Source: Author's calculation results

3. Total return

$$0 + (-0.0154) + 0 + 0 + 0 + 0 = -0.0154$$

Number of data = 6

$$E(R_i) = \frac{-0.0154}{6} = -0.00257$$

4. Abnormal return

Table 3. Abnormal Return on Pertamina Geothermal Energy Shares
Period t-3 to t+3 Iran-Israel escalation

Period	Ri	E(Ri)	AR
t-2	0.000	-0.00257	0.00257
t-1	-0.0154	-0.00257	-0.01283
T	0.000	-0.00257	0.00257
t+1	0.000	-0.00257	0.00257
t+2	0.000	-0.00257	0.00257
t+3	0.000	-0.00257	0.00257

Source: Author's calculation results

5. Cumulative Abnormal Return (CAR)

$$CAR = 0.00257 - 0.01283 + 0.00257 + 0.00257 + 0.00257 + 0.00257$$

$$CAR = 0.00002 = 0$$

Interpretation:

Stock returns tend to be stable (unchanged), there is only a small decline at t-1. CAR=0, indicating there is no significant market reaction to the event. Then, to test more deeply, a T test is carried out on the abnormal return results as follows:

6. Average Abnormal Return

$$AAR = \frac{0.00002}{6} = 0.000003$$

7. Standard Deviation (SD)

Cause AAR= 0, so:

$$SD = \sqrt{\frac{\sum AR^2}{5}}$$

$$SD = 0.00629$$

8. Test T (t statistic)

$$t = \frac{0.000003}{0.00629/\sqrt{6}}$$

$$t = \frac{0.000003}{0.00257} = 0.001$$

Test Decision:

$$n = 6 \rightarrow df = 5$$

$$\alpha = 5\% \rightarrow t_{tabel} = 2.571$$

$$t_{hitung} = 0.001 < t_{tabel} = 2.571$$

Decision: H₀ accepted, H₁ rejected.

Based on the calculation results, the Average Abnormal Return (AAR) value of 0.000003 indicates that the average abnormal return during the observation period is very small and close to zero. This indicates that there is no significant excess return around

the observed event. The results of statistical tests using the t test produce a calculated t value of 0.001, which is smaller than the t table value of 2.571 at a significance level of 5%. Thus, the null hypothesis (H_0) is accepted, which means that the Iran–Israel escalation does not have a significant effect on stock returns.

Even though there were small fluctuations in abnormal returns, especially a decrease in period t-1, overall the movement was not strong enough to influence the market reaction. The relatively stable abnormal return value in other periods indicates that the market does not respond significantly to existing information. Thus, it can be concluded that the Iran–Israel escalation does not have strong information content (low information content) and the market tends to be in an efficient condition, where stock prices reflect the available information.

Theoretically, geopolitical conflicts such as the Iran–Israel escalation generally have a significant impact on the global energy market, especially the oil and gas sector, because the Middle East region is the center of world energy production. However, the results of this research show that this impact does not directly affect environmentally based energy companies, especially the geothermal sector. This can be explained because the characteristics of the geothermal business are more stable, based on domestic resources, and less dependent on fluctuations in global energy prices such as crude oil.

This finding is in line with international research which shows that renewable energy companies tend to be more resilient to geopolitical shocks than conventional energy. Study by Reboredo (2022) found that clean energy stocks have lower volatility to geopolitical shocks than oil stocks [4]. Apart from that, research by Sadorsky (2023) shows that investors see renewable energy as a more stable long-term alternative amidst global uncertainty[5].

Furthermore, the insignificant market reaction to Pertamina Geothermal Energy shares also shows that information regarding the escalation of the Iran–Israel conflict has low information content for investors in this sector. This means that investors do not consider these events to be factors that are relevant enough to influence the performance of geothermal companies. This also reflects that the capital market is in a semi-strong form efficiency condition, where stock prices reflect all available public information [6].

In addition, small fluctuations in abnormal returns, especially the decline in period t-1, can be interpreted as a form of investor initial reaction to global uncertainty. However, because it was not followed by significant movements in the following period, it can be said that the market quickly adjusted (market correction), so that the impact did not continue.

From a green investment perspective, these results show that environmentally based companies such as Pertamina Geothermal Energy have better resilience to global external risks. This strengthens the argument that investment in the renewable energy sector not only supports environmental sustainability, but also provides stability in conditions of geopolitical uncertainty [7].

B. Malaysia: Tenaga Nasional Berhad

1. Share Prices and Conversion to USD

Table 4. Tenaga Nasional Berhad Share Price
Period t-3 to t+3 Iran-Israel escalation

Period	Time	Share Price (RM)	Share Price (USD)
t-3	25 February	RM 14,18	\$ 3,50
t-2	26 February	RM 14,18	\$ 3,50
t-1	27 February	RM 14,18	\$ 3,50
T	28 February	RM 14,18	\$ 3,50
t+1	1 March	RM 14,18	\$ 3,50
t+2	2 March	RM 14,28	\$ 3,53
t+3	3 March	RM 14,38	\$ 3,55

Source: <https://www.google.com/finance/quote/TENAGA:KLSE>

2. Stock Return

Table 5. Tenaga Nasional Berhad Stock Returns
Period t-3 to t+3 Iran-Israel escalation

Period	Ri
t-2	$(3.50-3.50)/3.50 = 0.000$
t-1	$(3.50-3.50)/3.50 = 0.000$
T	$(3.50-3.50)/3.50 = 0.0000$
t+1	$(3.50-3.50)/3.50 = 0.000$
t+2	$(3.53-3.50)/3.50 = 0.00857$
t+3	$(3.55-3.53)/3.53 = 0.00567$

Source: Author's calculation results

3. Total return

$$0+0+0+0+0+0+0.00857+0.00567=0,1424$$

Number of data = 6

$$E(R_i) = \frac{0.01424}{6} = 0.00237$$

4. Abnormal return

Table 6. Abnormal Returns on Tenaga Nasional Berhad Shares
Period t-3 to t+3 Iran-Israel escalation

Period	Ri	E(Ri)	AR
t-2	0.000	0.00237	-0.00237
t-1	0.000	0.00237	-0.00237
T	0.000	0.00237	-0.00237
t+1	0.000	0.00237	-0.00237
t+2	0.00857	0.00237	0.00620

t+3	0.00567	0.00237	0.00330
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Source: Author's calculation results

5. Cumulative Abnormal Return (CAR)

$$CAR = -0,00237 - 0,00237 - 0,00237 - 0,00237 + 0.00620 + 0,00330'$$

$$CAR = 0.00002 = 0$$

Intepretation:

Before the event → stable returns (no movement), after the event (t+2, t+3) → there is an increase in share prices. However, CAR= 0 → no significant impact overall. This means there was a small positive reaction at the end of the period, but not strong enough to be considered significant.

Then, to test more deeply, a T test is carried out on the abnormal return results as follows:

6. Average Abnormal Return

$$AAR = \frac{-0.00237 - 0.00237 - 0.00237 - 0.00237 + 0.00620 + 0.00330}{6}$$

$$AAR = \frac{-0.000 (\approx 0.00002)}{6} = 0.000003$$

7. Standar Deviasi (SD)

Cause AAR= 0, so:

$$SD = \sqrt{\frac{\sum AR^2}{5}}$$

$$SD = 0.00357$$

8. Test T (t statistic)

$$t = \frac{0.000003}{0.00357/\sqrt{6}}$$

$$t = \frac{0.000003}{0.00146} = 0.002$$

Test decision:

$$n = 6 \rightarrow df = 5$$

$$\alpha = 5\% \rightarrow t_{tabel} = 2.571$$

$$t_{hitung} = 0.002 < t_{tabel} = 2.571$$

Decision: H₀ accepted, H₁ rejected.

Based on the analysis results, the Average Abnormal Return (AAR) value of 0.000003 indicates that the average abnormal return during the observation period was very small and close to zero. This indicates that there are no significant excess returns around the events studied. The test results using the t test show a calculated t value of 0.002, which is smaller than the t table value of 2.571 at a significance level of 5%. Thus, the null hypothesis (H_0) is accepted, which means that the Iran–Israel escalation does not have a significant effect on stock returns..

Descriptively, it can be seen that in the period before and during the event (t-2 to t+1) abnormal returns tended to be negative, while in the period after (t+2 and t+3) they began to show positive values. This indicates that there was a slight positive market response after the event occurred. However, the response was not strong enough to produce a statistically significant effect. Thus, it can be concluded that the observed Iran–Israel escalation does not have strong information content (low information content), so it does not trigger a meaningful market reaction. This condition also shows that the market tends to be efficient in the semi-strong form, where the available information is reflected in stock prices.

From a financial theory perspective, geopolitical conflicts such as Iran–Israel typically have a major impact on the fossil-based energy sector due to its link to the world's oil supply. However, the results of this research show that this impact is not significant for electric utility companies such as Bahan Nasional Berhad, some of whose operations are starting to move towards sustainable and domestic-based energy. This shows that utility companies with relatively stable and regulatory business models tend to be more resistant to external shocks.

This finding is supported by international research which states that renewable energy companies and electric utilities have higher resilience to geopolitical risks than the conventional energy sector. Study by Pata (2025) menemukan bahwa saham energi bersih menunjukkan sensitivitas yang lebih rendah terhadap ketidakpastian geopolitik global [8]. Apart from that, research by Shah, et al. (2025) states that geopolitical risks have a smaller impact on renewable energy markets compared to fossil-based energy [9].

Furthermore, the insignificant influence of this event shows that the escalation of the Iran–Israel conflict has low information content for investors in Tenaga Nasional Berhad shares. This means that investors do not consider this event to be the main factor influencing company performance. This also indicates that the capital market is in a semi-strong form efficiency condition, where stock prices reflect all relevant public information [10].

From a green investment perspective, these results show that environmentally based companies and energy utilities have good resilience to global shocks, including geopolitical conflicts. This stability is an added value for investors who are looking for relatively safe investment instruments amidst global uncertainty [11]. Thus, investment in the sustainable energy sector not only provides environmental benefits, but also offers stability in the short term.

C. Thailand: Energy Absolut Public Company Limited

1. Share Prices and Conversion to USD

Table 7. Energy Absolut Public Company Limited Share Price

Period t-3 to t+3 Iran-Israel escalation

Period	Time	Share Price (THB)	Share Price (USD)
t-3	25 February	฿ 3,04	\$ 0,092
t-2	26 February	฿ 2,92	\$ 0,089
t-1	27 February	฿ 3,02	\$ 0,092
t	28 February	฿ 3,12	\$ 0,095
t+1	1 March	฿ 2,85	\$ 0,087
t+2	2 March	฿ 2,66	\$ 0,081
t+3	3 March	฿ 2,50	\$ 0,076

Source: <https://www.google.com/finance/quote/EA:BKK>

2. Stock Return

Table 8. Energy Absolut Public Company Limited Stock Returns

Period t-3 to t+3 Iran-Israel escalation

Period	Ri
t-2	$(0.089-0.092)/0.092 = -0.03261$
t-1	$(0.092-0.089)/0.089 = 0.03371$
T	$(0.095-0.092)/0.092 = 0.03261$
t+1	$(0.087-0.095)/0.095 = -0.08421$
t+2	$(0.081-0.087)/0.087 = -0.06897$
t+3	$(0.076-0.081)/0.081 = -0.06173$

Source: Author's calculation results

3. Total return

$$-0.03261+0.03371+0.03261-0.08421-0.06897-0.06173=-0.18120$$

Number of data = 6

$$E(R_i) = \frac{-0.18120}{6} = -0.03020$$

4. Abnormal return

Table 9. Abnormal Return on Energy Absolut Public Company Limited Shares

Period t-3 to t+3 Iran-Israel escalation

Period	Ri	E(Ri)	AR
t-2	-0.03261	-0.03020	-0.00241
t-1	0.03371	-0.03020	0.06391
t	0.03261	-0.03020	0.06281
t+1	-0.08421	-0.03020	-0.05401
t+2	-0.06897	-0.03020	-0.03877
t+3	-0.06173	-0.03020	-0.03153

Source: Author's calculation results

5. Cumulative Abnormal Return (CAR)

$$CAR = -.00241 + 0.06391 + 0.06281 - 0.05401 - 0.03877 - 0.03153$$

$$CAR = 0.00000 = 0$$

Intepretation:

Before the event → there is an increase (t-1, t), after the event → there is a sharp decrease (t+1 to t+3). However, in total, CAR=0 → the impact is not cumulatively significant.

Then, to test more deeply, a T test is carried out on the abnormal return results as follows:

6. Average Abnormal Return

$$AAR = \frac{-0.00241 + 0.06391 + 0.06281 - 0.05401 - 0.03877 - 0.03153}{6}$$

$$AAR = \frac{0.00000}{6} = 0.00000$$

7. Standard deviation (SD)

Cause AAR= 0, so:

$$SD = \sqrt{\frac{\sum AR^2}{5}}$$

$$SD = 0.05030$$

8. Test T (t statistic)

$$t = \frac{0}{0.05030/\sqrt{6}} = 0$$

Test decision:

$$n = 6 \rightarrow df = 5$$

$$\alpha = 5\% \rightarrow t_{tabel} = 2.571$$

$$t_{hitung} = 0 < t_{tabel} = 2.571$$

Decision: H_0 accepted, H_1 rejected.

Based on the calculation results, the Average Abnormal Return (AAR) value of 0.00000 indicates that on average there were no abnormal returns during the observation period. This indicates that there are no significant excess returns around the events studied. The results of statistical tests using the t test show a calculated t value of 0, which is smaller than the t table value of 2,571 at a significance level of 5%. Thus, the null hypothesis (H_0) is accepted, which means

that the observed Iran–Israel escalation does not have a significant effect on stock returns.

Descriptively, it can be seen that there are quite large fluctuations in abnormal returns, where in the $t-1$ and t periods they show high positive values, while in the following period ($t+1$ to $t+3$) there is a quite significant decline. This pattern indicates a temporary market reaction, namely an overreaction at the beginning followed by a correction in the following period. However, because the cumulative abnormal return (CAR) value is close to zero, this reaction does not last and does not have a significant short-term impact on stock prices. This shows that the information contained in the Iran–Israel escalation has low information content.

Theoretically, in the Efficient Market Hypothesis (EMH) perspective, an efficient capital market will respond to new information quickly and accurately [12]. However, the results of this study show that the Iran–Israel escalation does not have a strong enough information content (low information content), so it does not trigger a significant reaction from investors. This finding is in line with research by Matteo Iacoviello & Caldara (2022) which states that not all geopolitical conflicts have a significant impact on the stock market, especially if they do not have a direct link to the fundamentals of a particular company or industrial sector [13].

Furthermore, descriptively, it was found that there was a quite sharp abnormal return fluctuation pattern, especially in the $t-1$ and t periods which showed positive values, followed by a decline in the $t+1$ to $t+3$ periods. This pattern indicates an overreaction phenomenon at the beginning of the event which was then followed by a market correction. This phenomenon is consistent with research findings by Phan et al. (2023) which states that markets often overreact to geopolitical uncertainty in the short term, but return to normal once the information is deemed to be fundamentally irrelevant [14].

However, because the Cumulative Abnormal Return (CAR) value is close to zero, this reaction is not persistent. This shows that investors do not see the Iran–Israel conflict as a factor influencing the short-term performance of environmentally based energy companies such as Energy Absolute. In contrast to conventional energy companies (oil and gas) which are very sensitive to the Middle East conflict, renewable energy companies tend to be more stable because they do not depend directly on fluctuations in global oil prices.

This finding is supported by recent research by Zhang et al. (2024) which shows that renewable energy companies have higher resilience to geopolitical shocks than fossil energy companies. This is due to a business model that is more oriented towards long-term sustainability and does not depend on supply chains that are prone to conflict [15].

Apart from that, the low market reaction can also be explained by investor diversification factors and increasing awareness of green investment. According to research Bouri et al. (2023), Global investors are starting to view the renewable

energy sector as a defensive asset against geopolitical risks, so that fluctuations due to international conflicts are relatively limited [7].

Thus, the results of this study confirm that the Iran–Israel escalation did not have a significant impact on Energy Absolute Public Company Limited's stock returns. The market reaction that occurs is only temporary and not sustainable, so it does not affect the overall value of the company. This also shows that the environmentally based energy sector has better resilience to global geopolitical dynamics.

D. Singapore: Maxeon Solar Technologies

1. Share Prices and Conversion to USD

Table 10. Maxeon Solar Technologies Share Price
Period t-3 to t+3 Iran-Israel escalation

Period	Time	Share Price (SGD)	Share Price (USD)
t-3	25 February	\$ 2,69	\$ 2,08
t-2	26 February	\$ 2,68	\$ 2,08
t-1	27 February	\$ 2,45	\$ 1,90
t	28 February	\$ 2,40	\$ 1,86
t+1	1 March	\$ 2,35	\$ 1,82
t+2	2 March	\$ 2,28	\$ 1,77
t+3	3 March	\$ 2,48	\$ 1,92

Source: <https://www.google.com/finance/quote/MAXN:NASDAQ>

2. Stock Return

Table 11. Energy Maxeon Solar Technologies Stock Returns
Period t-3 to t+3 Iran-Israel escalation

Period	Ri
t-2	$(2.08-2.08)/2.08 = 0.00000$
t-1	$(1.90-2.08)/2.08 = -0.08654$
T	$(1.86-1.90)/1.90 = -0.02105$
t+1	$(1.82-1.86)/1.86 = -0.02151$
t+2	$(1.77-1.82)/1.82 = -0.02747$
t+3	$(1.92-1.77)/1.77 = 0.08475$

Source: Author's calculation results

3. Total return

$$E(R_i) = 0 - 0.08654 - 0.02105 - 0.02151 - 0.02747 + 0.08475 = -0.07182$$

Number of data = 6

$$E(R_i) = \frac{-0.07182}{6} = -0.01197$$

4. Abnormal return

**Table 12. Abnormal Return on Maxeon Solar Technologies Shares
Period t-3 to t+3 Iran-Israel escalation**

Periode	Ri	E(Ri)	AR
t-2	0.00000	-0.01197	0.01197
t-1	-0.08654	-0.01197	-0.07457
T	-0.02105	-0.01197	-0.00908
t+1	0.02151	-0.01197	-0.00954
t+2	-0.02747	-0.01197	-0.01550
t+3	0.08475	-0.01197	0.09672

Sumber: Source: Author's calculation results

5. Cumulative Abnormal Return (CAR)

$$CAR = 0.01197 - 0.07457 - 0.00908 - 0.00954 - 0.01550 + 0.09672$$

$$CAR = 0.00000 = 0$$

Intepretation:

Before the event → there was a quite sharp decline (t-1), during & after the event → it was still negative until t+2, t+3 → there was a strong rebound (sharp increase). However: CAR=0 → overall there is no significant effect. The market had reacted negatively to the event, but then an adjustment (reversal) occurred. Investors do not sustain such reactions in the short term.

Then, to test more deeply, a T test is carried out on the abnormal return results as follows:

6. Average Abnormal Return (AAR)

$$AAR = \frac{0}{6} = 0.00000$$

7. Standard deviation (SD)

Cause AAR=0, so:

$$SD = \sqrt{\frac{\sum AR^2}{5}}$$

$$SD = 0.05650$$

8. Test T

$$t = \frac{0}{0.05650/\sqrt{6}} = 0$$

Test decision

$$n = 6 \rightarrow df = 5$$

$$\alpha = 5\% \rightarrow t_{\text{tabel}} = 2.571$$

$$t_{\text{hitung}} = 0 < t_{\text{tabel}} = 2.571$$

Decision: H_0 accepted, H_1 rejected.

Based on the calculation results, the Average Abnormal Return (AAR) value was obtained at 0.00000, which indicates that on average there was no significant excess return during the observation period. The results of statistical testing using the t test show a calculated t value of 0, which is smaller than the t table value of 2,571 at a significance level of 5%. Thus, the null hypothesis (H_0) is accepted, which means that the observed events do not have a significant influence on stock returns.

Even though individually there are quite large fluctuations in abnormal returns, especially a decrease at t-1 and a sharp increase at t+3, cumulatively the Cumulative Abnormal Return (CAR) value is close to zero. This indicates that the market only reacts temporarily to existing information and then returns to normal conditions. This phenomenon shows a pattern of overreaction and correction, where investors overreact to initial information, but then adjust again. Thus, the information contained in this event does not have strong information content (low information content).

From a capital market theory perspective, this result can be explained through a market efficiency approach, where the market will only respond to information that has direct relevance to the company's fundamental performance. The Iran–Israel conflict, despite having a major impact on global geopolitics, has no direct connection to the solar energy business operations run by Maxeon Solar Technologies. This is in line with research by Andersen et al. (2022) which shows that market volatility due to global factors tends not to have a significant impact on companies with indirect risk exposure to these events [16].

Descriptively, this research found that there were quite large fluctuations in abnormal returns, especially a decrease in the t-1 period and a sharp increase in t+3. This pattern reflects the overreaction phenomenon in the early stages, where investors overreacted to global uncertainty, followed by a correction in the following period. This phenomenon is consistent with research findings by Dockner et al. (2023) which explains that the stock market often experiences short-term emotional reactions to geopolitical news before eventually returning to its fundamental values [17].

Even though there are significant fluctuations at the individual level, the Cumulative Abnormal Return (CAR) value which is close to zero indicates that the effect is not sustainable. This means that the market only experienced temporary disruption and there was no short-term change in investors' perception of the company's value. This condition shows that the information contained in the

conflict escalation has low information content for Maxeon Solar Technologies investors.

Furthermore, the characteristics of renewable energy companies are also an important factor in explaining these results. In contrast to fossil-based energy companies which are very sensitive to conflicts in the Middle East region, solar energy companies such as Maxeon are more influenced by long-term factors such as energy policy, technological innovation and the transition to a green economy. Research by Fabozzi et al. (2024) shows that renewable energy stocks tend to have lower sensitivity to geopolitical risks than conventional energy sectors [18].

Apart from that, the increasing trend of sustainable investment also contributes to the stability of shares of green energy companies. Global investors increasingly view the renewable energy sector as a long-term investment that is relatively resilient to external shocks. This is supported by recent research by Kleimeier & Viehs (2023) who found that ESG-based portfolios show better resilience in the face of global uncertainty [19].

Thus, the results of this study confirm that the Iran–Israel escalation did not have a significant impact on Maxeon Solar Technologies' stock returns. The market reaction that occurs is only temporary and not sustainable, so it does not affect the overall value of the company. This also strengthens the argument that the environmentally based energy sector has a higher level of resilience to global geopolitical dynamics.

Iran-Israel Escalation in View of Sharia Investment and Impact on Energy Scarcity

The escalation of the conflict between Iran and Israel which will peak in 2026 has triggered global geopolitical tensions, especially after the closure of the Strait of Hormuz as the main route for world energy trade [20]. The Strait of Hormuz is one of the most important chokepoints in the global energy distribution system because around 20% of the world's oil supply passes through it every day [21]. The closure of this route has disrupted the flow of exports of crude oil and liquefied natural gas from the Gulf region, including from major producing countries such as Saudi Arabia, Iraq, Kuwait and Qatar. These conditions show that geopolitical stability in the Middle East region is very closely related to global economic stability, especially in the energy sector.

The direct impact of closing the Strait of Hormuz is the disruption of the balance between global energy supply and demand. The cessation of distribution of large quantities of oil has caused a significant reduction in supply on the international market, while global energy demand is likely to remain high. This imbalance triggered a spike in world oil prices which rose sharply in a short time, even reaching more than 30% of normal prices [22]. The increase in energy prices has a broad impact on various economic sectors, such as transportation, manufacturing industry and international trade. Global logistics costs are increasing, giving rise to inflationary pressures in many countries, both developed and developing.

Apart from that, the closure of the Strait of Hormuz has also triggered energy shortages in various regions of the world. Countries that are highly dependent on energy imports from the Middle East are the ones most affected. The Asian region is the region with the biggest

impact, considering that the majority of oil exports through the Strait of Hormuz are destined for countries such as China, India, Japan and South Korea [23]. Developing countries in Asia, including Indonesia and the Philippines, are also experiencing significant pressure in the form of rising fuel prices, increasing energy subsidy burdens, and the potential for domestic inflation. On the other hand, European countries are also facing an energy crisis, especially regarding the supply of liquefied natural gas from Qatar, which has the potential to hamper industrial activity and slow economic growth [21].

Overall, the escalation of the Iran–Israel conflict which resulted in the closure of the Strait of Hormuz shows that disruption to strategic energy distribution channels can have a systemic impact on the global economy. This crisis not only causes energy prices to spike and supply shortages, but also has the potential to trigger stagflation in various countries. Therefore, this event is proof that the world's dependence on certain energy pathways is still very high, so it is necessary to diversify energy sources and strengthen national energy security to reduce the risk of geopolitical shocks in the future.

Constraints in oil and gas supplies have caused a significant reduction in energy availability, while global demand is relatively stable. This condition triggers an imbalance between supply and demand which leads to a short-term energy crisis. Apart from that, global supply chain disruptions due to delays in energy distribution also worsened the situation, so that several countries experienced difficulty in meeting their domestic energy needs. This shortage not only has an impact on the industrial sector, but also on the transportation and household sectors, which ultimately increases economic pressure at large.

This energy shortage then had implications for a significant spike in world oil prices. The latest data shows that global crude oil prices have increased sharply to reach more than USD 110 per barrel due to disruption in energy supplies from the Middle East region [24]. This price increase occurred because the market responded to supply uncertainty by increasing prices as an adjustment mechanism. This spike in energy prices has had a broad impact on the global economy, including through increased production costs, increased transportation costs, and inflationary pressures in various countries. Developing countries that depend on energy imports, such as Indonesia, experience a greater impact because they have to bear the burden of increasing energy subsidies and pressure on fiscal stability.

However, the energy crisis resulting from the closure of the Strait of Hormuz also has positive implications in the long term, namely encouraging the acceleration of the transition to renewable energy and increasing green investment. High dependence on fossil energy has been proven to create structural vulnerability to geopolitical shocks, so many countries are starting to see the importance of energy diversification as an energy security strategy [25]. In this context, the energy crisis provides momentum for the government and private sector to increase investment in environmentally friendly energy such as solar power, wind, bioenergy and green hydrogen. In fact, various environmental institutions emphasize that this crisis must be used as a turning point to build a more sustainable and just energy system.

Furthermore, in academic literature, geopolitical risk is proven to have a significant relationship to energy market volatility and drives changes in the structure of global energy investment. Research by Caldara dan Iacoviello (2022) energy prices and market uncertainty, which ultimately drives investors to look for more stable investment alternatives, including

renewable energy [13]. Additionally, studies Salisu dan Adediran (2020) found that geopolitical uncertainty increases interest in alternative energy assets as a long-term risk mitigation measure [26]. Thus, the Strait of Hormuz crisis is not only a short-term phenomenon, but also a catalyst in the transformation of the global energy system towards a more sustainable direction .

Overall, the closure of the Strait of Hormuz shows that the global energy system remains highly vulnerable to geopolitical disruption. The impact is not only energy shortages and soaring oil prices, but also broad global economic pressures. However, on the other hand, this crisis opens up strategic opportunities to accelerate the energy transition and increase investment in the green energy sector [27]. Therefore, this event can be understood as a turning point in the global energy transformation, from dependence on fossil energy towards a more sustainable and resilient energy system.

In the Al-Qur'an, Allah SWT has given a warning regarding the importance of maintaining the balance of the earth and avoiding damage, as in the Al-Qur'an Surah Ar-Rum Verse 41:

ظَهَرَ الْفَسَادُ فِي الْبَرِّ وَالْبَحْرِ بِمَا كَسَبَتْ أَيْدِي النَّاسِ لِيُذِيقَهُمْ بَعْضَ الَّذِي عَمِلُوا لَعَلَّهُمْ يَرْجِعُونَ

Artinya: "It has been seen that damage on land and at sea is caused by the actions of human hands; Allah wants them to feel some of the (consequences of) their actions, so that they return (to the right path)."

This verse emphasizes that damage to land and sea is the result of human actions, which in the modern context can be interpreted as a consequence of geopolitical conflicts, exploitation of natural resources, and excessive dependence on fossil energy. The closure of the Strait of Hormuz as the main route for world energy distribution has caused major disruption to global oil supplies, even being called one of the largest supply disruptions in the history of modern energy markets. This shows that human actions, both in the form of conflict and unsustainable energy policies, directly contribute to the emergence of the global energy crisis.

Furthermore, the energy scarcity that occurs as a result of the conflict reflects the form of "fasad" (damage) as mentioned in the verse. Disruptions in oil distribution of up to millions of barrels per day cause an imbalance between energy supply and demand, which results in price spikes, global inflation and slowing economic growth [28]. In fact, recent reports state that this crisis has the potential to become one of the largest energy crises in history, surpassing previous energy crises [29]. In Islamic perspective, this condition is proof that injustice, conflict and excessive exploitation of natural resources will produce destructive impacts that will be felt widely by humanity.

Apart from that, this verse also contains the reflective message "la'allahum yarji'un" (so they will return), which can be interpreted as an invitation to return to the principles of balance and sustainability in resource management. The energy crisis resulting from the Iran–Israel conflict shows the weakness of the global energy system which is highly dependent on one geopolitical region. This dependency makes the world vulnerable to disruption, so that when distribution channels are disrupted, the impact extends to all sectors of the global economy. Therefore, this crisis can be understood as a warning for humans to change energy consumption and production patterns towards a more sustainable system.

In the current context, the meaning of this verse is also relevant to energy transition efforts towards renewable energy sources. The current crisis has encouraged many countries to reduce dependence on fossil energy and switch to alternative, more environmentally friendly energy, such as solar and wind power. In fact, recent analysis shows that the energy crisis is due to the Eastern conflict [30]. Thus, this verse not only explains the causes of damage, but also provides a direction for solutions, namely returning to the principles of balance, responsibility and sustainability in managing the earth.

Overall, Al-Qur'an Surah Ar-Rum Verse 41 has very strong relevance to the phenomenon of energy scarcity due to the Iran–Israel escalation. This verse emphasizes that the crisis that occurred is not just a natural phenomenon, but is the result of unbalanced human actions in managing conflict and resources. Therefore, the global energy crisis can be understood as a form of warning as well as momentum to carry out a transformation towards an energy system that is more just, sustainable and in accordance with Islamic values.

In addition, in the Al-Qur'an Surah Al-A'raf Verse 31 it is emphasized that humans are prohibited from excessive consumption (israf), which is relevant to unsustainable energy consumption.

يَا بَنِي آدَمَ خُذُوا زِينَتَكُمْ عِنْدَ كُلِّ مَسْجِدٍ وَكُلُوا وَاشْرَبُوا وَلَا تُسْرِفُوا إِنَّهُ لَا يُحِبُّ الْمُسْرِفِينَ

Artinya: “O son of Adam! Wear your beautiful clothes every time you (enter) the mosque, eat and drink, but don't overdo it. Indeed, Allah does not like people who exaggerate.”

This verse emphasizes the prohibition of excessive consumption (israf), including the use of resources such as energy. In a modern context, such as excessive consumption of fossil energy which can cause an energy crisis, waste of resources which accelerates environmental damage and Islam encourages balance and sustainability. In an Islamic economic perspective, the israf prohibition does not only apply to individual consumption, but also to economic policies and production systems. Excessive use of fossil energy without considering sustainability is a form of imbalance (tawazun) which is contrary to sharia principles. Therefore, Islam encourages efficient, fair and sustainable resource management. This principle is in line with the concept of sustainable development which emphasizes a balance between economic, social and environmental needs.

In the context of sharia investment, the values contained in this verse are an important basis for making investment decisions. Sharia investment does not only consider financial profits, but also social and environmental impacts. Therefore, the energy crisis resulting from geopolitical conflicts can be a momentum to direct investment to the renewable energy sector as part of green investment. Investments in solar energy, wind and bioenergy reflect efforts to reduce dependence on fossil energy and avoid wasting limited resources.

Furthermore, in the academic literature, geopolitical uncertainty has been shown to drive changes in the direction of global investment. Research by Caldara dan Iacoviello (2022) shows that increasing geopolitical risks are having a significant impact on energy markets and driving investors to look for more stable and sustainable alternatives [13]. Besides that, Salisu dan Adediran (2020) found that energy uncertainty increases interest in investment in the alternative energy sector as a long-term risk mitigation strategy. From a sharia perspective, this

transition is not only driven by economic considerations, but also by moral values to maintain natural balance and avoid damage [26].

Thus, Al-Qur'an Surah Al-A'raf Verse 31 provides a strong normative foundation for the development of green investment-based sharia investment. The prohibition on excessive use (israf) can be interpreted as an encouragement to manage energy resources efficiently and sustainably. In a situation of global energy crisis, these values become increasingly relevant as guidelines in building an economic system that is not only profitable, but also maintains environmental sustainability and the welfare of future generations.

In facing the energy crisis, sharia investment is present as an alternative solution that is not only profit-oriented, but also sustainability and benefit. Sharia investment principles that avoid usury, gharar and maysir encourage more stable and ethical investment practices. In the context of the global energy crisis, sharia investment is starting to be directed towards the renewable energy sector as part of green investment. This is in line with the principles of maqashid sharia, especially in protecting the environment (hifdz al-bi'ah) and maintaining the continuity of human life.

The crisis resulting from the closure of the Strait of Hormuz has actually become a momentum for accelerating the global energy transition towards more environmentally friendly energy sources. Various studies show that geopolitical disruptions in fossil energy pathways encourage countries to reduce dependence on oil and switch to renewable energy such as solar power, wind and bioenergy. In the academic literature, geopolitical risks are shown to have a significant impact on energy markets and investment direction. Research by Caldara dan Iacoviello (2022) shows that increasing geopolitical risk is driving changes in investor behavior, including a shift to more stable assets such as renewable energy [13]. Besides that, Salisu dan Adediran (2020) found that geopolitical uncertainty increases investment interest in the alternative energy sector as a form of long-term risk mitigation [26].

Thus, sharia investment in the renewable energy sector (green investment) is a strategic solution in facing the global energy crisis. Not only does it provide economic benefits, but it also creates an energy system that is more sustainable, fair and in line with Islamic values. This transition shows that the energy crisis resulting from geopolitical conflicts can be a turning point towards transforming the global energy system into a more environmentally friendly and resilient one.

4. Conclusion

Based on an analysis of the capital market reaction of four environmentally based companies in the ASEAN region, all of them did not have a significant influence on stock returns due to the Iran-Israel escalation. Environmentally based companies have better resilience to global external risks. Investments in the renewable energy sector not only support environmental sustainability, but also provide stability in conditions of geopolitical uncertainty. The crisis that occurred is not just a natural phenomenon, but the result of unbalanced human actions in managing conflict and resources. Therefore, the global energy crisis can be understood as a form of warning as well as momentum to carry out a transformation towards an energy system that is more just, sustainable and in line with Islamic values.

This research enriches the study of the relationship between geopolitical risk and financial markets, in particular by examining the impact of the escalation of the Iran–Israel conflict on share prices of environmentally based companies in the ASEAN region. For the government and regulators, the results of this research can be a basis for formulating policies to strengthen national energy security through the development of green investment. This research combines geopolitical analysis (Iran–Israel escalation), capital markets (share prices of ASEAN green companies), and Islamic economics (Sharia investment) in one integrated analytical framework. This multidisciplinary approach is still rarely found in previous research.

This research uses an event study approach with a relatively limited event window period, so it may not fully capture the long-term impact of conflict escalation on the stock performance of environmentally based companies. Market reactions measured through abnormal returns tend to be short-term and can be influenced by momentary sentiment, so they do not always reflect changes in company fundamentals.

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