

Covid-19 And The Stock Reaction Of Islamic Banking In Asia

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ABSTRACT (English)

The number of COVID-19 cases that hit Asia also put pressure on the economy and turmoil in several stock markets. This study aims to see the reaction of Islamic banking stocks in Asia to the announcement of COVID-19 as a global pandemic by WHO. This research uses an event study method with an observation period of 10 days after and before the event day. Data were obtained through the stock trading website, and 43 banking samples from 11 countries were observed. Data analysis used *One-Sample T-Test, Paired Sample T-Test, One Sample Wilcoxon Signed Rank Test, and Paired Sample Wilcoxon Signed Rank Test* with the help of *SPSS 21.0* tools. The results showed that there was a significant AAR around the event days. And there is a difference in CAAR before and after the event day. These results were accompanied by a negative CAAR value after the event period, which confirmed that Islamic banking stocks in Asia responded negatively to the announcement of COVID-19 by WHO. The robustness test results show that ASEAN is the most reacted region compared to the GCC, South Asia, and other areas.

KEYWORD:

COVID-19,

Stock,


Islamic Banking,

Abnormal Return,

WHO announcement.

ABSTRAK (Indonesia)

Jumlah kasus Covid-19 yang melanda Asia turut memberikan tekanan di wilayah ekonomi serta gejolak di beberapa pasar saham. Tujuan dari penelitian ini adalah untuk melihat reaksi saham perbankan syariah di Asia atas pengumuman Covid-19 sebagai pandemi global oleh WHO. Penelitian ini menggunakan metode penelitian event study atau studi peristiwa dengan periode pengamatan adalah 10 hari sesudah dan sebelum hari peristiwa. Data diperoleh melalui website perdagangan saham dan terdapat 43 sampel perbankan dari 11 negara yang diamati. Analisis data menggunakan *One Sample T-Test, Paired Sample T-Test, One Sample Wilcoxon Signed Rank Test, dan Paired Sample Wilcoxon Signed Rank Test* dengan bantuan alat *SPSS 21.0*. Adapun hasil penelitian menunjukkan terdapat AAR yang signifikan di sekitar hari-hari peristiwa. Serta terdapat perbedaan CAAR sebelum dan sesudah hari peristiwa. Hasil ini diiringi dengan nilai CAAR yang negatif setelah periode peristiwa yang mengkonfirmasi bahwa saham perbankan syariah di Asia merespon negative pengumuman Covid-19 oleh WHO. Hasil uji robustness test menunjukkan bahwa ASEAN menjadi kawasan paling bereaksi dibanding kawasan GCC, Asia Selatan, dan kawasan lainnya.

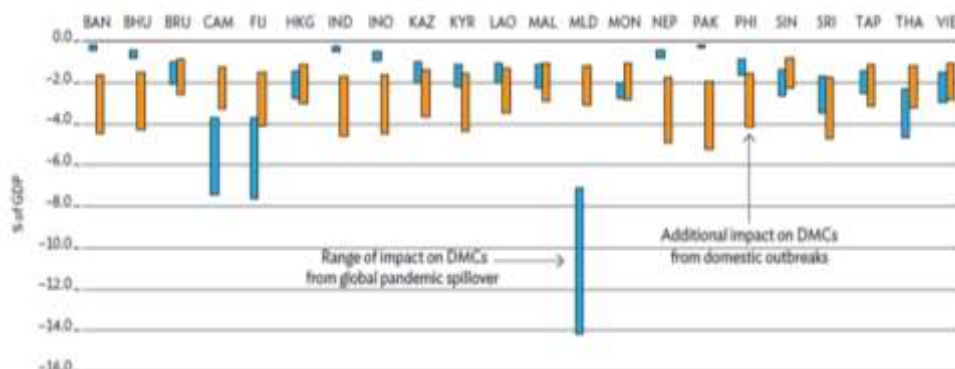
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1. Introduction

The COVID-19 pandemic has hit the global financial system severely, causing a sharp decline in financial markets since early March 2020 (Safti, 2020). Junaedi dan Salistia (2020) explained that COVID-19 has a multi-sectoral impact on the economy, especially in

the Asian region. According to the Asia Development Bank (2020), the Asian region experienced its first negative development since 1960 during COVID-19 and was strengthened by the geopolitical impact between China and the United States.

Figure 1.1 Effect Covid-19 On Asian Country



BAN = Bangladesh, BHU = Bhutan, BRU = Brunei Darussalam, DMC = Developing Member Country, FIJ = Fiji, HKG = Hong Kong, China, IND = India, INO = Indonesia, KAZ = Kazakhstan, KGZ = Kyrgyz Republic, LAO = Lao Peoples Democratic Republic, MAL = Malaysia, MLD = Maldives, MON = Mongolia, NEP = Nepal, PAK = Pakistan, PHI = Phillippines, SIN = Singapore, SRI = Sri Langka, TAP = Taipei, China, THA = Thailand, VIE = Vietnam.

Notes ; Blue bars indicate the range of estimated impact from pandemic spillover. Orange bars are additional impact on DMC's that suffer their own outbreaks the tops of bars indicate the shorter containment, smaller demand shock scenario, and bottoms of bars indicates the longer containment larger demand shock scenario source ADB estimates

Source : Asian Development Outlook 2020

Figure 1.1 shows a comparison between the global shocks caused by the COVID-19 pandemic (blue bars) and the additional shocks experienced by individual developing countries (yellow bars). Some countries experience better internal shocks than external shocks, but most developing countries in Asia experience more severe inner wonders. The shocks that occurred during COVID-19 impacted the equity sector or capital market. As the COVID-19 cases grew, the perception of market participants became pessimistic and negatively impacted health and economies worldwide. The capital outflow that started from developing countries in March 2020 caused a drop in stock indices in the world and developing countries (Indonesia Ministry of Economy, 2020).

This was reported by Kumarapperuma et al., (2021) that stock market abnormal returns in the Asian region after the COVID-19 event day were adverse. The abnormal return of stock markets in the Asian area after the day of the COVID-19 event is negative. Rachmawati et al., (2021) found differences before and after implementing the lockdown on stock price movements in countries in ASEAN. Found differences before and after implementing the lockdown on stock price movements in countries in ASEAN. In a broader scope, Tang et al., (2022) studied and found that Covid-19 affected *abnormal returns* and was offset by the equalization of the medical system in the country.

Islamic stocks are recognized as more resilient to crisis shocks and were used as an investment alternative during the Covid-19 pandemic. According Mirza et al., (2020), Islamic equities are more resilient to COVID-19 shocks, and Islamic equities are an applicable *safe-haven* property for investors to hedge pandemic risks. Islamic Capital Markets play an important role in enhancing the effective management of corporate capital and facilitating investment endeavors.

Financial instruments aligned with Islamic principles can attract Muslim investors. In addition, transactions conducted in the capital market must adhere to the code of fair and equitable profit sharing. This principle includes risk sharing, prohibiting speculation,

safeguarding property rights, ensuring transparency, and upholding fairness in contractual agreements (Octaviana, 2022). The narrative is reinforced by Nawazish et al., (2022), who revealed that Islamic equities are more resilient to COVID-19 shocks and outperform conventional equities during the peak months of the pandemic.

Hamurcu and Oner (2021) reported contrasting things when researching Islamic stocks. The findings state that the *cumulative abnormal return* of Islamic stocks in the post-COVID-19 period is different from the period before COVID-19. Reinforced by the conclusions of Kashif et al., (2023) that the effect of the Covid-19 pandemic on the stock market makes the *cumulative abnormal return* from the first day to the 33rd day, remain in the decimal range of -0.203 to single digits -9.09, which is a consequence of increased pressure on the stock market and requires serious attention from countries to control this pandemic.

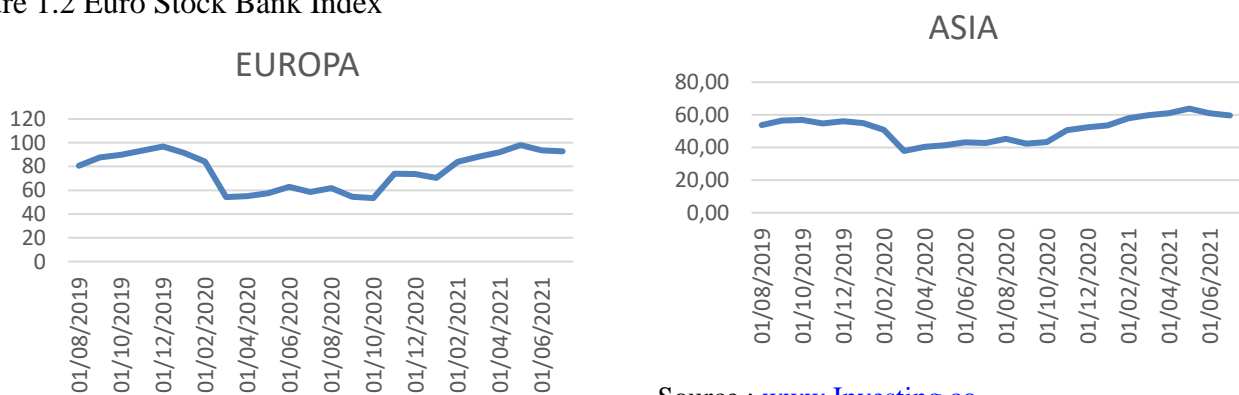
In fundamental stock analysis, the sectoral aspect is one thing that can be considered. Wira (2014) explained that by analyzing each company sector's characteristics, investors can make strategies if something happens to the industry. The finance and banking sector is sensitive to economic issues, inflation, interest rates, crises, and factors that cause lending to be hampered.

The most damaging impact of the COVID-19 pandemic has been on the services and financial sectors (Al-Kandari et al., 2021). According to Latorre et al., (2020), Banking stocks were impacted by COVID-19 in early 2020. The financial sector was one of the most affected, with bank valuations falling in all countries worldwide. Most banks experienced price declines in mid-March. European banks were negatively impacted as the *Euro Stock Bank Index* declined by 40.18 %, followed by the North American Stock Bank Index 600 (31.23 %) and the *Asia/Pacific Stock Bank Index* 600 (26.09 %) for the given period.

According to Brindha dan Sathyasree (2022), the banking system came under severe pressure from the crisis and the bank's countercyclical lending role, with bank stocks underperforming the domestic market and other non-bank financial firms. This is corroborated by the findings of Albaity et al., (2022) on MENA countries, which showed that news of the number of COVID-19 cases and deaths hurt bank stock market returns.

While COVID-19 has also impacted the Islamic banking sector and has implications across all financial markets, the impact on Islamic financial markets is expected to be more severe and profound. Compared to conventional banking, Islamic finance has a much more significant impact on SME servicing, microfinance, and retail lending, exposing them to a greater risk of client default.

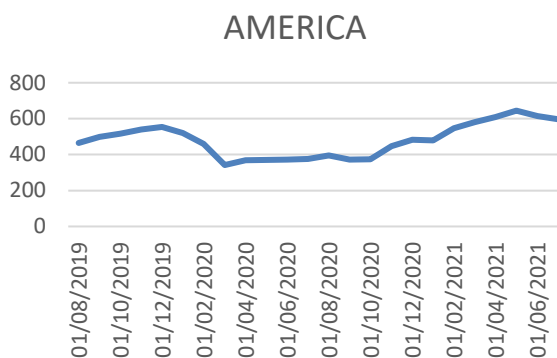
Figure 1.2 Euro Stock Bank Index



Source : www.Investing.co

Source : www.Investing.com

Figure 1.3 North America Stock Bank Index



Source : www.Investing.com

In addition to the fact that this crisis has severely affected small and medium enterprises (SMEs), the problem during Covid-19 differs from that experienced by Islamic banks during the 2008 crisis. In the 2008 crisis, Islamic banks provided interest-free services. They prohibited unethical and high-risk transactions in all cash flows attached to tangible assets in the economy, making it challenging to create uncollectible debt levels (ICIEC, 2023).

Domat (2023) confirmed that the global financial services sector, with total assets of 2.4 trillion dollars spread across 1400 institutions, was also affected by the crisis due to the COVID-19 pandemic. The impact of COVID on Islamic finance is also explained by Hasan et al., (2022), that Islamic financial equities failed to provide diversification benefits for investors to deal with the Covid-19 pandemic. This narrative is reinforced by the findings of Masfiatun (2021), which suggests that COVID-19 hurts the stability of Islamic banks. In line with that, Alabbad dan Schertler (2022) researched banking in dual-banking countries (Islamic and conventional). They found that the shares of Islamic banks responded negatively to the announcement of Covid-19 than traditional banks.

Contrasting findings were put forward by Siska et al., (2021) on Islamic bank stocks. They found that the performance of Islamic banking stocks tended to increase after the Covid-19 pandemic. Aliani et al., (2022) compared the performance of conventional and Islamic banking stocks during the Covid-19 pandemic. We compared the performance of traditional and Islamic banking stocks during the pandemic. The findings show that the performance of Islamic bank stocks has proven to be more stable than conventional banks during COVID-19, with more stable returns and lower risk.

Destiana (2021) explained that the Islamic financial sector in the capital market remained stable and showed signs of growth during the Covid-19 period. One of the key factors contributing to this success is the perception among retail investors that investing in Islamic stocks and Sukuk is a safer and more stable option in times of crisis, such as the COVID-19 pandemic.

According to the Efficiency Market Hypothesis (EMH), the study of public information is examined in a semi-strong market test using event studies. This test is measured using abnormal returns (Herlianto, 2013). In the case of COVID-19, event studies have been conducted in various indexes and regions as shown by (Shaik,2021;Kouki & Cherni,2022; Al-maadid et al.,2020), they found that stocks index are negatively affected by COVID-19 in the short term. Fatimah dan Maftukhah (2022) found differences in *Average Abnormal Return* before and after the government announced the economic stimulus policy. Rachmawati et al., (2021) The study's findings revealed a significant difference before and

after implementing the lockdown policy. Mansour et al., (2021) found a sharp decline in the MENA region after the virus outbreak, supporting investors' pessimistic views on potential returns and fear of uncertainty.

Pandey and Kumari (2021) provide evidence of the global stock market reaction to the epidemic. The results concluded that the COVID-19 outbreak significantly impacted global stock markets, with Asian stock markets being hit the hardest. Mishra (2020) explain the coronavirus pandemic caused a spontaneous decline in Asian stock markets. Mishra found volatility in stock markets in Asia that occurred due to pessimistic sentiment and investor panic. Ji et al., (2022) found that the stock market reacted quickly and negatively to the Covid-19 pandemic when lockdown restrictions were announced, and the Asian stock index experienced a more negative *abnormal return* than the stock index of countries outside Asia. In addition, the panic experienced by investors can be the reason why the Covid-19 outbreak affects stock market index returns.

Studies on Islamic stocks have also been carried out by several studies, including Hamurcu and Oner (2021) Islamic financial markets have a higher level of adaptation of speculative activity than conventional markets. Nawazish et al., (2022) show that Islamic equity funds were more resilient to the Covid-19 shock as they outperformed their non-Islamic peers during the peak months of the pandemic. This finding confirms the safe-haven property of Islamic equity funds, which is helpful for investors looking to hedge pandemic risk. Smolo et al., (2023) show that the pandemic outbreak has increased *volatility* across the sample but faded relatively quickly, suggesting that Islamic equities carry hedging features and offer portfolio diversification benefits to investors.

Kashif et al., (2023) examined the effects of the Covid-19 transmission epidemic on the stock markets of Islamic countries. found a significant negative *abnormal return* (AR) and the findings reveal that the pressure on the stock market has increased so that it requires serious attention from countries to control this pandemic. Irfan et al., (2021) found The BSE Sharia Index shows a negative response to the announcement of Covid-19 as a global pandemic. On the other hand, the JII positively welcomed the event. The study shows that the stock exchange reaction depends on other economic factors unique to the country, so the impact of the COVID-19 event varies from country to country.

Especially in the financial and banking sector, Al-Kandari et al., (2021) conducted a study and showed that the most negative impact of the COVID-19 pandemic was on services and financial stocks. Conducted a survey and showed that the most damaging effect of the COVID-19 pandemic is on benefits and economic supplies. Kakhkharov and Bianchi (2022) show that abnormal returns of banking stocks are more volatile to macroeconomic announcements and social restriction policies than monetary policy interventions. Azmi et al., (2021) stated a significant difference in *abnormal returns* and transaction volume between before and after the banking capital restructuring policy during the Covid-19 pandemic.

Bales and Burghof (2022) stated that the COVID-19 case hurt bank stock *returns* in the medium term. Brindha dan Sathyasree (2022) showed that the crisis and the role of *countercyclical* lending have put the banking system under significant pressure. Al-roumi (2021) examined the impact of the COVID-19 pandemic on banking stocks and found the *Average Abnormal Return* (AAR) after the event day was below the average *return* before the event day. All stocks experienced high *volatility* during the day after the event compared to the day before.

Alabbad and Schertler (2022) conducted studies on Islamic banks and showed that stock prices respond negatively like conventional banks to social restrictions. And showed that the share price of Islamic banks responds negatively like conventional banks to social conditions. While Islamic bank stocks respond more positively to government income support policies. Suhail et al., (2020) showed that Islamic banks generate less returns than

conventional banks including abnormal returns. Albaity et al., (2022) stated that banking stock returns reacted to Covid-19 news, and Islamic banking has better resilience than conventional banking.

Specifically on WHO events, Saleem et al., (2021) found that the *volatility of Islamic stock indices* increased after WHO announced the global health crisis. Al-Kandari et al., (2022) confirmed the GCC stock market indices were negatively affected by the COVID-19 pandemic and were severely affected when the World Health Organisation (WHO) announced that the COVID-19 virus had become a pandemic. Studies conducted by AlAli (2020) stated that *abnormal returns* occurred in the Islamic stock index around the announcement of COVID-19 by WHO. AL-Naif and Almashaqbeh (2020) explaining the Islamic stock market index show that the WHO announcement of COVID-19 as a global pandemic significantly negatively impacts index returns.

Researchers argue that this event study on Islamic banking stocks is essential. Given the echoed position of Islamic equities, it can be a diversification strategy by investors, with the severe impact of COVID-19 in the Asian region and the banking sector. Through these various considerations, researchers want to examine more deeply the response of Islamic banking stocks in Asia to Covid-19 since WHO announced it as a pandemic.

2. Literature Review and Hypotheses Development

On 11 March 2020, WHO (2020) declared Covid-19 a global pandemic. This announcement signaled a crisis experienced by the world, including the banking sector. According to Gazi et al., (2022) during the pandemic, bank bad debts increase dramatically and the inappropriate size of banks can reduce bank profitability. These high bad debts will ultimately affect profitability (Ahmed, El-Halaby & Soliman, 2022). This crisis signal will affect the demand and supply of shares in a rational aspect. According to Sudirman (2015), rational aspects include company performance, crisis, economic growth, and others. The information is then responded to by investors and causes fluctuations in stocks which ultimately impact stock *returns*.

Saleem et al., (2021) conducted research on the Islamic stock indexes of Qatar, UAE, ASEAN, MENA, MENASA, and Bahrain. The result is that Islamic stocks are significantly affected by the short-term outbreak of Covid-19 announced by WHO. In line with this Khaled dan Almashaqbeh (2020) examined 5 Islamic stock indices and found that the market responded quickly after the WHO announcement.

The stock reaction can be tested with several *proxies* including *average abnormal return* (AAR), and *cumulative average abnormal return* (CAAR). This was conducted by Utama (2015) in the event study by testing the *average abnormal return* (AAR) to see the daily reaction and *cumulative average abnormal return* (CAAR) around event days for a cumulative sample of stocks. *Average Abnormal Return* (AAR) provides insight into the most prominent reaction, the reaction is indicated by a significant abnormal return each day throughout the observation period (Handini & Astawinetu, 2020). With the existence of COVID-19 information by WHO, investors will show their reaction through a significant *Average Abnormal Return* (AAR) around the event days. As tested by (Ji et al., 2022; Kordestani et al., 2022; Saleem et al., 2021). Through these considerations, the researcher takes the hypothesis:

H1 : There is a significant AAR around the event days of the announcement of COVID-19 by WHO.

The impact of negative information by COVID-19 can also be tested with paired sample testing. According to Handini and Astawinetu (2020) This test is carried out to ascertain whether the impact of the event on stocks is statistically significant or not, the *cumulative average abnormal return* (CAAR) is tested separately by comparing the period before the event occurred with the period after the event occurred. This analysis will help determine the event's impact on overall stock performance. The negative information received through the announcement of Covid-19 by WHO, will make investors react. This creates a difference in the development of *Cumulative average abnormal return* (CAAR) accumulated in the period before & after the event has been done by (Al-Kandari et al., 2022; Pandey & Kumari, 2021; Singh et al., 2020). With this the researcher takes the hypothesis:

H2 : There is a difference in CAAR before and after the day of the event announcement of COVID-19 by WHO.

3. Method (Metode) (Times New Roman, 12 pt, Bold)

This research is a type of event study research that is analyzed with a quantitative approach. The quantitative method is to use the kind of data in the form of numbers and calculated with a statistical model. The tests carried out are by testing the normality of the data, then testing the significance of abnormal returns on event days with *one sample t-test*, *and paired sample t-test* for abnormal returns before and after the event. If the data is not standard, the *Wilcoxon* test is used (renald suganda, 2018).

The event period was determined when WHO declared Covid-19 as a global pandemic on 11 March 2020. The observation period is taken 10 days before and after the event day. The estimation period used in this study is 100 days before the observation period. In this study, the population used is the 100 largest Islamic banks according to The Asian Banker (2021) with the following criteria:

- Have *gone public* at least before the announcement of Covid-19 by WHO.
- There is daily stock data during the event

A sample of 43 banks in 11 Asian countries was selected Saudi Arabia, Bahrain, Bangladesh, Indonesia, Malaysia, Pakistan, Jordan, Qatar, Turkey and the United Arab Emirates.

Abnormal Return

Abnormal return is the difference between *actual return* and *expected return*. It is one of the methods to test capital market efficiency. *Abnormal returns* often occur around the announcement of events such as mergers, acquisitions, macroeconomic events, and even crises (Chandra, 2022). *Abnormal return* is observed for each stock type, which is the difference between the daily *actual and expected returns*. Due to the daily calculation, it is possible to identify the highest or lowest *abnormal return* in a given period. In addition, one can determine when the strongest reaction occurs for each type of stock. The impact of information leakage causing abnormal returns before an event can be visualized on each stock type's *abnormal return* (AR) chart.

Meanwhile, according to Handini dan Astawinetu (2020), *abnormal return* is the difference between *actual and expected returns*, which can materialize before the release of official information or due to information leakage. In addition, *abnormal returns* can also

occur after the dissemination of information to the public. In cases where *abnormal returns* occur solely after a specific event, such as an unexpected bomb explosion, those returns can be positive or negative. *Abnormal return* can be found with the calculation component of individual return and *expected return* with the following steps:

a. Return Individual

Stock returns are a reflection of the company's *value*, this has implications for investor interest and willingness to invest. (Siska & Lestari, 2021). The formula measures stock return:

$$\text{Return} = P_T - P_{T-1} / P_T \quad (3.1)$$

P_T = Share price at time t

P_{T-1} = Share price at time t-1

b. Expected Return

The *expected return* is calculated using the market model. Namely, according to the estimation period, the model corresponds to the average or constant value. The estimation period is before the event called the observation period. This model is calculated in 2 stages, namely calculating the market return (*return index*) and the *expected return* (Chandra, 2022).

1) The formula measures market return :

$$RM_i = (I_j - I_{j-1}) / I_{j-1} \quad (3.2)$$

I_j = Price Index at time j

I_{j-1} = Price Index j-1 (1 day earlier)

2) The formula measures expected return :

$$E(R_{i,t}) = \alpha_i + \beta_i \cdot RM_i + \epsilon_{it} \quad (3.3)$$

α_i = intercept or the part of stock return that is not influenced by market performance market performance

β_i = beta, sensitivity, or slope coefficient.

RM_i = return index

ϵ_{it} = residuals of estimation period t

After knowing the components of the abnormal return (individual return and expected return), the abnormal return can be calculated by the formula:

$$AR_{it} = R_{it} - E(R_{it}) \quad (3.4)$$

AR_{it} = abnormal return

R_{it} = return saham periode t

$E(R_{it})$ = expected return periode t

c. Average Abnormal Return (AAR)

Average abnormal return (AAR) represents the *average abnormal return* of all stocks analyzed on a daily basis. This means that there is an *average abnormal*

return (AAR) for the day before (AAR day -1), an AAR for two days before (AAR day -2), and so on. *Average Abnormal Return (AAR)* provides insight into the most prominent positive and negative reactions exhibited by all types of stocks on specific days within a defined window period. The *average abnormal return (AAR)* formula is :

$$\text{AAR} = (\sum_{i=1}^K \text{AR}_{it}) / k \quad (3.5)$$

AAR = average abnormal return

AR = abnormal return of security i on day 1

K = number of securities

d. *Cumulative Average Abnormal Return (CAAR)*

Cumulative average abnormal return (CAAR) is the sum of the daily cumulative *average abnormal return (AAR)* from the first day to the following days. Observing the daily *cumulative average abnormal return (CAAR)* chart can identify the upward or downward trend in returns that occurred during the specified event period. This makes it possible to understand the event's overall positive or negative impact on all types of stocks under study.

However, to ascertain whether the event's impact on the stock is statistically significant, it is important to conduct a separate *cumulative average abnormal return (CAAR)* test by comparing the period before the event occurred with the period after the event occurred. This analysis will help determine the event's impact on overall stock performance. CAAR can be seen with the following formula :

$$\text{CAAR}_t = (\sum_{i=1}^k \text{CAAR}_{it}) / K \quad (3.7)$$

CAAR_t = cumulative average abnormal return on day t

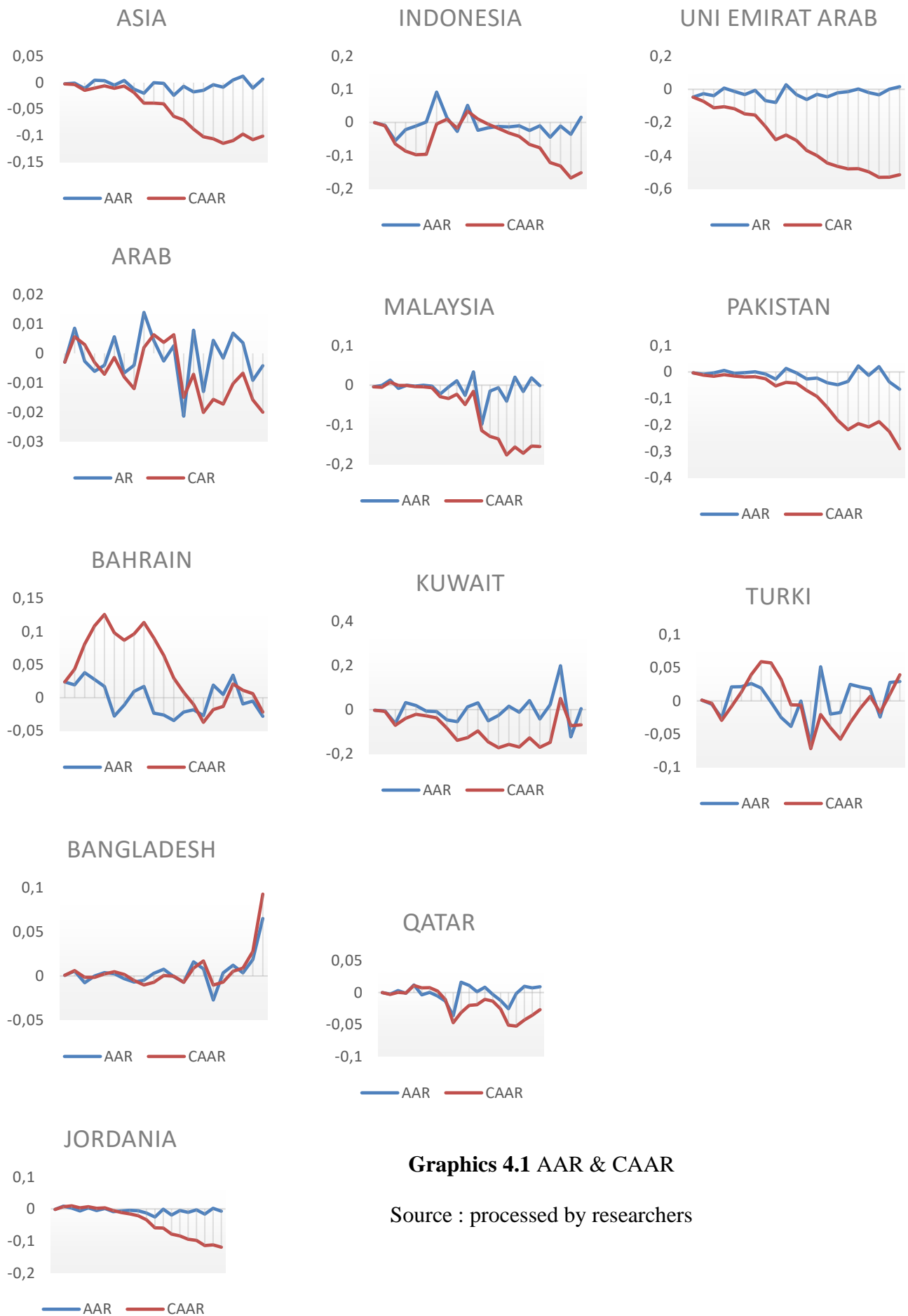
CAAR_{it} = cumulative average abnormal return of security I on day t

K = number of securities

4. Result and Discussion

Observing the development of abnormal returns across the total sample is possible. Figure 4.1 presents the *average abnormal return (AAR)* and *cumulative average abnormal return (CAAR)* on the total Asian sample and the individual country samples. The highest *average abnormal return (AAR)* for the full Asian selection can be seen on t+8 after the event. On the 4th day before the event, there was a decrease in abnormal return from positive to negative. On t-1, there is an increase in *average abnormal return (AAR)*. On t-0 there is a decrease in *average abnormal return (AAR)* and negative value continuously until t+7. Overall, the movement of the *average abnormal return (AAR)* tends to fluctuate, but after the event period the *average abnormal return (AAR)* value has more negative values.

The *cumulative average abnormal return (CAAR)* value is relatively stable on t-10 to t-4. Then the *cumulative average abnormal return (CAAR)* value decreased from t-4 today- and a significant decrease occurred at t-0 of the event period, which continued for several days after the event period. The highest *cumulative average abnormal return (CAAR)* was on t-8 before the event day. The lowest *cumulative average abnormal return (CAAR)* is on t+5 after the event period.



Graphics 4.1 AAR & CAAR

Source : processed by researchers

Through the cross-country chart, we can see that there are several movements in the *average abnormal return (AAR)* in various countries. *The fluctuating average abnormal return (AAR)* movement is shown by Arabia, Qatar, Bahrain, & Turkey. At the same time, the United Arab Emirates, Pakistan, & Jordan move relatively stable. Bangladesh, Kuwait, Indonesia, and Malaysia do not show a patterned *average abnormal return (AAR)* movement.

The cumulative average abnormal return (CAAR) values of Indonesia, Malaysia, Jordan, United Arab Emirates, and Pakistan showed a pattern of decreasing *cumulative average abnormal return (CAAR)* during the observation period. Turkey, Qatar, and Arabia tend to fluctuate. Bangladesh and Kuwait showed a gentle decline in *cumulative average abnormal return (CAAR)* followed by an increase at the end of the period. At the same time, Bahrain experienced a rise in *cumulative average abnormal return (CAAR)* followed by a sharp decline before the event day.

Table 4.1 One Sample T Test and One Sample Wilcoxon Signed Rank Test Results

PERIODE	HASIL
H-10	0.084
H-9	0.661
H-8	0.153
H-7	0.178
H-6	0.265
H-5	1
H-4	0.099
H-3	0.019
H-2	0.364
H-1	0.02
H-0	0.944
H+1	0.641
H+2	0.695
H+3	0.004
H+4	0.096
H+5	0.002
H+6	0.63
H+7	0.271
H+8	0.649
H+9	0.53
H+10	0.747

Source : processed by researchers

The test results show a significant *Average Abnormal Return (AAR)* for several days around the event. Significant *Average Abnormal Return (AAR)* occurs on t-3, t-1, t+3 and t+5. This is indicated by a significance value of less than (<) 0.05, which means reject H₀ or the hypothesis is accepted. This value reflects the significant movement of Islamic banking stocks in Asia then. At t-3, followed by an abnormal *Average Abnormal Return (AAR)* of -0.01223, t-1 with AAR 0.000442, t+3 with AAR -0.01742, and t+5 - 0.0038. This one-sample T test also reflects how the market reacts to the information

content of the announcement of Covid-19 as a pandemic by WHO. As explained by Nabiela et al., (2023) the significant *abnormal returns* in the one-sample T-test that occur around these event days explain how quickly investors react to existing information.

Positive *Average Abnormal Return (AAR)* occurs precisely on t-1, and statistical tests prove that the movement is significant. This is in line with the findings of AlAli (2020) that abnormal returns occurred in Sharia stocks in Asia around the announcement of COVID-19 by WHO. This positive abnormal return indicates that on T-1, the return of the Islamic banking sector is above the expected return obtained from market returns. The author suspects that the market is in a down position as Pandey dan Kumari (2021) found that Asian markets are the most affected by negative WHO information.

Tabel 4.2 Significant AAR in Hypothesis 1

Period	Sig Score	AAR
t-3	0.019	-0.01223
t-1	0.02	0.000442
t+3	0.004	-0.01743
t+5	0.002	-0.0038

Source : processed by researchers

The Market Efficiency Hypothesis states that no investor gets a return above the average or an abnormal return. However, the *market efficiency hypothesis* states that no investor gets a return above the norm or what is called an abnormal return. Herlianto (2013) explains that an efficient market is one in which abnormal returns are not prolonged and are absorbed quickly by the market. If event announcements do not cause *abnormal returns*, there are two possible conclusions that the market is efficient:

1. No investor consistently earns extraordinary returns.
2. The abnormal returns that occur are quickly absorbed by the market, leading to a new equilibrium price.

The existence of *abnormal returns* on Islamic banking stocks is not prolonged, so it can be interpreted that there is one day when investors get profits above normal on t-1. In contrast, other significant *abnormal returns* on t-3, t+3, and t+5 are negative. This proves that there is a reaction to the Islamic banking stock market, and it is still in the category of market reacting efficiently in a semi-strong form.

Tabel 4.3 Wilcoxon Sign Rank Test Result

NAME	SIG SCORE
CAAR ASIAN ISLAMIC BANKING	0.004

Source : processed by researchers

According to Handini dan Astawinetu (2020) by observing the daily CAAR chart, one can identify the upward or downward trend that occurred over the entire period. This makes it possible to understand the overall positive or negative impact of the event under study. To ascertain whether the effects of the event on the stock is statistically significant or not, it is essential to conduct a separate CAAR test by comparing the period before the event occurred with the period after the event occurred. This analysis will help determine the event's impact on overall stock performance.

The results of this test show statistically there is a significant difference in Cumulative Average Abnormal Return (CAAR) between before and after the event period. This is indicated by the test significance value of $0.004 < 0.05$, which means that H_0 is rejected or the hypothesis is accepted. In other words, this test states a significant

difference in the movement of Cumulative Average Abnormal Return (CAAR) in Asia between before and after the WHO announcement. According to Nabiela et al., (2023), the difference in abnormal return can describe the information content. As in this test, the difference in cumulative average abnormal return (CAAR) reflects the information content by the WHO announcement making investors react negatively.

The negative impact seen in the overall movement. Fluctuations in the CAAR of Islamic banking stocks in Asia still occurred from t-10 to t-5, but from t-4 to t+5, there was a continuous decline. The movement reflects the negative direction of Islamic banking's cumulative average abnormal return (CAAR) in Asia, especially after the event day, which shows a drastic decrease in cumulative average abnormal return (CAAR).

The graph shows that the *cumulative average abnormal return (CAAR)* moves relatively stable on t-10 to t-4 of the event period. Then there was a drastic decline on t-5 to t+6. The movement reflects the negative direction of *Islamic banking's cumulative average abnormal return (CAAR)* in Asia, especially after the event day, which shows a drastic decrease in *cumulative average abnormal return (CAAR)*. These results are reinforced by Ji et al., (2022) who found CAAR differences in 13 stock indexes in the world and reacted quickly and negatively to Covid-19 information, as well as the findings of AlAli, (2020) tested CAAR in 5 Islamic stock indices before and after the announcement of COVID-19 by the *World Health Organization (WHO)* and found a significant and negative impact.

This is in line with Alabbad dan Schertler (2022), who researched banks in dual-banking countries and found that Islamic bank stocks responded negatively to the announcement of COVID-19. Who conducted research on banks in dual-banking countries and found that Islamic bank stocks reacted negatively to the report of Covid-19. Kumarapperuma et al., (2021) conducted tests on the impact of Covid-19 on stock markets in the Asian region and revealed that the abnormal return after the event day was negative. Brindha dan Sathyasree (2022) stated that banking sector stocks were significantly affected by the COVID-19 pressure.

Robustnes Test

A *robust test* is used to determine the accuracy of the research results (Mutiasari, 2018). In this test, researchers split the sample under study into several parts based on geographical conditions. With this, researchers divide into groups: the ASEAN region (Southeast Asia), South Asia, the GCC (Arabian Gulf Region), and other uncategorized countries such as Turkey and Jordan.

The significance value can see the results of this test, if the sig value is more significant ($>$) than 0.05, it means that H_0 is accepted or the hypothesis is rejected. While the significance value is smaller ($<$) than 0.05, H_0 is rejected, or the idea is accepted. The data analysis technique is the same as testing the entire sample. The test results show a significant *Abnormal Return* for models in ASEAN, South Asia, and the GCC. However, there are no practical results for the Turkish sample.

Tabel 4.4 One Sample T Test Results on Robustnest Tests

PER	ASEAN	ASIA SELATAN	GCC	JRD	TRK
H-10	0.603	0.838	0.156	0.699	0.885
H-9	0.326	0.901	0.654	0.144	0.715
H-8	1	0.173	0.073	0.771	0.448
H-7	0.048	0.806	0.502	0.783	0.288
H-6	0.75	0.834	0.709	0.52	0.499

H-5	0.681	0.173	0.04	0.431	0.469
H-4	0.31	0.333	0.048	0.632	0.57
H-3	0.433	0.334	0.052	0.004	0.465
H-2	0.035	0.182	0.12	0.65	0.363
H-1	1	0.294	0.81	0.795	0.924
H-0	0.822	0.376	0.737	0.771	0.459
H+1	0.007	0.281	0.02	0.194	0.167
H+2	0.119	0.062	0.002	0.172	0.662
H+3	0.011	0.594	0.627	0.966	0.741
H+4	0.095	0.489	0.007	0.04	0.245
H+5	0.174	0.016	0.881	0.636	0.779
H+6	0.018	0.156	0.433	0.16	0.36
H+7	0.835	0.591	0.351	0.773	0.154
H+8	0.14	0.06	0.135	0.051	0.499
H+9	0.88	0.997	0.391	0.339	0.488
H+10	0.62	0.54	0.852	0.214	0.931

Source : processed by researchers

The ASEAN sample shows significant abnormal returns in the t-7, t-2, t+1, t+3, and t+6 periods. The South Asia sample shows a significant *abnormal return* on t+5. The Arabian Gulf region sample shows substantial abnormal returns on t-5, t-4, t+1, t+2, and t+4. Other samples that fall into other categories are Turkey and Jordan, Jordan shows abnormal returns on t-3 and t+4, while no significant *abnormal returns* are found in Turkey.

5. Tabel 4.5 Paired Sample T Test Results on Robustness Tests

COUNTRY	SIG
ASEAN	0.019
SOUTH ASIA	0,767
GCC	0,737
JORDANIA	0,2
TURKI	0,93

Source : processed by researchers

The results of the paired sample test are shown in Table 4.12. The significance value can see the test value, if the sig value is more significant ($>$) than 0.05, it means that H_0 is accepted or the hypothesis is rejected. While the significance value is more minor ($<$) than 0.05, H_0 is rejected, or the idea is accepted. Normal data testing is tested with the *Paired Sample T Test* and the test results are attached to the white column, while abnormal data is tested with the *Wilcoxon Signed Rank Test* with the results located in the yellow column.

The findings show significant results in the ASEAN region sample. This is indicated by the paired sample t-test significance value of $0.019 < 0.05$. This significance value means that H_0 is rejected, or in other words, the hypothesis is accepted. Meanwhile, the samples of South Asia, the Arabian Territory (GCC), Turkey, and Jordan

did not show significant results. The test is indicated by the paired sample t-test significance value of South Asia $0.767 > 0.05$, GCC region $0.929 > 0.05$, Jordan $0.2 > 0.05$, and Turkey $0.93 > 0.05$ which means H_0 is accepted, or the hypothesis is rejected.

The concentration of impact in ASEAN is shown through significant *abnormal returns* in the t-7, t-2, t+1, t+3, and t+6 periods. The existence of abnormal returns shows the reaction of Islamic banking stocks in the ASEAN region. This is coupled with a significant difference in the paired sample test. The significant *Paired sample T-test* shows that this stock reaction significantly differs between before and after the event period.

According to Suwandi (2022) Covid-19 has worsened the performance of Islamic banking stocks in Indonesia. This is in line with the actual conditions in the first quarter of 2020, the country's economic growth experienced a sharp decline of 2.97%, compared to the fourth quarter of 2019, economic growth plummeted by -2.41%, in contrast to the previous growth rate of 4.97%. These figures illustrate the depressed financial situation caused by the pandemic.

The response of Islamic banking in Malaysia is also explained by Riani dan Ikhwan (2022), that all banks experienced shocks and Islamic banks were more affected by Covid-19 than conventional banks. that all banks experienced shocks and Islamic banking was more affected by Covid-19 than traditional banks. This narrative is corroborated by Song et al., (2021), although the Malaysian government has enacted a rescue policy, investors needed more trust in the rescue information by the authorities, thus overreacting to the number of reported cases.

The South Asia sample shows significant abnormal returns on T+5. Among the entire piece, banking stocks in this region have the most minor reaction compared to the other regional models. This is accompanied by paired sample tests that do not show significant results. These results are supported by the internal and external fundamental conditions to banks in South Asia. According to Awais et al., (2022), banks in Pakistan are not significantly affected by the Covid-19 pandemic because they are in good health, and are only affected to a certain extent. Ellahi et al. (2021) conducted research in the February-March 2020 timeframe, the findings reported that COVID-19 did not show an adverse impact on the company's share price on the Pakistan Stock Exchange (PSX).

Miah et al., (2021) stated that Islamic banks in Bangladesh get protection from their fixed deposits, accounting for more than half (54%) of total deposits. According to Bangladesh Central Bank statistics, Islamic banks maintain excess liquidity equivalent to 48% of the required provisions as of December 2019. At the same time, the capital adequacy ratio of the 6 Islamic banks in Bangladesh which account for 90% of the Islamic banking market share, has an average of 12.3% (close to 12.5%) which Bangladesh Bank requires to meet the standard ratio. The above data provides evidence that Bangladesh's Islamic banking sector can absorb moderate economic shocks in the short term.

Another view of Qadri et al., (2023), stated that the COVID-19 pandemic significantly affects the financial performance of banks in South Asia, especially in terms of profitability. However, technological advances positively impact organizational performance, improving banks' financial performance in South Asia. And there is a big difference between the pre-pandemic and post-pandemic organizational performance.

The GCC sample (Arabian Gulf region) shows significant abnormal returns on t-5, t-4, t+1, t+2, and t+4. These results indicate a considerable investor reaction on these days. However, there is no significant difference in the paired sample test between the samples after and before the event period. Researchers suspect that the difference in reactions that occur throughout the event period is not constant (before and after the WHO announcement) as Saleem et al., (2021) found that the Islamic index in the GCC

region was affected by the shock of the Covid-19 outbreak and was offset by very high volatility after WHO announced the Covid-19 outbreak.

The existence of this reaction in the GCC region is reinforced by the findings of Abdulla dan Ebrahim, (2022) which revealed that GCC banks were negatively affected by the pandemic, which revealed that GCC banks were negatively affected by the pandemic. The findings show that the pandemic affects government-linked Islamic banks, large banks, and banks with high loan ratios. According to Aliani et al., (2022) the stock returns of Islamic and conventional banks moved in the same direction during the pandemic. Still, the fluctuations in the returns of Islamic banks were less stable than those of traditional banks.

Devi, Kamilah dan Kamaludin, (2022) stated that the index comparison in the GCC region showed similarities between the Sharia and conventional indexes. Al-Kandari et al., (2022) said that the GCC stock market interacted negatively with the initial announcement of COVID-19 cases and was severely affected when the World Health Organisation (WHO) announced that the COVID-19 virus had become a pandemic.

Significant abnormal returns are also found in Jordan this can be seen in the significance value of 0.004 which occurs on t-3, 0.04 on t+4. These results are accurate with the test results on the total sample with negative *abnormal returns*, followed by negative *abnormal returns* on t-3 to t+8. The results in Jordan confirm the adverse impact of the announcement period. However, there is no difference in abnormal returns before and after the event period. This is in line with tests in the GCC region, where the reaction was not constant during the event period and was offset by very high volatility after the COVID-19 outbreak was announced by WHO (Saleem et al., 2021).

While in Turkey no significant abnormal returns were found. In addition, according to Suwandi (2022) The author suspects that the wait-and-see action taken by investors influence the lack of stock reaction in Turkey. As reported by Hamurcu dan Oner (2021) that stocks in Turkey react more cautiously in the long run to negative news. In addition, Islamic financial markets have a higher level of adaptation than conventional markets. Islamic finance users tend to be conservative and react less to new announcements. In addition, according to Suwandi (2022) the lack of stock reaction can be influenced by the wait-and-see action taken by investors. Investors do not want to be too fast or careful to react and take risks. The *wait-and-see* is carried out in making decisions based on external information on the issuing company.

The results of this robustness test provide a more detailed picture of the reactions in Islamic banking stocks in the Asian region when WHO announced Covid-19 as a pandemic. Researchers concluded that the lowest response was shown by the South Asia region and the country due to fundamental conditions that actually experienced an increase in terms of financial performance and also increased digitalization.

The GCC region including Jordan has significant abnormal returns, but paired sample testing does not show results. This is because the level of volatility is very high so the movement that occurs is not constant. Meanwhile, the ASEAN region is most affected by the WHO announcement event. This conclusion is reinforced by Devi, Kamilah dan Kamaludin, (2022) who states that markets in the ASEAN region are more affected by the WHO announcement event. Which states that markets in the ASEAN region are more volatile during the pandemic than in the GCC region.

6. Conclusion

Based on the event study results, the effect of the announcement of COVID-19 by WHO on Islamic banking stocks in Asia can be concluded that there is a significant *Average Abnormal Return (AAR)* around the event days. Significant *Average*

Abnormal Return (AAR) is found in the overall sample on t-3, t-1, t+3, and t+5. There is a positive abnormal return on t-1 which is then absorbed quickly by the market, so the market is still said to be efficient. Abnormal returns on t-1, t+3, and t+5 are negative.

Second, there is a significant difference in *Cumulative Average Abnormal Return (CAAR)* between before and after the event of the announcement of COVID-19 by WHO. These results prove that Islamic banking stocks in Asia are affected by the shock of the Covid-19 outbreak announced by WHO as a pandemic; this is offset by the dominant negative *Cumulative Average Abnormal Return (CAAR)* value after the event period.

The robustness test results provide more information, by taking samples in several regions, showing the concentration level of the reaction of Islamic banking stocks in Asia. The ASEAN region is the most affected region by COVID-19 compared to the GCC region. At the same time, South Asia has the lowest reaction between the two. Another country in the category, Jordan, shows results in line with the GCC region, while Turkey shows no response to the WHO announcement.

This research provides investors an overview of an event's impact on sectoral stock movements. The overreaction to the pandemic encourages investors to sell shares to reduce the possibility of financial losses, so that financial market regulators can impose restrictions on short selling to protect companies and abuse by speculators and become an evaluation for Islamic banking management to carry out strategies and policies to withstand and minimize the impact of future crises such as Covid-19.

Limitations in this study include needing to see the extent to which stocks make adjustments in other periods and the development of the Covid-19 pandemic. Other factors may also affect stock returns and index returns on an event. In this case, the author realises that the research is limited to investor reactions to the market index. The author suggests using additional variables that may affect stock returns, so that future researchers can see more of the variables used.

The author also suggests that future researchers use other event variables such as social restrictions, credit restructuring assistance, etc. Using these other events adds variation to the test results on the effect of COVID-19 on the tested stocks. Finally, the author suggests to future authors to conduct testing by comparing several time periods. This comparison is intended to try each time span such as 5 Days, 10 Days, 30 Days, 60 Days, or other periods to see how far the stock market reacts.

7. References

- Al-Kandari, Al-Roumi, & AlRoomy, (2021) COVID-19's Impacts on the Kuwaiti Stock Market's Performance. *International Journal of Business and Management*, 16(5), 122. <https://doi.org/10.5539/ijbm.v16n5p122>
- Al-Kandari, A., AlRoomy, M., & Al-Roumi, K. (2022). The Influence of the COVID-19 on the GCC Stock Markets. *International Journal of Business and Management*, 17(4), 42. <https://doi.org/10.5539/ijbm.v17n4p42>
- Al-maadid, Alhazbi, & Al-thelaya, (2020) *Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID- 19 . The COVID-19 resource centre is hosted on*

Elsevier Connect, the company's public news and information. January.

- Al-roumi, (2021). *Covid-19's Impact on the Kuwaiti Banks' Stock Performance*. IX(2), 57–71.
- Alabbad, & Schertler, (2022). COVID-19 and bank performance in dual-banking countries: an empirical analysis. In *Journal of Business Economics* (Vol. 92, Issue 9). Springer Berlin Heidelberg. <https://doi.org/10.1007/s11573-022-01093-w>
- AlAli, (2020). The Effect of WHO COVID-19 Announcement on Asian Stock Markets Returns: An Event Study Analysis. *Journal of Economics and Business*, 3(3), 1051–1054. <https://doi.org/10.31014/aior.1992.03.03.261>
- Albaity, Mallek & Mustafa, (2022). Bank Stock Return Reactions to the COVID-19 Pandemic: The Role of Investor Sentiment in MENA Countries. *Risks*, 10(2), 1–15. <https://doi.org/10.3390/risks10020043>
- Aliani, K., Al-kayed, L., & Boujlil, R. (2022). COVID-19 effect on Islamic vs. conventional banks' stock prices: Case of GCC countries. *Journal of Economic Asymmetries*, 26(July), 263. <https://doi.org/10.1016/j.jeca.2022.e00263>
- Azmi, N. N., Ruhadi, R., & Barnas, B. (2021). Analisis Abnormal Return dan Trade Volume Activity Sebelum dan Sesudah Pengumuman Kebijakan Restrukturisasi Kredit Pandemi Covid-19. *Indonesian Journal of Economics and Management*, 2(1), 154–164. <https://doi.org/10.35313/ijem.v2i1.3111>
- Bales, S., & Burghof, H.-P. (2022). Pandemic waves, government response, and bank stock returns: evidence from 36 countries. *Fulbright Review of Economics and Policy*, 2(1), 20–34. <https://doi.org/10.1108/frep-11-2021-0070>
- Bank, A. D. (2020). *Pertumbuhan Ekonomi di Kawasan Asia Berkembang Terkontraksi pada 2020*. <https://www.adb.org/id/news/developing-asias-economic-growth-contract-2020>
- Brindha, K., & Sathyasree, C. M. (2022). Banking Sector Performance During the Covid-19 Crisis. In *Policy Research Working Paper* (Vol. 21, Issue 7). <https://doi.org/10.37896/YMER21.07/16>
- Buft, T., Khan, A., & Ahmed, E. (2020). Capital_Market_Reactions_to_th. *The Economy Research Guardian*, 10(Economic), 97–121.
- Destiana, W. (2021). *OJK_ Resiliensi Ekonomi dan Keuangan Syariah RI Sukses Dorong Pemulihan - Medcom*. IDX.
- Domat, C. (2023). *Islamic Finance Confronts Global Pandemic*. <https://www.gfmag.com/about-us/>
- Ellahi, N., Ur Rehman, J., Sulehri, A., Ahmad, M. A., & Qureshi, T. (2021). Investigating the Impact of COVID 19 Outbreak on Stock Market Returns: Evidence from Pakistan. *International Journal of Innovation, Creativity and Change*. *Www.Ijicc.Net*, 15(5), 2021. www.ijicc.net
- Fatimah, N. M., & Maftukhah, I. (2022). Analysis of Government Stimulus Policy Facing the Covid-19 Pandemic on Abnormal Share Returns (Study on LQ-45 Shares).

Atlantis, 204, 30–33.

- Hamurcu, Ç., & Öner, M. H. (2021). The Impact of Covid-19 Pandemic on Participation Index in Turkey: A Behavioral Finance Approach. *Journal of Financial Economics and Banking*, 2(2), 15–23.
- Hasan, B., Rashid, M., & Shafiullah, M. (2022). How resilient are Islamic financial markets during the COVID-19 pandemic? *Pacific-Basin Finance Journal*, 74(January).
- Herlianto, D. (2013). *Manajemen Investasi Plus*. Pustaka Baru.
- ICIEC. (2023). *THE FUTURE OF ISLAMIC FINANCE IN A COVID-19 WORLD*. Islamic Development Bank Group. <https://iciec.isdb.org/insights/future-of-islamic-finance/>
- Irfan, M., Kassim, S., & Dhimmar, S. (2021). Impact of Covid-19 on Islamic Stock Markets: An Investigation using Threshold Volatility and Event Study Models. *International Journal of Islamic Economics and Finance (IJIEF)*, 4(1), 121–148. <https://doi.org/10.18196/ijief.v4i1.10480>
- Ji, X., Bu, N. (Tom), Zheng, C., Xiao, H., Liu, C., Chen, X., & Wang, K. (2022). Stock market reaction to the COVID-19 pandemic: an event study. *Portuguese Economic Journal*, 0123456789. <https://doi.org/10.1007/s10258-022-00227-w>
- Junaedi, D., & Salistia, F. (2020). Dampak Pandemi COVID-19 Terhadap Pertumbuhan Ekonomi Negara-Negara Terdampak. In *Simposium Nasional Keuangan Negara* (pp. 995–1115).
- Kakhkharov, J., & Bianchi, R. J. (2022). COVID-19 and policy responses: Early evidence in banks and FinTech stocks. *Pacific Basin Finance Journal*, 74(July). <https://doi.org/10.1016/j.pacfin.2022.101815>
- Kashif, M., Sultana, F., Atif, M., Aslam, M., Sarwar, A., Awan, U. F., & Hanif, M. W. (2023). COVID-19 Attack on Stock Markets: Event Study and Panel Data Analysis of Organization of Islamic Countries (OIC). *Journal of Economic Impact*, 5(1), 50–63. <https://doi.org/10.52223/jei5012306>
- KEMENKO.RI. (2020). *Insentif Pemerintah Dukung Pasar Modal Bertahan di Tengah Pandemi*. Ekon.Go.Id. <https://www.ekon.go.id/publikasi/detail/745/insentif-pemerintah-dukung-pasar-modal-bertahan-di-tengah-pandemi>
- Khaled AL-Naif, Mohammad Almashaqbeh, N. R. M. S. A. (2020). The Effect of WHO COVID-19 Announcement on Asian Stock Markets Returns: An Event Study Analysis. *Journal of Economics and Business*, 3(3), 3912–3922. <https://doi.org/10.31014/aior.1992.03.03.261>
- Kordestani, A., Pashkevich, N., Oghazi, P., Sahamkhadam, M., & Sohrabpour, V. (2022). Effects of the COVID-19 pandemic on stock price performance of blockchain-based companies. *Economic Research-Ekonomiska Istrazivanja*, 35(1), 3206–3224. <https://doi.org/10.1080/1331677X.2021.1986676>
- Kouki, F., & Cherni, F. (2022). Stock Markets and COVID-19 Outbreak Spillover Effects:

- Evidence from the MENA Region. *Review of Economics and Finance*, 20, 978–1000. <https://doi.org/10.55365/1923.X2022.20.110>
- Kumarapperuma, O., Deysappriya, N. P. R., & Rajapaksha, R. M. M. C. (2021). Impact of COVID-19 on Stock Return in Asian Stock Markets. *South Asian Journal of Business Insights*, 1(2), 24. <https://doi.org/10.4038/sajbi.v1i2.26>
- Latorre, G. R., Santella, G., & Sharma, C. (2020). *Standing firm on shifting sands: Global Banking M&A outlook H2 2020*. July, 1–27. <https://assets.kpmg/content/dam/kpmg/xx/pdf/2020/07/standing-firm-on-shifting-sands.pdf>
- Mansour, H., Hassan, S., & Abdel Aziz, S. (2021). The impact of COVID-19 on MENA region stock markets. 382–359, (73)41, *المجلة العلمية لكلية التجارة (أسيوط)*. <https://doi.org/10.21608/sjcf.2021.246545>
- Masfiatun. (2021). Dampak Covid-19 Dan Variabel Makro Ekonomi Terhadap Stabilitas Perbankan Syariah Di Indonesia. *Jurnal Ilmiah Akuntansi Dan Keuangan*, 04(01), 27–39.
- Medhioub, I., & Chaffai, M. (2018). Islamic finance and herding behavior: an application to Gulf Islamic stock markets. *Review of Behavioral Finance*, 10(2), 192–206. <https://doi.org/10.1108/RBF-02-2017-0014>
- Mirza, N., Kumail, S., Rizvi, A., Saba, I., & Naqvi, B. (2020). *Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID- 19 . The COVID-19 resource centre is hosted on Elsevier Connect , the company ' s public news and information . January.*
- Mishra, P. K., & Mishra, S. K. (2020). Corona Pandemic and Stock Market Behaviour: Empirical Insights from Selected Asian Countries. *Millennial Asia*, 11(3), 341–365. <https://doi.org/10.1177/0976399620952354>
- Nawazish, Kumail, S., Rizvi, A., Saba, I., Naqvi, B., & Yarovaya, L. (2022). The resilience of Islamic equity funds during COVID-19: Evidence from risk adjusted performance , investment styles and volatility timing. *International Review of Economics and Finance*, 77(July 2021), 276–295. <https://doi.org/10.1016/j.iref.2021.09.019>
- Nuraini Rachmawati, E., Saputra, R., Sintya Prihatin, D., & Ria Yusnita, R. (2021). Dampak Penerapan Lockdown Terhadap Pergerakan Harga Saham Pada Negara Di ASEAN. *Jurnal Ekonomi KIAM*, 32(1), 110–121. [https://doi.org/10.25299/kiat.2021.vol32\(1\).7791](https://doi.org/10.25299/kiat.2021.vol32(1).7791)
- Octaviana, R. (2022). COVID-19 dan Pasar Modal Syariah : Pendekatan Regresi Korelasi Kanonikal. *Al-Tijary*, 8(1), 57–67.
- Pandey, D. K., & Kumari, V. (2021). Event study on the reaction of the developed and emerging stock markets to the 2019-nCoV outbreak. *International Review of Economics and Finance*, 71(January), 467–483. <https://doi.org/10.1016/j.iref.2020.09.014>

- Safti, A. El. (2020). The Covid-19 Effect On The Global Financial System And Effort To Counter It. In *Trend Research & Advisory*. https://trendsresearch-org.translate.googleusercontent.com/translate/g/translate?hl=en&ptq=wapp&prod=the-covid-19-effect-on-the-global-financial-system-and-efforts-to-counter-it/?_x_tr_sl=auto&_x_tr_tl=id&_x_tr_hl=en&_x_tr_pto=wapp
- Saleem, A., Bárczi, J., & Sági, J. (2021). COVID-19 and Islamic Stock Index: Evidence of Market Behavior and Volatility Persistence. *Journal of Risk and Financial Management*, 14(8), 389. <https://doi.org/10.3390/jrfm14080389>
- SHAIK, A. R. (2021). COVID-19 Pandemic and the Reaction of Asian Stock Markets: Empirical Evidence from Saudi Arabia. *The Journal of Asian Finance, Economics and Business*, 8(12), 1–7. <https://doi.org/10.13106/jafeb.2021.vol8.no12.0001>
- Singh, B., Dhall, R., Narang, S., & Rawat, S. (2020). The Outbreak of COVID-19 and Stock Market Responses: An Event Study and Panel Data Analysis for G-20 Countries. *Global Business Review*. <https://doi.org/10.1177/0972150920957274>
- Siska, E., Lestari, N. P., & Amalia, M. (2021). Satu Tahun Virus Corona: Analisis Pergerakan Harga Saham Bank Syariah di Lantai Bursa. *Jurnal Ilmiah Ekonomi Islam*, 7(03), 1253–1260. <http://jurnal.stie-aas.ac.id/index.php/jie>
- Smolo, E., Jahangir, R., Nagayev, R., & Aysan, A. F. (2023). Performances of leading Islamic finance markets prior to and during the COVID-19 pandemic. *Heliyon*, 9(1), e12870. <https://doi.org/10.1016/j.heliyon.2023.e12870>
- Suhail, M., Ahmad, G., & Ashraf, D. (2020). *Systemic risk, islamic bank, and the COVID-19 pandemic : an empirical investigation*. January.
- Tang, C. H., Lee, Y. H., Liu, W., & Wei, L. (2022). Effect of the Universal Health Coverage Healthcare System on Stock Returns During COVID-19: Evidence From Global Stock Indices. *Frontiers in Public Health*, 10(July), 1–12. <https://doi.org/10.3389/fpubh.2022.919379>
- Wira, D. (2014). *Analisa Fundamental SAHAM*.pd. EXCEED.