

SENSITIVITY ISLAMIC STOCK RETURN IN ASIA: THE EFFECT OF EXCHANGE RATE VOLATILITY

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ABSTRACT

The current study focuses on the existence of exchange rate volatility that impacts the return of MSCI Islamic stocks in Asia emerging countries. The study also sees comparisons between Islamic emerging markets in Asia (India, China, and Korea) and Southeast Asia regions (Indonesia, Malaysia, Thailand, and the Philippines). This study's daily time series data is from January 2015 to June 2020, employing time series regression as an analysis technique. The EGARCH method is used to indicate the asymmetric model and examines the impact of both good and bad shocks generated. The results highlight that the volatility of the MSINI is statistically positive, whereas MSCNI and MSKRI show a significant adverse effect on volatility. On the other hand, Southeast Asia (MSIDI, MSMYI, MSTHI, and MSPH) has no significant effect on exchange volatility. It is interpreted that the currencies of Southeast Asian countries are not strong enough because they still depend on other exchange rates. This result can be utilized to invest in the Islamic stock market in Southeast Asia because it is not affected by exchange rate volatility. Investors can quickly react to sensitive stocks to avoid uncertainty in stock returns. The government must be advised to increase the fiscal stimulus space and provide ease of business in the real sector.

INTRODUCTION

Currency exchange rates are determined in the foreign exchange market, where different currencies are traded. The level of currency stability in a country is the most sensitive variable to the root causes of economic problems (Krugman et al., 2018). As one of the essential values in the global financial market, the exchange rate has a significant impact, especially nowadays, since global transactions have become more significant. The volatility of the exchange rate may impact the economic condition, which can describe the power of the economic country. If the exchange rate is appreciated, the country has a surplus exchange rate reserve and good

conditions for international economic sectors and vice versa (Krugman et al., 2018). The volatility that occurs in the exchange rate also impacts the capital market, and this is because the majority of issuers have debt denominated in foreign currencies.

As happened some time ago, developing countries have experienced financial crises such as the stock market crash in 1978, the Mexican currency crisis in 1994, the Asian currency crisis in July 1997, and the US subprime mortgage crisis of 2008-2009. These events are characterized by significant negative asset returns and high volatility, and the impact quickly affects other developing countries (Walid et al., 2011). The financial crisis impact contributed to the loss of investor confidence in the conventional capital market caused by the 1997 Asian financial crisis. The moment of crisis was a significant turning point for the Islamic capital market industry. The increasing need for Islamic capital market openness was more pronounced after the 2008 financial crisis when demand increased in developed countries, particularly Japan, Britain, the United States, and developing countries such as Egypt, Malaysia, and Sudan (Kassim, 2013). The need for Islamic capital markets indicates that investors pay attention to the need for economic diversification of their assets to minimize losses.

For investors, it is essential to pay attention to the relationship between the exchange rate and the stock price index because the relationship between the two is very close. If the exchange rate rises, the stock price index will indirectly increase. The rise and fall of stock prices are caused by the appreciation of foreign currencies, which in turn, cause fluctuations in investor demand for shares in the capital market (Elton et al., 2014). According to assets portfolio theory, when foreign investors anticipate changes in the value of their national currency, they change the proportion of assets they hold to reduce portfolio losses, thereby affecting the market value of inflows or outgoing shares (Huang et al., 2020). Changes in the exchange rate are a variable that investors are very concerned about when placing their funds in the capital market because of the capital gains that investors wish to obtain in the short term (Reis & Pinho, 2021). Supported by Sgammini and Muzindutsi (2020) and Zolfaghari and Sahabi (2021), the exchange rate positively affects stock prices.

One of the efforts to maintain the stability of international economic development is by forecasting exchange rates and stock prices which can be done with volatility. Volatility is a proxy for risk caused by price changes in the foreign exchange and stock markets. Volatility is one of the factors used by investors in analyzing the behavior of exchange rates and stocks in the past that reflects future behavior. Statistical models widely used in forecasting time series data are autoregressive (AR), moving average range (MA), or a combination of ARMA or ARIMA and ARCH or GARCH. By using the ARMA or ARIMA method, high-precision prediction results can be obtained as long as the mean square error hypothesis is met. However, problems arise when this method is applied to commodity markets where price fluctuations, such as stock markets or exchanges, tend to be

concentrated. The characteristic of price clusters is that the trend changes significantly, followed by significant changes, and vice versa (Diebold, 2004). In this case, a different method needs to be used because the assumption of equality cannot be met (Robert, 1982).

Several previous studies have been analyzed and focused on conventional stock returns, such as that conducted by Perera (2016), who examined stock returns in Colombo; Lim and Sek (2014), who examined returns in four emerging markets in Asia (Indonesia, Philippines, Korea, Thailand); and Gay (2016), who sampled returns in four emerging markets (Brazil, Russia, India, and China). The contribution of current research to the previous research is its performance in a different index, which is the Islamic Index. Islamic Index is relatively new for investors, especially for non-Muslim countries in Asia. Investors may consider the Islamic Index because some previous studies mention that Islamic Index is stronger from a currency crisis. Research from Ali et al. (2022) and Jawadi et al. (2019) stated that Islamic stocks are more stable and can survive better than conventional stocks during economic outbreaks. Research from Asutay et al. (2022) and Majid (2018) also showed that Islamic stock outperformed conventional during the global financial crisis period (2007-2009).

In the Islamic concept, debt is prohibited because it contains non-halal income (riba). Basically, the company that indexes in Islam does not have high debt because the Islamic index has a maximum tolerance of debt. However, most of the go-public companies indexed in the capital market have debt in dollar currency to support the business process, including the company that indexes in Islam. If the volatility of foreign exchanges is high, it may affect the fundamental business of the company, which, in the end, with the investor behavior effect, will have an impact on the company's stock return. Islamic Index is known as the index that has a high screening process, such as debt screening. Logically Islamic Index is not sensitive to the exchange rate, but this statement needs to be analyzed further because volatility may affect the whole market. Based on the description of the background above, several previous studies are still very diverse and rarely study exchange rate volatility in the Islamic stock market in Asia. Therefore, this paper will analyze and prove the statement that the Islamic Index in Asia can withstand currency exchange volatility. Therefore, this research will be entitled "The effect of exchange rate volatility on the Islamic stock return in Asia" by employing the Exponential Generalized Autoregressive Conditional Heteroscedasticity (EGARCH) model introduced by Nelson (1991).

Generalized Autoregressive Conditional Heteroscedasticity (GARCH) is the development of an EGARCH model that can meet the characteristics of financial time series data, namely allowing for heteroscedasticity and volatility dependence (Jondeau & Rockinger, 2006). The originality of this manuscript can be seen from the

use of samples in the Asia emerging market, where it also sees comparisons between Islamic emerging markets in Asia (India, China, and Korea) and Southeast Asia regions (Indonesia, Malaysia, Thailand, and the Philippines). In addition, developing countries in the Asian region tend to be affected by macroeconomics due to the dependence of the economy on developed countries, which can impact volatility in foreign exchange rates. However, Islamic stocks can provide stability during a macroeconomic crisis because regulations in Islamic stocks provide security rules to investors, such as determining the company's debt threshold and minimizing income from non-halal trading activities.

LITERATURE REVIEW

Financial markets play an important role in facilitating the smooth running of the economy, namely by allocating resources and creating liquidity for businesses and entrepreneurs. The Capital Market makes it easy for buying and selling to trade their financial holdings. Financial markets create securities products that provide returns for those who have excess funds (investors/lenders) and make those funds available to those who need additional money (borrowers). The stock market is just one type of financial market. Financial markets rely heavily on transparency of information to ensure that the market sets efficient and appropriate prices. The market price of a security may not reflect its intrinsic value due to macroeconomic forces such as the volatility of the respective country's currency exchange rate against the dollar.

The exchange rate is the exchange between two different currencies, which compares the value/price between the two currencies and is used in various kinds of international transactions (Krugman et al., 2018). The exchange rate is the most apparent trait because its movement is susceptible to political and economic changes. Fluctuations in the exchange rate will interfere with the decision to determine the selling price and result in illiquidity in the financial sector, decreased output, and increased inflationary pressures (Kubo & Hirao, 2020). One way to measure exchange rate behavior is to use exchange rate volatility. Volatility indicates the extent to which exchange rates tend to change and is considered one of the factors that cause a high-cost economy. The uncertainty volatility exchanges rate can cause stock prices to be high.

Previous research on the relationship between the exchange rate and the stock market has produced various research results. The study that states a relationship between exchange rates and stock returns/prices is Firmansyah and Oktavilia (2017) entitled "Stock Markets and Exchange Rates in Five South Asian Countries," using the Engle-Granger error correlation and co-integration model approach. It can be concluded that the exchange rate affects the shares of Indonesia, Malaysia, the Philippines, Thailand, and Singapore, and the effect even influences stocks in one day.

According to Tudor and Popescu-Dutaa (2012), in a journal entitled "Causal Relationship between Stock Returns and Changes in Exchange Rates for 13 Developed and Emerging Markets," a relationship was found between stock prices and exchange rate movements against developed markets (Australia, Canada, France, Hong Kong, Japan, UK, and the USA) and emerging markets (Brazil, China, India, Korea, Russia, and South Africa). The research revealed that the exchange rate impacts the return of the stock market index.

Research from Tsai (2012) entitled "The Relationship Between Stock Price Indices and Exchange Rates in Asian Markets: A Quantitative Regression Approach" showed an interesting pattern in the relationship between these two markets in Asia, indicating a negative relationship between the stock markets of Singapore, Thailand, Malaysia, Philippines, South Korea, and Taiwan and foreign exchange. It is even more evident when the exchange rate is very high or low.

Murni (2015), in the research entitled "Analysis of Macroeconomic Factors on Stock Market Performance in Several Asian Countries," stated that exchange rates have a simultaneous and partial effect on stock market performance in several Asian countries. These results indicate that the countries that have the most influence on the stock price index are the Malaysian stock market, with a coefficient of 76.8%, the Japanese stock market at 71.2%, and the Indonesian stock market at 66%.

Tian and Ma (2010), in a journal entitled "The Relationship between Stock Returns and Foreign Exchange Rates: ARDL Approach," show that the exchange rate and the money supply affect stock prices with a positive correlation. Furthermore, it shows that the increase in the money supply is mainly due to the large flow of 'hot money' from other countries in recent years. After the local currency's appreciation, hot money, followed by an increase in the money supply, pushed the market to high levels.

Purbasari (2017), in a journal entitled "Interdependence of Dynamic Variants and Transmission of Volatility in ASEAN Stock Markets," investigated the interdependence of volatility in five Southeast Asian markets firstly by creating a return model in the VAR-BEKK framework to obtain the conditional variance, and then applying the vector-autoregressive (VAR) model to the five market variants. The results of the VAR estimation show that the conditional variance of the equity market interdependence is high. Although the most exogenous and least susceptible to volatility stimuli from other markets, the Singapore market is the most influential in transmitting volatility to other ASEAN markets.

Based on the explanations described in the background and the theories and definitions that have been explained, a hypothesis is prepared, which will then be tested empirically. The hypotheses of this study are:

H0: There is no effect of exchange rate volatility on Islamic stock returns (MSCI Indonesia Islamic Index, MSCI China Islamic Index, MSCI Malaysia Islamic Index, MSCI India Islam Index, MSCI Thailand Islamic Index, MSCI Korea Islam Index, and MSCI Philippines Islamic Index index) significantly.

H1: There is an effect of exchange rate volatility on Islamic stock returns (MSCI Indonesia Islamic Index, MSCI China Islamic Index, MSCI Malaysia Islamic Index, MSCI India Islam Index, MSCI Thailand Islamic Index, MSCI Korea Islam Index, and MSCI Philippines Islamic Index index) significantly.

RESEARCH METHODS

The current study employs a quantitative method and uses secondary data types. The current study applies the EGARCH model approach to analyze the effect of exchange rate volatility on stock return and also to show asymmetry, namely good news or bad news of volatility currencies to market conditions. EGARCH was chosen because of its ability to capture the asymmetric behavior of the data. EGARCH also does not require non-negativity constraints; therefore, EGARCH can capture more real results (Walid et al., 2011). The EGARCH model can capture the asymmetrical volatility clustering well through the parameter. The exchange rate (NITU) mean model used is as follows:

$$NITUx_t = \alpha + \beta_1 NITU_{t-1} + e_t \dots \dots \dots (1)$$

Variance model used for exchange rates:

$$\log(hNITU_t) = \gamma + \sum_{j=1}^q \zeta_j \left| \frac{e_{t-j}}{\sqrt{hNITU_{t-j}}} \right| + \sum_{j=1}^q \xi_j \frac{e_{t-j}}{\sqrt{hNITU_{t-j}}} + \sum_{i=1}^p \delta_i \log hNITU_{(t-i)} \dots \dots (2)$$

While the MSCI Islamic Index (MSCI) mean model used is as follows:

$$\log(h_t) = \gamma + \sum_{j=1}^q \zeta_j \left| \frac{u_{t-j}}{\sqrt{h_{t-j}}} \right| + \sum_{j=1}^q \xi_j \frac{u_{t-j}}{\sqrt{h_{t-j}}} + \sum_{i=1}^p \delta_i \log h_{(t-i)} + \vartheta \log h_{nit_u(t-1)} \dots \dots (3)$$

Information: h_t = variance condition; $\gamma, \zeta, \xi, \delta$ = parameter coefficient; u, e = error terms; j, i, p, q = sample period.

Secondary data in this study is from daily closing stock prices obtained from the MSCI Islamic Index in Asia (www.ycharts.com), which also shows that the country in this sample is a part of the Asia Emerging Market. It is in the form of raw data and measures the unit exchange rate of the domestic currency per US dollar (www.investing.com) sourced from the data stream. This study used daily time series data from January 2015 to June 2020, employing time series regression analysis techniques. The reason for choosing the Asia MSCI Islamic index in the emerging market is because those developing countries, in general, have been affected by macroeconomic movements such as foreign exchange. The existence of international trade relations between countries can result in foreign exchange volatility.

The MSCI Islamic Index return is the dependent variable used in this study. The following is the dependent variable, along with an explanation that can be seen in Table 1 as follows:

Table 1
Operational Definition of Dependent Variables

Dependent Variable	Code	Operational Definition
Return of MSCI Indonesia Islamic Index	MSIDI	An index that measures the performance of the Indonesian Islamic stock market
Return of MSCI China Islamic Index	MSCNI	An index that measures the performance of the Chinese Islamic stock market
Return of MSCI Malaysia Islamic Index	MSMYI	An index that measures the performance of the Malaysian Islamic stock market
Return of MSCI India Islamic Index	MSINI	An index that measures the performance of the Indian Islamic stock market
Return of MSCI Thailand Islamic Index	MSTHI	An index that measures the performance of the Thai Islamic stock market
Return of MSCI Korea Islamic Index	MSKRI	An index that measures the performance of the Korean Islamic stock market
Return of MSCI Philippine Islamic Index	MSPHI	An index that measures the performance of the Philippine Islamic stock market

Source: Various References Processed by Author

The independent variable in this study is the exchange rate. According to Gujarati & Porter (2009), independent variables are variables that affect other variables. The following is the operational definition of the independent variable, which can be seen in Table 2 as follows:

Table 2
Operational Definition of Independent Variable

Independent Variable	Operational Definition
Exchange Rate USD/IDR	An index that measures the movement of the US dollar to rupiah exchange rate
Exchange Rate USD/CYN	An index that measures the movement of the US dollar to yuan exchange rate
Exchange Rate USD/MYR	An index that measures the movement of the US dollar to ringgit exchange rate
Exchange Rate USD/INR	An index that measures the movement of the US dollar to rupee exchange rate
Exchange Rate USD/THB	An index that measures the movement of the US dollar to baht exchange rate
Exchange Rate USD/KRW	An index that measures the movement of the US dollar to won exchange rate
Exchange Rate USD/PHP	An index that measures the movement of the US dollar to peso exchange rate

Source: Various References Processed by Author

Parameter Significance Test

The exchange rate is the exchange between two different currencies, resulting in a comparison. After estimating the mean and variance parameters, testing is conducted to determine whether the model parameters are significant. At the significant level α by using the hypothesis:

H0: $\beta=0$, means that β is not significant or the independent variable does not affect the dependent variable

H1: $\beta \neq 0$, means that β is significant or the dependent variable is influenced by the independent variable

H0 is rejected if probability (t-stat) > t- α (0.01*, 0.05**) for 99%, and 95% confidence levels, respectively (Mankiw & Euston, 2006).

RESULT AND ANALYSIS

Table 3
EGARCH Regression Results MSCI Islamic Stocks Exchange Rate Volatility

	MSIDI	MSCNI	MSMYI	MSINI	MSTHI	MSKRI	MSPHI
Coefficient							
Mean Equation							
α	-0.0004 (0.206)	0.0006 (0.099)	-0.0001 (0.469)	0.0001 (0.633)	0.0002 (0.408)	0.0002 (0.513)	-0.0005 (0.104)
β	0.0242 (0.359)	0.0834* (0.000)	0.1084* (0.000)	0.0290* (0.003)	0.0392 (0.163)	0.0051 (0.855)	-0.0150 (0.581)
Variance Equation							
γ	-0.3119* (0.001)	-0.1437 (0.082)	-0.1878* (0.000)	0.2052* (0.000)	-0.1707 (0.080)	-0.1403* (0.000)	-0.0358 (0.743)
ζ	0.0863* (0.000)	0.0915* (0.000)	0.1214* (0.000)	0.0210* (0.000)	0.1608* (0.000)	0.0775* (0.000)	0.0750* (0.000)
ξ	-0.0829* (0.000)	-0.0623* (0.000)	-0.0446* (0.000)	0.0117* (0.000)	-0.0668* (0.000)	-0.0755* (0.000)	-0.0744* (0.000)
δ	0.9766* (0.000)	0.9727* (0.000)	0.9896* (0.000)	0.0098* (0.000)	0.9847* (0.000)	0.9848* (0.000)	0.9903* (0.000)
ϑ	0.0066 (0.143)	-0.0294** (0.018)	0.0024 (0.849)	0.0110* (0.000)	-0.0085 (0.311)	-0.0134* (0.000)	-0.0101 (0.318)

Significance: 5%** , 1%*

Source: Data Processed

When the work is cited in the running text, place the year of publication in parentheses. When the work is not cited in the running text, place the author's name and the year of publication in parentheses. Examples: The coefficient ϑ with a significant negative value is shown in the MSCNI and MSKRI Islamic stocks indices. Meanwhile, a significant positive value is shown in MSINI shares. The regression results mean that the exchange rate volatility statistically has a negative or positive effect in the case of the MSCI Islamic Stock Index in Asia. In contrast, the East Asia region (MSCNI and MSKRI) shows similar results. The Southeast Asia region shows that exchange rate volatility does not significantly affect stock returns (MSIDI, MSMYI, MSTHI, and MSPHI). Another South Asia index, namely India (MSINI), reports the adverse effect.

The Result of E-Garch Model in The Case of MSINI, MSCNI, and MSKRI

The first step of analysis is estimating the mean and variance parameters of the exchange rate. The testing is conducted to determine whether the model parameters are significant or not at α significance level by using the Hypothesis. Based on Table 3, exchange rate volatility has a significant positive relationship with the Islamic index MSINI returns. Meanwhile, exchange rate volatility has a significant negative relationship with the return on the MSCNI Islamic index and the return on the MSKRI Islamic index. The following provides further exposure to the volatility of the MSINI, MSCNI, and MSKRI exchange rates.

MSCI India Islamic Index (MSINI)

Exchange rate volatility has a statistically significant positive effect on MSINI returns. The positive relationship shows that when the volatility of the exchange rate increases by one unit, it will also result in an increase in the return of the MSINI index of Islamic stocks by a coefficient of 0.0110 at a 99% confidence level. It is in line with the research of Mishra and Rahman (2010) and Agrawal et al. (2010), who also found a significant positive effect. India is a country of financial and economic prominence, introduced major deregulation and market liberalization since the early 1980s. It gives the Indian market extraordinary liquidity and sophistication. The positive effect means that when there is volatility (fluctuations) in the exchange rate in India, investors in foreign exchange will withdraw their funds and move to the Indian Islamic stock market, thereby causing the stock return of the MSINI index to rise. The increased volatility (fluctuation) of the exchange rate is a signal for investors to withdraw their funds from the foreign exchange market because it is considered to reduce their returns. In the end, investors will switch to other investments that provide higher returns (Almansour, 2021; Fakhfekh et al., 2021; Nugroho et al., 2021; Wang et al., 2021).

The increase in MSINI return when the exchange rate fluctuates can also be caused when the issuers in the MSINI index are dominated by companies involved in export activities. So, when the exchange rate experiences a shock, such as currency depreciation, it will increase domestic export activities (Aydemir & Demirhan, 2009). The increasing MSINI index return is because of the increase in the selling price of exporters' products abroad, which provides greater profits, thus increasing the returns of issuers listed in the MSNI index.

MSCI China Islamic Index (MSCNI)

Exchange rate volatility has a statistically significant negative effect on MSCNI returns. The negative relationship shows that when the exchange rate volatility increases by one unit, it will reduce the return of the MSCNI index of Islamic stocks by

a coefficient of -0.0294 at the 95% confidence level. In line with Bilson et al. (2001), who also found a significant negative effect, China has developed into a country open to foreign investors and institutions. The change in the fixed exchange rate system to floating, which is determined by market mechanisms, makes investors more careful about exchange rate volatility. Shocks in the foreign exchange market can affect the stock market is called the contagion effect. The negative coefficient value indicates that if the exchange rate experiences a shock, it will reduce the return on the MSCNI index. The volatility of the yuan exchange rate against the US dollar for other capital market investors, such as the stock market, can be interpreted as risk. So investors will take their investment in China's Islamic stocks because exchange rate risk will worsen and have an impact on Islamic stocks. Therefore, it causes MSCNI's return to be decreased and negative.

MSCI Korea Islamic Index (MSKRI)

Exchange rate volatility has a statistically significant negative effect on MSKRI returns. The negative relationship shows that when the volatility of the exchange rate increases by one unit, it will reduce the return of the MSKRI index of Islamic stocks by a coefficient of -0.0134 at the 99% confidence level. It is not in line with Beer and Hebein (2008), who found a significant positive effect. Korea is one of the export destinations that continues to grow. In their research, the magnitude of Korean stock shocks with positive shocks has the same magnitude as negative shocks. Negative and significant influence happens because the volatility makes the company's condition unstable, especially the company with foreign debt. The increasing rate of the dollar will increase the risk to the company. The investor will respond to the condition and try to avoid the possibility of loss by selling the stock, which leads to a decreasing return. So, the distribution of stock returns is inefficient in the capital market, and investors less experienced in investing will be cautious and choose to leave the market. This condition causes more instability even when the economy is in good shape.

The possibility of a decline in MSKRI returns when the exchange rate fluctuates can also be caused by issuers in the MSKRI index involved in export and import activities. When the exchange rate experiences a shock such as depreciation or currency appreciation which will increase price uncertainty for exporters and importers, issuers in the index will delay export and import activities and cause low returns. Therefore, when fluctuations increase, the return on the MSKRI index will decrease because investors predict they will not make a profit.

The Result of E-Garch Model in The Case of MSIDI, MSMYI, MSTHI, and MSPHI

Based on Table 3, the exchange rate volatility has no significant relationship in the case of MSIDI, MSMYI, MSTHI, and MSPHI. However, the direction in MSIDI and MSMYI is positive, while the direction of MSTHI and MSPHI is negative. Thus it can be

concluded that MSCI Islamic Index in Southeast Asian Countries does not influence the exchange rate volatility. Further explanation will be presented as follows:

MSCI Indonesia Islamic Index (MSIDI)

The volatility of the Rupiah exchange rate has a positive and insignificant relationship with the return of the MSIDI index of Islamic stocks. The positive correlation is not significant, indicating that when the exchange rate fluctuates, then MSIDI stock index investors will not react to the foreign exchange market. The Indonesian economy is one of the world's major emerging economies, the largest in Southeast Asia and the sixth in Asia. The results of this study are in line with Md-Yusuf and Rahman (2012) that there is no significant effect between the volatility of the rupiah exchange rate and the stock market in five countries, including Indonesia. This insignificant could be due to other factors, such as most MSIDI shares being dominated by domestic transactions and national market sales, so the exchange rate does not affect the return. Second, the Islamic index has good debt screening, so the listed companies are not affected by foreign debt. Third, the investors or investors who do not use the US dollar currency; thus, exchange rate volatility does not affect MSIDI.

MSCI Malaysia Islamic Index (MSMYI)

Exchange rate volatility has an insignificant positive relationship with the return of the MSMYI index of Islamic stocks. The insignificant positive correlation indicates that when the exchange rate is affected, investors in the MSMYI stock index will not react to the foreign exchange market. Malaysia is one of the countries whose economy developed rapidly after the 1998 economic crisis that rocked Asia. A different opinion exists with Vejzagic and Zarafat (2013), who found a significant negative effect. The positive relationship is not significant, indicating that investors are less responsive to the foreign exchange market when the exchange rate fluctuates wildly. The insignificant effect may be because MSMYI has a strong analysis of debt. The company does not have high debt in the dollar. The company's activity is in the domestic transaction, so the same as MSIDI shares, and investors believe in investing in MSMYI shares. So, changing the exchange rate will not make investors react directly.

MSCI Thailand Islamic Index (MSTHI)

Exchange rate volatility has an insignificant negative relationship with the return of the MSTHI index of Islamic stocks. The insignificant negative correlation indicates that when the exchange rate is affected, the MSTHI stock index investors will not react to the foreign exchange market. Thailand welcomes foreign investors to be able to attract other investments. There is a different opinion from Lim and Sek

(2014), who found a significant positive effect. The negative relationship is not significant, indicating that when exchange rate shocks occur, MSTHI stock investors are less responsive to the foreign exchange market. This condition is due to the possibility of experienced investors investing in MSTHI shares, keeping investors facing shocks calmly in exchange rates.

MSCI Philippines Islamic Index (MSPHI)

Exchange rate volatility has an insignificant negative relationship with the return of the MSPHI index of Islamic stocks. The insignificant negative correlation indicates that when the exchange rate is affected, the MSPHI stock index investors will not react to the foreign exchange market. The Philippines' economy is the fourth largest in Southeast Asia. The results of this study are in line with Beer and Hebein (2008), who found a significant negative effect. The negative relationship is not significant, indicating that when exchange rate shocks occur, MSPHI stock investors are less responsive to the foreign exchange market. This condition is due to the possibility that investors who invest in emerging markets are not investors who tend to be careless with fluctuations in the US dollar. So, investors believe in stocks in developing countries as long as these stocks are still active.

Based on the description above, investors should first analyze the stock market conditions before carrying out investment activities. Investments contain risks, as well as uncertain economic conditions, especially on the exchange rate, because the exchange rate significantly influences stock returns. Other results also showed that the state's regional factors gave uniform results. Countries in East Asia (China and Korea) explained that the exchange rate has a significant negative impact on the MSCI Islamic Index. MSCI Islamic Index movements in the region are susceptible. When the exchange rate increases, Islamic investors will withdraw funds from the stock market due to indications of economic instability, unlike the case in the South Asian region (India), which explains a unidirectional relationship between the exchange rate and the MSCI Islamic Index (MSINI). It means that when the exchange rate is related, this results in a good trend for Islamic stocks. While the Southeast Asian region (Indonesia, Malaysia, Thailand, and the Philippines) showed insignificant results, exchange rate volatility does not affect the Islamic stock market (MSIDI, MSMYI, MSTHI, and MSPHI). It means the Southeast Asia region can be an excellent opportunity for international Islamic investors to invest because the macroeconomic risk related to exchange rate volatility can be minimized.

Policymakers for large open economies should watch carefully for exchange rate movements. For countries with large open economies, changes in exchange rate volatility have a greater effect on the stock market because they are more integrated and heavily dependent on international markets. The implication of the research is that investors in China and Korea should conduct an analysis of market conditions before investing in the Islamic-selected index. Basically, investments contain risks,

because of the uncertain economic conditions, especially on the exchange rate. The results show that in China and Korea, the exchange rate has a negative effect on stock returns; therefore, it is better for investors to choose more diverse investment instruments when the exchange rate is unstable. Meanwhile, although the volatility of the currency does not affect the returns of Islamic stocks, investors in Southeast Asia should still be careful in investing, especially those in Thailand and the Philippines, which show a negative relationship.

CONCLUSION

The current study aimed to examine the effect of exchange rate volatility on the return of the MSCI index of Islamic stocks throughout Asia with a quantitative research approach using the Exponential Generalized Autoregressive Conditional Heteroscedasticity (EGARCH) model from the period January 2, 2015, to June 30, 2020. The results of this study indicate that the volatility of the exchange rate has a significant effect on the return of the MSINI (India), MSCNI (China), and MSKRI (Korea) indices. Meanwhile, exchange rate volatility has no significant effect on the return of the Southeast Asian Countries, MSIDI (Indonesia), MSMYI (Malaysia), MSTHI (Thailand), and MSPHI (Philippines) index returns. Each stock index has different characteristics and investor attitudes in dealing with exchange rate fluctuations. On the other hand, the stock indices MSIDI (Indonesia), MSMYI (Malaysia), MSTHI (Thailand), and MSPHI (Philippines), which have no significant influence, indicate that in the event of exchange rate shocks are volatile. Investors in these stock indices will not react to the foreign exchange market. Southeast Asia MSCI Islamic Index can be an alternative as a diversification investment to minimize the exchange rate risk.

While the implication for the government, especially for China and Korea, which volatility of the dollar has a negative impact on Islamic Stock, the government must be advised to increase the fiscal stimulus space and provide ease of doing business in the real sector, including tourism and export-import activities, so as to support economic growth and stability exchanges rate.

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