

THE RELATIONSHIP BETWEEN EXCHANGE RATES AND ISLAMIC INDICES IN INDONESIA AND MALAYSIA

Ratih Purbowisanti

Universitas Alma Ata Yogyakarta
ratihp33@gmail.com

***Abstract:** This study is aimed to analyze the causal relationship between the exchange rates and Islamic indices in Indonesia and Malaysia, and the long-term relationship of the two variables. Indonesia is represented by the value of the rupiah to US dollar and the Jakarta Islamic Index while Malaysia is represented by the exchange rate of the ringgit to US dollar and the FTSE Bursa Malaysia Hijrah Shariah Index. By using the Vector Autoregression (VAR) model, it can be concluded that the relationship between Jakarta Islamic index is a unidirectional relationship, where the Jakarta Islamic Index affects the exchange rate. The relationship between Malaysia Islamic index has a bidirectional relationship, where the exchange rate affects the FTSE Bursa Malaysia ringgit Hijrah Shariah Index and FTSE Bursa Malaysia Hijrah Shariah Index affects the ringgit exchange rate. Through the study is also concluded that the exchange rate with Islamic indices in Indonesia and Malaysia has a long-term relationship.*

***Keywords:** Rupiah, Ringgit, Jakarta Islamic Index, the FTSE Bursa Malaysia Hijrah Shariah Index, VECM*

***Abstrak:** Penelitian ini bertujuan untuk menganalisis hubungan kausalitas antara nilai tukar dengan indeks harga saham syariah di Indonesia dan Malaysia, serta hubungan jangka panjang dari kedua variabel tersebut. Indonesia direpresentasikan nilai tukar rupiah terhadap*

dolar AS dan Jakarta Islamic Index, Malaysia direpresentasikan nilai tukar ringgit terhadap dolar AS dan FTSE Bursa Malaysia Hijrah Shariah Index. Dengan menggunakan model Vector Autoregression (VAR) disimpulkan bahwa hubungan antara indeks harga saham syariah di Indonesia merupakan hubungan yang searah (undirectional relationship), dimana Jakarta Islamic Index mempengaruhi nilai tukar rupiah. Hubungan antara indeks harga saham syariah di Malaysia mempunyai hubungan yang dua arah (bi-directional relationship), dimana nilai tukar ringgit mempengaruhi FTSE Bursa Malaysia Hijrah Shariah Index dan FTSE Bursa Malaysia Hijrah Shariah Index mempengaruhi nilai tukar ringgit. Melalui penelitian ini juga disimpulkan bahwa nilai tukar dengan indeks harga saham syariah di Indonesia dan Malaysia terdapat hubungan jangka panjang.

Kata Kunci: *Rupiah, Ringgit, Jakarta Islamic Index, FTSE Bursa Malaysia Hijrah Shariah Index, VECM*

INTRODUCTION

Islamic Finance for Asia, Prospected & Inclusive Growth, ADB per May 2015 states that the biggest assets of world Islamic capital markets are located in the region of Southeast Asia region for US \$ 203.1 billion.¹ Indonesia and Malaysia are the two countries in the Southeast Asia region that have a fairly rapid Islamic stocks growth. In Indonesia, the number of Islamic stocks continues to grow, in June 2015 it reached 335 stocks with a market capitalization of Rp 3.011 trillion or 56.4% of the all shares capitalization.² The development of Islamic stocks in Malaysia, up to June 2015, there

¹ Aset Pasar Modal Syariah Asia Tenggara Terbesar di Dunia, <http://investasi.kontan.co.id>, accessed November 8, 2015

² www.ojk.go.id, accessed November 8, 2015

were 905 stocks by market capitalization up to RM 1,659.02 billion and covers 61.6% of the total stocks capitalization value in Malaysia.³

Capitalization of Islamic stocks in Indonesia and Malaysia which is very large compared to the overall stock make the sharia stock index could represent the movement of the stock index as a whole. Jakarta Islamic Index (JII) and the FTSE Bursa Malaysia Hijrah Shariah Index is one of the leading shares index in Indonesia and Malaysia respectively that meet the criteria of sharia and become a benchmark of shares investment performance on the basis of sharia in Indonesia and Malaysia. The movement of both indices becomes an important indicator for the investors to invest in the capital market in Indonesia and Malaysia.

Throughout the second half of 2015, there was a weakening exchange rate of the currency to US dollar in various countries caused by the uncertainty of the Fed in raising interest rates. In August, it was recorded a depreciation 16.79% for Malaysian ringgit, Indonesian rupiah weakened 11.76%, Thailand's baht weakened 8.23%, Singapore dollar weakened 5.40%, the Philippine peso weakened 4.36%, Taiwan dollar weakened 1.8%.⁴ Currency debasement was responded by the movement of stock indices. Jakarta Islamic Index in Indonesia and the FTSE Bursa Malaysia Hijrah Shariah Index in Malaysia experienced a significant movement caused by the weakening of the exchange rate in both countries.

³ <http://www.sc.com.my/>, accessed November 8, 2015

⁴ Mata Uang Ringgit Paling Terpuruk, <http://finance.detik.com/read/2015/08/30/154914/3005007/5/>, accessed November 10, 2015.



Figure 1. Rupiah Exchange Rate January 1st 2015-December 31st 2015

Source: www.yahooofinance.com



Figure 2. Jakarta Islamic Index January 1st 2015-December 31st 2015

Source: www.yahooofinance.com

Based on the Figure 1 and 2, it can be seen that when the exchange rate was depreciated in June 2015, the Jakarta Islamic Index was also declined for that period. In August, the rupiah was

depreciated to Rp 14.128 and it caused the Jakarta Islamic Index was also ever more declined to the level of 553.09. The conditions continued to rise until the end of September which reached Rp 14.728 and it caused the Jakarta Islamic Index increasingly declined to the level of 554, 23.

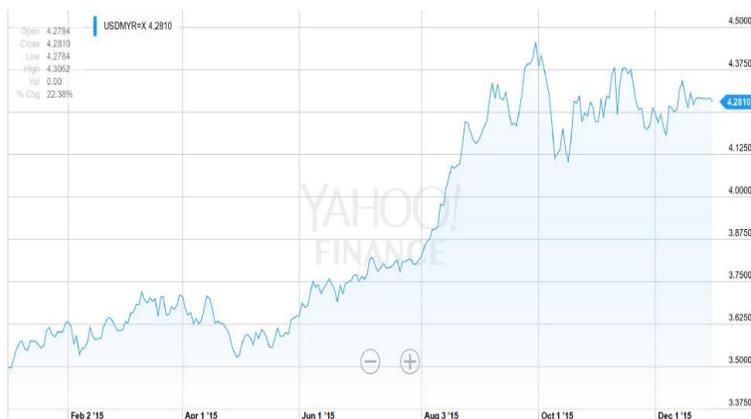


Figure 3. Ringgit Exchange Rate Graph January 1st 2015- December 31st 2015

Source: www.yahooofinance.com

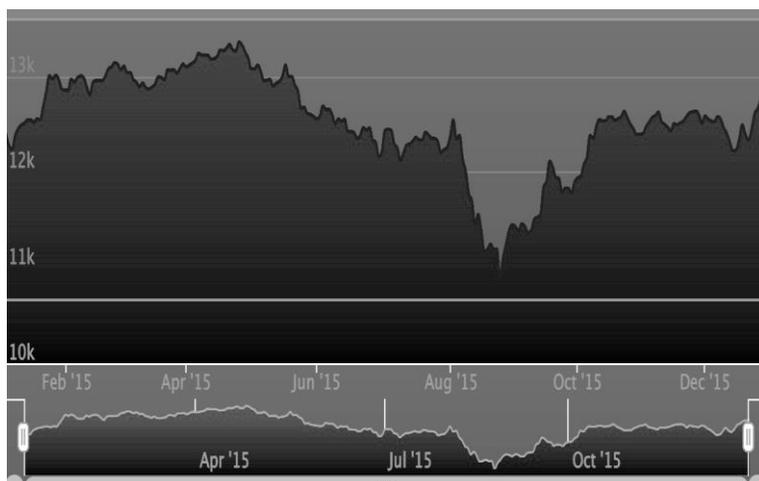


Figure 4. FTSE Bursa Malaysia Hijrah Shariah Index January 1st 2015-December 31st 2015

Source: www.bursamarketplace.com

The movement of the ringgit exchange rate also led to the movement of the FTSE Bursa Malaysia Hijrah Shariah Index in June to August. Figure 3 and Figure 4 shows that when the exchange rate of the ringgit was depreciated in June 2015, FTSE Bursa Malaysia Hijrah Shariah Index in that period was also declined. In August, ringgit was increasingly depreciated to 4.2435 RM lead FTSE Bursa Malaysia Hijrah Shariah Index was also increasingly declined to the level of 12952.54. The ringgit was continued to be depreciated until the end of September which reached 4.4725 RM, but this condition caused the FTSE Bursa Malaysia Hijrah Shariah Index had increased at 13483.94 levels. The data of exchange rate movements and followed by the movement of the sharia stock price index above indicates that the depreciation of the exchange rate led to a declining in the stock price index and an escalation in the stock price index. There is an influential relationship between the exchange rate and the stock price index.

THEORETICAL FRAMEWORK

The movement of stock indices is affected by economic conditions and phenomena that occur in domestic and economic turmoil in overseas. Fluctuations in currency exchange rates become

one of the factors that influence the movement of the stock price index. Based on macroeconomic theory, the effect of exchange rate on stock prices is uncertain (can be a positive and negative correlation).⁵ First, when the exchange rate depreciates, it will be followed by a decline in stock prices. This condition occurs due to the weakening of the exchange rate resulting in the cost borne by the company which depend the raw materials and loans on outside becoming greater thus it reduces the level of corporate profits and then lowers the price of the company's shares traded in the capital markets and it automatically lowers the stock price index. Second, when the exchange rate is depreciated then it will be responded by rising share prices. Depreciation of the exchange rate may increase the registered profit of an export-oriented company so that the value of the stock price index is increasing.

There are two approaches developed to determine the relationship between the currency exchange rate and the stock price: flow oriented approach and stock oriented approach, "Stock Price and Exchange Rate: Empirical Evidence from Kuwait Financia, "Stock Price and Exchange Rate: Empirical Evidence from Kuwait Financial.⁶ First, the effect of the exchange rate on the stock market (flow approach) is described as follows. Exchange rate depreciation will increase the competitiveness that leads to an increasing in domestic output (expansion), which in turn it is an indicator of

⁵ Samuelson, Paul A., and William D. Nordhaus, *Economics*, 14th ed, (New York: McGraw-Hill, 2012), p. 183.

⁶ Ahmed Alhaiky dan Dambendia Houdu, "Stock Price and Exchange Rate: Empirical Evidence from Kuwait Financial Market", *The IUP Journal of Financial Economi*, Vol. VII, No. 3&4, p. hlm. 82

economic expansion and improving or affecting the stock price. Second, the effect of stock price on the exchange rate (stock approach) explain that the increasing in stock prices led to capital inflows, which in turn led to an increasing in demand for domestic currency and causing the exchange rate of the domestic currency increases. From the explanation above shows that there is a two-way relationship between the exchange rate and the stock price or there is a causal relationship between the exchange rate and the stock price.

LITERATURE REVIEW

Some researches on the relationship between the exchange rate and index stock price index find the differences on its results. Several studies have found that the exchange rate affects the price of shares and others have found that it is the stock price index which affects the exchange rate while some others have found that there is a relationship between the two.

Harjito who conducted a research on the causality between stock price index and the exchange rate in four ASEAN countries; Indonesia, Philippines, Singapore and Thailand found that the exchange rate affects the stock price with the Singapore dollar as the dominant and there is a long-term relationship between stock prices and exchange rates in these four countries.⁷ Benjamin found that stock prices affect the exchange rate with negative correlation and

⁷ Agus Harjito and Carl B. McGowan, "Stock Price and Exchange Rate Causality: The Case of Four Asean Countries," *Southwestern Economic Rivien*, Vol.34, No 1 (2011), p 113.

there is no long-term relationship in Brazil⁸. Abdalla and Murinde who conducted a research in India, Pakistan, South Korea and the Philippines found that the exchange rate effects on stock prices in India, Pakistan, South Korea, while in Philippines the stock price takes the lead to the domestic currency.⁹ Lutfur Rahman and Jashim Udin conducted a research in Bangladesh, India and Pakistan found that there is no term relationship and there is no causal relationship between the stock price and the exchange rate in the three countries.¹⁰

RESEARCH METHODS

The data used in this research is time series data with the daily scale that began on June 1st, 2015 until December 31st, 2015 from the Jakarta Islamic Index and the FTSE Bursa Malaysia Hijrah Shariah Index. After the data were collected, further analysis will be conducted by using the model of Vector Auto Regression (VAR). VAR analysis model is a nonstructural model or atheoretic model because it is built by minimizing economic theories approach. VAR model is applied because it can capture the economic phenomena properly (Widarjono, 2013).¹¹ In this research, there are two models of equations, that is

⁸ Benyamin M. Tabak, "The Dynamic Relationship between Stock Price and Exchange Rate: evidence for Brazil," *Working Paper Series 124*, (November 2006), p. 4.

⁹ Abdalla, I. S., & Murinde, V, "Exchange Rate and Stock Price Interaction in Emerging Financial Market: Evidence on India, Korea, Pakistan, and the Philipine", *Applied Financial Economic*, Vol. 7, (1997), p. 25-35

¹⁰ Lutfur Rahman and Jashim Udin, "Dynamic Relationship between Stock Prices and Exchange Rates: Evidence from Three South Asian Countries," *International Business Research*, Vol. 2, No 2 (2009), p. 7.

¹¹ Agus Widarjono, *Ekonometrika Pengantar dan Aplikaisnya Disertai Panduan Erienvs*, edisi ke-4 (Yogyakarta: UPP STIM YKPN, 2013), p. 313.

the model of Indonesia's exchange rate to US dollar and the Indonesia sharia stock price index represented by rupiah (ERI) and the Jakarta Islamic Index (JII), and a model of Malaysia's exchange rate (ERM) to the dollar AS and Malaysian stock price index represented by the FTSE Bursa Malaysia Hijrah Sharia Index (FBMHS). Then in general, the model of VAR (p) can be written as follows:

$$\begin{aligned} \text{ERIt} &= A_0 + A_1\text{ERIt-1} + A_2\text{JIIIt-2} + \dots + A_p\text{Yt-p} + vt \\ \text{ERMt} &= A_0 + A_1\text{ERMt-1} + A_2\text{FBMHSt-2} + \dots + A_p\text{Yt-p} + \\ &vt \end{aligned}$$

The steps in the analysis by using the VAR model that is started with a data stationary test, then the optimal inaction length test (lag), then granger causality test, followed by cointegration test.

RESEARCH RESULT

Stationarity Test Data

Unit root testing in this research model is based on Augmented Dickey Fuller (ADF) test at the first difference level because it is not stationary at the current level.

Table 1
Unit Root Tests on the First Difference

	ADF Statistic	Nilai Kritis Mc Kinon			Keterangan
		1%	5%	10%	
Indonesia					
Rupiah	-6.053386	-4.026942	-3.443201	-3.146309	Stationery
JII	-11.25365	-4.026429	-3.442955	-3.146165	
Malaysia					
Ringgit	-10.09464	-4.026429	-3.442955	-3.146165	Stasionery
FBMHS	-9.869478	-4.026429	-3.442955	-3.146165	

Testing result of the unit root in first difference indicates that all data are stationary, it can be seen from the ADF statistic absolute value which is greater than Mc Kinon Critical Value on the critical value of 1%, 5% and 10%. Thus it can be explained that all the variables to be estimated in this study have been stationary at the same degree that is the degree of integration one.

Test Long Lag Optimal

The steps taken to determine the optimal lag is by finding the lowest value of AIC, SIC, and HQ. Based on the testing that was done, Indonesia and Malaysia have the lowest value of AIC, SIC, and HQ in lag 1.

Granger Causality Test

Granger causality test is used to determine the relationship between the two variables statistically. In this study, the variables tested is the exchange rate and sharia stock price index in Indonesia represented by the rupiah and the Jakarta Islamic Index; and in Malaysia represented by ringgit and the FTSE Bursa Malaysia Hijrah Syariah from July to December 2015.

Table 2
Granger Causality Test

Null Hypothesis	F-Statistic	Probability	Keterangan
Indonesia			
RUPIAH does not Granger Cause JII	0.70615	0.4022	H ₀ accerpted
JII does not Granger Cause RUPIAH	5.083694	0.0258	H ₀ rejected
Malaysia			
RINGGIT does not Granger Cause FBMHS	4.53495	0.0350	H ₀ rejected
FBMHS does not Granger Cause RINGGIT	4.21142	0.0421	H ₀ rejected

The above table shows that the relationship between *the Jakarta Islamic Index* and the exchange rate is a unidirectional relationship, where the *Jakarta Islamic Index* affects the exchange rate, but the exchange rate does not affect the Jakarta Islamic Index. In the case of Malaysia, it is obtained the results of the bidirectional causality between the ringgit exchange rate and the FTSE Bursa Malaysia Hijrah Shariah Index. Changes in the ringgit exchange rate have an influence on changes in FTSE Bursa Malaysia Hijrah Shariah Index and otherwise, changes in FTSE Bursa Malaysia Hijrah Shariah Index have an influence on the ringgit exchange rate.

*Jobansen Cointegration Test*Table 3
Cointegration Test

Indonesia				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.091087	17.28531	15.49471	0.0266
At most 1 *	0.030198	4.200935	3.841466	0.0404
Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None	0.091087	13.08438	14.26460	0.0762
At most 1 *	0.030198	4.200935	3.841466	0.0404

Malaysia				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.075379	15.60969	15.49471	0.0481
At most 1 *	0.034943	4.872885	3.841466	0.0273
Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None	0.075379	10.73680	14.26460	0.1679
At most 1 *	0.034943	4.872885	3.841466	0.0273

Based on the value of trace statistic and max-eigen statistic which is greater than the critical value of 5%. It can be concluded that between the exchange rate and the sharia stock price index in Indonesia and Malaysia there is cointegration relationships or in other

words there is a long-term relationship between the exchange rate and the sharia stock price index in Indonesia and Malaysia.

Analysis of Causality Relationship between Exchange and Sharia Stock Price Index

Indonesia

The result of Granger causality test shows that the relationship between the exchange rate and the Jakarta Islamic Index is a unidirectional relationship, where the variable *Jakarta Islamic Index* variables affects the exchange rate.

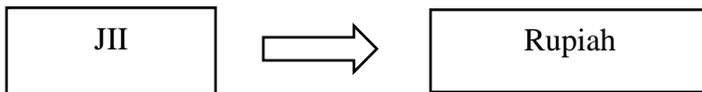


Figure 1. Causality Rp Exchange Rate to JII

Changes in the exchange rate that have an influence on the Jakarta Islamic Index are not proved. It indicates that the theory of good market approach does not apply to Indonesia. This is due to many other factors causing changes in stock prices. Monika said stock prices are influenced by macro conditions of a country. A good macroeconomic condition will create a favorable investment climate. If the macroeconomic variables such as GDP, SBI interest rate, inflation, and the exchange rate of the domestic currency are considered quite stable, the domestic investment climate will be judged as a good one by foreign countries who want to invest in the

country.¹² Investment Coordinating Board said that the macro economy conditions in 2015 showed a positive trend.¹³

The strong Indonesian macro conditions make foreign parties are still remain confident in buying Indonesia stocks. The data reported from Bank Indonesia said that amid the uncertainty in global financial markets, capital and financial account in third and fourth quarter of 2015 remain in surplus. The capital and financial account surplus of the third quarter of 2015 totaled USD1.2 billion lower than the surplus in the second quarter of 2015 amounted to \$ 2.2 billion and the surplus account capital and financial of the fourth quarter of 2015 is higher than the third quarter of 2015 amounted to USD0,28 billion. This surplus is sustained by foreign capital inflows in the form of portfolio investment and direct investment. The amount of the actual inflow reflects investor confidence in Indonesia's economic fundamentals condition and prospects for future economic growth are well preserved.¹⁴

Furthermore, the relationship is the Jakarta Islamic Index affects the exchange rate. This is in accordance with the theory of portfolio balance approach and in line with a previous study of Benjamin where in his research found that that stock prices affects the exchange rate. Rupiah bounced back in October of 2015. The strengthening of the exchange rate against the US dollar is due to

¹² Monika Lestarisky, dkk "Pengaruh Indikator Makro Ekonomi Terhadap *Foreign Direct Investment* di Indonesia Tahun 2004-2013", *Jurnal Administrasi Bisnis*, Vol. 15, (2014), p. 3.

¹³ <http://www.bkpm.go.id/>, accessed March 30, 2016.

¹⁴ www.bi.go.id, accessed March 30, 2016.

positive sentiment and the confidence of foreign investors on Indonesia's economic condition so that the numbers of incoming funds in Indonesia make the strengthening of the rupiah. The number of foreign funds coming into the equity market is about US \$ 800 million. The further coming amount of capital inflows will further increase the demand for domestic currency; the high demand for the domestic currency by outsiders causes the domestic currency is appreciate.

Malaysia

The result of granger causality test shows that the relationship between the ringgit exchange rate and the FTSE Bursa Malaysia Hijrah Shariah Index is a bi-directional causality, where changes in the ringgit exchange rate has an influence on changes in the FTSE Bursa Malaysia Hijrah Shariah Index, so conversely changes in the FTSE Bursa Malaysia Hijrah Shariah Index have an influence on the ringgit exchange rate. These results are consistent with research conducted by Ayub who found the same thing that the two-way relationship between stocks returns and exchange rates.¹⁵

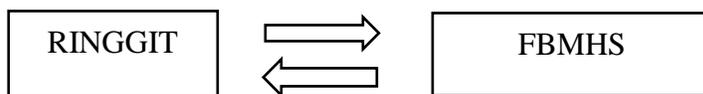


Figure 2. Causality Ringgit Exchange Rate with FBMHS

¹⁵ Aisyaton Ayuband Mansur Masih, "The Relationship between Exchange Rate and Islamic Indices in Malayisa FTSE Market: Wavelet Based Approach," *MPPRA (Munich Personal RePEc Archive)*, No 59618 (2013), p. 32.

Weakening domestic exchange rate against foreign currency (ringgit to the dollar) gives a negative influence on the equity market, as equity markets have no appeal. Jogiyanto said that this aspect of financial gain is one of the aspects considered by investors in investing.¹⁶ For investors, the depreciation of the ringgit against the dollar indicates that the Malaysian economic outlook is bleak. Depreciation in a country can happen when a country's economic fundamental factors are not strong, so the dollar will strengthen, and will lower the stock price index. Investors would definitely avoid the risk, so investors are likely to sell and wait until the economic situation perceived improves. The sell-off investors who do this will push down the stock price index.

Ringgit weakening conditions throughout 2015 is the most unfavorable conditions that occurred during the last 17 years.



Figure 3. Ringgit Exchange Rate 1990-2015

¹⁶ Jogiyanto, *Teori Portofolio dan Analisis Investasi*, (Yogyakarta: BPFE, 2010), p. 5.

It affects the amount of foreign funds going out of Malaysia. As at the end of July 2015, foreign funds going out of the Malaysian market has reached \$ 3 billion. The country's foreign exchange reserves only USD92,67 billion.¹⁷ The increase in capital outflows from abroad will increase the supply of domestic currency in the foreign exchange market, investors swap ringgit to the world's major currencies (US dollars) to be invested in other countries. The opposite relationship occurred is variable FTSE Bursa Malaysia Hijrah Shariah Index affects the ringgit exchange rate variable. The ringgit rebounded in October 2015. The strengthening of the exchange rate against the US dollar was due to a massive sell-off in the stock market or the financial markets hit many developing countries or emerging markets. Such conditions open the possibility of a rebound in the market of the country, especially in Indonesia, Mexico, and Malaysia. Michael Hasenstab, a fund manager at Franklin Templeton, said a rebound in the markets of the developing world will encourage the long term investment. The numbers of incoming foreign investors to invest in Malaysia causes a high demand of money and make the appreciation of the domestic currency. The high demand for domestic stocks ringgit currency makes the demand is high, making the appreciation of the ringgit currency.

¹⁷Ekonomi Malaysia Lebih Rapuh dari Indonesia, <http://economy.okezone.com/read/2015/08/29/213/1204553/ekonomi-malaysia-lebih-rapuh-dari-indonesia>, accessed March 30, 2016.

Analysis of Long-Term Relationship between Exchange Rate and Stock Price Index Sharia

The purpose of long-term analysis is to determine whether there is common ground movement and stability of the relationship between the variables in the study. The results of cointegration test between variable rate and variable sharia share price index in Indonesia and Malaysia is there a long-term relationship. A case in Indonesia, there was no causal relationship but there was cointegration relationship between the exchange rate and the Jakarta Islamic Index. Causality test results shows that it only happen one-way relationship that Jakarta Islamic Index affects the exchange rate. It shows there is no influence of the weakening of the rupiah against the Jakarta Islamic Index. However, the impact happened is that there is a strengthening of the rupiah, partly helped by the Jakarta Islamic Index. The existence of cointegration relationships indicates that Jakarta Islamic Index movement in the long term affects the movement of the exchange rate. If foreign investors still invest their funds in the capital markets in Indonesia, the return of the company will raise and in the long term it will increase the demand for rupiah, so that the rupiah will appreciate.

case in Malaysia, there is causality and cointegration relationship between ringgit exchange rate and the FTSE Bursa Malaysia Hijrah Shariah Index. The existence of cointegration relationships shows a long-term relationship between exchange rate movements and the sharia stock price index movements in Malaysia.

The weakening of ringgit against the US dollar led to a decrease in demand for domestic stocks, causing a decrease in the FTSE Bursa Malaysia Shariah Index Hijah in the long term. The movement of the FTSE Bursa Malaysia Shariah Index Hijah in the long term affect the ringgit exchange rate movements. If foreign investors still invest their funds in the capital market in Malaysia then the return company will raise and in the long term it will increase the demand for the ringgit, so that the ringgit would appreciate.

CONCLUSION

This study found that the relationship between the exchange rate sharia share price index in Indonesia indicates a unidirectional relationship (unidirectional relationship), that is the variable change Jakarta Islamic Index influences variable exchange rate; and variable changes in the exchange rate does not give effect to changes in the Jakarta Islamic Index. This is caused by strong Indonesia's macroeconomic conditions make them confidence of foreign investors to buy shares of Indonesia so that it makes the appreciation of the domestic currency. The relationship between the exchange rate sharia share price index in Malaysia indicates a bidirectional causality relationship, where changes in the exchange rate of the ringgit have an effect on changes in the FTSE Bursa Malaysia Hijrah Shariah Index, and vice versa, changes in the FTSE Bursa Malaysia Hijrah Shariah Index Syaria have an influence on the exchange rate of the ringgit. It happens because the economic fundamentals in Malaysia are deteriorated so that it lowers stock price index. The opposite relations,

there is a rebound in the equity markets of Malaysia which also pushes the incoming foreign investors in Malaysia and make the appreciation of ringgit currency. While based on the Johansen cointegration test analysis, there are long-term relationship between the exchange rate and sharia stock price index in Indonesia and Malaysia.

REFERENSI

- Abdalla, IS, & Murinde, V, "Exchange Rate and Stock Price Interaction in Emerging Financial Marke: Evidence on India, Korea, Pakistan, and the Philipine", *Applied Financial Economic*, Vol. 7, 1997.
- Al Muntasir, "Cross Border Investment Portfolio and The Volatility of Stock Market Index and Rupiah's Rate," *Bulletin of Monetary Economics and Banking*, Vol. 17, No. 41 April, 2015.
- Alhaiky, Ahmed and Dambendia Houdu, "Stock Price and Exchange Rate: Empirical Evidence from Kuwait Financial Market", *The IUP Journal of Financial Economic*, Vol. VII, No. 3 & 4, 2009.
- Job, Aisyaton and Mansur Masih, "The Relationship between Exchange Rate and Islamic Indices in Malayisa FTSE Market: Wavelet Based Approach," *MPPRA (Munich Personal Repec Archive)*, No. 59 618 (2013), p. 1.
- Benjamin M. Tabak, "The Dynamic Relationship between Stock Price and exchange Rate: Evidence for Brazil", *Working Paper Series 124*, November 2006.
- Halim, *Abdul, Investment Analysis*, Jakarta: Four Salemba 2005.
- Harjito, Agus and Carl B. McGowan, "Price and Exchange Rate Stock Causality: The Case of Four Asean Countries," *Economic Southwestern Rivien*, Vol.34, No. 1, 2011
- Jogiyanto, *Portfolio Theory and Investment Analysis*, Yogyakarta: BPF 2010.

- Lestari, Monika et al "Effect of Macro Economic Indicators Against Foreign Direct Investment in Indonesia Year 2004-2013", *Journal of Business Administration*, Vol. 15, 2014.
- Mankiw, N. Gregory, *Principles of Macroeconomics*, Australia: Cengage Learning, 2001.
- Michael, P Tadoro and Stephen Smith, *Economic Development in the Third World*, Eighth Edition, Jakarta: Erlang, 2004.
- Rahman, Lutfur and Jashim Udin, "Dynamic Relationship between Stock Prices and Exchange Rates: Evidence from Three South Asian Countries," *International Business Research*, Vol. 2, No. 2 (2009), p. 7.
- Samuelson, Paul A., and William D. Nordhaus, *Economics*, 14th ed, New York: McGraw-Hill, 2012.
- Sowam, Muhammad "Analysis of the Relationship Natra Exchange Composite Stock Price Index in Indonesia," *Simposium Economic Research II*, Surabaya in 2000.
- Tandelilin, Eduardus, *Investment and Portfolio Management*, Yogyakarta: Doubleday, 2010.
- Widarjono, Agus, *Econometrics Introduction and Aplikasinya Accompanied Free Eviews*, 4th edition, Yogyakarta: UPP STIM YKPN, 2013.
- <http://www.idx.go.id> , accessed December 8, 2015
- <http://www.ftse.com/products/indices/bursa-malaysia#> accessed December 8, 2015.
- <http://www.bkpm.go.id/> , accessed March 30, 2016.
- www.bi.go.id , accessed March 30, 2016.
- www.ojk.go.id, accessed November 8, 2015.
- <http://www.sc.com.my/>, accessed November 8, 2015.