Does Integration Superpower Stock Market for Index of Sharia Stock in Indonesia

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Abstract
This research was to examine the integration of stock markets and the dynamic interaction between the long and short term Islamic Indonesian stock market, and the stock market of Indonesia's main trading partners (US, Japan, China and Korea, Hongkong). Investors Ownership Indonesian stock market in 2012 foreign dominated lokal45.46% and 54.54%, but increased in 2018, 54.89% owned by local investors and foreign investors 45.11%, this research method VECM method to analyze and measure the stock market (The US, Japan, China and Korea, Hongkong) Affecting the Islamic stocks in Indonesia, with Monthly stock index from January 2013 to December 2019, The results of this research showed that the stock market index, the US, Japan, China and Korea, Hong Kong, does not affect the Indonesian Islamic stock index. To a certain extent, it was found that regional trade integration is essential to the national stock market, so the Indonesian Islamic stock index is more influenced by Reviews their own regional stock indexes, and the geographical proximity and close relations between countries contribute more towards integration explained that in the long term there are two variables that influence the Indonesian Islamic stock indexes variable significantly Hong Kong stock index and stock index Korea, and in the short there is only one variable that Chinese stock indexes affecting significantly Indonesian sharia stock index.

Keywords: The stock market, Integration, Indonesia Trade.

INTRODUCTION
And dynamic integration between the stock market has become an important topic that is increasingly in demand lately. Interest in the integration of emerging stock markets mainly because of financial theory shows that an integrate regional stock market is more efficient than national capital markets are segmented. Integrated regional stock markets, investors from all member states will be able to allocate capital to its location in an area where it is most productive (Plummer, 2005). In addition, the level of integration of the stock markets have major implications on the potential benefits of international portfolio diversification and financial stability of a country (Ibrahim, 2005). The integration of stock markets tend to show long run equilibrium relationship, linking the price movements in the national stock index and can greatly reduce the benefits of international portfolio diversification. The integration of a country's international trade is not relate to its stock market integration with the global stock market (Chaiporn & Sriyalath, 2016). Additionally, Chaiporn Vitheesonthi 2016, found that the bilateral international trade integration, which is measure such as (1) the concentration of imports and (2) the concentration of exports, not related to integration of bilateral stock market.

One of the indicators influencing investors to buy into the stock market is the stock price (Kamaruddin, 2004) share price is the price that is formed by the interaction of the sellers and stock buyers are motive to get the profit of the company, the selection of an investment portfolio should look at the ethics of investing, with the intention of investors will pay attention to and consider in managing its investments, indirectly establish compliance with shariah compliance as one of the significant indicators for investors to make decision of investment (Devi Lusyana, 2017)

The author tries to extend from her or his study titled "Does the matter for a stock market trade integration?" In which the author M. Bakri Abdul Karim and Abd Shabiri. Majid researching stock Malaysia's major trading partner and measured in the short term and found that the trade did not care for the integration of stock markets. The geographical proximity and close relations between countries is contributing to a greater integration among them.

Based on the literature, this study re-examine the stock market integration between Islamic stock market in Indonesia and trade stock market (US, Japan, China and Korea, Hongkong). While previous studies have focused on the integrity of markets trade in the Malaysian State measured in the short term, this paper tries to looked at stock markets Indonesian sharia which ISSI experienced growth in each period, Indonesian has
exciting  discussion of stock market Owners, Investors Indonesian stock market in 2012 was dominated foreign 54.54% and lokal 45.46%, but increased in 2018 owned by local investors and foreign investors 54.89% 45.11% (Source: OJK), and as certain whether Sharia Stock Index premises affected by the Superpower to measure short-term and long-term. To the best of the authors' knowledge, no studies that integrate trade stock index Superpower on ISSI (Indonesian Islamic stock index). One purpose of this study was to measure the stock trading market integration (US, Japan, China and Korea, Hongkong) at ISSI. In addition, these results are very important to see if the trade in Islamic stock market affect the stock market indices Superpower.

This study is structured as follows: Section provides an overview of empirical studies on the integration of stock markets, describe the data used in the empirical analysis, IRF to see traces of the response of the dependent variables to shocks in terms of error in VAR systems for some period in the future, and FEVD used to predict the contribution of each variable shocks to changes in certain variables.

THEORETICAL REVIEW

2.1 Capital market

Capital Market activities relate to the public offering and trading of securities, public companies relate to securities issuance, as well as lembag and professions related to the effect. in capital markets with a long-term purchase, so often mention abstract market. the funds relate to the investment of more than one year (sawiji 20008: 15). According Eduardus Tandelilin (2010) the stock market is a meeting between the parties who have excess funds through the sale of securities in the run purchasing, thus capital market can also be interpreted as a market to trade in securities generally has particularly more than 1 year of age, such as stock and bond. (Waworundeng & Paulina, 20018).

The stock market in a country has an important role in economic growth and development by encouraging savings and investment (Rizvi & Arshad, 2016). In addition, improv corporate governance and provide a great opportunity for local and global diversification through asset allocation that is effective and efficient (Samaratunga, 2008). According to (Rizvi & Arshad, 2016) Several studies reveal the performance of the stock market is strong influenced by macroeconomic fundamentals. Such a relationship would indicate that expectations of future macroeconomic conditions will have a significant effect on the stock market. The main connection between the financial markets and the dominant macroeconomic volatility explained by the model of financial market imperfections. Bernanke and Gertler argue known as "balance sheetview" who said that the nominal and real shocks to the economy coupled with the "financial accelerator". Therefore, the stock market as a benchmark for the business cycle has long been accepted in the literature. However, some scholars do not agree that the stock market can be a barometer of economic activity (Barro).

2.2. The concept of the Capital Market Integration

Capital market integration is a state of stock prices in the world as having Hubunngan close between a stock market with other capital markets in the world so that the capital market in the world can achieve a price International (International Pricing) on stock shares and give askses unlimited or barriers the investors all world to have it. Market modala concluded fully integrated will create a state of the capital markets worldwide related close with each other, affect the rise and fall of stock indices, resulting in simultaneously and generate risk and return are equal throughout the capital markets in the world and the cause of freedom on the investors to invest in the capital markets (Waworundeng & Paulina, 20018).

Previous research, Chambet and Gibson (2008) that countries that own a high level of financial integration, tends to be a high concentration in international trade partners. The main difference that the concentration of major trading partners, and focus on the integration of bilateral trade will provide new evidence on trade integration between the pair of states, rather than the concentration of trade with some major trading partners, related to the integration of stock markets. In contrast to other studies Overall, Vithessonthi, 2016 did not find empirical support for the notion that international trade integration affects the integration of the stock markets of the country. and Hnatkovska, 2014)

METHODOLOGY

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3.1. Types and Sources of Data
Data used in this research are secondary data from monthly data series (time series) from January 2012 to October 2018. Source of data derived from State Equity Index report respectively.

3.2. Research variable
In this study, the variables used are the major trading partners Negara Indonesia (ISSI) America (MCA), Japan (JPN), China (CHN), and Korea (KRA), Hong Kong (HKN). The proxy data used in each of the variables are as follows:

<table>
<thead>
<tr>
<th>variables</th>
<th>Unit</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>American</td>
<td>Percent</td>
<td>DJIA</td>
</tr>
<tr>
<td>Japan</td>
<td>Percent</td>
<td>NIKKEI</td>
</tr>
<tr>
<td>China</td>
<td>Percent</td>
<td>SSEC</td>
</tr>
<tr>
<td>Korea</td>
<td>Percent</td>
<td>HANG SUNG</td>
</tr>
<tr>
<td>Hongkong</td>
<td>Percent</td>
<td>KOSPI</td>
</tr>
<tr>
<td>Indonesia</td>
<td>Percent</td>
<td>ISSI</td>
</tr>
</tbody>
</table>

3.3. Data analysis method
The analytical method used in this research is descriptive analysis and econometric analysis:

- **Descriptive analysis**
  Descriptive analysis use in this study to provide an overview of data obtained with the help of charts, tables, and diagrams. In this research, descriptive analysis was conduct to measure whether there is influence Index stock trading in the Country ((US, Japan, China and Korea, Hongkong)) against the shares of sharia in Indonesia, during the month of January 2013 to December 2019. This analysis is also used to describe the internal and external variables.

- **Autoregression Vector Analysis (VAR)**
  Data in this research will be analyzed by Vetor Autoregression (VAR) that if there is integrasi will continue with the methods of Vector Error Correction Models (VECM). The stages of the research consisted of:
  a. Data Ujistasioneritas
  b. VAR stability test
  c. The optimum lag test
  d. Cointegration test
  e. VECM

**FINDINGS AND DISCUSSION**

4.1. Stationarity Test Data
Testing methods used to perform stationary test data in this study is to test the ADF (Augmented Dickey Fuller) by using the real level of five percent ($\alpha = 5\%$). If the ADF t-value is less than the critical value MacKinnon, then can we interpret that the data used is data that has been stationary (non-root units). Tests on the roots of this unit carried out at current level until the first difference. The results in this study data test shows that the data stationary at first mingat Differ.

4.2. Stability Test VAR
In the test the stability of the VAR model, the data used is the data that is stationary. If the data is data first difference is stationary, then used the data of the first difference is not the data level, stability of the VAR model will be seen from the inverse roots polinomialnya AR characteristics. A VAR system to be stable if all its roots have modulus smaller than one (Gujarati 2003). In this study the model is said to be stable on Lag 8

<table>
<thead>
<tr>
<th>Model</th>
<th>modulus</th>
<th>lag</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.420188 + 0.872506i</td>
<td>0.968413</td>
<td>8</td>
</tr>
</tbody>
</table>

### 4.3. Optimum Lag Test

According Arsana (2004: 6) There are several criteria for information that can be used to determine the lag optimum, ie criteria Like likewhood Ratio (LR), Final Prediction Error (FPE), Akaike Information Criterion (AIC), Schwartz Information Criterion (SC) or hannan - Quan Criterion (HQ). And determination of the lag in this study will use the smallest lag of criteria Akaike Information Criterion (AIC). Based on optimum test results lag using criteria Akaike Information Criterion (AIC), this indicates that the optimum lag lag 6.

<table>
<thead>
<tr>
<th>Lag</th>
<th>LogL</th>
<th>LR</th>
<th>FPE</th>
<th>AIC</th>
<th>SC</th>
<th>HQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>915.0063</td>
<td>NA</td>
<td>2.25e-18</td>
<td>-23.61055</td>
<td>-23.42792 *</td>
<td>-23.53750 *</td>
</tr>
<tr>
<td>1</td>
<td>937.3858</td>
<td>40.68993</td>
<td>3.21e-18</td>
<td>-23.5677</td>
<td>-21.97833</td>
<td>-22.74541</td>
</tr>
<tr>
<td>6</td>
<td>1094.908</td>
<td>63.08767</td>
<td>*</td>
<td>-22.67295</td>
<td>-15.91548</td>
<td>-19.97002</td>
</tr>
</tbody>
</table>

### 4.4. Cointegration test

Cointegration tests were conduct to determine the existence of cointegration between the variables used in this study (Arsana 2004: 7). Cointegration between two variables a nd more meaning that there is a long-term relationship or equilibrium relationship between these variables. Based on the test results koingerasi, this model there is cointegration in real taranf five percent.

<table>
<thead>
<tr>
<th>hypothesized No. of CE (s)</th>
<th>eigenvalue</th>
<th>Trace statistics</th>
<th>0.05 critical Value</th>
<th>Prob. **</th>
</tr>
</thead>
<tbody>
<tr>
<td>none *</td>
<td>0.678137</td>
<td>195.7442</td>
<td>95.75366</td>
<td>0.0000</td>
</tr>
<tr>
<td>At most 1 *</td>
<td>0.582154</td>
<td>111.8555</td>
<td>69.81889</td>
<td>0000</td>
</tr>
<tr>
<td>At most 2</td>
<td>0.291994</td>
<td>47.28004</td>
<td>47.85613</td>
<td>0.0566</td>
</tr>
<tr>
<td>At most 3</td>
<td>0.137257</td>
<td>21.72760</td>
<td>29.79707</td>
<td>0.3139</td>
</tr>
<tr>
<td>At most 4</td>
<td>0.109580</td>
<td>10.80237</td>
<td>15.49471</td>
<td>0.2239</td>
</tr>
<tr>
<td>At most 5</td>
<td>0.029473</td>
<td>2.213774</td>
<td>3.841466</td>
<td>0.1368</td>
</tr>
</tbody>
</table>

### 4.5. Empirical Results VECM Estimation Model

Based on the results of cointegration test has been done before, it can be concluded that the model of the Indonesian Islamic stock index has qualified to be resume in the test phase VECM estimation. This is because on every model there is at least one cointegration between variables. In the test phase VECM estimation this would explain the relationship of short-term and long-term research variables. A variable will be said to be significant in affecting other variables when the value of t-statistics of these variables is greater than t table at the 5% significance level is (t statistics> 1.96) VECM estimation results on the model of Islamic stocks in Indonesia can be seen in the table below:

<table>
<thead>
<tr>
<th>Variables</th>
<th>coefficient</th>
<th>T statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNK</td>
<td>2.470402</td>
<td>[4.46163]</td>
</tr>
</tbody>
</table>
In the estimation of VECM model Indonesian sharia stock index is explained that in the long term there are two variables that influence the Indonesian Islamic stock indexes significantly variable Hong Kong stock index (HNK) and the Korean stock index (KR). While the index variable Shares of Japan, the index of US stocks, and stock indices of China does not have an impact on stock indexes sharia Indonesia, and in the short term variable stock index is the variable index of shares Japan, the index of US stocks, and stock indexes Korea does not influence the share index of sharia Indonesia significantly, and there is only one variable that China's stock index (CN) affecting the Indonesian islamic stock index significantly.

Stock index America as the global market is known to have a negative influence significantly on the index of Islamic stocks Indoenesia, it is contrary to the rear with research Cheung and Mak (1992) found that the US market is "global factors", which leads to most of the emerging markets of Asia. however The research result is consistent with research, Vithessonthi, 2014 did not find empirical support for the notion that international trade integration affects the stock market integration for the country, so the Indonesian sharia stock index not including influenced by the American Superpower.

In Japan stock index unknown variables do not have a significant positive effect on Indonesian sharia stock index short-term or long-term. This contrasts with research Johnson & SOENEN (2002) find that the equity markets are Australia, China, Hong Kong, Malaysia, New Zealand, and Singapore is highly integrated with the stock market in Japan. But the results of this research in tune with research previously found that the bilateral integration of the stock market is not associated with bilateral international trade integration is largely consistent with previous studies (evans and Hnatkovska, 2014) Japan explained stock index as as the third largest economy in the world. The stock market of a country plays an important role in economic growth and development by encouraging savings and investment (Aydemir & Demirhan 2009). In addition, improving corporate governance and provide a great opportunity for local and global diversification through asset allocation that is effective and efficient (Samaratunga 2008).

Then, on China's stock index has a significantly positive effect on Indonesian sharia stock index short-term is not in the long term. This is consistent with the results of research Laurenceson previous (2003) the financial found markets between China and ASEAN founding countries do not respond to one another, but draw their goods and services markets have a strong relationship may be due to the cheap labor cost in China. This is supported by the Park, which shows that the Chinese government restricts capital markets by legal barriers and impose strict regulations on cash flow. Therefore, there is a lack of cointegration stock market despite a strong trade relations (Saifur, Anwar, Farihana, 2017).Hong Kong stock market indices had a significantly positive effect on Indonesian sharia stock index in the long term is not in the short term. This is consistent with the research study previously (R. Maderitsch, 2014) that the Hong Kong market exerts only little effect on other

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CN</td>
<td>0.260224</td>
<td>[1.71609]</td>
</tr>
<tr>
<td>JPN</td>
<td>-0.064838</td>
<td>[-0.23235]</td>
</tr>
<tr>
<td>KR</td>
<td>-3.300783</td>
<td>[-3.59231]</td>
</tr>
<tr>
<td>US</td>
<td>-0.726377</td>
<td>[-1.62308]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Short-term</th>
<th>Coefficient</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>D (HNK (-1))</td>
<td>0.169364</td>
<td>[1.47578]</td>
</tr>
<tr>
<td>D (HNK (-2))</td>
<td>-0.142446</td>
<td>[-1.23823]</td>
</tr>
<tr>
<td>D (CN (-1))</td>
<td>-0.023810</td>
<td>[-0.37472]</td>
</tr>
<tr>
<td>D (CN (-2))</td>
<td>0.167199</td>
<td>[2.47978]</td>
</tr>
<tr>
<td>D (JPN (-1))</td>
<td>0.074172</td>
<td>[0.73317]</td>
</tr>
<tr>
<td>D (JPN (-2))</td>
<td>0.151177</td>
<td>[1.57730]</td>
</tr>
<tr>
<td>D (KR (-1))</td>
<td>-0.124687</td>
<td>[-0.79719]</td>
</tr>
<tr>
<td>D (KR (-2))</td>
<td>-0.124286</td>
<td>[-0.82575]</td>
</tr>
<tr>
<td>D (US (-1))</td>
<td>-0.144494</td>
<td>[-0.82953]</td>
</tr>
<tr>
<td>D (US (-2))</td>
<td>-0.284999</td>
<td>[-1.65739]</td>
</tr>
</tbody>
</table>

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markets, and the span of market participants should process the foreign news is relatively short compared to the
time they have to process the information revealed in the days before the return of the domestic market.

The latter is variable Korean stock index has a significantly positive effect to Indonesian sharia stock
index in the long term is not in the short term. The research result is consistent with research previous (Syaifur,
Anwar, Farihana 2017) that the Korean stock market was found to have great results related to all stock markets
in the ASEAN region, with a range of 70 to 94 percent. So Many studies have suggested that the performance of
the stock market is strongly influenced by macroeconomic fundamentals. The relationship between the two
emerged from asset pricing model indicates that expectations of future macroeconomic conditions will have a
significant effect on the stock market. The main connection between the financial markets and the dominant
macroeconomic volatility explained by the model of financial market imperfections.

4.6. Impulse Response Function

Impulse Response Function Analysis was conducted to see traces of the response of the dependent
variables to shocks in terms of error in VAR systems for some period in the future. Based on the results of the
IRF model stock indices Indonesian sharia below explains that the stock index Sharia Indonesia as a whole to
respond negatively when shocks occur at variable share index of sharia Indonesia consisting of stock index
Hongkong (HNK) and the composite index of Korea (KR), variable index of Shares Japan (JPN), American
stock indices (US), and stock indices of China (CN).

From the image above, first, when shocks occur in hongkong stock index (HNK), Indonesian sharia stock
index responds to negative in the period 1, Response Hong Kong stock index stabilized in the period to 15.
Second, the current shocks on China's stock index, the index Indonesian islamic stocks responded negatively to
the first period, and reached a point of stability in periode15. In the Korean stock index (KR), Indonesian sharia
stock index responds to positive in the period 1 to period 2, Response Korea stock index stabilized in the period
to 16. Third, when shocks occur at variable US stock index, stock index sharia Indonesia responding to positive
on period 1 and reach a point of stability in the period of the last 17. and in the event of shocks on Japan stocks
index variable.

4.7. FEVD

After analyzing Impulse Response Function (IRF), the next step will be analyzed using the Forecast Error
Variance Decomposition (FEVD). According Ascarya (2009), FEVD used to predict the contribution of each
variable shocks to changes in certain variables. This analysis was performed to predict the contribution of each
variable shocks stock index countries (US, Japan, China and Korea, Hongkong) against the Indonesian Islamic
stock index.
Can be seen in the image above, that the behavior of most major stock Indonesian Sharia influenced by Islamic stocks itself with a contribution of 24%. Followed by Hong Kong stock index variable which contributed 63%, the index of Chinese stocks with a contribution of 8.05%, the Korean stock index with a contribution of 2.49%, US stock index with a contribution of 0.80%, and the latter variable Japang stock index with a contribution of 12.45%.

**Table.** Variable contribution shocks Stock Index Superpower against Indonesian Islamic stock index

<table>
<thead>
<tr>
<th>Stock Index</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesian Islamic stocks</td>
<td>24%</td>
</tr>
<tr>
<td>Hong Kong stock index</td>
<td>63%</td>
</tr>
<tr>
<td>China stock index</td>
<td>8.05%</td>
</tr>
<tr>
<td>The Korean stock index</td>
<td>2.49%</td>
</tr>
<tr>
<td>US stock indexes</td>
<td>0.80%</td>
</tr>
<tr>
<td>Japan stock index</td>
<td>0.45%</td>
</tr>
</tbody>
</table>

**CONCLUSION**

Based on the results penelitian above researcher can conclude that in the short term there are two variables that influence the Indonesian Islamic stock indexes significantly variable Hong Kong stock index (HNK) and the Korean stock index (KR). While variable Japan stocks index, stock index American and Chinese stock index has no influence on Indonesian Islamic stock index. And in the long term variable stock index is the variable index of shares Japan, the index of US stocks, and stock indexes Korea does not influence the share index of sharia Indonesia significantly, and there is only one variable that stock indexes China (CN) affecting stock index Indonesian sharia in significant.

Based on IRF explained that first, when shocks occur in hongkong stock index (HNK), Indonesian sharia stock index responds to positive in the period 1, Response Hong Kong stock index stabilized in the period to 15. Second, the current shocks on China’s stock index, the index Indonesian Islamic stocks responded positively to the first period, and reached a point of stability in periode15. In the Korean stock index (KR), Indonesian sharia stock index responds to positive in the period 1 to period 2, Response Hong Kong stock index stabilized in the period to 16. Third, when shocks occur at variable US stock index, stock index sharia Indonesia responding to positive on period 1 and reach a point of stability in the period of the last 17. and in the event of shocks on Japan stocks index variable,

In FEVD explained that that most major stock Indonesian Sharia influenced by Islamic stocks itself with a contribution of 24%. Followed by Hong Kong stock index variable which contributed 63%, the index of Chinese stocks with a contribution of 8.05%, the Korean stock index with a contribution of 2.49%, US stock index with a contribution of 0.80%, and the latter variable Japang stock index with a contribution of 12.45%.

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