The Effect of Islamic Capital Market Development on Economic Growth in Indonesia
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Abstract: The purpose of the study is to find out whether there is a long-term and short-term influence of the development of the Islamic capital market on economic growth in Indonesia. The data used are monthly data from January 2011 to December 2017 with Islamic stock variables, Islamic bonds (sukuk), and Islamic mutual funds as independent variables, as well as economic growth as the dependent variable. This research uses long-term relationship and error correction models to see the existence of short-term relationships. The results of this show are the significant positive influence between corporate sukuk, the Jakarta Islamic Index and Islamic Mutual Funds on Economic Growth in Indonesia. Whereas in the short term there is no influence between corporate sukuk, the Jakarta Islamic Index, and Islamic Mutual Funds on Economic Growth in Indonesia. Based on the results of the study, it can be implied that Islamic capital market is able to become an alternative capital to increase economic growth in Indonesia with long-term analysis using ECM.

Keywords: Economic Growth, Islamic Capital Market, co-integration, Error Correction Model.

JEL Classification: E22, F43, F65

INTRODUCTION

The success of a country's development is measured by looking at economic growth as an indicator of a process of increasing output over time [1]. One of the efforts made to implement development in improving economic growth is by growing the investment sector by using capital market instruments.

In every economy, the capital market is a milestone and an indicator of economic growth of a country. The capital market plays an important role as an investment tool that is useful for development [2]. Based on ethical investment, there are types of investors who have excess liquidity, but are selective in investing, to facilitate investors like this, the capital market continues to experience adjustments so that it can accommodate all types of investors, one of which is the existence of Islamic capital markets in line with the principles Islamic [3].

The Islamic capital market has played an important role in the shape of world financial system evolution, and rapidly developing in recent decades. Currently, the Islamic capital market is no longer a trend among Muslim countries only. The development of the Islamic finance industry with 15 percent per year of growth throughout the world is stirring interest to open such capital market services in capitalist and liberal countries [2].

In general, the Islamic capital market consists of three main sectors of the Islamic equity market which are facilitated by the Islamic stock index, Sukuk, and Islamic funding markets. In Indonesia the Islamic capital market was officially launched on March 14, 2003 along with the signing of a Memorandum of Understanding (MoU) between the Capital Market-Financial Institution Supervisory Agency (Bapepam-LK) and the National Islamic Council-Indonesian Ulema Council (DSN-MUI) [4]. However, much earlier Islamic investment activities in the capital market actually began at the June 25, 1997 Islamic Mutual Fund issuance and the issuance of Indosat Islamic bonds at the beginning of September 2002. Subsequently, on July 3, 2000 the Indonesia Stock Exchange collaborated with PT. Danareksa Investment Management launched the Jakarta Islamic Index (JII) which listed 30 Islamic-based shares [5].

The theoretical framework on the effects of capital market on economic growth dates back to the work of Schumpeter [6], which explained that a well developed financial system can facilitate technological innovation and...
economic growth through the provision of financial services and resources to investors. The above argument of Schumpeter [6], was later advanced as the McKinnon-Shaw [7] hypothesis, which is a policy analysis tool for developing countries with strong recommendation and high priority on the efficiency of financial systems in facilitating capital accumulation and financial intermediation [8].


This paper is motivated by the different of many empirical researches about the effect of Islamic Capital Market variables on Economic Growth in Indonesia. This study aims to determine the long-term and short-term dynamics of the development of the Islamic capital market towards economic growth in Indonesia.

THEORETICAL FRAMEWORK

Schumpeter's Growth Theory
Schumpeter's theory was first put forward in his German-speaking book, in 1911 which was later published in English in 1934 under the title "The Theory of Economic Development". Then Schumpeter describes a further theory of the development process and the main factors that determine development in his book published in 1939 under the title Business Cycle [14].

Schumpeter [6] argued that financial development led to economic development. Financial markets promote economic growth by funding entrepreneurs and especially by channeling capital to entrepreneurs with high returns projects. The Islamic capital market is included in one of the financial market instruments that are currently developing. That is, the Islamic capital market is able to influence the economic growth of investments invested by investors into various instruments in the Islamic capital market.

Islamic Investment Theory
Metwally [15] states that an investment in the Islamic economy will be very different from a non-Islamic (conventional) economy. The model developed assumes a zero interest rate. Furthermore, the interest rate variable is analogous to the expected rate of profit (r) variable. This replacement or analogy brings fundamental changes because the interest rate is determined by the credit market, and is not determined by the level of profitability of the entrepreneur's business. While the expected rate of profit variable is determined by the characteristics of the entrepreneur's business. Other assumptions used are penalties for accumulating assets that are not utilized (idle assets), prohibition of all forms of speculation and acts of gambling, and interest rates on all types of loan funds are zero [16].

Islamic Capital Market Instrument
Capital market instruments in principle are all securities (securities) that are traded on the exchange, because of that they are diverse. Instruments that can be traded in the Islamic capital market only if they meet Islamic criteria and to ensure that the instrument is truly in accordance with Islamic principles, it is necessary to convert through a screening process to capital market activities. As for the Islamic capital market instruments are:

Islamic Shares
Islamic stock is a certificate that shows proof of ownership of a company issued by an issuer whose business activities and management methods do not conflict with the principles of the company [17]. The Jakarta Islamic index is one of the Islamic stock indices in Indonesia that calculates the average index of stock prices for types of shares that meet the criteria or principles of Islamic Islamic. JII was established to respond to the needs of the community towards the growing Islamic instruments. The purpose of establishing JII is to increase investor confidence and provide benefits to investors in implementing Islamic Islamic to invest in the stock exchange.

Islamic Bonds (Sukuk)
Sukuk is derived from the word "صكوك" the plural form of the word "صك" in Arabic, which means check or certificate, or a legal medium of exchange other than money. The word "sukuk" was first reintroduced and submitted as one of the tools of Islamic finance at the ulama meeting world fiqh organized by the Islamic Development Bank (IDB) in 2002. Briefly AAOIFI (The Accounting and Auditing Organization for Islamic Financial Institutions) defines sukuk as the same certificate which is proof of ownership that is not shared on an asset, benefit rights and services services or ownership of certain investment projects or activities [5].
Islamic Mutual Funds

Islamic mutual funds are mutual funds that operate according to the provisions and principles of Islamic Islamic, both in the form of a contract between investors as property owners (sahib al-mal) and investment managers as representatives of sahib al-mal, and between investment managers as representatives of shahib al-mal and users investment [17]. Islamic mutual funds are mutual funds whose management and investment policies refer to Islamic Islamic. Islamic mutual funds will not invest their funds in bonds from companies whose management or products are contrary to Islamic law such as alcoholic beverages factories, pig farm industries, financial services that involve usury in its operations and businesses that contain immorality [5].

LITERATURE REVIEW

Coşkun, Seven, Ertuğrul, & Ulussever [17] entitled "Capital Market and Economic Growth Nexus: Evidence from Turkey". State that there is a long-run co-integrating relationship between capital market development and economic growth and also a unidirectional causality running from capital market development to economic growth.

Research with the title "The Impact of Capital Market on Economic Growth: A Malaysian Outlook" by [12]. The findings of this study have one important policy implication. This shows that the stock market has a greater impact on the country's economy.

Saleem, Fakhfekh, & Hachicha [13] conducted a study entitled "Sukuk Issuance and Economic Growth: The Malaysian Case", the results show that empirically the issuance of Sukuk has an impact on economic growth in the case of Malaysia. Econometric results do reveal the prevalence of a strong relationship between sukuk issuance and economic growth.

Khairirina [18] with the research title "Analysis of the Influence of Investment, Monetary Operations and ZIS on Indonesia's Economic Growth". The results showed that Islamic Mutual Funds had a positive influence on Indonesia's real GDP, conventional Mutual Funds had a positive influence on the Indonesian economy, FASBIS had a negative influence on the Indonesian economy, ZIS had a positive influence on the Indonesian economy, and the previous period GDP also had a positive influence on the Indonesian economy. Partially, Islamic mutual funds that have not seen a significant influence.

Araar [19] with a study entitled "Islamic Finance Based on Sukuk Approach: The Roadmap for Economic Development in Tunisia". This study seeks to focus a little on the different types of capital markets in Muslim countries where the emergence of the Islamic financial industry can offer systems tools to promote social and economic justice and stimulate economic development. The study briefly defines a coherent plan in Tunisia to unlock the potential for Sukuk that has been identified as an important way to clog Tunisia's government deficit, and increase financing for the country's infrastructure and development needs.

Further research was conducted by [20] under the title "Islamic Finance and Economic Growth: An Empirical Evidence from United Arab Emirates (UAE)"). The co-integration results provide evidence of a unique co-integration vector. The results show that Islamic finance is a suitable environment for attracting FDI into the country and FDI reinforces Islamic finance. The results also indicate that improvement of the Islamic financial institutions in the UAE will benefit economic development, and it is critical in the long run for the economic welfare, and also for poverty reduction. The results of study are quite significant as it is one of the pioneering studies of Islamic finance.

METHODOLOGY

The type of data used in this study is secondary data in the form of timeseries using monthly data. In this study, the data used included the Jakarta Islamic Index data, Corporate Sukuk, Islamic Mutual Fund Net Asset Value as an independent variable, and economic growth seen from GDP according to expenditure as the dependent variable.

The time period used is from January 2011 to December 2017. These data are obtained from the website as follows: ojk.go.id and bps.go.id. This study also uses other sources such as journals, articles and other literature.

This study uses descriptive and quantitative analysis methods. The analytical tool used in this study is the Error Correction Model (ECM) method. This analysis will explain the long-term and short-term relationships between Islamic stocks, Islamic bonds (sukuk) and Islamic mutual funds to economic growth. The equation can be written as follows:

$$EG = a_0 + a_1 JI, + a_2 Sukuk_2 + a_3 NAVIMF_3 + \varepsilon$$  \(1\)

Then the model is formed into a dynamic model that includes the lag or lag one of which is known as the Error Correction Model which is defined as follows:

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\[ D(\text{EG})_t = \alpha_0 + \alpha_1 D(\text{JII})_t + \alpha_2 D(\text{Sukuk})_t + \alpha_4 D(\text{NAVIMF})_t + \alpha_5 (\text{JII})_{t-1} + \alpha_6 (\text{Sukuk})_{t-1} + \alpha_6 (\text{NAVIMF})_{t-1} + \text{ECT} \] (2)

Where EG is the Economic Growth, JII is the Jakarta Islamic Index, Sukuk is the company’s islamic bonds, NAVIMF is Net Asset Value of islamic Mutual Funds, and ECT is Error Correction Term. D is First Difference, (t-1) is the backward log operator. EG to be a dependent variable. JII, Sukuk, and NAVIMF to be a independent variable.

RESEARCH RESULTS
Stationary Test

Stationary test (unit root test) is testing unit roots for all variables used in time series analysis. Stationary data testing performed on all variables in the research model is based on Augmented Dickey Fuller test (ADF test). The hypothesis used is as follows:

\[ H_0: d = 0 \text{ non stationary; there are unit roots} \]
\[ H_0: d \neq 0 \text{ stationary; free from unit roots} \]

The decision to reject H0 to test the unit roots is if the ADF test statistic value is greater than the critical value that is the value of the confidence level on the Mac Kinnon table at various levels of trust (1 percent, 5 percent, and 10 percent) seen the probability value that must be smaller than 0.05 (5 percent).

<table>
<thead>
<tr>
<th>No.</th>
<th>Variabel</th>
<th>ADFtest</th>
<th>ADF Mc. Kinnon CV 5%</th>
<th>Probabilitas &lt;0.05</th>
<th>Keterangan</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>EG</td>
<td>-3.990</td>
<td>-3.466</td>
<td>0.0128</td>
<td>Stasioner</td>
</tr>
<tr>
<td>2</td>
<td>Sukuk</td>
<td>-1.988</td>
<td>-3.465</td>
<td>0.5987</td>
<td>Tidak Stasioner</td>
</tr>
<tr>
<td>3</td>
<td>JII</td>
<td>-3.125</td>
<td>-3.465</td>
<td>0.1074</td>
<td>Tidak Stasioner</td>
</tr>
<tr>
<td>4</td>
<td>NAVIMF</td>
<td>-0.613</td>
<td>-3.465</td>
<td>0.9755</td>
<td>Tidak Stasioner</td>
</tr>
</tbody>
</table>

Based on the above it can be seen that only the Economic Growth data is stationary at the level level, while other variables are not stationary at the level level, because the ADF test of these variables is smaller than the Mac Kinnon Critical Value 5% and the probability value is more than 0.05 (5%), so that it can be concluded that variables at the level (original data) have unit root problems.

The conclusion of the results of the data processed is that H0 is accepted, that is the data is not stationary at the level level so it must be continued at the following level until all the data becomes stationary using the Integration Degree Test.

Degree of Integration Test

In the ADF test unit root test when it comes to the conclusion that the data is not stationary, it is necessary to process data differentiation. The stationary test of data through this differentiation process is called the degree of integration test. Dickey-Fuller Augment Test (ADF) continued at the first difference level. The test results can be seen in table-2 below:

<table>
<thead>
<tr>
<th>No.</th>
<th>Variabel</th>
<th>ADFtest</th>
<th>ADF Mc. Kinnon CV 5%</th>
<th>Probabilitas &lt;0.05</th>
<th>Keterangan</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>EG</td>
<td>-8.833</td>
<td>-3.466</td>
<td>0.000</td>
<td>Stasioner</td>
</tr>
<tr>
<td>2</td>
<td>Sukuk</td>
<td>-9.886</td>
<td>-3.466</td>
<td>0.000</td>
<td>Stasioner</td>
</tr>
<tr>
<td>3</td>
<td>JII</td>
<td>-9.199</td>
<td>-3.466</td>
<td>0.000</td>
<td>Stasioner</td>
</tr>
<tr>
<td>4</td>
<td>NAVIMF</td>
<td>-9.600</td>
<td>-3.466</td>
<td>0.000</td>
<td>Stasioner</td>
</tr>
</tbody>
</table>

From the table above it can be seen that all variables are stationary at first difference. This can be proved by the ADF test value greater than Mc. Kinnon Critical Value 5% and also the probability value is smaller than 0.05. The conclusion of the data processed by H0 is rejected, that all variables are stationary at the first difference level, so it does not need to be continued at the next level (second difference) and the test can be continued with the next test which is co-integration test.

Co-integration Test

After testing the stationary data and all observed variables are stationary and have the same degree, the next step is co-integration testing to see the long-term relationship of the model. In this study the Johansen method is used to test the co-integration of existing variables. The hypothesis used for the co-integration test is as follows:

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H0; d = 0 non co-integration; no long-term relationship
H0; d ≠ 0 co-integration; there is a long-term relationship

The decision to reject H0 for the co-integration test is if the t-statistic value is greater than the Critical value.

<table>
<thead>
<tr>
<th>Hypothesized Trace</th>
<th>0.05</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of CE(s)</td>
<td>Eigenvalue</td>
</tr>
<tr>
<td>None *</td>
<td>0.278386</td>
</tr>
<tr>
<td>At most 1</td>
<td>0.224125</td>
</tr>
<tr>
<td>At most 2</td>
<td>0.059436</td>
</tr>
<tr>
<td>At most 3</td>
<td>0.005975</td>
</tr>
</tbody>
</table>

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

From Table-3 above, the Trace Statistic value> CV 5% is 52.431> 47.856 with a probability of 0.0175 so H0 is rejected. The residual meaning of the equation has been stationary in the first degree of integration or I (1), so that each variable is said to be co-integrated or there is an indication of a long-term relationship.

The existence of an indication of a balance relationship in the long term cannot be used as evidence that there is a relationship between the variables in the short term. Therefore, to determine which variables cause changes in other variables, the Error Correction Model calculation is used.

Error Correction Model Test

With the discovery of the phenomenon of long-term relationships in each variable, the next step is to do an Error Correction Model (ECM) approach to see whether there is a relationship between variables in the short term. ECM is one approach to analyzing time series models that are used to see the consistency between short-term relationships and long-term relationships of the variables tested.

<table>
<thead>
<tr>
<th>Dependent Variable: D(PE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method: Least Squares</td>
</tr>
<tr>
<td>Sample (adjusted): 2011M02 2017M12</td>
</tr>
<tr>
<td>Included observations: 83 after adjustments</td>
</tr>
<tr>
<td>Variable</td>
</tr>
<tr>
<td>C</td>
</tr>
<tr>
<td>D(LOG(SUKUK))</td>
</tr>
<tr>
<td>D(LOG(JII))</td>
</tr>
<tr>
<td>D(LOG(NAVIMF))</td>
</tr>
<tr>
<td>LOG(SUKUK(-1))</td>
</tr>
<tr>
<td>LOG(JII(-1))</td>
</tr>
<tr>
<td>LOG(NAVIMF(-1))</td>
</tr>
<tr>
<td>EC</td>
</tr>
</tbody>
</table>

Based on the output data processed ECM regression results in the short-term equation can be as follows:

PE = 0.225564 + 0.000521 D(LOG(SUKUK)) + 0.003704 D(LOG(JII)) + 0.000232 D(LOG(NAVIMF)) + 0.009071 EC

From the equation test results, obtained the following data estimation:
- Constants of 0.225564, meaning that if all independent variables are constant. So the economic growth in the short term is 22.56 percent.
- D (LOG (SUKUK)) amounted to 0.000521, meaning any increase in Sukuk change in the short term by one percent, it will cause an increase in economic growth change of 0.0521 percent.
- D (LOG (JII)) is 0.0037, it means that every change of JII in the short term is one percent, it will cause the change of economic growth by 0.37 percent.
- D (LOG (NAVIMF)) 0.000232, it means an increase in Net Asset Value Islamic mutual funds in the short term of one percent, it will cause an increase in economic growth changes of 0.023 percent.
EC amounted to 0.009071, meaning the error correction speed to correct the behavior of each variable is 0.9071 percent.

The long-term regression coefficient of economic growth is sought by the following formula:

\[
\text{constant (c)} = \frac{\beta_0}{\beta_7} = \frac{0.2256}{0.0091} = 24.7912 \\
\text{Sukuk} = \frac{\beta_4}{\beta_7} = \frac{0.0249}{0.0091} = 2.7363 \\
\text{JII} = \frac{\beta_5}{\beta_7} = \frac{0.0563}{0.0091} = 6.1868 \\
\text{NAVIMF} = \frac{\beta_6}{\beta_7} = \frac{0.0414}{0.0091} = 4.5495
\]

The results are shown in the following equation:

\[\text{PE} = 24.7912 + 2.7363 \log (\text{SUKUK} (-1)) + 6.1868 \log (\text{JII} (-1)) + 4.5495 \log (\text{NAVIMF} (-1)) \quad (4)\]

From the result of equation test, we get an estimation of data as follows:

- Constant 24.912, meaning if all independent variable is constant. So the long-term economic growth is 2,479.12.
- \(\log (\text{SUKUK} (-1))\) of 2.7363, meaning that any increase of Sukuk change in the long term by one percent, it will cause an increase in economic growth change of 27.363 percent.
- \(\log (\text{JII} (-1))\) amounted to 6.1868, meaning that any increase in JII change in the long term by one percent, it will cause the growth of economic growth change of 61.868 percent.
- \(\log (\text{NAVIMF} (-1))\) amounted to 4.5495, meaning that any change in Net Asset Value of Islamic Mutual Fund in the long term by one percent, it will cause an increase in economic growth change of 45.495 percent.

Based on Table 4 in the long term, the probability value of Sukuk, JII, and NAV of Islamic Mutual Funds is 0.015, 0.0001, and 0.0003 less than \(\alpha = 5\%\) and has positive coefficient value. So in the long term, the Islamic capital market has a significant positive influence on economic growth. Meanwhile, in the short term, the probability value of Sukuk, JII, and NAV of Islamic Mutual Fund is 0.939, 0.784, and 0.971 bigger than \(\alpha = 5\%\), so in the short term Islamic capital market has no significant effect.

**DISCUSSION**

ECM test results on corporate sukuk variables, Islamic stocks and Islamic mutual funds on economic growth, obtained the results that in the short term sukuk relations have a positive and not significant effect on economic growth. This is because the Islamic capital market is not yet known by the whole community because the socialization is still lacking. Therefore in its influence with positive economic growth is insignificant because it is seen from the prospects of the development of the Islamic capital market itself is quite rapid but not directly influential because the results of these investments are still within the scope of individuals or private.

The results of testing long-term equations show that in the long run corporate sukuk has a positive and significant impact on economic growth in Indonesia. That is, if the corporate sukuk has decreased, economic growth will also decline. This research is also in line with the research of Salem, Fakhfekh, and Hachicha [13], Araar [19], and Abduh and Omar [21]. This is because sukuk is an investment instrument intended for development in the real sector. The government and corporations as issuers issue sukuk with the aim of obtaining funds from the public to expand their business and infrastructure development which in turn opens up new jobs that can absorb labor and reduce unemployment so as to increase economic growth.

Islamic stock testing results seen from the Jakarta Islamic Index show a significant positive long-term relationship to economic growth in Indonesia. That is, if JII experiences a decline, economic growth will also decline. In theory, it can be explained that an increase in economic growth can increase the purchasing power of consumers towards the company's products so as to increase the profitability of the company. With the increase in profitability, it will increase investors in investing, so that it can increase stock prices which have a positive impact as well. Therefore the revenue from Islamic stocks themselves is still within the scope of the criteria for Islamic stock companies, so that their influence on national economic growth is not direct or comprehensive. This result is also consistent with the research of Regan [22], Nordin and Nordin [12], and Al-Shams and Ahraf [23].

In the long-term testing of Islamic mutual fund variables on economic growth, the result is a significant positive influence between Islamic mutual funds and economic growth. That is, if Islamic mutual funds which are seen from net asset values have increased, economic growth will also increase.
In the results of co-integration or long-term testing on Corporate Sukuk, Jakarta Islamic Index, and Islamic Mutual Funds which state that the three Islamic capital market instruments have a significant positive influence on economic growth. So this is in accordance with Schumpeter's Economic Growth theory which states that the main factor that causes economic development is the innovation process and the perpetrators are investors or entrepreneurs.

The economic progress of a society can only be applied with innovation by entrepreneurs. With these innovations and driven by the desire to make a profit, new investment will be held. This new investment will increase economic activity. Community income will increase and consumption levels become higher. The increase will encourage other companies to produce more goods and make new investments. The Islamic capital market is included in one of the investments that are currently developing. That is, the Islamic capital market is able to influence the economic growth of investments invested by investors into various instruments in the Islamic capital market.

CONCLUSION

In the long term, Sukuk, Jakarta Islamic Index, and Islamic Mutual Funds have a positive and significant impact on economic growth in Indonesia. This shows that if the development of the Islamic capital market increases, economic growth in Indonesia will also increase. On the contrary, if there is a decline in the development of Islamic capital markets, then economic growth also showed a decline.

In the short term, Sukuk, Jakarta Islamic Index and Islamic Mutual Funds have no significant effect on economic growth in Indonesia. This shows that the development of the Islamic capital market has not been able to influence the economic growth that occurred in Indonesia.

REFERENCES