



THE IMPACT OF ISLAMIC CAPITAL MARKET DEVELOPMENT ON ECONOMIC GROWTH: THE CASE OF INDONESIA

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Abstract: *The purpose of this study was to determine the short and long term effects of three Islamic capital market instruments, namely the corporate sukuk, the Jakarta Islamic Index, and Islamic Mutual Funds on economic growth. The data set is built based on the Badan Pusat Statistik Indonesia and Otoritas Jasa Keuangan Indonesia (OJK) and runs from January 2011 to December 2017. This research uses the co-integration test to examine the long-term relationship, as well as the error correction model to analyze the existence of a short-term relationship. The results show that in the long-term there is a significant positive influence of the corporate sukuk, the Jakarta Islamic Index and Islamic Mutual Funds on economic growth, while in the short-term there is a significant impact of the corporate sukuk, Jakarta Islamic Index, and Islamic Mutual Funds on economic growth in Indonesia. The ECM results indicate that in the long term the Islamic capital market is able to provide alternative capital to support economic growth in Indonesia.*

JEL Classification: E22, F43

Key Words: Islamic Capital Market, Sukuk, Jakarta Islamic Index, Islamic Mutual Fund, Error Correction Model

1. INTRODUCTION

Economic growth as a process of increasing output over time is an important indicator to measure the success of a country's development (Todaro & Smith, 2011). The implementation of a country's economic development, especially in developing countries or



Less-Developed Countries (LDCs) is often hampered by the availability of limited capital and this is one of the main obstacles for these countries to carry out their development.

One of the efforts made to implement development in improving the quality of the economy is by growing the investment sector by using capital market instruments. The capital market is a network of financial institutions and infrastructure that interact to mobilize and allocate long-term funds in the economy. The market affords the opportunity to business firms and governments to sell stocks and bonds, to raise long-term funds from the savings of other economic agents. The capital market is a highly specialized and organized financial market and indeed an essential agent of economic growth because of its ability to facilitate and mobilize saving and investment (Nwaolisa, Kasle, & Egbunike, 2013).

Based on ethical investment, there are types of investors who have excess liquidity, but selective in making investments. The capital market continues to adjust to facilitate investors like this so that it can accommodate all types of investors, one of which is the existence of Islamic capital markets in line with the Islamic principles (Susanto, 2009).

Islamic capital markets are an important component of the entire Islamic financial system, although it has become the final entrant in the industry, beginning in the mid-1990s. In particular, the sector has gained positive momentum and is now attracting a wide range of investors and issuers from around the world. In general, the Islamic capital market consists of three main sectors of Islamic equity market facilitated by Islamic stock index, *Sukuk*, and Islamic financing market (IFSB, 2015).

In Indonesia, the Islamic capital market was officially launched on March 14, 2003, together with the signing of a Memorandum of Understanding (MoU) between the Capital Market and Financial Institution Supervisory Agency (Bapepam-LK) with the National Islamic Council-Majelis Ulama Indonesia (DSN-MUI) (Djamil, 2008). However, Islamic investment activity in the capital market has actually started much earlier. The first step in the Islamic capital market in Indonesia was the issuance of Islamic Mutual Funds on June 25, 1997, and the issuance of the Indosat Islamic bonds in early September 2002. This bond has then pioneered the issuance of Islamic bonds to the present. Then, Indonesia Stock Exchange in cooperation with PT. Danareksa Investment Management launched the Jakarta Islamic Index (JII) on July 3, 2000, which distributed 30 Islamic-based stocks (Soemitra, 2009).



In general, Islamic capital market activity is not different from the conventional capital market, but the Islamic capital market has product and transaction mechanism which is in line with Islamic principles. As for the principles of Islamic in the operation of capital markets are principles based on Islamic teachings which determination is done by DSN-MUI.

The theoretical framework on the effects of capital market on economic growth dates back to the work of Schumpeter, (1911) 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, (1911) was later advanced as the McKinnon-Shaw, (1973) 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 (Yadirichukwu & Chigbu, 2014)

The above hypothesis became formalized and popularized through the endogenous growth models of Fry (1988), Greenwood and Jovanovic (1990) and Pagano (1993) which specify explicitly the modeling of the link between financial intermediation role of capital markets and growth indicators. These models have identified the capital market as an institution that contributes to the economic growth of emerging economies, they are also considered as a variable in explaining the economic growth in the most-developed ones (Yadirichukwu & Chigbu, 2014).

Studies in various countries support that the capital market has an effect on economic growth. In Malaysia, Nordin and Nordin (2016) and Saleem, Fakhfeh, and Hachicha (2016) state that capital markets have an effect on economic growth. In Turkey, Coskun et al. (2017) and Pay, Rich, and Yildirim (2014) conclude that there is a long-term relationship between capital markets and economic growth. In Nigeria, Yadirichukwu and Chigbu (2014) and Edame and Okoro (2013) state that capital markets have an effect on economic growth.

In addition, the latest research using multiple regression analysis from Latifah (2016) states that sukuk have a negative and significant effect on financial deepening, Tambunan (2016) stated that Islamic mutual funds have not been seen to real GDP of Indonesia, and Afolabi (2015) Stock market capitalization has no effect on the economy. This shows that the regression approach does not always yield reliable results. This resulted in this research using Error Correction Model technique to determine long-term and short-term dynamics between



developments of Islamic capital market to economic growth in Indonesia. The long-term relationship is an expectation of the results of the study, where as the short run is what actually happens to the independent variable to the dependent.

2. LITERATURE REVIEW

Coskun et al (2017) 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. We also find that capital market development has asymmetric effects on economic growth Using ARDL, Markov Switching Regression and Kalman Filter models, where government bond market development is negatively but the aggregated index of other sub-components is positively associated with economic growth.

Salem, Fakhfekh and Hachicha (2016) 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. The Johansen test underlines the existence of a co-integration relationship between GDP, investment, labor force and *sukuk* issuance.

Al-Shams and Ashraf (2015) examine under the title "The Impact of Capital Market in Economic Growth of Bangladesh". This study shows the tendency of some exogenous variables of capital markets such as market capitalization, all market share indices, market transaction value, number of transactions and inflation over the past ten years. Linear log rente analysis method is commonly used to analyze data. The results show that the capital market has a significant impact on GDP.

Bayar et al (2014) under the title "Effects of Stock Market Development on Economic Growth: Evidence from Turkey". The conclusion of this study is that there is a long run relationship between economic growth and stock market capitalization, total value of stocks traded, turnover ratio of stocks traded and also there is unidirectional causality from stock market capitalization, total value of stocks traded and turnover ratio of stocks traded to economic growth.



Further research was conducted by Tabash and Dhankar (2014) 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.

3. RESEARCH METHODOLOGY

The qualitative and quantitative methods have been used. The qualitative approach is used to review the existing literature from all resources such as academic, scholarly journals, newspapers and magazines, documents, workshops, and other related literature of Islamic finance industry. The quantitative approach is used to test the long term relationship between Islamic finance and growth of economy. The data set is extracted from Badan Pusat Statistik Indonesia and Otoritas Jasa Keuangan Indonesia (OJK). The period of time used is from January 2011 to December 2017.

This analysis will explain the long-term and short-term relationship between islamic bonds (*Sukuk*) and islamic mutual funds to economic growth. The equation can be written as follows:

$$EG = \alpha_0 + \alpha_1 JII_1 + \alpha_2 Sukuk_2 + \alpha_3 NAVIMF_3 + \varepsilon \quad (1)$$

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

$$D(EG)_t = \alpha_0 + \alpha_1 D(JII)_t + \alpha_2 D(Sukuk)_t + \alpha_3 D(NAVIMF)_t + \alpha_4 (JII)_{t-1} + \alpha_5 (Sukuk)_{t-1} + \alpha_6 (NAVIMF)_{t-1} + ECT \quad (2)$$

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 lag operator; EG is a dependent variable, while JII, *Sukuk*, and NAVIMF are independent variables.



4. Analysis and Results

4.1. Co-integration Test

The result (Table 1) shows the Trace Statistic value $> CV 5\%$ that is $52,431 > 47,856$ with a probability of 0.0175 so that H_0 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.

Table 1. Co-integration test results

Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.278386	52.43106	47.85613	0.0175
At most 1	0.224125	26.00362	29.79707	0.1286
At most 2	0.059436	5.448732	15.49471	0.7595
At most 3	0.005975	0.485409	3.841466	0.4860

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

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, the Error Correction Model calculation is used to determine which variables cause changes in other variables.

4.2. Error Correction Model Test

As we can see from the results of the Error Correction Model Test data (Table 2), the error correction variable (EC) is positive and statistically significant which means the ECM specification model of the single squared cost used in this study is valid.

**Table 2. Error Correction Model Test Results**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.225564	0.056917	3.963055	0.0002
D(LOG(SUKUK))	0.000521	0.006813	0.076508	0.9392
D(LOG(JII))	0.003704	0.013456	0.275262	0.7839
D(LOG(NAVIMF))	0.000232	0.006370	0.036410	0.9711
LOG(SUKUK(-1))	0.024863	0.010042	2.476018	0.0155
LOG(JII(-1))	0.056333	0.013996	4.024875	0.0001
LOG(NAVIMF(-1))	0.041369	0.011033	3.749646	0.0003
EC	0.009071	0.002808	3.230154	0.0018

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

$$PE = 0.225564 + 0.000521 D(\text{LOG (SUKUK)}) + 0.003704 D(\text{LOG (JII)}) + 0.000232 D(\text{LOG (NAVIMF)}) + 0.009071 EC \quad (3)$$

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:

$$\text{constant (c)} = \beta_0 / \beta_7 = 0.2256 / 0.0091 = 24.7912$$

$$\text{Sukuk} = \beta_4 / \beta_7 = 0.0249 / 0.0091 = 2.7363$$



$$\text{JII} = \beta_5 / \beta_7 = 0.0563 / 0.0091 = 6.1868$$

$$\text{NAVIMF} = \beta_6 / \beta_7 = 0.0414 / 0.0091 = 4.5495$$

The results are shown in the following equation:

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

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 (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 (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 (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 1 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.

In the results of co-integration or long-term testing on Corporate *Sukuk*, Jakarta Islamic Index, and *Islamic* Mutual Funds which states if these three instruments of *islamic* capital market have a significant positive effect on economic growth. So this is in accordance with the theory of Economic Growth Schumpeter stating that the main factor that causes economic development is the process of innovation and the perpetrators are the investors or entrepreneurs. The economic progress of a society can only be applied for innovation by entrepreneurs. With the innovation and driven by the desire to gain profits will be held a new investment. This new investment will increase economic activity. People's income will increase and consumption levels become higher. The increase will encourage other companies to produce more goods and make new investments.



Schumpeter (1911) also argues that financial development led to economic development. Financial markets promote economic growth by funding employers and in particular by channeling capital to entrepreneurs with high return projects. The *islamic* capital market is included in one of the emerging financial market instruments. That is, the *islamic* capital market is able to affect the economic growth of investments invested by investors to various instruments in the Islamic capital market.

5. 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.

CONFLICTS OF INTEREST AND PLAGIARISM: The authors declare no conflict of interest and plagiarism.

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