



## Stock Returns and Liquidity Changes Around the Screening Announcement: An Empirical Study in Indonesia

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**Abstract:** This paper aims to identify and analyze the volatility of stock returns and the changes of liquidity around the announcement of Shari'ah stock screening published by Otoritas Jasa Keuangan (OJK) and Dewan Syariah Nasional (DSN-MUI). The announcement is consist of stocks that become the constituent of ISSI (Indonesia Shari'ah Stock Index) and the stocks out from ISSI in each period. The number of data are 341 emitens, divided into two categories. The first category was 196 stocks that out from the composition of ISSI, and the second was shari'ah stock from 145 emitens which categorized as part of ISSI from 2011 to 2016. The statistical method (t-test) is used to analyze the change of stock returns and the change of liquidity in 14 days around the announcement (6 days pre- and post announcement). The result shows that Shari'ah compliant stocks over 6 years around the announcement have no difference in return and have negative sign for both the Shari'ah stocks and the stocks out from ISS. It may caused by the intention of Islamic investor which invest their capital based on the compliance of Shari'ah, so the returns do not become the most important one. Interestingly, on the other hand, the liquidity change of stocks which out of ISSI has negative significant difference on the days after the announcement of screening. It indicates that the non-compliant stocks have negative in change of liquidity or have significant liquidity declining after the announcement. Also, in fact Islamic investors are more concern in the list of stocks that out from ISSI and the stock returns become less important to them than the compliance of investment. Thess findings confirm the issue that the screening is not effecting the expected return of investors. Besides, this study tells that the screening is perceived as important information by the investors in making decisions. Thus, the next studies are needed to investigate the effect of long-term investment on shari'a stock and the factors that influence the shari'a stock return during the period of announcement.

**Keywords:** Shari'ah Screening, Stock returns, Liquidity, ISSI.

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## Introduction

Islamic finance has become the counterpart of the conventional in several countries which have great Muslim population. Islamic investments or Shari'ah investments increase in both the type and the number of investment. This kind of investments fall into ethical or socially responsible category which restricted to companies that are not involved in the banned activities based on principle of Shari'ah, namely tobacco industries. Shari'ah stock screening is the step of reducing the asset universe to a set of compliant assets in Islamic principle.

Stock screening becomes more important. Based on Bahlous and Yusof (2014), Islamic investors only willing to invest their capital in the companies or industries complied with Shari'ah law. In conceptual framework conducted by the Financial Accounting Standards Boards (FASB) stated that the main objective of financial report is to provide the information for their users, so it can be such a consideration to predict the future cash flow (Rees and Thomas, 2010). Hanafi (2011) said that the screening process is an implementation of Fiqh Muamalah laws which provide halal investment to Islamic investors. The processes of screening are the selection processes that give the list of compliant stocks.

Asymmetric information, however, still becomes a matter among investors. It still comes to pass because the firm and Shari'ah scholars who conduct stock screening have more information about the compliant of Shari'ah than the outside investors. Besides, the main of the objective of screening is to increase the level of investment by Islamic investors, therefore it can be seen as positive signal to them.

This phenomena is linked to the theory of asymmetric information hypothesis (Rock, 1986; Baron & Holmstrom, 1980; Triaryati & Husnan, 2004) and signaling hypothesis (Welch, 1989; Alan & Faulhauber, 1989; Carter & Manaster, 1990; Triaryati & Husnan 2004). The signals might be reflected in the volatility of stock's price (return) and the trading volume of stocks (liquidity) in both three days prior to and after the announcement as studied by Rees and Thomas (2010). An efficient market is happened when an information can be captured quickly by investors. In other words, the stock price will reflect the informations (Bodie et al., 2014) and its fluctuation could reflect the effect of a news or information.

This study aims to identify whether there is any effect of screening to the stock return and the liquidity of stocks which can be approximated by the difference of trading volume. This paper organized as follows: Section 2 will discuss some literature reviews and background on Shari'ah screening and the theories which related to return and liquidity of stocks. Section 3 deals with the method used in this research to analyze the data. The result and discussion will be in Section 4. Finally, some general conclusion and suggestions are drawn in the last section.

## The Literature Review and Theoretical Background

Based on Hanafi (2011), in general, there are two criterias which have to fulfilled by emitens to become comply with Shari'ah rules. Those criterias are the main business activity (qualitative) and the quantitative measurement such as leverage ratio, non permissible income, etc. The main business activity is the core of business conducted by emitens which have to be *halal* activity. It becomes the basis of screening

process. The quantitative screens or accounting based screens consist of the leverage, equity, and income generated by emitens. This criteria may be different among countries, according to their rules and governance of Shari'ah scholars. Shari'ah Supervisory Board (SSB) assign the treshold of leverage is 33% from the total capital. This percentation is based on the hadits about the maximum number in testament.

Islamic investment presupposes that investment activities complied with Shari'ah are prohibited to have an ownership of share which generate income from illegal activities or products, such as gambling, alcohol, tobacco, pork, and weapons. Furthermore, the main criteria is prohibition of riba (interest), so the Islamic investors are banned to invest their capital on the business activities which have fixed interest rate. Also, screening is implemented on leverage ratio (debt/market value of equities) which not more than 33%, non-permissible income which not exceed 15% from the total revenue, and the most of its assets can not be originated by the receiveables (Bahlous and Yusof, 2014). *Daftar Efek Syari'ah* (DES) is list of the complied-stocks based on screening process in Indonesia conducted by Dewan Syariah Nasional (DSN-MUI) and Otoritas Jasa Keuangan (OJK). It is announced twice a year in May and November (Hanafi, 2011). Sumar'in (2015) said that speculations are still occurring in Indonesia Shari'ah stock exchange in three to five days before and after the dividend announcement. So, the minimum holding period could be the one of alternatives to reduce speculations. Then, the appropriate minimum holding period is seven days.

Shari'ah stock screenings by DSN-MUI and OJK are viewed as the informations guiding investors to invest in complied share. According to Brigham and Ehrhardt (2011), an asymmetric information is the information which only owned by a person or a group (private information). Signaling Theory established by Modigliani-Miller (MM) assumes that all investors have the same information with the managers about the firm's prospect. However, it rarely happens because certainly the managers have more informations than the investors. An announcement or an information published by emitens will be arrested as a signal. The investors have different perceptions, therefore it might be seen as a positive or negative signal.

Stock prices, generally, reflect all the informations in stock market. Up and down of the price are becoming conception of new informations. This informations defined as the unpredictable informations which could fluctuate the prices randomly (random walk). If that informations could have been predicted, then it becomes a part of hodiernal information (Bodie et al., 2014).

Based on the study about the effect of stock screening to the performance of FTSE Global Islamic Index and Dow Jones Islamic Market by Hussein (2005), it can be seen that shari'ah investment do not offer the lower performance (return) than the conventional (unscreened investment). Another research conducted by Abdullah et al. (2007) denoted that shari'ah investment is underperform to the conventional. Furthermore, Hassan et al. (2005) said that the practices of ethical investment (screening) do not affect to the performance in Dow Jones Islamic Market (DJIM).

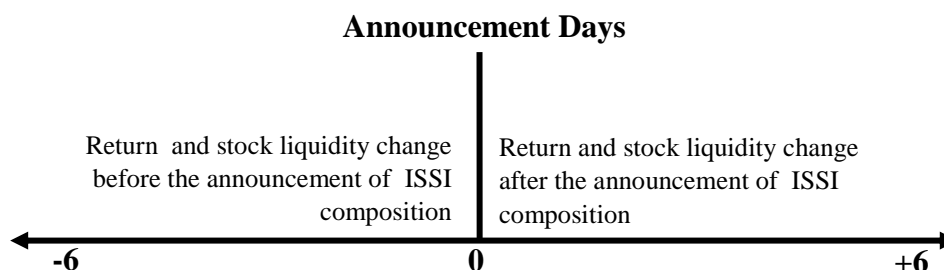
According to Berkman and Eleswarapu (1998), the information related to stock market could affect the liquidity of stocks. The change of stock liquidity can be reflected by the difference of trading volume in pre- and post the announcement period. In this research, the measure of liquidity is the average daily trading volume around the announcement. Based on the above literatures, there are mixed result about the effect of Shari'ah screening on the return and the change in liquidity of stocks. So that, this study

needs to be done in Indonesia Shari'ah stocks market particularly to identify whether the screening process is an important passage to the investors.

**Data and Methodology**

The data used is the historical data of daily stock returns and changes in the liquidity of the stock for six (6) days before and six (6) days after the announcement of Indonesia Sharia Stock Index (ISSI) screening by Indonesia Stock Exchange (IDX). Data can be sorted by issuers' entry and exit screening in the list of ISSI shares in accordance with the provisions of Islamic stock screening by the Otoritas Jasa Keuangan (OJK) from 2011 to 2016.

**Figure 1: Anayisis Model**



The focus variables of this research are *return* and liquidity changes of Islamic stocks. *Return* obtained from the current stock price minus the previous stock price divided by the previous stock price, while the stock liquidity changes sought to follow the formula in the study that was done by Berkman and Eleswarapu (1998):

$$\Delta VOL_i = \log (VOL_i, \text{post}) - \log (VOL_i, \text{pre})$$

After the return value and stock liquidity changes obtained and then the researchers will test the impact of screening on changes of the average return and stock liquidity by comparing the return and stock liquidity changes for six days before and six days after the announcement of the change in the ISSI composition issued by IDX.

Data retrieval is done purposively by various criteria. The first criterion is stock returns and the stocks liquidity changes of issuers included in ISSI composition at the time of the announcement of its period, from the second period of 2011 until the first period in 2016. The second criterion is the return of the issuer's shares and stock liquidity changes per day used in the data are the data stock returns and changes liquidity of shares of the issuer are out of the composition of ISSI shares, per the announcement of the year 2011-2016. The third criterion is the composition of the announcement date data is the date of the decision by IDX announcement of ISSI composition in each period. Based on these criteria, the number of shares included in the composition ISSI issuers totaled 196, while the number of shares issued in the composition of ISSI amounted to 145 issuers.

Data stock returns and liquidity of stock trading volume were analyzed by two methode, namely descriptive analysis by plotting the data, and statistical analysis of two different average test to determine the impact of stock screening . The impact of screening method was tested with Paired Sample t-Test using a 95% confidence level ( $\alpha = 0.05$ ) (Atmadja and Siaputra, 2006). First, Paired Sample t-Test was performed to compare, return for the shares included in

the composition of ISSI shares before and after the announcement of the change in the composition of ISSI by IDX and return with  $H_0$  of both groups of the average sample statistically was not significantly different. Second, return shares issued in the ISSI composition before and after the announcement of ISSI composition with  $H_0$  the average sample groups did not differ significantly. Third, changes in the value of the stock liquidity before and after the announcement of the shares included in the composition of ISSI by IDX,  $H_0$  which states that the change in the value of the stock liquidity before and after the announcement of the composition of ISSI are not different significantly. Fourth, changes in the value of the liquidity of stock trading volume before and after the announcement of the stock out in the composition of ISSI by IDX,  $H_0$  which states that the change in the value of the liquidity of the stock before and after the announcement of the composition of ISSI are not different significantly.

## Finding and Analysis

### 1. ISSI Stock Return In

Paired samples T-test is used to compare stock returns for six days before and after the screening with the alpha level of 0.05. Here are the results.

**Table 1:** Results of t-test for the Shares Return In on ISSI in 2011-2016

	Mean	N	Sig.(2-tailed)	df
R_Pre	0.0037	196	0,618	195
R_Post	0.0034	196		

Based on table 1, it can be seen that the screening of Islamic stocks have no impact on stock returns or no difference in the return of Islamic stocks observation for six days before and after the announcement of the Islamic securities list. It can be seen at the probability value of t-test is 0.618 (above the alpha value of 0.05) for six days of observation, indicating  $H_0$  accepted statistically, in other words, there is no different from the average return of the stock due to the announcement of the stock screening.

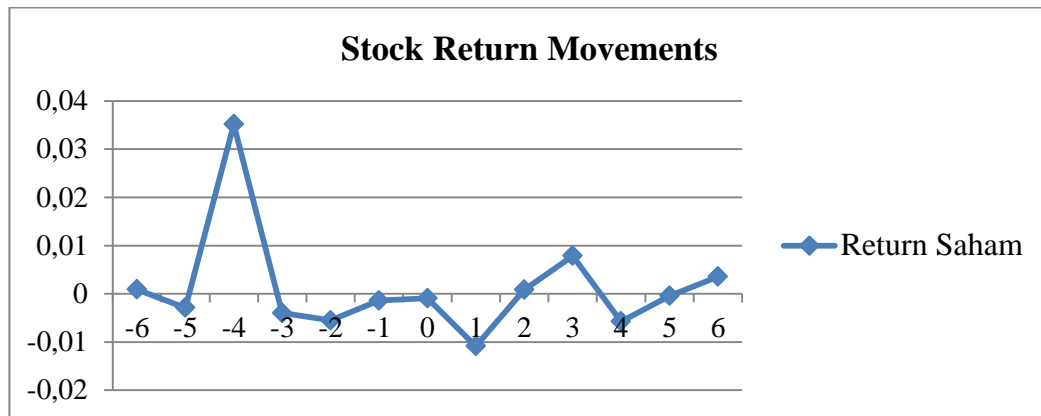
But the results of this analysis can not explain whether the screening has a positive or negative impact on stock returns sharia. This impact can be said that it is not significant because of the possibility of other factors that influence changes in stock returns before and after the screening. This can be seen in figure 2 of fluctuations in share price returns over 4 days. The increase in stock returns is clearly visible on the fourth day (-4) before screening results are announced. The writer's assumptions when the announcement of the results of Islamic stocks screening in the list of Islamic securities, the information around the announcement day will reflects returns of Islamic stock evenly and should give more comprehensive information for investors to assess the stock price after the announcement of the screening which will reflect the price and return of the shares not only on the day of the transaction, so the return of the stock price on the fourth day before the announcement is not due to the announcement of the screening, but the impact of this may affect the overall results of the t test conducted has no significant value. The decline in shares return on the fourth day before the announcement of the screening shows that there are other factors (not screening) which led to an increase in stocks returns significantly.

### 2. Descriptive Analysis of Stock Return In of ISSI in 2011 - 2016

Based on Figure 2, it can be seen that in the period before the six days announcement, it happens fluctuations of shares higher than in the period after the announcement of screening. The third day before the results of the screening carried out, the stock price has shown a substantial decline, then they tend to decrease to day-to-14 (+ 6). The share price

which enters after the screening shows the movements tend to decline and more stable compared with the period before to the announcement of screening. On the third day after the announcement of the screening, there was little increase in the stock price. This indicates that the information regarding screening impact is less visible (weaker) against the interest of investors, so these results supports previous studies which stated that the screening did not have a significant influence on the performance of sharia stock investments.

**Figure 2:** Graph of Stock Return In of ISSI in 2011-2016



**3. ISSI Stock Liquidity Change in**

Paired samples T-test was performed to compare the changes in the liquidity of the stock for six days before and after the screening with the alpha level of 0.05. Here are two different test results mean.

**Table 2:** The Result of t test for Stocks Liquidity Changes In of ISSI in 2011-2016

	Mean	N	Sig.(2-tailed)	df
L_Pre	5,6115	196	0,987	195
L_Post	5,6121	196		

Based on table 2, it can be seen that the screening of Islamic stocks have no effect or no difference changes in the liquidity of Islamic stocks observation. It can be seen at the probability value of 0.987 t-test (above the alpha value of 0.05) for a day of observation for six days, indicating their acceptance of H0. These results indicate that enthusiasts Islamic stock investing is not based on the results of screening of Islamic stocks that go into the list of ISSI. In addition, it indicates that entry screening does not have a significant impact on the liquidity of stock trading volume change syariah both before and after the announcement of the screening. Many investors do not buy shares after the announcement of the screening. Screening information received by the market are not captured as a positive or negative signal by the market.

**4. ISSI Stock Return Out**

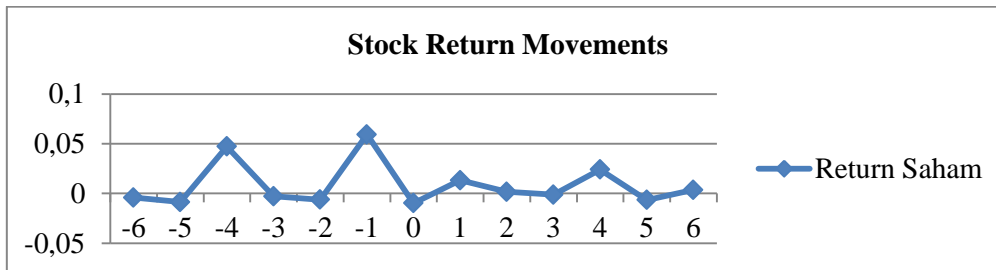
**Table 3:** Results of t-test for the Shares Return Out of ISSI in 2011-2016

	Mean	N	Sig.(2-tailed)	df
R_Pre	0,0141	145	0,426	144
R_Post	0,0058	145		

Based on Table 3, it can be seen that the screening of Islamic stocks have no effect or no different impact of the Islamic stocks return during the observation days. It can be seen at the probability value of 0.426 t-test (above the alpha value of 0.05) for days of observation, which indicates acceptance of  $H_0$ . These results indicate that screening announcement issued shares is not seen as an important information to investors so that during the day of observation there is no significant difference.

**5. Descriptive Analysis of Stock Return Out of ISSI in 2011 – 2016**

**Figure 3:** Graph of Stock Return Out of ISSI in 2011-2016



Based on Figure 3, it can be seen that both the period before and after the announcement of screening there is high return fluctuation. However, stocks that enter the post-screening show the movement of return with a range that is high enough and not much different from the movement of return before screening. This causes the return of Islamic stocks before the screening does not differ significantly with the return of Islamic stocks after the screening. This indicates that the information of sharia shares screening issued are not used as a basis in the decision to buy and sell these shares.

**6. ISSI Stock Liquidity Changes Out**

**Table 4:** Results of t-test for the Shares Return Out of ISSI in 2011-2016

	Mean	N	Sig.(2-tailed)	df
L_Pre	5,5838	145	0,042	144
L_Post	5,4889			

Based on Table 4, it can be seen that the Islamic stock screening effect or contrastive changes in the liquidity of Islamic stocks on the days of observation. It can be seen at the probability value of 0.042 t-test (under the alpha value of 0.05), which indicates rejection of  $H_0$ , it means that there are different rates of stock liquidity change before and after the announcement of screening by decree of the list of Islamic Securities published by OJK in cooperation with DSN MUI.

These results indicate that the announcement of the stock screening is not seen as an information for investors that can change the movement of the stock price and its return, but on the other hand, this information has a significant impact on the change of stock liquidity. Interestingly, the different test results for stock liquidity changes when the stock is announced entry because of screening does not show any difference, so it can be concluded that investors see differently the screening information of shares in as Islamic stocks and the screening information of shares out in the list of Islamic securities. The phenomenon of the difference of liquidity changes when the announcement of screening of stocks out can only be explained by the existence of OJK regulations and DSN MUI which requires managers to immediately enact sharia mutual fund shares that do not pass screening in their portfolio, a maximum of ten days after the announcement of the list of Islamic securities.

## **Conclusion**

Screening of Islamic stocks carried out by OJK from 2011 to 2016 does not have a significant impact on returns and changes in the liquidity of the sharia shares that are listed in the Stock Index Syariah Indonesia (ISSI). This is because the movement of return and changes in the shares liquidity does not have differences significantly between the periods before and after the announcement of screening. This result applies both on entry screening and exit screening, so there is an indication that investors are less likely to make the screening results announcement shares of sharia as the basis of information in decision making.

The results of this study could prove that for investors, the announcement of the results of Islamic stocks screening has not become an important information. In addition, this study may provide a brief overview of the performance of Islamic stocks listed on ISSI. However, this study is limited to whether there is a significant effect in the six days before and after the announcement of screening, so more research is needed to determine how the long-term impact due to the Islamic stock screening. In addition, research on what are the things that affect the fluctuation of returns and changes in liquidity in the period of announcement of screening needs to be done in order to obtain more comprehensive research results.



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