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Testing the Semi-strong Form Efficiency of Islamic Capital Market With Response to Information Content of Dividend Announcement: A Study in Jakarta Islamic Index

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The specific concepts of Islamic capital market are based on transparency, accountability, and no asymmetric information. A capital market is said to be efficient with respect to an information item if the prices of securities fully impound the return implication of that item. This study has two main objectives. Firstly, for testing the efficiency of Islamic capital market which focuses on Jakarta Islamic Index (JII). Secondly, by this research finding, the regulator can make a good solution to create the real Islamic capital market. This study concludes that the Islamic capital market is not efficient in information. This is proved by test, where the result for both mean adjusted model and market adjusted model shows not significant, which means that the stock price that occurred has not been able to reflect a strong relationship with the real conditions that exist within the company. The second conclusion is the magnitude of abnormal return suggests that the market still has asymmetric information that will cause the occurrence of abnormal return. This is very unfortunate because Islamic capital market should be efficient in reflecting information transparency that could create a fair price in accordance with the real condition of the company's stock issuance.

Keywords: Islamic capital market efficiency, abnormal return, dividend announcement

Introduction

Islamic capital market is an important part in the development of Islamic economics in the future because of several functions in terms of economy. First, it provides a mobilization of fund to the efficient economic source. Second, it provides liquidity to the Islamic finance institution such as Islamic bank etc. with which they can raise their fund easier and cheaper. Third, Islamic capital market could define the transparency of Islamic enterprise (Mirakhor, 1995). Therefore, in the whole of Islamic countries where the Islamic finance disperses, the existence of Islamic capital market is consequential.

Nevertheless, the presence of Islamic capital market still leaves a very crucial problem related to the

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Shariah compliance. One of the Shariah compliance determinants in Islamic Capital Market is market price mechanism. Market price is very important in Shariah perspective, because from its perspective, the price must reflect the real current condition of company which has issued a stock.

Hence, in this term, Islamic capital market should be efficient. Islamic capital market efficiency is believed to be the main factor that can be used to answer to the market price problem in Islamic capital market. Islamic capital market efficiency is achieved when the Islamic security prices fully reflect all available information. It means that in the Islamic capital market, just sell and buy a paper that indicate the firm asset, the price of the Islamic security can accurately describe the real condition of enterprise. Therefore, the price of Islamic capital market is the same as the real asset of enterprise.

A capital market is said to be efficient with respect to an information item, if the prices of securities fully impound the return implication of that item. In an efficient market, when a new information item was added to the market, its revaluation implications for security returns were instantaneously and impartially impounded in the current market price (Raja, Sudhahar, & Selvam, 2009). It is an extremely stringent requirement for prices to reflect all available information. Thus, the efficient market hypothesis has been subdivided into three categories, each deals with a different type of information. In weak form test of the efficient market hypothesis, the information tested is the past sequence of security price movement. Thus, weak form tests are tests of whether all information contained historical price is fully reflected in current prices. Semi-strong form tests of efficient market hypothesis are tests of whether publicly available information is fully reflected in current stock prices. Finally, strong form tests of the efficient market hypothesis were tests of whether all information, whether public or private, was fully reflected in security prices and whether any type of investor could make an excessive profit or not (Elton, Cruber, & Brown, 2007).

The main objective of this research is to examine the efficiency of Islamic capital market. By this research finding, the authors expect that it can be a solution for the Islamic scholar to create the best model of capital market. In theory, Islamic capital market should be strong-form capital market because of several reasons. First, Islamic capital market is regulated by government and is applied based on the Shariah principles including transparency, responsibility, and fairness. Among which, fairness is the most important thing. All of these principles are similar with the strong market requirement. Second, the empirical evidence shows that Islamic capital market is built by the Islamic scholar as a perfection of conventional capital market.

This research is very important, because it will provide special treatment for the capital market in one side and will realize the core concept of Islamic capital market that has been regulated by Shariah principles without maysir, ghoror, riba, gambling etc.. If the efficiency of Islamic capital market can be realized, all forms of transaction that have been prohibited can be abolished from the real economy and in the long-term, it will be the significant security in the economy of Muslim countries.

Theoritical Foundation

As far as our knowledge is concerned, there has not been any study conducted on the Islamic capital market efficiency. The authors only know study about the capital market efficiency in conventional system. In contrast, in the last decade, Islamic capital market had been increasing dramatically not only from the institution’s perspective but also in terms of the financial instruments such as sukuk, Islamic equity, etc.. Moreover, some scholars are still in a debating position about this system because of the position of Islamic

capital market in the empirical practice that has been conducted is quite different from the Islamic core value in Shariah law. Therefore, this research will focus on examining the efficiency of Islamic capital market.

What Is the Efficient Market

In an efficient capital market, security prices react instantaneously and impartially to impound new information in such a way that leaves no opportunity to market participants to consistently earn abnormal return. Previous empirical research in accounting and finance literature provides evidence supporting efficient market hypothesis. The results of these studies imply that accounting data are valuable to investors' decisions as they correlate with security returns. However, there have been several studies that have documented strong evidence of anomalies in the stock market that seems to contradict with the Efficient Market Hypothesis (EMH). Market efficiency can be tested at three levels of information: information on past prices, all publicly available information, and all public and private information. Fama (1970) defined three forms: weak form efficiency, semi-strong form efficiency, and strong form efficiency. Weak form efficiency hypothesizes that stock prices reflect all the information found in past stock prices. If the market was of weak form efficiency, then stock price would react so fast to past information that no investor can earn an above normal risk adjusted return by acting on this level of information (Dhareshwar & Bacon, 2008)

Semi-strong form efficiency suggests that stock price immediately reflects all available information. Published financial statements and any historical information are included. A test of semi-strong form efficiency indicated that investors could not earn an above normal return on publicly available information such as historical prices, volume information, accounting statements, annual reports, stock splits, dividend announcements, new issues of stock announcements, and earnings announcements (Fama, Fisher, Jensen, & Roll, 1969). When a market is semi-strong efficient, stock prices should reflect all information released, making it impossible to earn above abnormal returns by acting on public announcements.

The primary hypothesis for EMH is that stock prices accurately and quickly reflect all available information in such a way that no one can earn abnormal return. The time for the adjustment for any new information is considered as a critical factor; if the market adjusts more rapidly and accurately, it is considered more efficient. According to Dyckman and Morse (1986) and Hadi (2006), a security market was generally defined as efficient if: (1) the price of the security traded in the market act as though they fully reflect all available information; and (2) these prices react instantaneously, or nearly so, and in unbiased fashion to new information.

The alternative hypothesis is that security market is inefficient and that result of stock price is not accurately reflecting the new information. This might result from the following: the investor is unable to interpret the new information correctly; the investors have no access to the new information; the transaction cost in trading security is an obstruction for free trading; the restriction on short sale; and finally, the investors might be misled by the change in accounting principles.

Islamic Capital Market

The issue of development of Islamic capital market was not separate from the issue of development of capital market in general that played a vital role in attracting savings and channeling them for the productive purposes (Salman, 2008). In addition, Islamic capital market is also an integral system with the Islamic economic whose main objective is to realize the objective of Shariah.

The Shariah objectives or maqosidus syariah are the objectives and the rationale of the Shariah. A

comprehensive and careful examination of the Shariah's rulings entails an understanding that the Shariah aims at protecting and preserving maslahah in all aspects and segments of life. Many Shariah texts state clearly the reasoning behind certain Shariah rulings, suggesting that every ruling in Shariah comes with a purpose, namely, to benefit the mukallaf. For example, when the Qur'an prescribes qishos (retaliation), it speaks of the rationale of it, which applies retaliation to prevent further killing "There is life for you in qishos".

According to Al-Ghazzali (1937, pp. 139-140) and Shatibi (1388, p. 38; pp. 46-47), "The objective of the Shariah is to promote the well-being of all mankind, which lies in safeguarding their faith (din), their human self (nafs), their intellect (aql), their posterity (nasl), and their wealth (maal). Whatever ensures the safeguard of these five, serve public interest and is desirable". Thus, the maqosid assyariah is created, which has the siyasah syariah that is very valuable in promoting the objectives of syariah.

This paper will try to discuss and provide an overview in the economic term. The main objective of Islamic economy is *maslahah*. In addition, *Maslahah* can be reached by the good system in Islamic economy. The problem is how to achieve the best system in Islamic economy. Actually in Islamic economy, there are many parts (Iqbal, 2000) endowment, opportunities, distribution and growth. First, endowment describes the ownership of factors of production. Islam has its own unique concept of ownership. Islam gives a number of instructions that have a bearing on ownership of factors of production. If the authors attract to the economic concept, there are many factors of productions such as natural resources, labour, capital and entrepreneurship.

Many Islamic values and norms facilitate provision of opportunity to all, especially to the less advantaged sections of society. Islamic values emphasized that everybody should receive an equal treatment irrespective of his race, colour, or gender (Iqbal, 2000). It means that in Islamic economic concept everybody has same opportunity to obtain the resource, do difference among them. Another important Islamic principle having implications for the provision of opportunities is the elimination of interest. By prohibiting interest the Islamic system removes the disparities. It also provides greater opportunities for the poor to have access to credit.

Islamic capital market can be defined as the capital market that implements the principles of Islamic law in business activities which does not involve things prohibited by the Islamic Law such as usury, gambling, speculation, etc.. Islamic capital market is important to develop Islamic finance in the world.

In the Islamic capital market, all instruments should be approved by Shariah advisory council (DSN). In classifying these securities, the Shariah Advisory will collect information to decide all securities. The Shariah advisory gathered information of the companies from various sources, such as company annual financial reports, company responses to survey forms and through inquiries made to the respective company's management.

The Shariah advisory has applied a standard criterion in focusing on the activities of the companies listed like in Jakarta Composite Index. As such, subject to certain conditions, companies whose activities are not contrary to the Shariah principles will be classified as Shariah compliance security. The companies will be classified as Shariah non-compliant securities if they are involved in the following core activities:

(1) Financial services based on riba (interest);

(2) Gambling and gaming;

(3) Manufacture or sale of non-halal products or related products;

(4) Conventional insurance;

(5) Entertainment activities which are non-permissible according to Shariah;

(6) Manufacture or sale of tobacco-based products or related products;

(7) Stock broking or share trading in Shariah non-compliant securities;

(8) Other activities deemed as non-permissible according to Shariah.

The DSN also takes into account the level of contribution of interest income received by the company from conventional fixed deposits or other interest bearing financial instruments. In addition, dividends received from investment in Shariah non-compliant securities are also considered in the analysis carried out by the DSN. For companies with activities comprising both permissible and non-permissible elements, the DSN considers two additional criteria:

(1) The public perception or impression of the company must be good;

(2) The core activities of the company are important and considered *Maslahah* ("benefit" in general) to the Muslim *ummah* (nation) and the country, and the non-permissible element is very small and involves matters such as *`umum balwa* (common plight and difficult to avoid), *`uruf* (custom) and the rights of the non-Muslim community which are accepted by Islam. To determine the tolerable level of mixed contributions from permissible and non-permissible activities towards turnover and profit before tax of a company, the Shariah Advisory Council (SAC) has established several benchmarks based on ijtihad (reasoning from the source of Shariah by qualified Shariah scholars).

In Indonesia, although Islamic capital market was officially established on March 14, 2003 together with the signing of Memorandum of Understanding (MOU) between the capital market supervisory agency (BAPEPAM) and the National Syariah Board of Indonesian Council of Ulama (DSN-MUI). However, the instrument of Islamic capital market has actually been popular since 1997, precisely when PT Danareksa Investment Management launched a Shariah Danareksa on July 3, 1997. Further development, present Islamic bonds pioneered by PT Indosat in early September 2002, the issued Islamic bonds worth Rp. 175 Billion. This step was followed by Indosat, Muammalat, and Bank Syariah Mandiri (BSM) then followed by PT Berlian Laju Tangker which published emissions worth Rp. 175 billion on May 28, 2003. PT Bank Syariah Bukopin issued Mudharabah bonds on July 10, 2003 with a value of emissions of Rp. 45 billion.

The purpose is to facilitate the investors who want to invest according to the Islamic principles. In addition, Jakarta Islamic Index (JII) also intended as a benchmark for calculating the performance of syariah-based shares investment. Hopefully, through this index, we can develop the investor's trust on equities. JII is the index which contains 30 stocks that fulfill some criteria to be listed in JII. The criteria used in choosing the shares in JII are determined by the Syariah Council and PT Danareksa Invesment Management.

Besides the criteria above, the process of shares selection in the JII by the Jakarta Stock Exchange (JSX) also considers the aspects of liquidity and financial condition of the issuers, such as:

(1) The business activity of the issuer is not against the Islamic law and the share is listed in the exchange for more than three months (except if the shares are included in the 10 biggest capitalization lists);

(2) The company's annual financial report or its mid-year financial report has the ratio of obligation assets for maximum of 90%;

(3) Shares included in the top 60 are based on its last year average of market capitalization;

(4) Shares included in the top 30 are based on its last year average of liquidity in regular market.

Re-evaluation will be held every six months by considering the index components at the beginning of January and July on each year. The changes in issuer's line of business will be monitored all the time based on the public data available.

Literature Review

The authors found several researches about the capital market efficiency. A research was done by Jones and Bacon (2007), the title of which was *Surprise earning announcement: A test of market efficiency*. This study tested the effect of the announcement of third positive quarter earnings surprises on stock price's risk adjusted rate of return for 50 randomly selected firms from the randomly selected dates of October 17, 2006, November 10, 2006, and November 13, 2006. This study analyzed 11,183 observations by using standard risk adjusted event study methodology with the market model on 50 public trading firms. In conducting this event study, appropriate statistical tests for significance were conducted. Results show a significantly positive market reaction just prior to the firms' positive surprise earnings announcements. The results from these tests also support semi-strong form market efficiency, which states that a market is semi-strong efficient if it reflects all available information.

When a firm announces positive surprise earnings, investors appear to perceive a positive signal about the firm's future which causes an increase in the firm's stock price. This study's results suggest that positive surprise earnings announcements do send a positive signal about the profitability and future success of a firm. As a result of this positive signal, stock prices did increase and the market reacted quickly to available information (Marshall & Bacon, 2005).

Eugene Fama also makes research about market efficiency, long-term return, and behavioral finance. The conclusion of this study is that the recent financial literature seems to produce many long-term return anomalies. Subjected to scrutiny, however, the evidence does not suggest that market efficiency should be abandoned. Consistent with the market efficiency hypothesis that the anomalies are chance results, apparent overreaction of stock prices to information is about as common as under-reaction. And post-event continuation of pre-event abnormal returns is about as frequent as post-event reversal. Most important, the long-term return anomalies are fragile. They tended to disappear with reasonable changes in the way they were measured (Fama, 1998).

Another EMH is also done by Khan and Ikram (2010) that they test the efficiency of the Indian Capital Market in its semi-strong form of EMH. In that research, the efficiency is tested in relation to the impact of Foreign Institutional Investors (FIIs) largely on the Indian capital market. Monthly averages of National Stock Exchange (NSE) and Bombay Stock Exchange (BSE) and Monthly FII's net investment have taken over the period from April 1, 2000 to April 30, 2010 in order to test the efficiency of Indian capital market. Karl-Pearsons' product moment correlation coefficient (simple correlation) and linear regression equations have been used to analyze and determine the degree and direction of the relationship between the variables involved. The results suggest that the FIIs do have a significant impact on Indian capital market, which leads to the conclusion that Indian capital market is semi-strong form efficient.

Raja, Sudhahar, and Selvam (2009) conducted study about semi-strong form efficiency. This study has empirically examined the informational efficiency of Indian stock market with regards to stock split announcement released by the information technology companies. The result of the study showed the fact that the security prices reacted to the announcement of stock splits. The reaction took place for a very few days surrounding Day 0, remaining days it was extended up to +15. Thus one can conclude from the forgoing discussion that the Indian stock markets in respect of IT (Information Technology) companies in general are efficient, but are not perfectly efficient to the announcement of stock split. This can be used by investors for making abnormal returns at any point of the announcement period.

Methodology

There are no specific methodologies for testing the efficiency in Islamic capital market. Therefore this research used methodology that had been used by previous researchers, i.e., Raja, Sudhahar, and Selvam (2009). This research can be categorized as exploration research in Islamic capital market and this study uses market adjusted model and mean adjusted model.

Hypothesis of the Study

(1) This study will test tree hypothesis;

(2) Dividend announcement and contained information are not relevant for the valuation of the Islamic stock which listed in JII;

(3) Dividend announcement has no significant influence on the stock price of JII companies;

(4) Islamic capital market which is acted for by JII is not efficient in the form of semi-strong efficiency.

Sample Selection

This study focuses on the islamic capital market which has been represented by the JII. Totally, JII included 30 stock companies which always re-evaluated in every six months. This study intends to cover all the listed companies in JII between June 2010 and November 2010. From all comapnies listed in that period, only 28 companies which satisfy the following criteria were selected:

(1) The stock of company which had been listed in JII between June 2010 and November 2010;

(2) The company which paid dividend in that period;

(3) Availability of data, including data return of company in estimate periods.

Sources of Data

All information regarding market price of stock, daily return of stock, dividend announcement, and value of JII were obtained from “bloomberg”, Indonesia Composite Index. Other relevant information were also obtained from the website www.idx.co.id, books and journal.

Tools Used for the Analysis

(1) Daily return

The daily returns were calculated for both individual securities as well as Market Index by using the following equation:

$$R_{i,t} = \frac{P_t - P_{t-1}}{P_{t-1}} \times 100 \quad (1)$$

Where,

$R_{i,t}$ =Return security *i* at time *t*

p_t =Price of security at time *t*

p_{t-1} =Price of security at time *t*-1

(2) Security Return Variability (SRV)

SRV is used to demonstrate the reaction of the market. Symbolically, the model is:

$$SRV_{i,t} = \frac{AR^2_{i,t}}{V(AR)} \quad (2)$$

Where,

$SRV_{i,t}$ = Security returns variability of security *i* at time *t*;

$AR^2_{i,t}$ = Abnormal return on security *i* at time *t*;

$V(AR)$ = Variance of abnormal return during the announcement period.

Abnormal return is calculated by the two main methods in this research.

For mean adjusted model, the equation is as below:

$$AR_{i,t} = R_{i,t} - ER_{i,t} \tag{3}$$

Where,

$AR_{i,t}$ = Abnormal return on security *i* at time *t*;

$R_{i,t}$ = Actual return on security *i* at time *t*;

$ER_{i,t}$ = Expected return on security *i* at time *t*.

$$ER_{i,t} = \frac{\sum_{j=t1}^{t2} R_{i,j}}{T} \tag{4}$$

Where,

$ER_{i,t}$ = Expected return on security *i* at time *t*;

$\sum_{j=t1}^{t2} R_{i,j}$ = Actual return on security *i* in the estimate periods;

T= Time of estimates periods, which in this study use 60 days as an estimate period.

For market adjusted model, the equation is as below:

$$AR_{i,t} = R_{i,t} - R_{m,t} \tag{5}$$

Where,

$R_{m,t}$ = Actual return on market index which is represented by JII, an Islamic index in Indonesia, at time *t*.

The $SRV_{i,t}$ calculated for all the dividend announcements are averaged to find the Average Security Return Variability (ASRV) by using the equation, as follow:

$$ASRV_t = SRV_{i,t} \times \left(\frac{1}{n}\right) \tag{6}$$

Where,

$ASRV_t$ = Average security return variability (ASRV) at time *t*;

$SRV_{i,t}$ = Security returns variability of security *i* at time *t*;

n= Number of dividend announcement in the sample.

(3) Average Abnormal Return (AAR)

AAR is calculated by the following equation:

$$AAR_t = \frac{1}{n}\sum_{t=1}^{n} AR_{i,t} \tag{7}$$

Where,

AAR_t =Average abnormal return on day *t*;

$\frac{1}{n}\sum_{t=1}^{n} AR_{i,t}$ = Abnormal return on security *i* at time *t*.

(4) Cumulative abnormal return

Cumulative AAR is calculated as:

$$CAAR_k = \sum_{t=1}^{k} AAR_t \tag{8}$$

Where,

$CAAR_k$ = Cumulative average abnormal return for the k^{th} period;

$\sum_{t=1}^{k} AAR_t$ = Average abnormal return of sample dividend at time *t*.

(5) *T*-test

To test the significant reaction in security prices ($ASRV_t$) is tested by using the *t*-statistics as follows:

$$t_{stat} = (ASRV - 1) \times \frac{\sqrt{n}}{s} \tag{9}$$

Where, *n* is the number of quarters in the sample and *s* is the standard deviation of abnormal returns.

To test the significance of the AAR_t using the *t*-test as follows:

$$t_{stat} = AAR_t \times \frac{\sqrt{n}}{s} \tag{10}$$

Where, AAR_t is the AAR at time *t*, *n* is the number of dividend in sample, and *s* is the standard deviation of AAR.

Research Finding

Analyses of ASRV From the Dividend Announcement

As described in the previous chapter, this study will use two main approaches in order to analyze the reaction of market from the dividend announcement, namely, mean adjusted model and market adjusted model.

Table 1 describes the value of ASRV and *t*-value of dividend announcement of the stock listed in Islamic Index in Indonesia based on the mean adjusted model. From this table, it can be understood that the ASRV on Day 1 after announcement was 1.19 and the highest value of ASRV during 31 days in the announcement periods was on Day -6 which recorded 1.92. During the post-dividend announcement periods there were only two days that the ASRV was greater than one i.e., during Day 1, and Day 3, and the other day, the ASRV value was lower than one. Meanwhile, during pre dividend announcement there were several days that ASRV yielded a value greater than one, i.e., during Days -14, -13, -12, -11, -10, -9, -8, -6, -5, -4, -3, and -2 with a value of 1.51, 1.77, 1.74, 1.71, 1.05, 1.04, 1.46, 1.92, 1.33, 1.04, 1.40, and 1.34 respectively. It showed that the market

positively received information before the dividends were announced. Investors were interested in dividend announcement and gave a high expectation to dividend. Therefore, the ASRV were more than one. However, after dividend announcement, many ASRV value were below one indicating that investor lost their expectation and they had not gotten important information from the dividend announcement.

Table 1

Result of ASRV and T-value Based on the Mean Adjusted Model

Day	ASRV	*T*-value
-15	0.736476	-0.4334
-14	1.510161	0.615079
-13	1.778506	0.723359
-12	1.747264	0.686525
-11	1.718642	0.551935
-10	1.05844	0.094034
-9	1.045883	0.070633
-8	1.467775	0.524335
-7	0.912183	-0.13661
-6	1.928334	0.859247
-5	1.335282	0.404335
-4	1.041297	0.061545
-3	1.408031	0.554908
-2	1.346824	0.458086
-1	0.916691	-0.12482
0	0.579326	-0.70653
1	1.199757	0.223813
2	0.739822	-0.43988
3	1.082909	0.091004
4	0.941878	-0.08573
5	0.644426	-0.74934
6	0.640569	-0.7656
7	0.777976	-0.43282
8	0.747517	-0.52112
9	0.573078	-0.88154
10	0.796343	-0.36992
11	0.766664	-0.48163
12	0.542659	-0.87562
13	0.874114	-0.23507
14	0.759722	-0.43491
15	0.2903	-2.46958

Although the ASRV value was more than one, the *t*-value showed that ASRV was significant at level of 5% on Day +15 only. Most of the ASRV in 31 days were not statistically significant. It has useful meaning that the dividend announcement in the Islamic capital market was not relevant for valuation of the security in that period. Hence, the hypothesis entitled “dividend announcement contained information which was not relevant from the valuation of stock in Islamic capital market” was mostly accepted.

The ASRV and *t*-value based on the mean adjusted model show that hypothesis one in this study is

accepted. It means that in the dividend announcement, Islamic capital market is not efficient in the context of information content. The same result is also explained by the result of ASRV and *t*-value based on the market adjusted model as in Table 2. During the pre-announcement, the values of ASRV were mostly more than one, i.e., Days -14, -13, -11, -8, -7, -6, -5, -3, -2 and -1 with the ASRV at 1.51, 1.61, 1.29, 1.34, 1.21, 1.93, 1.43, 1.08, 1.35, and 1.16 respectively. Identical condition also happened during post dividend announcement when there were only two days which ASRV value was more than one, i.e., Day 1 and Day 10.

Table 2

Result of ASRV and T-value Based on the Market Adjusted Model

Day	ASRV	*T*-value
-15	0.962694	-0.06935
-14	1.516115	0.817995
-13	1.61516	0.652769
-12	0.91798	-0.10662
-11	1.299743	0.358733
-10	0.851155	-0.35762
-9	0.626917	-0.90422
-8	1.349175	0.465074
-7	1.212469	0.385299
-6	1.938668	0.948636
-5	1.439921	0.615088
-4	0.947765	-0.08734
-3	1.088001	0.161077
-2	1.355187	0.58057
-1	1.16586	0.267734
0	0.746841	-0.51077
1	1.166682	0.240874
2	0.864049	-0.27701
3	0.646496	-0.72106
4	0.628272	-0.86145
5	0.554339	-1.24644
6	0.660388	-0.78346
7	0.719448	-0.75991
8	0.272951	-2.86767
9	0.585685	-1.08642
10	1.164718	0.337613
11	0.648077	-0.91089
12	0.539239	-1.58198
13	0.739579	-0.59417
14	0.826773	-0.40277
15	0.442875	-1.78303

In addition, from the *t*-value perspective, only Day 8 shows significant result of ASRV. It means that similar result and evidence show that most of ASRV is not significant. The market adjusted model is strengthening the previous result which accepts hypothesis entitled “dividend announcement contained information which was not relevant from the valuation of stock in Islamic capital market”.

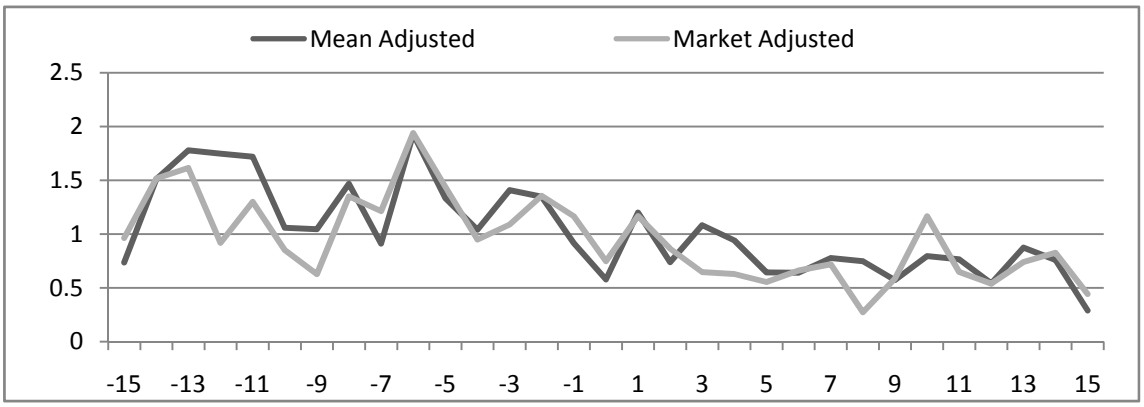

Figure 1. ASRV mean adjusted and market adjusted models.

The above Figure 1 shows the ASRV of dividend announcement in JII which is based on the mean adjusted model and market adjusted model. It is clear that there are sharp variation in the ASRV on Days -9, -8, and -6. The peak of ASR value is on the Day -6. This variation is followed by minor type in the post-dividend announcement period.

Analysis of the AAR From the Dividend Announcement

Table 3 shows the analysis of AARs on mean adjusted along with *t*-test for dividend announcement of Islamic capital market. From *t*-value in the table, it is clearly understood that there are significant abnormal returns almost all the day, except Days -7, 3, 6, 9, and Day 14. Most of the day either pre-or post-dividend announcement were significant i.e., significant at the level of 0.05%. It is clear *t*-test analysis shows the existence of abnormal return during the announcement periods. The values of AARs varies from -0.85 to 1.12 during the pre-dividend announcement. The highest AAR in the pre-announcement is on Day -11, followed by Day -13 with the AAR 0.667. The interesting case from this table, AAR shows almost negative. This indicates that investor gets negative information during the pre-dividend announcement. From Day -15, the AAR is negative and continued until Day -1 before dividend is announced.

Table 3

Result of AAR and T-value Based on the Mean Adjusted Model

Day	ARR	*T*-value
-15	-0.54971	-5.26052
-14	-0.83424	-7.98339
-13	0.667582	6.388508
-12	0.261386	2.501362
-11	1.124818	10.76408
-10	-0.2492	-2.38472
-9	-0.84142	-8.05208
-8	0.279911	2.678639
-7	0.029389	0.281244
-6	-0.16344	-1.56402
-5	-0.42343	-4.05208
-4	-0.39449	-3.77515
-3	0.7183	6.873858
-2	0.303829	2.907524

(Table 3 continued)

Result of AAR and T-value Based on the Mean Adjusted Model

Day	ARR	*T*-value
-1	-0.46481	-4.44803
0	-0.32555	-3.11542
1	-0.9726	-9.30738
2	0.222614	2.130334
3	-0.08846	-0.84654
4	0.270193	2.585643
5	-0.58945	-5.64085
6	0.015957	0.152704
7	-0.70948	-6.78944
8	0.287675	2.752941
9	-0.09763	-0.93427
10	-0.59855	-5.7279
11	0.65275	6.24657
12	-0.83528	-7.99326
13	-0.85149	-8.14846
14	0.018404	0.176115
15	-0.90915	-8.70022

Negative abnormal return also occurs in the post-dividend announcement. Most of the days after dividend announcement have negative AAR from Day 1 to Day 15. It explains that investors give negative reaction to the dividend announcement from the company which list in JII. In the post-announcement, the value of AAR is significant at the level of 0.05% on Days 6, 9, and 14. It reveals the fact that the announcement of dividend meets significant reactions in the security price of sample JII companies. Therefore, the second hypothesis entitled “dividend announcement has no significant reaction in the security prices of companies which listed in Islamic index” is rejected.

Testing of abnormal return based on the market adjusted model is also conducted in order to find a convincing result. Table 4 explains that most of days in the dividend announcement periods note a significant abnormal return. During pre-announcement day, there are three days which have not significant t-value: Days -15, -12, and -6. It is clearly understood that investor has got information before the dividend was announced. However, the above AAR shows variation value from negative ARR till positive AAR. It means that before announcement period, investor still see uncertainty information of dividend that will be paid by the companies. Investor cannot get a clearly information about the dividend.

Table 4

Result of AAR and T-value Based on the Market Adjusted Model

Day	AAR	*T*-value
-15	-0.00478	-0.04686
-14	-0.85288	-8.36441
-13	0.678458	6.653817
-12	-0.02774	-0.27208
-11	0.911951	8.943742
-10	0.354545	3.477117
-9	-0.59443	-5.8297

(Table 4 continued)

Result of AAR and T-value Based on the Market Adjusted Model

Day	AAR	*T*-value
-8	-0.31613	-3.10039
-7	-0.10474	-1.02723
-6	0.072813	0.714098
-5	-0.70165	-6.88128
-4	0.36291	3.559151
-3	0.345158	3.385051
-2	1.005328	9.859522
-1	-0.18733	-1.83724
0	-0.59345	-5.82012
1	-1.41547	-13.8819
2	0.326596	3.203018
3	0.040931	0.401419
4	-0.04433	-0.43479
5	0.018544	0.181865
6	-0.36467	-3.5764
7	-0.02045	-0.20056
8	0.179039	1.755886
9	0.208717	2.046946
10	-0.5813	-5.70093
11	0.773196	7.582942
12	-0.56906	-5.58094
13	-0.45845	-4.49615
14	0.089905	0.88172
15	-0.55723	-5.46488

The negative AAR was continued in the post-announcement period. The highest negative AAR in the post-announcement period was recorded on the Day 1 that AAR is -1.41, and Day 1 was the highest negative AAR during 31 days. In addition, *t*-value also describes that most of the post-announcement periods are significant at the level of 0.05%. It is clearly understood that the second hypothesis entitled “dividend announcement has no significant reaction in the security prices of companies which listed in Islamic index” is rejected. In similar, that Islamic capital market which represented by JII is not efficient.

Figure 2 graphically describes the AAR of the dividend announcement of both mean adjusted model and market adjusted model. From the below Figure 2, it is obviously understood that there has been significant reaction in the security prices of sample JII companies. The AAR value is quite similar between mean adjusted model and market adjusted model, it can be seen from the fluctuation pattern during 31 days of announcement period.

This result explains that Islamic capital market is not efficient in the form of semi-strong efficiency. It is indicated by the sharp fluctuation of AAR. It can also be concluded that the market is using the dividend announcement for valuation of stock in the Islamic capital market. This fact gives evidence that Islamic capital market should conceptually be more efficient, but the information cannot be accepted by the market in balance. If the Islamic capital market was efficient, there would be no abnormal returns during the announcement of dividend, because the market has got the information, no asymmetric information and therefore no investor can

get abnormal return from the dividend event.

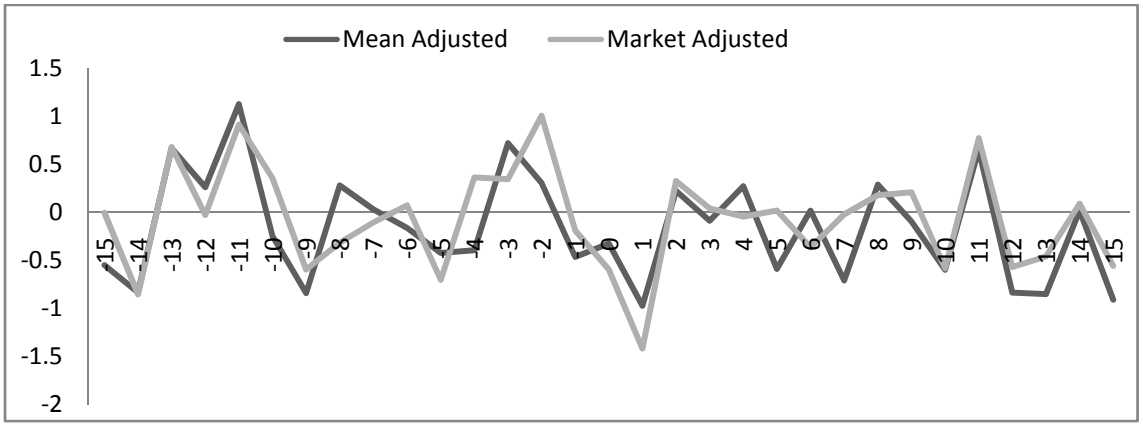

Figure 2. AAR mean adjusted and market adjusted model.

Cumulative Abnormal Return

Figure 3 shows the curve of cumulative AARs of share price during dividend announcement based on the mean adjusted and market adjusted model. The curve of CAAR for dividend announcement fluctuated violently during the announcement period of 31 days. It is clearly understood from Figure 3 that the curve of CAAR for dividend announcement is rising and falling steeply. This fluctuation happens for both mean adjusted and market adjusted model. It is clear that the Islamic capital market is represented by JII reactions according to the information content of dividend announcement.

Figure 2 is describing the graph form of AAR. In addition, CAAR of shared price dividend announcement is given in Table 5. On the day of announcement (Day 0), the value of CAAR based on the mean adjusted model was -0.86, while the value of CAAR during the pre-announcement period was ranged from -1.38 to 0.66. Moreover, the highest value of CAAR during the pre-announcement period was recorded on Day -14 which at -1.38 followed by days -4 and -13. The values of CAAR during these days were -1.09 and -0.71 respectively. During the post-announcement period, the value of CAAR ranged from -0.86 to -5.04. The highest cumulative abnormal return during the post announcement period was recorded on Day 15 followed by Days 13, 14, and 12 with CAAR value of -5.04, -4.15, -4.13, and -3.30.

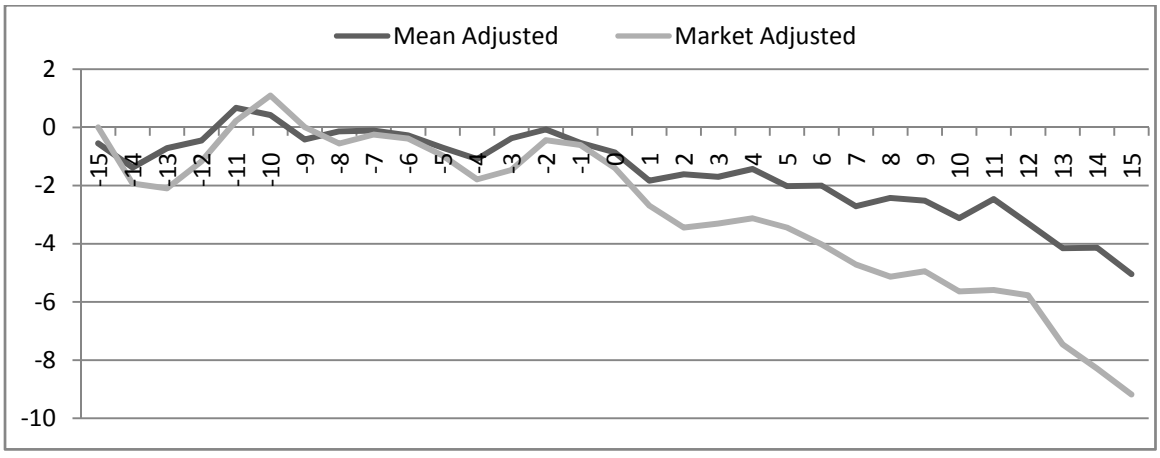

Figure 3. Curve of cumulative AAR mean adjusted and market adjusted model.

Table 5

Cumulative AAR Mean Adjusted and Market Adjusted Model

Day	Mean adjusted	Market adjusted
-15	-0.54971	-0.00478
-14	-1.38395	-1.93366
-13	-0.716368	-2.100318
-12	-0.454982	-1.17135
-11	0.669836	0.214854
-10	0.420636	1.090472
-9	-0.420784	-0.000148
-8	-0.140873	-0.561657
-7	-0.111484	-0.252357
-6	-0.274924	-0.386408
-5	-0.698354	-0.973278
-4	-1.092844	-1.791198
-3	-0.374544	-1.467388
-2	-0.070715	-0.445259
-1	-0.535525	-0.60624
0	-0.861075	-1.3966
1	-1.833675	-2.69475
2	-1.611061	-3.444736
3	-1.699521	-3.310582
4	-1.429328	-3.128849
5	-2.018778	-3.448106
6	-2.002821	-4.021599
7	-2.712301	-4.715122
8	-2.424626	-5.136927
9	-2.522256	-4.946882
10	-3.120806	-5.643062
11	-2.468056	-5.588862
12	-3.303336	-5.771392
13	-4.154826	-7.458162
14	-4.136422	-8.291248
15	-5.045572	-9.181994

This study also tests CAAR based on the market adjusted model in order to make comparison result with mean adjusted model. The main purpose is to find greater reason to make a conclusion. Table 5 shows that by using the market adjusted model, CAAR during the announcement periods also vary sharply with the most of the CAAR values which are negatives. In the pre-dividend announcement, the highest CAAR was on Day -13, followed by Days -14, -4, and -3 with the CAAR -2.1, -1.9, -1.7, and -1.4 respectively, on the announcement day (Day 0), the CAAR was -1.396. In cumulative, the CAAR increases sharply until Day 15's post-announcement. It indicates that there is a high abnormal return which market gives a negative response with the dividend announcement. This result explains that Islamic capital market whose operation based on Shariah rule is not efficient.

Conclusions

This study concludes that the Islamic capital market in this study using the JII is not efficient in

information. It can be seen in the first test that dividend announcements are not eligible to serve as an important consideration in decisions regarding the stock price at the JII. This is evidenced by *t*-test, where the mean adjusted model and market adjusted model show that *t*-test result is not significant. It means that the stock price occurred has not been able to reflect a strong relationship with the real conditions that exist within the company.

The second conclusion of this study is the magnitude of abnormal return suggests that the market still has symptoms of asymmetric information. Symmetric information will enable market participants to make decisions quickly and appropriately, so those stock prices will rapidly develop an adjustment. Therefore, this will not cause the occurrence of abnormal return. This is very unfortunate because the Islamic capital market should be efficient in information. Hence, information transparency could create a fair and a reasonable price in accordance with the real condition of the company's stock issuance.

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