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THE EFFECT OF RAMADAN ON SHARIA CAPITAL MARKET
IN INDONESIA AND MALAYSIA DURING THE PERIOD OF 1435 H - 1437 H

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Abstract
This study is aimed at examining whether the prevalent condition happening in Indonesia and Malaysia during Ramadan months has an impact on Sharia stock exchanges in both countries. In other words, this study is addressed to prove whether there is a Ramadan anomaly / Effect of Ramadan on the Sharia capital markets in Indonesia and Malaysia. The study was conducted in the Indonesian Stock Exchange by the unit of analysis, using the market return of The Indonesian Sharia Stock Index (ISSI) and in the Malaysian Stock Exchange using FTSE Bursa Malaysia Emas Shariah Emas Index (FBMS). The periods of the study started from 1435 H to 1437 H. The analytical equipment which was used is one way ANOVA to examine differences between return of Ramadan and that of outside Ramadan. Meanwhile, to test the different market return in the month of Ramadan in the Indonesian and Malaysian Sharia capital markets, Mann-Whitney U test was occupied. In conclusion, there is no return difference in Ramadan and that in outside Ramadan in the Sharia capital markets in both Indonesia and Malaysia. This proves that there is no Ramadan anomaly in the Sharia stock exchange. Similarly, a test to compare the Sharia stock market return in the Indonesian Stock Exchange and Malaysian Stock Exchange also shows no significant differences, although the return market in the Indonesian Sharia stock market is higher during the study period.

Keywords: Effect of Ramadan, Return, ISSI, FBMS
Introduction

The efficient capital market will show real stock prices, as well as actual condition of the capital markets. According to Thaler (1987), an efficient capital market predicts that safe stock prices have to follow random walk movement patterns. Therefore, to predict tomorrow’s stock prices is based on the information on today's prices, so the stock change is a ‘surprise’ in nature. Referring to the hypothesis of efficient capital market, markets will react quickly to relevant new information, so that investors will not earn abnormal returns consistently.

Some researchers have different opinions regarding the efficient capital market hypothesis. They found particular anomalies in the capital market as a result of inefficiencies in the process of absorption of new information by investors. In the last few years, investors recorded that there was an irregularity condition in the stock market, so that they could earn additional profit (Hamed Akrami, 2012). According to Rita (2009), anomaly in a capital market occurs when stocks react to conditions which are not included in the concept of efficient markets. There are some anomaly forms in the capital markets, one of which is seasonal or calendar anomaly. The calendar anomaly takes several forms, including Holiday Effect. One or more important holidays in calendar contains Holiday Effect, Monthly effect, January effect, and Religious Holiday Effect. The result of the study conducted by (Josef Lakonishok, Winter, 1988 ), ( Pettengill, Spring 1989 ) and ( Ariel, 1990 ) who did researches in American capital markets, provided higher return results during the trading periods before holiday. Another study conducted by ( Chan,1996 ) showed that the return before religious holidays tended to be higher than any other holidays.

Studies on Ramadan anomaly in the stock exchanges have been done by earlier researchers. The study conducted by (Hamed Akrami, 2012) showed there was a significant abnormal return difference before and after Ramadan in Tehran Stock Exchange. Whereas, (Seyyed, September 2005), who examined the Ramadan effects in Saudi Arabian capital markets found decreasing systematic pattern results during Ramadan but the changes were not significant. The study conducted by (Mustafa 2008) in the Karachi Pakistani stock exchanges found the results of market return differences during Ramadan. The study conducted by (Frantisca Mayarina SD, 2014) found the different average abnormal return in the different periods of Ramadan. Meanwhile, the study conducted by (Rachmawati 2005), (Aprida Rusmayanti, 2016) indicated that there was no Ramadan and Eid effect in the Indonesian capital market.
Indonesia and Malaysia are two countries in which most of the citizens are Moslems, therefore, Ramadan and Eid Fitri are usually welcomed enthusiastically. There are some similarities of the two countries in celebrating Ramadan, for example, in terms of consumption patterns, the phenomena of "shock market" or "Ramadan market" appear in societies to provide *fasting-break* and *sahur* with typical dishes of each country and region. Another tradition before Eid is going back-home (*mudik*) or back to the village (*pulang kampong*) in Malay. In Indonesia, on Eid’s customs, people wear new clothes, meanwhile in Malaysia, they prefer wearing traditional clothes namely *Baju Melayu* or *Baju Kurung*. In both in Indonesia and Malaysia, the first day of Ramadan is usually decided as a national holiday, and the end of Ramadan or the Eid’s holidays are usually longer. Similarly, the community activities in the fields of social and religious affairs are also livelier. The *Ramadan effect* will give a different effect for capital market participants.

Based on the various phenomena and inconsistencies in the results of the studies, a study on whether or not there are Ramadan effects or anomalies in Sharia capital markets in Indonesia and Malaysia during the month of Ramadan was needed. The analysis units which were used were the Indonesian Sharia Stock Index (ISSI) and FBMS (FTSE Malaysian Sharia Gold Stock Exchange Index). According to Boudreaux in (Pujiharjanto 2010), the calendar effects are more easily detected with a market index rather than stock prices. Studies using another stock price index have been done in several times, however there was not much to examine whether there are anomalies of Ramadan in the Sharia capital markets. Indonesia and Malaysia which have a Moslem majority population are huge market potentials for the advancement of Sharia finances, including Sharia capital markets. In terms of Sharia stocks numbers, in the Malaysian Stock Exchange during 2012, there were 817 stocks up, but fell in 2013 to 650. Meanwhile, in Indonesia whose number was fewer, but its trend has increased, starting from 302 stocks to 313 in 2013

**Theoretical Review and Hypothesis Development**

**Capital Market Efficiency**

An efficient market, which reflects all information in the marketplace can be published quickly and accurately (Hartonno, 2009). In an efficient market, the price flow of marketable securities of each company is relevant, and in an efficient market, the prices of securities reflect all available information, so that the offers of return rate are consistent on the risk level. The market efficiency tests are usually categorized in three forms, namely *weak form*
test, semi strong test and strong test. The tests in developing countries usually make use of weak and semi strong test. (Fama, 1970)

**Capital Market Anomalies**

According to (Jones, 2008), market anomaly is a series of techniques or strategies which are opposite or contrary to the concept of efficient capital markets. *Overreaction hypothesis* is the opposite reaction to normal conditions and can be an anomaly in the capital markets. Anomalies can be found in all forms of the efficient markets, but most are found in the form of semi-strong efficient markets.

There are several kinds of anomalies in the capital markets, among which are anomalous events, seasonal anomalies, company anomalies, and accounting anomalies. (Levy, 1996). Seasonal anomalies include *January effect, week-end effect, time of day, end of the month, seasonal effects, and holiday’s effect.*

According to (Zafar 2009), *seasonal effects* or seasonal anomalies show consistent and regular patterns at a certain time interval. The stock prices may either rise or fall due to seasonal effects. Investors will gain a certain abnormal return than in the other periods. It is contrary to the concept of efficient capital markets in which investors will not gain more profits in the stock market.

**Ramadan Anomaly / Ramadan Effect**

Ramadan, which is a Moslems’ religious tradition in the world may have a different impact on economy in real sectors and financial sectors. *Ramadan effect* is one form of seasonal anomalies / calendar anomalies where investors will earn a certain different return than they do outside Ramadan. The result of the study by (Hamed Akrami, 2012) in the Tehran stock exchange showed significant differences of abnormal return at the time of Ramadan, before and after Eid.

The result of the study by (Seyyed, September 2005) at the Saudi Arabia Stock Markets in six sectors being examined, namely banking, cement, electricity, agriculture, and services using weekly returns indicated a decline in volatility during the month of Ramadan, except in the electricity and agriculture sectors. However, this result was not significant, meaning that there was no Ramadan effect in the study result.

In Indonesia, the test conducted by (Syarifatul A. S, 2015), which examined the effects of Ramadan in the Indonesian Stock Exchange in *Food and Beverages* sub sector in the period of 2013 to 2014, found that the abnormal return in Ramadan did not differ
significantly from the month of Shaban and Shawwal, yet the trading volume activity (TVA) differed significantly in the month of Ramadan. Meanwhile, the study conducted by (Fransisca Mayarina SD, 2014), which examined the effects of Ramadan on ILQ 45 at the Indonesian stock exchange in 2011-2012 found that in 2012 the average abnormal return before Ramadan was greater than that after Ramadan. Whereas, in 2011 the average abnormal return before Ramadan was smaller than that after Ramadan.

Stock Return and Market Return

According to (Hartono, 2009), stock return is a result obtained by an investor on their decision to invest a certain capital in a particular company. When the gained return increases, it shows that the investor’s stock prices also increase, and all the way around. Market return shows a comprehensive market profit change that can be measured by the change of the stock price index. Systematically, the calculation of market return is calculated by the following formula:

\[ R_{it} = \frac{P_{it} - P_{it-1}}{P_{it-1}} \]

- Rit - Sharia stock index return in period t
- T - Sharia stock index return in period t
- P it - Sharia stock index in period t
- P it-1 - Sharia stock index in period t-1

The Sharia stock index which was used in this study was the Indonesian Sharia Stock Index (ISSI) as a proxy for the Sharia capital market in Indonesia, and FBMEMAS (FTSE Malaysian Sharia Gold Stock Exchange Index) as a proxy for the Sharia capital market in Malaysia.

Sharia stock and Sharia Stock Index

Sharia stock is an evidence of a capital enclosure into a company, which does not violate Sharia principles. According to the provisions of the Financial Services Authority (FSA), the first criterion for companies to be counted for Sharia stocks is to be able to firstly include in constituent ISSI (Indonesian Sharia Stock Index). The selection process conducted by the FSA, namely, first, the issuer does not conduct transactions which are prohibited in Sharia
law and listed in the Indonesian Stock Exchange. In addition, the FSA also views from the financial statements side. The ratio of interest-based debt compared to the total assets is not more than 45%. Also, the non-halal income ratio compared to the total revenue is 10% in maximum. If these conditions are fulfilled, the issuer can then be included in the category of Sharia stocks. ISSI constituents are reviewed every six months, on May and November.

In Malaysia, the provisions of Sharia stocks consist of 2 layers. First, the stocks which are categorized as pure stocks, of which activities are using Sharia principles. Second, the stocks whose activities are according to Sharia principles, but there are other activities which are mixed up and not appropriate to the Sharia principles. For the second-layer stocks, there are some additional criteria, such as a company must have a good image in a community, the company activities which do not fit with Sharia principles are very small in the portion, the benchmark activities whose haram status clarity should not exceed 5%, such as gambling, liquor, pork and the like.

Another activity which has served the common good, but may also be against Sharia principles, such as hotel businesses. The stock trading business should not exceed 20%. Then the debt ratio to total assets of the company is less than 33%. In Malaysia, the Sharia Index, which was firstly launched was the Kuala Lumpur Stock Exchange (KLSI). In January 2007, the Malaysian stock exchange was in collaboration with FTSE Group and formed a new Sharia index, which is FTSE Malaysian Sharia Gold Stock Exchange Index. KLSI was then non-activated on November 1st, 2007. In order to meet the increasing demand of local and foreign investors, the Malaysian exchange launched the FBM Hijrah Sharia Index, which consisted of 30 biggest Sharia companies in FBMEMAS which were filtered by Yasar, Ltd and the effect commission of the Sharia Advisory Council (SAC)

**Hypothesis Development**

**H1:** There is a difference in stock returns during Ramadan and outside Ramadan in the Indonesian Sharia Stock Index (ISSI)

**H2:** There is a difference in stock returns during Ramadan and outside Ramadan in the FTSE Malaysian Sharia Gold Stock Exchange Index (FBMS)

**H3:** There is a difference in Ramadan return at the ISSI and FBMS

**Research methods**

This study is an empirical research trying to prove whether or not there are differences in market return in the month of Ramadan and that in other months based on the Sharia
calendar. The unit of analysis in this study is the data taken from the daily trading of the Indonesian Sharia Stock Index (ISSI) and the FTSE Malaysian Sharia Gold Stock Exchange Index (FBMS) during the period of 1435 H - 1437 H or if it is based on the calculation of the Gregorian calendar, during the period of 4 November 2013 - October 2, 2016. The data were obtained from the website google finance and www.investing.com.

The test was done using descriptive statistics, then the homogeneity and normality test were done as well. To see the return differences during Ramadan and outside Ramadan, one way ANOVA test was used. Meanwhile, to examine the Ramadan return differences in Malaysia’s and Indonesia’s capital markets, Wilcoxon Mann-Whitney U was conducted.

**Descriptive analysis**

The descriptive statistic of the returns during Ramadan and outside Ramadan in the Indonesian Sharia Stock Index (ISSI) and Malaysian (FBMS) in the period of 1435 H - 1437 H is described in the following table:

<table>
<thead>
<tr>
<th></th>
<th>ISSI</th>
<th>FBMS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean (%)</td>
</tr>
<tr>
<td>Ramadan months</td>
<td>59</td>
<td>0.1369</td>
</tr>
<tr>
<td>Outside Ramadan Months</td>
<td>648</td>
<td>0.0197</td>
</tr>
<tr>
<td>Total</td>
<td>707</td>
<td>0.0295</td>
</tr>
</tbody>
</table>

Source: Data Processing Results, 2016

From the table above, it can be seen that during the study periods, the amount of 707 period data were obtained, with the Ramadan period of 59 days in the Indonesian capital market. Meanwhile, in the Malaysian capital market, it gained a total number of 720-day periods, and Ramadan for 3 years in Malaysia was 61 days. This shows that the transaction periods in Malaysia were more than those in Indonesia. Whereas, from the return produced, both at the ISSI and the FBMS, shows the average returns were higher in the month of Ramadan than those in outside Ramadan. The average returns in Indonesia were higher, amounted to 0.1369%, while those in Malaysia were 0.00926%.
The Test of Return Difference During Ramadan and Outside Ramadan Months

The test of return difference during Ramadan and the outside Ramadan month was done by using One Way Anova, but it was preceded by conducting homogeneity and normality test. The following is the result of the test for the Indonesian Sharia Stock Index (ISSI):

Table 2. Test of homogeneity of Variances

<table>
<thead>
<tr>
<th>R_ISSI</th>
<th>Levene Statistic</th>
<th>DF1</th>
<th>DF2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.486</td>
<td>1</td>
<td>705</td>
<td>.223</td>
</tr>
</tbody>
</table>

Source: Data Processing Result, 2016

The homogeneity test result shows a significant value of 0.223 which means the population variance was the same. Similarly, the normality test result generated the returns following a normal distribution. Whereas, the test result for the Malaysian Sharia Stock Index (FBMS) is as follows:

Table 3. Test of homogeneity of Variances

<table>
<thead>
<tr>
<th>return FBMS</th>
<th>Levene Statistic</th>
<th>DF1</th>
<th>DF2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.601</td>
<td>1</td>
<td>718</td>
<td>.439</td>
</tr>
</tbody>
</table>

Source: Data Processing Result, 2016

The test result for the FBMS returns also shows a significant value of 0.439, which means return variance was the same. But in the normality test result, the variables were not normally distributed. In the ANOVA test, it remained robust, although there was a deviation of normality. (Widodo, 2006)

The one way ANOVA testing result for the ISSI shows the calculated F valued 0.749 with 0.387 significance, and with an error rate of 5%. It can be concluded there was no difference between the return in Ramadan and the outside Ramadan month in the Indonesian Sharia Stock Index market S.
Table 4. One Way Anova Test at the ISSI

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>.742</td>
<td>1</td>
<td>.742</td>
<td>.749</td>
<td>.387</td>
</tr>
<tr>
<td>Within Groups</td>
<td>698 546</td>
<td>705</td>
<td>.991</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>699 289</td>
<td>706</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Data Processing Result, 2016

The test result for the FBMS return shows the calculated F value of 0.025 with 0.874 significance value and error rate of 5%. It can be concluded that there was no difference between the return in the month of Ramadan and outside Ramadan at the Malaysian Sharia Stock Index.

Table 5. One Way Anova Test at the FBMS

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>.009</td>
<td>1</td>
<td>.009</td>
<td>.025</td>
<td>.874</td>
</tr>
<tr>
<td>Within Groups</td>
<td>268 496</td>
<td>718</td>
<td>.374</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>268 506</td>
<td>719</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Data Processing Result, 2016

The absence of differences in returns during Ramadan and outside Ramadan months signifies that there is not much change in the investors’ activities in doing transaction during Ramadan. According to (Aprida Rusmayanti, 2016) who examined the difference of return on ILQ45 at the Indonesian Stock Exchange in the year of 1425 H - 1434H, the absence of difference in the returns in the month of Ramadan was due to the investors’ composition which was dominated by foreign investors and institutions. Although the number of foreign investors was only 4% of the total investors, but the foreign investment portfolio was more than 60%.

In contrast to some other Moslem countries which tend to decline in economic activity, both in Indonesia and Malaysia in Ramadan months, there have been an increasing number in some sectors. This can be seen from the presence of Ramadan bazaars which provide a variety of food and clothing, the tradition of going back home as well as the distant communication using mobile phones increases. From the descriptive data above, it is shown that the average return of the Sharia market stocks were higher in Ramadan than those in
outside Ramadan. However, the Sharia stocks consisting of various business sectors did not seem to generally receive the impact of the changes in the real sector.

The results showing no difference in the returns in Ramadan months described no behavioral changes of overall investors in the Sharia stock markets. It was only in a particular issuer which was expected to have a correlation, which was in the sectors of consumer goods or retail and telecommunication. The study showed no Ramadan anomalies which was allegedly because no investors’ sentiment on Sharia index action resulting excessive sale and purchase of shares. The Indonesian and Malaysian Sharia stock markets proved that both were efficient in the weak form.

The Test of Return Difference in Ramadan at the Indonesian and Malaysian Sharia Stock Index

The difference test was done to determine whether there are return differences in the Sharia stock markets in the month of Ramadan at the Indonesian and Malaysian exchanges, using the Wilcoxon Mann-Whitney U. Non-parametric test was done because from the normality test results, the return results were not normally distributed. The testing results are presented in the following table:

<table>
<thead>
<tr>
<th>Table 5. The Difference Test of Wilcoxon Mann-Whitney U</th>
<th>Returns in Ramadan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mann-Whitney U</td>
<td>1607.000</td>
</tr>
<tr>
<td>Wilcoxon W</td>
<td>3560.000</td>
</tr>
<tr>
<td>Z</td>
<td>-1151</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>.250</td>
</tr>
</tbody>
</table>

From the table above, it can be seen that the significance value of 0.250 was greater than the error rate of 5%, so it can be concluded that there were differences in the return markets at the Indonesian and Malaysian Sharia indexes during the month of Ramadan. If seen from the description of the data above, the average return at the Indonesian Sharia stock index during Ramadan was higher (0.1369%) compared to that at the Malaysian (0.00926) for 3 years, which was 1435 H-1437 H. However, this difference was not apparently significant. But the differences was in contrast to the results of the study by (Mifrahi, 2013),
which examined the *stock screening* based Sharia stock exchange performance at the Indonesian and Malaysian exchange in the period of 20220-2012.

The results of the research show that the Sharia stock *market performance* in Malaysia was better than that in Indonesia, but it is also not statistically significant. This means that the momentum of Ramadan in both countries did not significantly give impacts on the difference of return investors comprehensively. Although, the number of Malaysian stocks was bigger, however the growth of the Sharia stocks in Indonesia had a positive trend. The Sharia stock investors’ behaviors in Indonesia and Malaysia were not much different at both sides.

**Conclusion**

This study is aimed at examining whether the prevalent conditions in Indonesia and Malaysia during Ramadan months, such as more consumptive behaviors, long holidays and other traditions during Ramadan also give impacts on the Sharia stock markets in both countries. In other words, this study is expected to prove whether there are anomalies in Ramadan at the Indonesian’s and Malaysian’s Sharia stock exchange.

In conclusion, there is no Ramadan anomaly / *Ramadan Effect* at the Indonesian and Malaysian stock exchange. It is reflected in the testing result, saying that there is no differences in the Sharia stock *return market* in the month of Ramadan and outside Ramadan at the Indonesian Sharia Stock Index Indonesia (ISSI) in the Indonesian Stock Exchange and the FTSE Malaysian Sharia Gold Stock Exchange (FBMS) in the Malaysian Stock Exchange during the period of the year study of 1435H - 1437 H. There is not much difference in transactions during Ramadan and other months. Although there are some sectors receiving a positive impact from the momentum of Ramadan, but there are also many investors who conduct the stock sale transaction due to the increasing financial needs during Ramadan.

The study results to compare the Sharia stock market return at the Indonesian Stock Exchange and Bursa Malaysia also show no significant differences even though the market returns in the Indonesian Sharia stock markets are higher during the study period.

With the absence of the *return* differences in both stock markets, it shows that the Sharia capital markets in Indonesia and Malaysia have been efficient in the weak form.
Suggestions
For further studies, it can then be developed deeper, among which are:

1. The study can be done by comparing the month of Ramadan to the months outside Ramadan in the Sharia calendar to determine the differences in the month of Ramadan with another single month, for example, the return difference in Ramadan to Shawal, Ramadan to Shaban, etc.

2. The study can be done on certain sectors, such as consumer goods and telecommunications sectors to see the *Ramadan Effect* on certain economy sectors because the study uses all Sharia stocks, it is likely to be some hidden stocks in the calculation of the Sharia Stock Index.

3. There are still more studies on other seasonal anomalies in the Sharia capital market which is interesting to study. In the context of the anomaly on the Sharia calendar, besides *Ramadan Effect*, we can also examine the *effect of Muharam*, since in some areas, there are also a number of different traditions and customs.

BIBLIOGRAPHY


