THE 10th ISLAMIC BANKING, ACCOUNTING AND FINANCE INTERNATIONAL CONFERENCE 2022 (*i*BAF 2022)

Ramadan Effect in Indonesia Capital Market Period 2016 – 2020, What's Next?

Ratna Juwita
Faculty of Economics and Business, Universitas Indonesia (UI), Depok, 16424, Indonesia &
Jurusan Akuntansi, Politeknik Negeri Jakarta, Jl. Prof. DR. G.A. Siwabessy, Kampus Universitas Indonesia, Depok, Indonesia, 16425
Tel: +628998706005 E-mail: r_juwi@ui.ac.id, ratna.juwita@akuntansi.pnj.ac.id

Nazila Rizki Kamila
Faculty of Economics and Business, Universitas Indonesia (UI), Depok, 16424, Indonesia &
Jurusan Akuntansi, Politeknik Negeri Jakarta, Jl. Prof. DR. G.A. Siwabessy, Kampus Universitas Indonesia, Depok, Indonesia, 16425
E-mail: nazila.rizkikamila.ak17@mhsw.pnj.ac.id

Ali Masjono Muchtar
Faculty of Economics and Business, Universitas Indonesia (UI), Depok, 16424, Indonesia &
Jurusan Akuntansi, Politeknik Negeri Jakarta, Jl. Prof. DR. G.A. Siwabessy, Kampus Universitas Indonesia, Depok, Indonesia, 16425
E-mail: ali.masjonomuchtar@akuntansi.pnj.ac.id

Abstract

The purpose of this study is to find whether the Ramadan Effect exists in Indonesia capital market or not. As a country with the largest Muslim majority population in the world, Indonesia Capital Market can behave differently during the Ramadan period. To test the effect, we use the differences in Abnormal Return (AR) and Trading Volume Activity (TVA) before and during the Ramadan period 2016-2020. The type of research is an event study with a quantitative approach. The sample consists of 9 sectoral indices i.e. CONSUMER, AGRI, MINC-IND, MINING, INFRASTRUC, TRADE, FINANCE, PROPERTY, and BASIC-IND. The method used to test the hypothesis is paired sample t-test. The results of this study indicate that there is no difference in the AR before and during Ramadan, and no difference in the TVA in 2018, while in the other years there is a difference in the average trading volume activity. We conclude that there is no Ramadan effect measured AR, but there is a Ramadan effect measured with TVA in Indonesia capital market period 2016-2020. The new implication of this study is to check the Shawwal Effect.

Keywords: Ramadan Effect; Market Anomalies; IDX Sectoral; Abnormal Return; Trading Volume Activity

1. Introduction

Indonesia is a country with the largest Muslim majority population in the world. In 2021 the total Muslim population in Indonesia is 237.53 million people (Indonesia's Ministry of Internal Affairs data) or 13% of the Muslim population worldwide (worldpopulationreview.com). In Islam, investment is a muamalah activity that is highly recommended, because by investing, the assets become productive and also provide profits for these investors (Mashuri, 2018). One of the investment instruments that can be used by Muslims is a stock investment in the capital market.

In the capital market, many studies have proven that the capital market in Indonesia was not efficient because some anomalies occurred (Halari, Helliar, Power, Tantisantiwong, & Nongnuch, 2019), (Sonjaya & Wahyudi, 2016), (Białkowski & Yaghoubi, 2021). Literally, an anomaly is an abnormal condition, deviation from the usual pattern. According to (Sawitri & Astuty, 2018) market anomalies are symptoms of deviations or inefficiencies in the capital market hypothesis. We can find two types of calendar anomalies, i.e. religious related anomalies and non-religious related anomalies. An example of religious related anomalies is Ramadan effect (Halari, Helliar, Power, Tantisantiwong, & Nongnuch, 2019) (Sonjaya & Wahyudi, 2016).

During Ramadan the Jakarta Composite Stock Price Index moved higher, supported by the performance of stocks in the consumer goods, retail, and telecommunications sectors (Bisnis.com, 2019). Based on sectoral index

movement data in 2020, the index for the consumer goods sector on average increased by 9.75%, the retail sector by 2.74%, and the telecommunications sector by 9.29% (yahoo finance data 2020). In the consumer goods sector, the level of public consumption has increased, especially food and beverage consumption, which has increased two to three times. Although Muslims are required to fast in Ramadan, they are encouraged to provide the food as an iftar for those in need. In other sectors, public consumption is increased in the retail sector. People buy new clothes to prepare for Eid al-Fitr as a celebration of Ramadan fasting. In the telecommunications sector during fasting and Eid al-Fitr, the level of internet data usage increases as a result of the Ramadan Effect.

Several authors have studied Ramadan Effect that tested with abnormal return data. According to Jogiyanto (2015) abnormal return is the excess of the actual returns over normal returns. Abnormal Return is tested to determine the market reaction to an event, this is indicated by the direction of the market response that is positive or negative. Shahid, Sattar, Aftab, Saeed, & Abbas (2020), Hidayati, Maslicha, & Junaidi (2017) state that there are differences in abnormal returns during the month of Ramadan. This is due to an increase in public consumption one month before Ramadan so investors responded positively as good news. According to Shahid, Sattar, Aftab, Saeed, & Abbas (2020) Bialkowski, Etebari, & Wisniewski (2012), the life of the Muslim community when making decisions is usually influenced by religious beliefs and conditions in the month of Ramadan. A positive mood will increase positive investment also in the month of Ramadan. During the month of Ramadan, the optimistic mood of investors positively affects the value of financial markets in Islamic countries. Research conducted by Kudusia, Yusuf, & Mahmud (2020) and Faih & Nafiah (2019) stated that there is no difference in abnormal returns during the month of Ramadan. This is due to the absence of market anomalies in the Indonesian capital market during the month of Ramadan.

In addition to abnormal return, the Ramadhan Effect can also be measured or indicated by differences in the amount of trading volume. Rachmadani & Yaningwati (2013) say Trading Volume Activity is a comparison between the number of stock traded at a certain time with the number of all stock outstanding in a certain period. The amount of TVA in an event is an instrument that can be used to assess whether an event causes the demand to be higher than the supply so that the trading volume of stock increases. The stock trading volume shows the phenomenon of the Ramadan Effect from the active side of the transactions that occur. Kudusia, Yusuf, & Mahmud (2020) Faih & Nafiah (2019) stated that there is differences in Trading Volume Activity during the month of Ramadan. This is because the announcement of Ramadan contains information that can affect the difference in average trading volume activity before and after Ramadan. Meanwhile, Setiasari and Rinofah (2017) and Hidayati and Junaidi (2018) state that there is no difference in Trading Volume Activity during the month of Ramadan.

Previous study have tested Ramadan Effect in certain stock price index using individual stock price (Widyarti, Wahyudi, & Hersugondo, 2021) (Hidayati, Maslicha, & Junaidi, 2017) (Setiasri & Rinofah, 2017), (Faih & Nafiah, 2019), (Kudusia, Yusuf, & Mahmud, 2020). The other study uses the main composite index that contains all stocks in the capital market ((Al-Khazali, 2014) (Białkowski & Yaghoubi, 2021) (Halari, Helliar, Power, Tantisantiwong, & Nongnuch, 2019) (Sonjaya & Wahyudi, 2016). This study will employ all stock price indexes from different sectors in Indonesia capital market. We use index values rather than individual stock prices to weight the Ramadan effect relative to the industrial sector. The authors believe this approach will contribute to the real value of the Ramadan effect.

Based on the background that has been described, the authors conducted an event study using abnormal return and trading volume activity to see if there is a Ramadan Effect in Indonesia or not. The authors try to answer the question, are the Ramadan effect exist as measured by the difference in abnormal returns and trading volume activity before and after Ramadan in the Indonesian Capital Market?

2. Literature Review

The concept of the efficient market hypothesis (EMH) was first put forward by Fama (1970). A market is said to be efficient if no one, both individual investors and institutional investors, will be able to obtain abnormal returns, after adjusting for risk, using existing trading strategies. This means that the prices formed in the market are a reflection of existing information or "stock prices reflect all available information". When there is a distortion in predicting stock returns or prices, it can be said that there is a market anomaly that is contrary to the EMH concept (Sawitri & Astuty, 2018).

Market anomaly according to (Alteza, 2007) is the concept of efficient market deviations and stock seasonal patterns that are influenced by differences in trading days in the study of financial literature. Gumanti & Utami (2002) define market anomaly as the existence of irregularities associated with the efficient market hypothesis. Anomalies are one form of phenomenon that exists in the market. By considering market anomalies, an event can be used by investors to obtain abnormal returns.

According to Levy (1996), there are 4 (four) types of market anomalies, namely corporate anomalies, seasonal anomalies, event anomalies, and accounting anomalies (Gumanti & Utami, 2002). In seasonal anomalies, we can find two types of calendar anomalies, i.e. religious related anomalies and non-religious related anomalies. The

example of religious related anomalies are Christmas and Good Friday effects (Cadsby & Ratner, 1992), Jewish High Holy Days effects (Frieder & Subrahmanyam, 2004), or the Easter week holiday effect (Pantzalis & Ucar, 2014), and Ramadan effect (Halari, Helliar, Power, Tantisantiwong, & Nongnuch, 2019) (Sonjaya & Wahyudi, 2016). For non-religious related anomalies, we can find the holiday effect (Hood & lesseig, 2017), the January effect, Wednesday effect, and weekend effect (Schwert, 2003).

Ramadan is the ninth month of Hijri, the Muslim lunar calendar. In Ramadan, people are required to fast and only do good deeds. During Ramadan, the investor has a good mood, more optimist, and favorable health (Bialkowski, Etebari, & Wisniewski, 2012). Muslims are becoming more socially and spiritually oriented in the holy month Ramadan. With religion, people have valuable form of social support, encourages optimistic beliefs, and contributes to their happiness (Al-Khazali, 2014). With that changed behavior, return and trading activity will be different during Ramadan, (Bialkowski, Etebari, & Wisniewski, 2012), (Sonjaya & Wahyudi, 2016). Another study by different authors used firm-level or individual stock price data in certain sectors to analyze the Ramadan Effect. In the hospitality sector, Ramadan affects the sector as all restaurants were closed during the day (Halari, Helliar, Power, Tantisantiwong, & Nongnuch, 2019). In conclusion, the Ramadan Effect shows a different return and trading activity in the month of Ramadan compared to other months of the Hijr Muslim calendar.

3. Methodology and Data

The objects in this study are all indexes listed on the Indonesia Stock Exchange for the 2016-2020 period. Currently, there are 9 (nine) sectoral indexes on the Indonesia Stock Exchange. The nine indexes are CONSUMER, AGRI, MINC-IND, MINING, INFRASTRUC, TRADE, FINANCE, PROPERTY, and BASIC-IND.

Table 1. Research Sample.

Index	Sector
CONSUMER	IDX Sector Consumer Goods Industry
AGRI	IDX Sector Agriculture
MINC-IND	IDX Sector Miscellaneous Industry
MINING	IDX Sector Mining
INFRASTRUC	IDX Sector Infrastructure, Utilities, and Transportation
TRADE	IDX Sector Trade, Services, and Investment
FINANCE	IDX Sector Finance
PROPERTY	IDX Sector Property, Real Estate, and Building Construction
BASIC-IND	IDX Sector Basic Industry and Chemicals

The variables of this research consist of Abnormal Return and Trading Volume Activity. According to Jogiyanto, (2015) abnormal return is the excess of the actual return to normal return, where the normal return is the expected return (return expected by investors), thus abnormal return (abnormal return) is the difference between the actual return and the abnormal return. expected return, which is written by the formula:

$$AR_{i,t} = R_{i,t} - E(R_{i,t}) \quad (1)$$

Where,

$AR_{i,t}$ = Abnormal Return of security i on day t

$R_{i,t}$= Actual Return for security i on day t

$E(R_{i,t})$ = Expected return for security i on day t

In estimating the expected return, this study uses the market-adjusted model. The following is the formula for Market-Adjusted Model:

$$AR_{i,t} = R_{i,t} - R_{M,t} \quad (2)$$

$$R_{M,t} = \frac{JCI_t - JCI_{t-1}}{JCI_{t-1}} \quad (3)$$

Where:

$R_{M,t}$= Market Return on day t

JCI_t= Jakarta Composite Index on day t

JCI_{t-1}= Jakarta Composite Index on day t-1

Trading volume activity (TVA) is a measurement of changes in stock volume activity. TVA can be calculated by counting the ratio between the volumes of stock traded with the volume of stock outstanding (Rachmadani & Yaningwati, 2013). Here's the formula for calculating Trading Volume Activity:

$$TVA_{i,t} = \frac{Volume\ of\ stock\ traded_t}{Volume\ of\ stock\ outstanding_t} \quad (4)$$

The source of the data comes from the IDX. In this study, the authors use descriptive statistical analysis followed by a comparative statistical test. The descriptive statistic is used to provide an overview of the characteristics of the variables used in the study. To answer the research question, we have to conduct a comparative statistical test, which can be done by parametric test using Paired Sample T-Test, or non-parametric test. To ensure which method will be used in conducting a comparative test, the authors use the normality test. If the data is normally distributed, we continue with the parametric test, and if not, we continue with the nonparametric test.

4. Results and Discussion

4.1 Descriptive Analysis

The average abnormal return before and after Ramadan (see Table 2) is negative. If we compare the magnitude of the average abnormal return before and during Ramadan, it can be seen that in all year, the average abnormal return during Ramadan was bigger than the average abnormal return before Ramadan. Judging from the size of the data spread, in 2017, 2019, and 2020, the value of the standard deviation of abnormal returns before Ramadan is greater than during Ramadan. In contrast, in 2016 and 2018 abnormal returns during Ramadan were more varied than before Ramadan. In conditions before Ramadan, the smallest and largest values of abnormal returns occurred in 2019, which were -0.1341 for the smallest value and 0.1114 for the largest value. Meanwhile, in conditions during Ramadan, the smallest and largest abnormal returns are -0.0392 and 0.0482 occurred in 2018. It is quite interesting that the largest abnormal return was in 2018 when the global crisis happened.

Table 2. Abnormal Return Descriptive Statistics Results 2016-2020.

Period	Minimum	Maximum	Average	Standard Deviation
Before Ramadan 2016	-0.0309	0.0293	-0.0001	0.0084
During Ramadan 2016	-0.0263	0.0343	0.0005	0.0092
Before Ramadan 2017	-0.0233	0.0207	-0.0010	0.0084
During Ramadan 2017	-0.0206	0.0249	-0.0002	0.0069
Before Ramadan 2018	-0.0364	0.0349	-0.0003	0.0114
During Ramadan 2018	-0.0392	0.0482	0.0006	0.0115
Before Ramadan 2019	-0.1341	0.1114	-0.0004	0.0151
During Ramadan 2019	-0.0211	0.0196	-0.0002	0.0076
Before Ramadan 2020	-0.0496	0.0710	0.0003	0.0156
During Ramadan 2020	-0.0253	0.0382	0.0014	0.0136

Table 3. Trading Volume Activity Descriptive Statistics Results 2016-2020.

Period	Minimum	Maximum	Average	Standard Deviation
Before Ramadan 2016	0.0071	0.1590	0.0282	0.0182
During Ramadan 2016	0.0055	0.2757	0.0418	0.0390
Before Ramadan 2017	0.0060	0.2568	0.0482	0.0401
During Ramadan 2017	0.0059	0.2861	0.0424	0.0385
Before Ramadan 2018	0.0119	0.1337	0.0415	0.0188
During Ramadan 2018	0.0155	0.1055	0.0430	0.0181
Before Ramadan 2019	0.0007	0.2609	0.0490	0.0407
During Ramadan 2019	0.0008	0.1300	0.0426	0.0335
Before Ramadan 2020	0.0078	0.0938	0.0253	0.0131
During Ramadan 2020	0.0047	0.0462	0.0215	0.0093

If we compare the average TVA before and during Ramadan (see Table 3), it can be seen that in 2016 and 2018, the average TVA during Ramadan was greater than the average TVA before Ramadan. Meanwhile, in 2017, 2019, and 2020, the average TVA during Ramadan was lower than before Ramadan. When we look at the variation in the data, in all years except 2016, TVA before Ramadan was more varied than during Ramadan. In conditions before Ramadan, the smallest value of TVA was 0.0007 and 0.2609 for the largest value that occurred in 2019. While the smallest and largest value of TVA during Ramadan was 0.0008 occurred in 2019 and 0.2861 in 2017.

4.2 Hypothesis Testing

Based on Table 4, it can be seen that the results of normality testing using the Shapiro-Wilk method on abnormal return and Trading Volume Activity (TVA), data before and after Ramadan from 2016 to 2020 have a p-value of more than 0.05. This indicates that with a significance level of five percent the data is normally distributed. Thus, the analysis using the paired t-test method can be carried out.

Table 4. Normality Test Results.

Period	Abnormal Return (p-value)	Trading Volume Activity (p-value)	Data Distribution
2016	0.261	0.498	Normal
2017	0.300	0.080	Normal
2018	0.974	0.995	Normal
2019	0.134	0.452	Normal
2020	0.653	0.162	Normal

The test results based on the Paired T-Test for abnormal return of sectoral index for the 2016-2020 period (see Table 5) have a value of sig (2-tailed) greater than 0.05 (> 0.05) so the decision is failed to reject Ho. This means that there is no significant difference in abnormal returns before and after the month of Ramadan in 2016-2020. This result rejects the research hypothesis which states that there is a Ramadan Effect as measured by differences in abnormal returns. The results of this study can be concluded that the movement of sectoral index in the Indonesia capital market during the fasting month is not too much influenced by the changed behavior of investors such as consumption patterns. However, this is more due to the encouragement of external sentiments, such as commodity price movements, investment values, geopolitical issues, and so on.

Table 5. Abnormal Return Paired T-Test Results.

Period	t-value	p-value	Conclusion
2016	-0.629	0.265	Fail to reject Ho
2017	-0.958	0.170	Fail to reject Ho
2018	-0.719	0.237	Fail to reject Ho
2019	-0.167	0.434	Fail to reject Ho
2020	-0.724	0.235	Fail to reject Ho

The results of this study are in line with the research of Kudusia and Yusuf (2020) which stated that there was no difference in abnormal returns before and after Ramadan. This is because Ramadan occurs once a year. In addition, Rusmayanti, Yusniar, & Yuniar (2016) did not find the effect of the Ramadan effect in the Indonesia Stock Exchange. This is because the Sectoral Price Index which is used as the basis for calculating returns is quite stable and does not experience differences in returns during the month of Ramadan with months outside Ramadan.

The absence of the Ramadan Effect is also influenced by the composition of investors in Indonesia. Broadly speaking, the number of investors in the IDX is still relatively small. The Indonesia Stock Exchange is dominated by foreign investors so during the month of Ramadan in the Indonesia Stock Exchange there is no change in activity in the capital market. Foreign investors dominate the stock market in Indonesia with a securities value of 51.46% of total equity, leaving domestic investors with 48.54% (www.idx.co.id). This is different from the capital market conditions in other Muslim majority countries such as Saudi Arabia and Pakistan which are dominated by domestic investors.

Table 6. Trading Volume Activity Paired T-Test Results.

Period	t-value	p-value	Conclusion
2016	-5.183	0.000	Reject Ho
2017	1.872	0.031	Reject Ho
2018	-0.798	0.213	Fail to reject Ho
2019	3.001	0.002	Reject Ho
2020	3.962	0.000	Reject Ho

Next, we try to check the Ramadan effect measured by TVA. The test results based on the Paired T-Test on the sectoral index for the 2016-2020 period found that in all years except 2018 the significance value of the p-value was <0.05, which means that in that year there was a significant difference in trading volume activity before and during Ramadan in all years except 2018. These results support the research hypothesis which states that there is a Ramadan Effect as measured by differences in trading volume activity. This finding agrees with Kudusia and Yusuf (2020) who state that there is an influence of Ramadan as measured by the difference in the average volume of trading activity (TVA). The results of this study are in line with Faih and Nafiah's research (2019) which states that there are differences in the frequency of stock trading.

The different result obtained in 2018 which a p-value > 0.05 indicates there was no significant difference in trading volume activity before and after Ramadan. So it can be said that this result rejects the hypothesis which states that there is a Ramadan effect as measured by differences in trading volume activity. The results of this study are in line with the study of Setiasari and Rinofah (2017) and Hidayati &Junaidi (2018) which show that there is no difference in the average volume of stock trading before and after Ramadan. Thus, it can be concluded that Ramadan does not contain information that can affect the average trading volume activity.

When we test Ramadan Effect using TVA, we can conclude there is a Ramadan Effect period 2016-2020 except 2018. The 2018 result should be excluded from the conclusion in favor Ramadan effect because 2018 is the year when the global crisis hit Indonesia, so we can treat 2018 as an outlier. Then we focus on the result

obtained from the years 2016, 2017, 2019, and 2020 that show Ramadan Effect in Indonesia Capital Market measured with TVA. Although there is Ramadan effect occurred, the sign of the result is quite different from what we expected in the beginning. During Ramadan, TVA is lower than before Ramadan. No investor (good) mood was observed in trading activity, in contrast to the previous study by Bialkowski, Etebari, & Wisniewski (2012) and Al-Khazali (2014). The trading activity during Ramadan becomes sluggish (CNBC Indonesia, 2021). People are more focused on good deeds, and more socially and spiritually oriented in the holy month of Ramadan. Ramadan itself should be considered as a holiday when investors do not really wish to trade more actively and prefer to enjoy the holiday. This argument is in line with another study that captured the holiday effect (Hood & lesseig, 2017). With this result we come to the next step of the Ramadan effect, that is Shawwal effect to show the effect of the month after Ramadan, just like the January effect to depict the effect of the month after a long holiday, December. This implication is new to the market anomalies literature.

5. Conclusion

Based on the results of the analysis that has been done, the conclusions of this study are: there is no Ramadhan Effect when measured by the difference in AR in the Indonesia Stock Exchange for the 2016-2020 period; meanwhile, there is Ramadan Effect period 2016-2020 except 2018 measured by differences in TVA. During Ramadan, TVA is lower than before Ramadan and should be considered as a holiday effect. The implication of this study is come to the next step of the Ramadan effect, that is the Shawwal effect which is new to the market anomalies literature.

References

Alifah, F. N., & Yunita, I. (2021). Capital Market Reaction to The Announcement of COVID-19 Vaccine Clinical Test by PT. Bio Farma Indonesia: Case Study of Pharmaceutical Sub-Sector Listed on The IDX 2020. *International Journal of Advanced Research in Economics and Finance, 3*(1).

Al-Khazali, O. (2014). Revisiting fast profit investor sentiment and stock returns during Ramadan. *International Review of Financial Analysis*, 157-170.

Alteza, M. (2007). Efek Hari Perdagangan Terhadap Return Saham: Suatu Telaah atas Anomali Pasar Efisien. *Jurnal Ilmu Manajemen,*, 31-43.

Białkowski, J., & Yaghoubi, M. (2021). The Ramadan effect: A standalone anomaly or just a compensation for low liquidity? *Journal of Behavioral and Experimental Finance*.

Bialkowski, J., Etebari, A., & Wisniewski, T. (2012). Fast profits: Investor sentiment and stock returns during Ramadan. *Journal of Banking & Finance*, 835-845.

Cadsby, C., & Ratner, M. (1992). Turn-of-month and pre-holiday effects on stock returns: Some international evidence. *Journal of Banking and Finance*, 497-509.

CNBC Indonesia. (2021, April 13). *CNBC Indonesia*. Retrieved from www.cnbcindonesia.com: https://www.cnbcindonesia.com/market/20210413090649-17-237351/bulan-puasa-bursa-saham-juga-ikutan-lesu-fakta-atau-mitos

Faih, A., & Nafiah, R. (2019). Analisis Efek Ramadhan Terhadap Abnormal Return dan Trading Volume Activity pada Perusahaan Yang Masuk dalam Jakarta Islamic Index (JII) di Bursa Efek Indonesia Periode 2014-2018. . *Al-Tijary*, 37–47.

Frieder, L., & Subrahmanyam, A. (2004). Non-secular regularities in returns and volume. *Financial Analysts Journal*, 29-34.

Gumanti, T. A., & Utami, E. S. (2002). Bentuk Pasar Efisiensi Dan Pengujiannya. *Jurnal Akuntansi Dan Keuangan*, 54–68.

Halari, A., Helliar, C., Power, D. M., Tantisantiwong, & Nongnuch. (2019). Taking advantage of Ramadan and January in Muslim countries. *The Quarterly Review of Economics and Finance*, 85-96.

Halari, A., Tantisantiwong, N., Power, D., & Helliar, C. (2015). Islamic calendar anomalies: Evidence from Pakistani firm-level data. *The Quarterly Review of Economics and Finance*, 64-73.

Halari, A., Tantisantiwong, N., Power, D., & Helliar, C. (n.d.). Islamic calendar anomalies: Evidence from Pakistani firm-level data.

Hidayati, N., Maslicha, & Junaidi. (2017). Reaksi abnormal return dan trading volume activity terhadap ramadhan effect (Studi pada Perusahaan Food and Beverages yang Terdaftar di Bursa Efek Indonesia Periode 2015-2017. *Jurnal Ilmiah Riset Akuntansi*, 1576-1580.

Hood, M., & lesseig, V. (2017). Investor inattention around stock market holidays. *Finance Research Letters*, 217-222.

Jogiyanto, H. (2015). *Studi peristiwa : menguji reaksi pasar modal akibat suatu peristiwa (Edisi Satu).* Yogyakarta.: BPFE.Kudusia, N. A., Yusuf, N., & Mahmud, M. (2020). Reaksi Abnormal Return Dan Trading Volume Activity Sebelum dan Sesudah Ramadhan Effect. . *Jambura Accounting Review*, 48–58.

Mashuri, M. (2018). Faktor-faktor Investasi Dalam Pandangan Islam. *IQTISHADUNA: Jurnal Ilmiah Ekonomi Kita*, 144–151.

Nurfauziah, N., & Afiano, R. (2013). Analisis Dampak Penetapan UU No. 28/2009 terhadap Abnormal Return dan Trading Volume Activity. *Jurnal Ekonomi Dan Pembanguanan, 3*, 157–162.

Pantzalis, C., & Ucar, E. (2014). Religious holidays, investor distraction, and earnings announcement effects. *Journal of Banking & Finance*, 102-117.

Rachmadani, K., & Yaningwati, F. (2013). Analysis of Trading Volume Differences Activity Before and After Stock Split (Study of Companies Listing on IndonesiaStock Exchange 2007-2011). *Journal of Business Administration*.

Rusmayanti, A., Yusniar, M. W., & Yuniar, A. (2016). Pengaruh bulan ramadhan terhadap return pasar saham di bursa efek indonesia (1425h-1434h). *Jurnal Wawasan Manajemen*.

Sawitri, N. N., & Astuty, P. (2018). Market anomalies and effect on returns. *European Research Studies Journal*, 630–649. .

Schwert, G. W. (2003). Anomalies and market efficiency. *Handbook of the Economics of Finance*, 939-974.

Setiasri, R., & Rinofah, R. (2017). Pengaruh Ramadhan Terhadap Return Dan Volume Perdagangan Saham Pada Jakarta Islamic Index (JII). *Manajemen Dewantara*.

Shahid, M. N., Sattar, A., Aftab, F., Saeed, A., & Abbas, A. (2020). Month of Ramadan effect swings and market becomes adaptive: A firm level evidence through Islamic calendar. *Journal of Islamic Marketing*, 661–685.

Sonjaya, A. R., & Wahyudi, I. (2016). The Ramadan effect: Illusion or reality? *Arab Economic and Business Journal*, 55-71.

Widyarti, E. T., Wahyudi, S., & Hersugondo, H. (2021). Map of Changes in Abnormal Return and Trading Volume Activity: Reviewing the Effect of Ramadhan in Indonesia. *Universal Journal of Accounting and Finance*, 1093-1102.