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Impact of Muslim Holy Days on Asian stock markets: An empirical evidence

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Abstract: This study investigated the impact of Muslim Holy Days on daily stock returns of Asian financial markets for a period of 2001–2014. These markets include Pakistan, Bahrain, Saudi Arabia, and Turkey. The study has tried to isolate the effect of Gregorian calendar anomalies from Muslim Holy Days to certify that the documented effect is actually a result of Muslim Holy Days rather than Gregorian calendar anomalies. Pooled fixed/random effect Panel Regression is used to check the underlined effect. The results reveal that Eid-ul-Fitr is the only Holy day, which has significant positive effect on stock returns of Asian markets, while all other Holy Days have no effect. Friday is the only Gregorian calendar anomaly, which exists in Asian markets. These results provide support to the fact that both Islamic and Gregorian calendar anomalies exist in Asian markets.

Subjects: Social Sciences; Behavioral Sciences; Macroeconomics; Investment & Securities

Keywords: gregorian calendar anomalies; market efficiency; Holy Days; religion; Asian stock markets

JEL classifications: G02; G14; Z1

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PUBLIC INTEREST STATEMENT

This study attempts to investigate the impact of five Muslim Holy Events (Eid-ul-Fitr, Eid-ul-Adha, Eid-Melad-un-Nabi, Ramadan and Ashura) on stock markets of Pakistan, Bahrain, Saudi Arabia, and Turkey. The results reveal that Eid-ul-Fitr is the only Holy day, which has significant positive effect on stock returns of Asian markets, while all other Holy Days have no effect.

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1. Introduction

A number of studies have reported anomalies in stock returns which oppose the Efficient Market Hypothesis.[1] These anomalies include day of the week, turn of the year, pre-holiday effects etc. (Cross, 1973; French, 1980; Gibbons & Hess, 1981; Keim, 1983; Tinic & West, 1984). Day of the week effect states that stock returns are higher on Friday and Lower on Monday because any negative news arises during the week holidays and when new week starts, the investors hesitant to invest in stocks due to that negative news. When days of the week passes, the investors regain their confidence and start to take part in market activities so at the end of the week, the returns become high (Jaffe & Westerfield, 1985; Solnik & Bousquet, 1990). Similarly, January effect states that the stock returns are higher in the month of January rather than other months of the year. Many studies have recognized the regularity of January to the fact that as the tax year ended on December in USA, so most of the firms settle their tax liabilities. To minimize the tax liability of capital gain the investors sell out their shares in the month of December and buy back in January, the excess of share demand in the month of January lead toward high returns (Dyl, 1977; Givoly & Ovadia, 1983; Jacobs & Levy, 1988; Roll, 1983).

Our study spreads the certification of seasonality in stock market returns by examining the influence of Muslim Holy days on Asian stock markets. There are few studies, which covers all the above stated Muslim Holy events in a single study (Majeed, Raheman, Sohail, Bhatti, & Zulfiqar, 2015 & Al-Ississ, 2015 etc.). But it is the first study, which covers all these Islamic events on continent level. The major contribution of this study is that it isolate the effect of Muslim Holy days from Gregorian calendar anomalies. This study will also contribute to the literature by comparing the results of controlling and without controlling these anomalies. So this is a comprehensive study. This study will be helpful for the market participants in term of their anticipations of the prices of share.

This paper contains five sections and brief introduction is presented in Section 1. In Section 2, we will briefly review and discuss the literature review regarding Islamic calendar anomalies and Gregorian calendar anomalies. Section 3 is about research methodology, sampling, data collection, models, and techniques used to get the required results. Next section focuses on discussion regarding research findings and in Section 5, we conclude based on our findings and discussions.

2. Literature review

Modern studies provide the appropriate evidence on stock return irregularity in financial markets, which oppose the traditional financial philosophy (EMH) that distribution of stock return should remain same across all trading days of the year (Jaffe & Westerfield, 1985; Rozeff & Kinney, 1976 etc.). This traditional financial philosophy means that return of financial instruments must be same during that time in which they are measured. But later on, it was measured that this return of financial instruments is affected by specific time periods such as preholiday, day of the week, turn of the year, and other seasonal effects. This phenomena is known as seasonal anomalies. The literature review is divided into two sections: Gregorian calendar anomalies and Islamic calendar anomalies.

2.1. Gregorian calendar anomalies

Most of the studies performed on financial anomalies have focused on Gregorian calendar regularities, which advocate that stock returns are feasible on certain days, months and at a specified times of year (Ariel, 1987; French, 1980; Gibbons & Hess, 1981; Jaffe & Westerfield, 1985; Lakonishok & Maberly, 1990; Rozeff & Kinney, 1976 etc.). These calendar anomalies opposed the efficient market hypothesis as through these anomalies the investor become able to predict the price changing direction of shares. Studies conducted on day of the week effect explained that the returns are lower on Monday and higher on Friday (French, 1980; Gibbons & Hess, 1981 etc.). Similarly, many studies also found the presence of January effect, which describe that returns are higher in January (Dyl, 1977; Jacobs & Levy, 1988; Roll, 1983). Some studies also observed January effect in those countries, where December is not the last month of tax year. For example, Brown, Keim, Kleidon, and Marsh (1983) executed a study in Australia, where tax year ends on June and found that returns are higher in January. Gultekin and Gultekin (1983) conducted a study on 17 stock exchanges and found

January effect in 12 out of 17 markets. Agrawal and Tandon (1994) examined 18 stock markets and came to conclusion that January effect exist in 14 out of these 18 stock exchanges. Boudreaux (1995) also showed similar results of January effect in seven stock markets. Wachtel (1942) found five causes for January effect. These causes include tax-loss selling, positive thinking about New Year, preholiday effect and unusual demand on Christmas and optimistic opinion about business activity in spring.

2.2. Islamic calendar anomalies

Some of the studies executed on financial anomalies have concentrated on Islamic calendar regularities, which advocate that stock returns are probable on certain Muslim Events like Ashoura, Eid Milad-un-Nabi (SAW), Ramadan, Eid-ul-Fitr and Eid-ul-Adha (Białkowski, Etebari, & Wisniewski, 2012; Bley & Saad, 2010; Husain, 1998 etc.).

One of the Hijri calendar months that has been revealed when testing for a seasonal anomalies is the holy month of Ramadan. Interesting aspect of Ramadan is that many of the Muslims may tend to abstain from participating in stock market, considering stock market a form of gambling. The stock markets decrease their trading hours, while shops, hotels, and restaurants are shut during the whole day (Białkowski et al., 2012; Husain, 1998). One of the initial observation held in this area was executed by Oğuzsoy and Güven (2004), who conducted a research in Istanbul Stock Exchange from 1988 to 1999, they came to conclusion that Ramadan effect exist in Turkey Stock market as returns were significantly higher during this month. Similar findings also reported by Al-Hajieh, Redhead, and Rodgers (2011) and Al-Mudhaf (2012). Another study executed on Tunisian Stock Market showed that Ramadan affect the economy more than the other months (Rehomme & Rejeb, 2008). Abadir and Spierdijk (2005) carried out a study to check Ramadan effect in six Muslim countries. They came to conclusion that Ramadan effect prevail in these markets. The Holy Days also affect the trading volume of stock markets. These findings of Abadir and Spierdijk (2005) support the results of Wong, Neoh, Lee, and Thong (1990). Al-Ississ (2010) also supported the findings of Abadir and Spierdijk (2005), that the Holy Days of Ramadan and Ashoura also have an impact on trading volume. Husain (1998) and Mustafa (2008) exposed a significant drop in return volatility during Ramadan. Alper and Aruoba (2004) also revealed that volatility decline during religious events. Białkowski et al. (2012) carried out a study in 14 Muslim markets. They found a decrease in volatility of share price in Ramadan for all markets except Turkey. Al-Khazali (2014) found that it is very difficult to outperform the stock market during Ramadan; however, investors who don't invest in risky stocks, they prefer to invest during Ramadan. Ramezani, Pouraghajan, and Mardani (2013) illustrated the Ramadan effect in the stock market of Iran and found that Ramadan effect is positively correlated with Tehran Stock Exchange. Alper and Aruoba (2001) examined that there is no Ramadan effect in Istanbul Stock Exchange. Seyyed, Abraham, and Al-Hajji (2005) executed a study on Saudi Arabian Stock Exchange. The results showed that the average returns did not change across the Holy month of Ramadan but they exhibited a drop in volatility.

Bley and Saad (2010) tried to analyze the Gulf countries and showed significant positive return on Holy event of Eid-ul-Fitr in all Gulf countries except Bahrain, which is a smallest market in the Gulf region. McGowan and Jakob (2010) investigated the impact of Eid-ul-Fitr on Malaysian Stock Exchange and came to conclusion that Eid-ul-Fitr effect does not exist in Malaysian Stock Exchange. Nilgun, Burak, and Burcu (2008) executed a study to investigate the impact of Ramadan and Eid-ul-Adha on the economy of Turkey. The results of this study stated that both Ramadan and Eid-ul-Adha affect the market in the form of decrease in trading activities. Chowdhury and Mostari (2015) also conducted a research to check the impact of Eid-ul-Adha on Dhaka stock exchange. The results show that Eid-ul-Adha has significant effect on stock return. The studies conducted to find out the impact of Ashura and Eid Milad-un-Nabi (SAW) revealed that results are significantly negative on both of these events (Al-Ississ, 2015; Majeed et al., 2015).

On the basis of above discussion, we hypothesize that Muslim holy day events might have an impact on stock returns of relevant Muslim countries. In the next section, we will elaborate the approach used to investigate how the holy day events affect the stock market.

3. Research methodology

This study inspected the impression of Muslim Holy Days of Ashoura, Eid Milad-un-Nabi (SAW), Ramadan, Eid-ul-Fitr, and Eid-ul-Adha on stock returns of four Asian financial markets for a period of 1 January 2001 to 31 December 2014. Those Asian markets are selected, where Muslim population is more than 90% excluding countries, which are in war or below poverty line. These countries include Pakistan, Turkey, Bahrain, and Saudi Arabia. We did not include the African markets in our study because most African Muslim majority countries are in war. The second thing is that African markets are small in size than Asian markets. They do not have any comparison with Asian markets. As the stock exchanges in Muslim countries remain close on these Holy Days except Ramadan, so we use the average of one pre and post trading day's return to check the impact of these Holy Days. These pre and post-trading days are the last trading day of particular market before Muslim Holy days and the first trading day of particular market after Muslim Holy days. Summary of financial market data for selected Asian markets is shown in Table 1.

Each Muslim country announces the start of Hijri calendar's months, and therefore, the Holy Days occur on separate dates. Furthermore, countries usually do not retain official records for the announcement of lunar calendar month. Thus, to find out the Hijri calendar dates for each country was labor intensive, difficult and challenging process. We used mobile application named as "Islamic Calendar" to convert Hijri dates to Gregorian dates. We also use the website "time and date.com". In this study, the dependent variables are daily stock return. The daily returns are determined by means of this given formula used by Majeed et al. (2015) and Husain (1998).

$$\mathrm{R(t)} = \mathrm{Ln}\left(\frac{P(t)}{p(t-1)}\right) \times 100$$

where: $R(t)$ = Return of stock at time t; Ln = Natural Log; $P(t)$ = Price of stock at day t; $P(t-1)$ = Price of stock at previous day.

We estimate the impact of Muslim Holy Days on stock indices return by applying a pooled fixed/random effect panel regression across all the inspected stock markets. We used this technique (Pooled regression) by following the methodology of Al-Ississ (2010). We add two days lagged return variables to control for nonsynchronous trading effects and to control for calendar and seasonal regularities, we include day of the week and turn of the year as control variables (Akgiray, 1989; Saunders, 1993). We follow the same methodology of Al-Ississ (2015). Here, we used panel data analysis techniques (fixed or random effect model) to test our inference regarding the impact of these Islamic holidays across the Asian regions level. Fixed effect model is acceptable in the case where our basically aim is to link up with the policy-related inference while random effect is

Table 1. Summary of financial markets data

Country	Muslim (%)	Index	Head office	Start date	End date	Obs.
Pakistan	96.3	Karachi S.E 100 Index	Karachi	01 January 2001	31 December 2014	3,443
Bahrain	90.4	Bahrain S.E All Share Index	Manama	24 May 2010	31 December 2014	1,155
Saudi Arabia	100	Tadawul S.E All Share Index	Riyadh	03 December 2001	31 December 2014	3,487
Turkey	99.8	Istanbul S.E All Share Index	Istanbul	14 March 2001	31 December 2014	3,466
Total						**11,551**

Source: https://nosharia.wordpress.com/list-of-muslim-majority-countries-with-sectstategovernment/ (for Muslim percentage) and " http://www.investing.com"www.investing.com (for daily stock prices of all markets).

preferable before going to final inference if the researcher has significant access to rich data set and selection contrivance is very well understood. The following regression is estimated to capture the effect of Holy Days on stock returns:

$$Ret_{j,t} = \beta_0 + \beta_1 \text{Holy Day}_{j,t} + \beta_2 \sum_{j=8} \text{Dt} + \beta_3 \sum_{j-8} Mt + \beta_4 Ret_{j,t-1} + \beta_5 Ret_{j,t-2} + \in$$

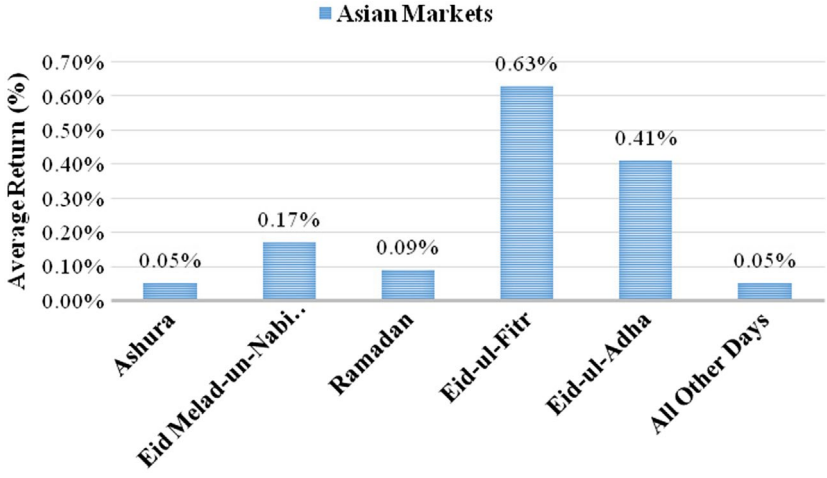
where: $\text{Ret}_{j,t}$ = The return of stock exchange on day (*t*) which is listed in country (*j*); $\text{Holy-Day}_{j,t}$ = A dummy variable that takes the value 1 if day (*t*) is a Muslim Holy Day in country (*j*), and 0 otherwise; D_t = Day of the week dummy variable to control for calendar and seasonal regularities; M_t = Turn of the year dummy variable to control for calendar and seasonal regularities; $\text{Ret}_{j,t-1}$ = Lagged return of the one previous trading day to account for nonsynchronous trading effects and control for potential missing variable bias; $\text{Ret}_{j,t-2}$ = Lagged return of the two previous trading days to account for nonsynchronous trading effects and control for potential missing variable bias.

4. Results

Figure 1 demonstrates the daily mean returns on Muslim Holy Days and all other days across Asian markets. Consistent with our forecasts, the Holy Days returns vary from returns on all other days. Likewise, returns during the Holy Days also differ from each other. In Asian markets, the Eid-ul-Fitr, in particular, displays the highest mean return (0.63%) relative to rest of the Holy Days. While the mean return on Eid-ul-Adha is 0.41%, which is lower than the mean return of Eid-ul-Fitr but higher than the mean returns of all other Holy Days. Similarly, the mean return on Eid Milad-un-Nabi (SAW) is 0.17%, which is approximately 2.5 times lower than the mean return of Eid-ul-Adha. The mean return of Asian markets during Holy month of Ramadan is 0.09%. As Eid-ul-Fitr is followed by the Holy month of Ramadan, but returns of both events in Asian markets are showing a huge difference. This is supporting to our argument that the spiritual features of fasting are countered by physical hardship during Ramadan. The mean return on Ashura is 0.05%, which is lower than the average return of all other Holy Days in Asian markets. The important thing is that the mean returns of all Muslim Holy Days in Asian markets are positive including Ashura. This result is amazing as one would expect Ashura's return to be negative (Al-Ississ, 2015). The mean return of other days in Asian markets is 0.05%, which is lower than all Muslim Holy Days. This thing is showing that all Muslim Holy Days have huge impact on stock returns of Asian markets.

A pooled fixed/random effect Panel Regression has been used. Hausman test is used to check that whether fixed effect panel regression is suitable or random effect. The *p*-value of Hausman test in all models is greater than 0.05, so we use random effect panel regression. Table 2 reports Random Effect Panel Regression results for Asian markets on Muslim Holy Days, controlling with lagged returns, day of the week and turn of the year effects. Ten models are estimated in this table. In models 2.1–2.5, coefficient estimates correspond to Muslim Holy Days, which are estimated individually without

Figure 1. Mean daily returns on Holy days and All other days.



controlling day of the week and turn of the year effects. The results show that Holy Days of Ashoura and Eid Milad-un-Nabi (SAW) are not statistically significant. Ramadan is statistically significant at 5% level, with an increase of 0.03 percent in daily stock return. Eid-ul-Fitr and Eid-ul-Adha both are statistically highly significant at 1% level, with an increase in 0.55 and 0.34% in daily stock return respectively. In model 2.6, all the Muslim Holy Days are estimated together without controlling day of the week and turn of the year effects. The results indicate that Eid-ul-Fitr and Eid-ul-Adha both are statistically significant at 1% level, with an increase of 0.55 and 0.35% in daily stock return respectively. Models 2.7–2.9, estimates all the Muslim Holy Days together controlling with Monday, Friday and January effects separately. The results of Model 2.7, show that all the Muslim Holy Days are not statistically significant, while controlling with Monday effect. In model 2.8, all Muslim Holy Days are investigated together, controlling with Friday effect. The results report that the Holy Days of Ashoura, Eid Milad-un-Nabi (SAW) and Ramadan are not statistically significant. Eid-ul-Fitr and Eid-ul-Adha both are statistically associated at 1% level, with an increase in 0.60 and 0.39% in daily stock return, while controlling with Friday effect. While, Friday is statistically significant at 1% level, with an increase in 0.13% in daily stock return. Model 2.9 estimates all the Muslim Holy Days together, controlling with January effect. The results state that the Holy Days of Ashoura, Eid Milad-un-Nabi (SAW) and Ramadan are not statistically significant. Eid-ul-Fitr and Eid-ul-Adha both are statistically associated at 1% and 5% levels, with an increase in 0.55 and 0.22% in daily stock returns, respectively, while controlling with January effect. January is not statistically significant. Model 2.10 is the final model, which evaluate all the Muslim Holy Days together, controlling with Monday, Friday and January effects. The results reveal that Ashoura, Eid Milad-un-Nabi (SAW), Ramadan and Eid-ul-Adha are not statistically significant. Only the Holy day of Eid-ul-Fitr is statistically significant at 1% level, with an increase in 0.48% in daily stock return. The one day lagged returns of all models are statistically significant at 5% level, with an increase in 0.05%, showing that one day before Muslim Holy Days, the daily returns were positively significant. In Asian markets, Friday is highly statistically significant at 1% level, with an increase in 0.10% in daily stock returns. Monday and January effects do not exist in Asian markets. Summary of country's Holy Days data has been shown in Table 1A in Appendix A whereas summary of Mean of daily returns on Holy Days and all other days is shown in Table A2 in Appendix A.

4.1. Discussion on results

This study has tried to isolate the effect of Gregorian calendar anomalies from Muslim Holy Days by comparing the results of both without control and with control of these Gregorian anomalies. The results reveal that the Holy day of Ashoura has no impact on stock returns in both with and without control. The reason behind is that the Muslim holidays are strict religious practices that seriously affect investor sentiments and moods. Ashoura is celebrated in the month of Muharram, which is the first month of Islamic New Year. This day is considered as a day of Sorrow in Islamic history and is celebrated quietly and may be that is why there was no impact felt for this Holy day in underlined Asian markets. Similarly, the effect of holy day of Eid Milad-un-Nabi (SAW) is also not found, because in Asian markets, there are some countries like Saudi Arabia and Turkey that do not celebrate this Muslim event. Stock markets remain open and people of these markets remain busy in routine life. Similarly, many people believe that 12th Rabi-ul-Awal is a day of death for Holy prophet Mohammad (SAW). So they celebrate this day quietly. That is why, this Holy day has no effect in Asian markets. This result is supported by Bley and Saad (2010). The Ramadan effect is also not found in Asian markets. This result is supported by Alper and Aruoba (2001). This can be attributed to the fact that when Muslim start fasting, the general level of activity slows down probably as a result of low levels of energy brought about by the fast. Interesting aspect of Ramadan is that many of the Muslims may tend to refrain from contributing in stock exchange, considering stock market a form of gambling. That is may be the reason, Ramadan has no impact on stocks of Asian markets. The Holy day of Eid-ul-Fitr has significant positive effect on stock returns of Asian markets. This result is supported by Bley and Saad (2010). This can be attributed to happy investor moods as they make decision to invest after they successfully complete the fast which they believe comes with a blessing. The Holy Day of Eid-ul-Adha has significant effect on stock return before controlling it with Gregorian calendar anomalies, but this effect is not found after controlling. This shows the involvement of Gregorian calendar anomalies but after controlling this effect disappears. The reason behind may be that

Table 2. Regression results for Muslim Holy Days on stock return of Asian markets

	Model 2.1	Model 2.2	Model 2.3	Model 2.4	Model 2.5	Model 2.6	Model 2.7	Model 2.8	Model 2.9	Model 2.10
Ashura	−0.0268					−0.0164	−0.0339	−0.1202	0.2517	0.2503
Eid Milad-un-Nabi (SAW)		0.1080				0.1170	0.0063	−0.0466	0.1415	0.0948
Ramadan			0.0381**			0.0210	0.0048	−0.0030	0.0237	0.0118
Eid-ul-Fitr				0.5555***		0.5518***	0.5870	0.6004***	0.5529***	0.4866***
Eid-ul-Adha					0.3436***	0.3508***	0.1115	0.3937***	0.2289**	0.1487
Lag Ret-1							0.0557**	0.0546**	0.0549**	0.0550**
Lag Ret-2							0.0006	−0.0000	0.0000	0.0006
Monday							−0.1090			−0.0979
Friday								0.1349***		0.1057***
January									0.0236	0.0199
Constant	0.0549	0.0538	0.0515	0.0502	0.0518	0.0448	0.0716	0.0329	0.0422	0.0529
Hausman test	0.29	0.29	0.28	0.29	0.29	0.80	0.99	0.99	0.87	0.99
Observations	10,322	10,314	11,173	10,318	10,320	11,551	11,286	11,387	11,499	11,350
Panel	4	4	4	4	4	4	4	4	4	4

Notes: Model 2.1–2.5 show the results of all Muslim Holy Days investigated individually without controlling Day of the week, turn of the year effects, etc. Model 2.6 shows the results of all Muslim Holy Days investigated together without controlling day of the week, turn of the year effects etc. Similarly, Models 2.7–2.9 show the results for all Muslim Holy Days controlling with Monday, Friday and January effects respectively. Model 2.10 is the final model, revealing the results of al Muslim Holy Days controlling with Monday, Friday and January effects together.

**$p < 0.05$.

***$p < 0.01$.

people of countries like Pakistan make most of their spending on Eid-ul-Fitr. At the event of Eid-ul-Adha which is celebrated after 2 months of Eid-ul-Fitr, people do not spend their money again on things like shopping etc. They just spend their money to buy sacrificial animal. So Eid-ul-Adha has no effect in these markets.

5. Conclusion

The analysis of Muslim Holy day's effects in the stock markets of Asian region discloses the existence of Islamic calendar anomalies that are well recognized in other markets around the world, proposing the presence of a global phenomenon. The current study attempts to isolate the impact of Muslim Holy Days from Gregorian calendar anomalies. The results reveal that Eid-ul-Fitr effect is found in Asian markets, while other Holy Days have no effect on stock returns of Asian markets. All the above stated results are purely due to the Muslim Holy Days and have no involvement of Gregorian calendar anomalies like day of the week, turn of the month effect etc. We also found some Gregorian calendar effects in these markets, i.e. Friday effect is found in Asian markets. These results show the strength of Gregorian calendar effects that still exist in Asian markets even after controlling them. The existence of all these anomalies in Asian markets has dim effect on market efficiency. The policymakers need to focus on such policies through they become able to overcome the anomalistic behavior of stock markets and shelter the stockholders against the abnormal returns. The central banks and Security Exchange Commissions of these markets can play vital role to remove the effect of these irregularities on stock returns and employing investor's encouraging strategies.

The current study has some limitations, which can affect the results. (1) To convert Hijri calendar dates to Gregorian calendar, approximation is used through a mobile application. This approximation of dates can affect the original findings. (2) The number of observations for all markets are not same due to the unavailability of data. (3) Those countries are selected for which, data was easily available. In light of these limitations, we recommend that there is need of future research, to check the impact of all Muslim Holy Days on stock markets for which equal data is available. Similarly, studies can be carried out to check the impact of those markets having minimum 90% Muslims of their total population other than the countries taken in the current study.

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Note

1. According to Efficient Market Hypothesis, securities always trade at their fair market price, so it is not possible for investors to earn abnormal return. The only way through which an investor can attain higher return is by investing in riskier assets (Fama, 1965).

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Appendix A

Table A1. Summary of country's Holy Days data.

Country	Ashura	Eid Milad-un-Nabi (SAW)	Ramadan	Eid-ul-Fitr	Eid-ul-Adha	Total
Bahrain	10	8	108	10	10	146
Saudi Arabia	28	26	277	28	28	387
Pakistan	30	28	275	28	30	391
Turkey	30	28	289	28	28	403
Total	98	90	949	94	96	**1,327**

Table A2. Mean of daily returns on Holy Days and all other days.

Holy days	Obs.	Mean (%)	Std. dev (%)	Min (%)	Max (%)
Ashura	98	0.05	0.16	−7.71	3.96
Eid Milad-un-Nabi (SAW)	90	0.17	0.15	−4.52	8.51
Ramadan	949	0.09	0.44	−7.60	11.65
Eid-ul-Fitr	94	0.63	0.20	−10.33	8.57
Eid-ul-Adha	96	0.41	0.15	−6.73	4.01
All Other Days	10,224	0.05	1.48	−13.05	12.07

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