The Holy Day Effect

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Abstract

We use Muslim holy days to investigate the underlying mechanism behind the holiday effect. Muslim holy days are exceptionally conducive to isolating the holy day effect. The study documents a positive change in stock returns during Ramadan. The significance and magnitude of the effect is consistent with the heterogeneity of worship intensity during Ramadan. Five possible causal channels are explored. We find support for a change in the composition of traded stocks according to their riskiness on holy days. Additionally, the mood channel is supported through documenting a negative effect on Ashoura linked to the proportion of Shia in a country.

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alississ@aucegypt.edu. All errors and opinions expressed herein are my own. My special gratitude goes to Nolan Miller for his feedback. This paper benefited from the participants in the AALIMS conference on Islam and Economic Development Conference, Duke University's 2010. This paper is copyrighted by the author. For permission to reproduce or to request a copy, contact the author.

"Discovery commences with the awareness of anomaly, i.e., with the recognition that nature has somehow violated the paradigm-induced expectations that govern normal science."

Thomas Kuhn

1. Introduction

Religion is a central force in the lives of people. It affects their preferences, decision making, and mood. Can religion therefore affect the stock market?

This study uses Muslim holy days to better understand a well documented stock market anomaly, the holiday affect: the tendency of stock markets to experience positive returns prior to holidays on average. While the holiday effect is well documented, its underlying drivers are not. The leading explanation focuses on the liquidity premium story. It has also been suggested that mood, which has been documented to affect stock market returns on other occasions, is the driving force behind the holiday effect. Yet, separating these two mechanisms is difficult since main Western holidays fall on days when markets are closed[1]. Additionally, the holiday effect is noisy for Western events since they are potentially confounded with documented calendar effects.

Existing literature established abnormal stock returns in Muslim countries during the Muslim holy month of Ramadan (Husain, 1998; Oguzsoy, 2004; Seyyed, Abraham, and Al-Hajji, 2005; Al-Hajieh, Redhead, and Rodgers, 2011; Bialkowskia et al., 2012). In addition to documenting the Ramadan effect, our paper extends existing research in a number of ways. First, it investigates the effect at the company level, not the index level, which enhances our understanding of the Ramadan effects and its causality. Second, this paper uses the actual start dates of Ramadan as declared and practiced within each country, not converted or calculated dates. Third, we explore the heterogeneity of

[1] Frieder and Subrahmanyam (2004) examine stock returns on the St. Patrick's Day when the market is open.

worship intensity within the month of Ramadan. Most importantly, this paper tests for the underlying mechanism behind the Ramadan effect.

Muslim holidays are well positioned to investigate the holiday effect and isolate its underlying mechanism. First, markets remain open during important Muslim holy days which are observed by overwhelming majorities of the population. Second, naturally occurring factors in the Islamic calendar enable the decoupling of the mood effect from other contaminants. The annual shift of the Muslim *Hijri* calendar *vis-à-vis* the Gregorian one permits us to separate the holy day effect from calendar effects. The different methods Muslim countries use to determine the beginning of lunar *Hijri* months isolate the holy day effect from contemporaneous events. The built-in alternating worship intensity within the month of Ramadan allows a precise test of mood effects.

The first part of this paper documents positive changes on holy days in the returns of ten Muslim financial markets over the period 1995-2012. The paper uses the inherent heterogeneity of worship intensity within the month of Ramadan as a robustness check to test that the documented positive effect on returns is driven by holy days. The religious significance for Ramadan's last odd days is higher than its last five even ones. Consistent with this, we document a statistically significant 0.140% increase in returns on Ramadan's last five odd days. The intensity of faith experience culminates on Ramadan's 27^{th} day when returns increase a statistically significant 0.452%.

The second part of the paper explores the underlying mechanism behind the holy days effect. Five potential channels are explored. The first is the liquidity premium channel whereby traders are receiving higher returns due to decreased liquidity on holy

days. Yet, abnormal returns during Ramadan persist even after controlling for change in volume on holy days.

The second channel is a change in the composition of traders on holy days due to decreased (or increased) participation by religiously observant traders on holy days. We investigate this channel though separating companies according to their compliance with Islamic law, Shariah. However, we do not find support for this channel.

The third channel separates the physical aspects of fasting from the spiritual ones using the daily temperatures in the cities of the stock exchanges. We document a positive main holy day channel, and a negative effect on warmer holy days. The latter effect can be seen as the physical effect of fasting on stocks.

The fourth channel is a change in the composition of traded stocks as a result of physical attributes associated with fasting such as fatigue which may lead traders to avoid riskier stocks. We test for this channel through dividing companies into ten deciles based on their market capitalization to proxy for their riskiness. We find evidence in support of this channel.

Finally, we explore and find support for mood as a potential driver for the holy day effect. We investigate the behavior of returns on Ashoura which is a Muslim holy day with a different emotional valence from Ramadan, especially for Shia Muslims. We find that an increase of 1% in the proportion of Shia in a country is associated with a statistically significant drop of 12.13% % in returns on Ashoura. The remainder of the paper is organized as follows: Section 2 presents an overview of relevant literature, section 3 demonstrates the attributes of the Muslim *Hijri* calendar that are especially conducive for this research, section 4 describes the methodology and data, section 5

presents the results, section 6 checks the econometric robustness of these results, section 7 investigates potential mechanisms, and section 8 concludes.

2. Relevant Literature

Our study extends existing scholarship in three strands of literature. First, we extend research on the holiday effect by separating the psychological aspects of the holiday from the actual market closure. Second, we contribute to the study of the impact of mood on decision making. Third, we add to the sparse work on the impact of religious experience on stock markets.

Past research has documented a number of regularities in stock market returns on the turn of the year, month, week, and day, and around holidays (for a thorough review see Thaler (1987) and Jacobs and Levy (1988). Lakonishok and Smidt (1988) use ninety years of DJIA daily returns to investigate the holiday effect. "The average preholiday rate of return is 0.220 percent for the total sample, compared with the regular daily rate of return of 0.0094 percent per day. Therefore, the preholiday rate of return is 23 times larger than the regular daily rate of return, and holidays account for about 50 percent of the price increase in the DJIA." Furthermore, they find that the sub period results are mostly consistent with overall results. Lakonishok and Smidt (1988) show that the holiday effect is different from other documented seasonal anomalies. Of interest, the authors find that "preholiday rates of return are generally two to five times larger than preweekend rates of return. Therefore, there appears to be an additional factor at work".

Pettengill (1989) confirms the finding that preholiday returns are higher than other days, regardless of the size of firms. Ariel (1990) also finds a statistically significant 10 fold increase in pre-holiday returns in the US, during the period 1963-

1982. The holiday effect has been also documented by Kim and Park (1994) across different US stock markets such as the NYSE, AMEX, and Nasdaq. Furthermore, this effect has been found in countries other than the US, such as Italy by Barone (1990), Canada, Japan, Australia, and Hong Kong by Cadsby and Ratner (1992), Japan and UK by Kim and Park (1994), New Zealand by Vos et al. (1993).

The leading explanation for the holiday anomaly focuses on limiting risk exposure while the market is closed (Amihud and Mendelson, 1987). Nonetheless, Jacobs and Levy (1988) point out that "while no fully satisfactory explanation of the holiday effect has yet surfaced, psychological reasons appear to be the most promising". Indeed, there is an increasing literature that investigates the psychological drivers associated with the nature of these holidays *per se*, not the closure of the market. To that end, abnormalities in market return have been examined around the lunar new year in Asia (Wong et al., 1990; Tong, 1992; Yen and Shyy, 1993; Chan, Khanthavlt and Thomas, 1996). Kuo et al. (2010) document a negative effect associated with the full moon festival which is associated with nostalgia and negative associations. Psychological explanations are especially plausible in light of the increasing literature linking the mood of investors to changes in stock returns. Yet the task of separating the effect of widely observed religious and cultural holidays from market closure is a challenging one given that the two often coincide. Wu (2013) investigates the lunar new year using Chinese stocks traded in the US to bypass market closure.

Emotions and moods have been documented to effect the decision making of individuals Bagozzi, Gopinath, and Nyer (1999). Moods influence judgment regarding uncertain future events, with positive mood leading to a more positive evaluation in a

number of situations, Wright and Bower (1992). Of special relevance to financial markets is the finding that moods influence peoples' judgment of risk, Johnson and Tversky (1983). For a review of the impact of mood on decision making see Loewenstein et al. (2001) and Hirshleifer and Shumway (2003).

A number of studies have linked mood effects to returns of financial markets. Saunders (1993) reports negative NYSE index returns when it is cloudy in New York. Kamstra, Kramer, and Levi (2000) report negative returns following daylight savings time changes. Hirshleifer and Shumway (2003) find a strong statistical relationship between morning sunshine and stock exchange returns. Kamstra, Kramer, and Levi (2003) document the effect of seasonal affective disorder (SAD) and stock market returns. This study further contributes to this growing body of literature.

Finally, investigating the holiday effect through examining Muslim holy days enhances our understanding of the impact of religious experience on financial markets One of the few studies on this topic is Frieder and Subrahmanyam (2004) which examines the impact of the Jewish holy days of Rosh Hashanah and Yom Kippur and the Catholic Irish one of St. Patrick's on the MSCI index. They report significant positive returns on Rosh Hashanah and the days that precede it and on the days that precede St. Patrick's Day. They also report a significant impact on trading volumes.

Recently, important contributions have established abnormal returns during Ramadan. Husain (1998), Oguzsoy (2004) and Seyyed, Abraham, and Al-Hajji (2005) investigate the effect of Ramadan on the Karachi, Istanbul, and Saudi Stock Exchanges, respectively. The study on the Istanbul stock exchange documents higher returns during Ramadan, but not for Karachi and Saudi stock exchanges.

Al-Hajieh, Redhead, and Rodgers (2011) document a positive return during Ramadan as a whole for a subset of Middle Eastern countries. The study converts Gregorian dates to the Muslim *Hijri* ones to investigate the Ramadan effect. The paper documents positive calendar effects during Ramadan and suspects that mood changes might cause this anomaly.

Bialkowskia et al. (2012) investigate the Ramadan effect on the Morgan Stanley Capital International indices of 14 stock exchanges in predominantly Muslim countries over the years 1989–2007. The study uses latitude and longitude data of the stock exchanges to determine Ramadan's start. They find that stock returns during Ramadan are significantly higher than the rest of the year. The authors exclude the liquidity effect and other seasonal effect as explanations for their observed results and "believe that the Ramadan effect documented in this paper can best be explained by a change in investor psychology". In closing the authors encourage further study of the Ramadan effect at the company level to better understand the driver of the effect, which is what we do in this paper.

3. Isolating the Holy Day Using the *Hijri* Calendar

We use Muslim holy days to investigate the impact of religious experience on the returns of Muslim financial markets. Specifically, the study focuses on an important Muslim holy day, Ramadan. It is the ninth month of the Muslim *Hijri* calendar during which the Quran was revealed to the prophet Mohamad, observed by both Sunni and Shia Muslims. Fasting during Ramadan is mandatory for Muslims and one of Islam’s five pillars. During the fast, Muslims do not eat or drink anything from dawn until sunset. It is a month of heightened religiosity and faith. In addition to fasting, Muslims put more

emphasis on praying, reciting the Quran and giving charity in anticipation of capturing the month's promised wealth of blessings.

The use of Muslim holy days is particularly well suited for investigating the relationship between faith and financial market returns for a number of reasons. First, these holy days are widely observed on a religious and cultural level by an overwhelming proportion of the population in the countries under investigation. The wide spread observance of Ramadan allows for a more measured impact. Additionally, most financial markets remain open during these holy days.

Second, unlike secular and Christian holidays, Islamic holy days follow a purely lunar Islamic (*Hijri*) calendar, not the solar Gregorian calendar. The Muslim *Hijri* year is about 11 days shorter than the Gregorian year. This means that while Muslim holy days fall on the same day of the *Hijri* calendar, they actually shift days and months each year on the Gregorian calendar. For example, the first day of Ramadan as declared by Saudi Arabia shifted backwards by about nine months over twenty-five years, beginning on April 28th in 1987 and commencing on August 1st in 2011. Given that the majority of businesses in these countries follow a Gregorian, not *Hijri*, fiscal calendar, this enables us to isolate the faith effect from the established fiscal calendar anomalies, seasonal and weather effects mentioned in the aforementioned mood literature.

Third, each Muslim country follows an independent and often different method to determine the start of the lunar month. Countries ascertain the beginning of lunar months using a variety of methods that range from rudimentary eyewitness observations of the new crescent to advanced astronomical calculations. Thus, Islamic holy days fall on

different days within the same *Hijri* year across Muslim countries. This enables us to lessen the impact of other contemporaneous effects and cross market linkages.

Fourth, the study utilizes the fact that the intensity of worship is not constant throughout the month of Ramadan. We use this inherent heterogeneity in the intensity of religious experience within Ramadan to isolate faith from other non-faith aspects of this holy month. While some of the studies mentioned above did not document a Ramadan effect on financial markets, our study is the first to utilize this unique attribute of heterogeneity. The month of Ramadan is perceived as consisting of three parts, equal in length but different in promised rewards, characteristics, and intensity of worship[2].

The last third of Ramadan is perceived as the most blessed part during which Muslims increase their worship and experience of faith. The last ten days of Ramadan contain the holiest night in the Islamic calendar, *Laylat Al-Qadr*, the Night of Destiny, when the Quran was first revealed to the prophet Mohamad[3].

While it has not been revealed on which of the last ten days of Ramadan the Night of Destiny falls, many Muslim scholars and certainly an overwhelming majority of Muslims believe that the Night of Destiny occurs on one of last five odd numbered nights of Ramadan, i.e. the 21st, 23rd, 25th, 27th or 29th of Ramadan[4]. Of these five days, the Night of Destiny is believed by most Muslims to occur on the eve of Ramadan 27th. This

[2] The following Hadith (saying of the prophet Mohamad) documents that: "The first part [of Ramadan] brings God's Mercy, the middle of which brings God's forgiveness and the last part of which brings emancipation from hellfire." Ibn Khuzaymah, 3: 191.

[3] The following Quran verses document the sanctity of this night:

"97:1 We revealed it [the Quran] on the Night of Destiny.
97:2 And what will explain to thee what the Night of Destiny is?
97:3 The Night of Destiny is better than a thousand months.
97:4 The angels and the Spirit descend therein, by the permission of their Lord, with all decrees.
97:5 (The night is) Peace until the rising of the dawn." (The Holy Quran, 97:1-5)

[4] The following *Hadith* supports this argument: "Search for the Night of Destiny in the odd nights of the last ten days of Ramadan" Bukhari, (3(32): 234).

night witnesses the culmination of faith practice in the Islamic calendar as Muslims spend it in prayer and Quran recitation in mosques until the break of dawn. Most television and radio stations in Muslim countries suspend their programming to air live broadcasts of the conclusion of the Quran recitation from the Grand Mosque in Mecca. Religious experience, and therefore its impact on financial markets, will be amplified on the more sacred odd days at the end of Ramadan and culminate on its 27^{th} day.

4. Methodology and Data

Our dataset comprises all firms listed in the stock exchanges of the ten Muslim countries that are reported by Compustat during the period January 1, 1995 till August 31, 2012.[5] This time period represents the earliest available data, in particular for trading volume data. We evaluate the impact of faith on financial markets by regressing daily returns ($Ret_{i,,j,t}$) on a dummy variable ($Holy\_Day_{j,t}$) that takes the value one if day (t) was a holy day in country (j), and zero otherwise. As per Saunders (1993), we include day of the week and month of the year dummies to control for calendar and seasonal regularities. The daily return of MSCI World Index is also included to control for global financial movements. As per Saunders (1993), we include the lagged return of the previous two trading days to account for nonsynchronous trading effects and control for potential missing variable bias (see Akgiray, 1989)[6]. As the aim of this study is to document the holy day effect and its underlying causes, and not explore the viability of financially exploiting it, we ignore trading and other transaction costs. We use fixed

[5] Previous versions of this paper used stock exchange indices, not individual firms, to investigate the effect. To maintain a consistent dataset within this version, we dropped countries whose individual company stock information are not reported on Compustat.

[6] Including lagged returns for the previous one hundred trading days does not alter the overall results nor their significance.

effects at the firm level and date levels using Stata's –xtivreg2- command, and include dummies at the country level. We use robust Newey and West (1987) heteroskedasticity-autocorrelation-consistent standard errors with twelve lags[7]. The following regression is estimated to capture the effect on daily returns:

$$Ret_{i,t} = \beta_0 + \beta_1 Holy\_Day_{i,t} + \beta_2 MSCI_t + \beta_3 \sum_{J=2}^{6} D_t + \beta_4 \sum_{J=2}^{12} M_t + \beta_5 Ret_{i,t-1} + \beta_6 Ret_{i,t-2} + \varepsilon$$

where:

$Ret_{i,j,t}$	=	the arithmetic stock return of firm (i) on day (t) which is listed in country (j).
$Holy\_Day_{j,t}$	=	a dummy variable that takes the value 1 if day (t) is a holy day in country(j) , and 0 otherwise.
D_t	=	day of the week dummy variable with Tuesday omitted.
M_t	=	month of the year dummy variable with April omitted.
$MSCI_t$	=	the return of MSCI World Index on day (t).

We examine the effect of seven classifications of holy days as explained in the previous section:

$Ramadan_{j,t}$	=	a dummy variable that takes the value 1 if day (t) is part of the month of Ramadan in country (j), and 0 otherwise.
$Ramadan\_1\text{-}10_{j,t}$	=	a dummy variable that takes the value 1 if day (t) falls on days 1-10 of Ramadan in country (j), and 0 otherwise.
$Ramadan\_11\text{-}20_{j,t}$	=	a dummy variable that takes the value 1 if day (t) falls on days 11-20 of Ramadan in country (j), and 0 otherwise.
$Ramadan\_21\text{-}30_{j,t}$	=	a dummy variable that takes the value 1 if day (t) falls on days 21-30 of Ramadan in country (j), and 0 otherwise.
$Odd\_Days_{j,t}$	=	a dummy variable that takes the value 1 if day (t) is on the 21^{st}, 23^{rd}, 25^{th}, 27^{th}, or 29^{th} day of Ramadan in country (j),

[7] Newey and West standard errors are estimated with 12 lags. The lag number is calculated based on the rule of thumb: Lags=$0.75(T)^{(1/3)}$. Where (T) is the longest number of observations for any firm, which in our case T=4080. We tested the robustness of our results to increased lag periods up to 55 lags with no important changes to our conclusions.

		and 0 otherwise.
$Even\_Days_{j,t}$	=	a dummy variable that takes the value 1 if day (t) is on the 22^{nd}, 24^{th}, 26^{th}, 28^{th}, or 30^{th} day of Ramadan in country (j), and 0 otherwise.
Ramadan $21_{j,t}$ - Ramadan $30_{j,t}$	=	a dummy variable that takes the value 1 if day (t) is on day (z) of Ramadan in country (j), and 0 otherwise. $Z \epsilon (21\text{-}30)$.

The key challenge to conducting this study is converting the *Hijri* dates for each country to Gregorian equivalents in order to determine the exact Gregorian date for the holy days within each country for the time period under investigation. As mentioned in the previous section, each Muslim country declares the beginning of lunar months and hence the dates of holy days independently. Moreover, countries generally do not keep official records of their past lunar month proclamations. Thus, finding each country's *Hijri*/Gregorian date equivalent is labor intensive and challenging. We used microfilms of official newspapers archives, formal legislations and decrees from these countries which often report both *Hijri* and Gregorian dates to establish the exact *Hijri* calendar for each included country. We established holy day dates for each of the 10 countries in the sample for each year of our timeframe 1995-2012. Table 1 lists summary statistics for the stock exchanges such as market capitalization, percent of local trading and number of listed companies. Table 2 presents the correlation of returns of equally weighted and value-weighted indices between each of the ten used financial markets in addition to the MSCI. The table shows that the stock markets of Malaysia and Indonesia are most correlated. The average correlation among the ten countries equally weighted and value weighted indices is 0.10 and 0.15 respectively. Turkey's stock market is most correlated with the MSCI World Index with a correlation factor of 0.27. Table 3 lists summary statistics of used variables.

5. Results

Figure 1 below depicts the mean of daily returns on holy days and all other days. The means and their descriptive statistics are listed in Table 4. Consistent with our predictions, returns on holy days differ from those on all other days. Returns during Ramadan increase 0.051%. Returns drop 0.152% during Ramadan's first third, but they increase during its second third, its last five odd days and its 27th day by 0.193%, 0.185% and 0.524%, respectively. The aforementioned results are statistically different from those on other days. It is worth noting that while the last five odd days are significantly different than all other days, returns during its last five even days are not.

Insert Table 4 here.

Figure 1 Mean Daily Returns on Holy Days and All Other Days

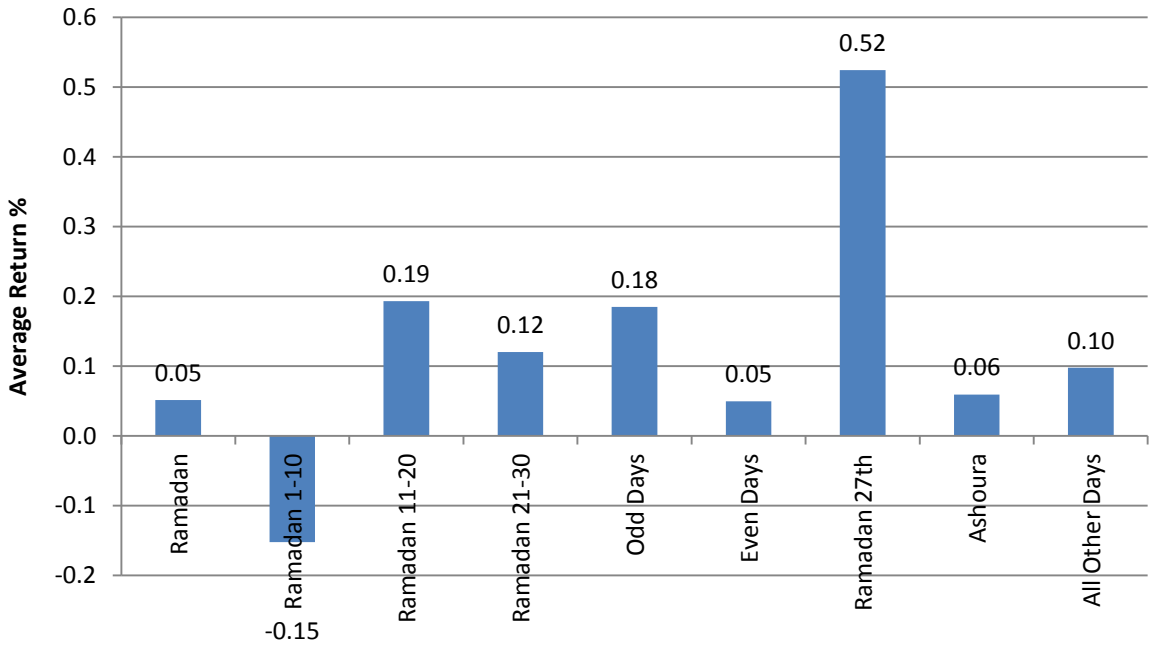

Table 5 reports regression results for stock returns on holy days, controlling for the MSCI, day of the week, and month of the year. Naïve regressions excluding these

controls are available upon request and are essentially similar to those with controls with no changes to our conclusions. Table 5 shows that returns during the month of Ramadan as a whole are not statistically significant (Column 1). Its first ten days are associated with 0.140% decrease in daily returns (Column 2). On the other hand, returns during Ramadan's second and third ten days are associated with increases of 0.089% and 0.042% respectively (Column 2). This result is consistent with Bialkowski et al. (2012) which finds that returns are higher in the last days of Ramadan than its start. The positive impact of Ramadan increases on the days associated with higher worship intensity. The daily returns during the last five odd days of Ramadan are 0.140% higher than all other days (Column 3).Interestingly, returns on the last five even days of Ramadan decrease by 0.059% (Column 3). Finally, among the last ten days of Ramadan, the last five days of Ramadan have positive returns with days 29 and 27 registering the highest increase in returns at 0.784% and 0.452%, respectively (Column 4).

Insert Table 5 here.

Country-by-country regression results for stock returns on holy days are listed in Table 6. These regressions control for the volume, MSCI, day of the week, and month of the year. The results show that for our two key holy day categories, Odd-Days and Ramadan 27th, the holy day effect holds, for the most part, on an individual country basis. Returns on Ramadan's last five odd days are positive in six of the ten countries, negative in Turkey and not significant in Morocco, Malaysia and Qatar. Returns on Ramadan 27th are positive and significant for all countries except for Morocco and Qatar where they are not significant.

Insert Table 6 here.

6. Robustness

Petersen (2009) shows that a key concern when dealing with panel time series is correlation of the error terms within firms across time (firm effect) and across firms at a moment in time (time effect). We use two approaches to address this concern.

First, we form an equally-weighted index from the individual firms to avoid cross sectional autocorrelation. Ideally we will form a single index across all firms and countries. However given that the holy days occur on different days across different countries we are unable to do that. Therefore, we construct an equally weighted index for each country. We also use value-weighted indices that are reported by these stock exchanges. We use the return of those two indices as dependent variable in two separate regressions. As per Saunders (1993), we include the lagged return of the previous two trading days to account for non-synchronous trading effects and control for potential missing variable bias (see Akgiray, 1989)[8]. We also include country level dummies for each of our ten countries. In addition, we control for the return of the MSCI, day of the week and month of the year. We estimate:

$$\begin{aligned} Index\_Ret_{i,t} = {} & B_0 + \beta_1 Holy\_Day_{I,t} + \beta_2 MSCI_t + \beta_3 \sum_{J=2}^{6} D_t + \beta_4 \sum_{J=2}^{12} M_t + \\ & \beta_5 Index_{i,t-1} + \beta_6 Index_{i,t-2} + \beta_7 \sum_{J=2}^{10} Country_t + \varepsilon \end{aligned}$$

where,

$Index\_Ret_{i,t}$ The Return of an equally-weighted or value-weighted index of firms in country (i) on day (t).

$Index_{i,t-1}$ One trading day lagged $Index_i$

[8] Including lagged returns for the previous one hundred trading days does not alter the overall results nor their significance.

$Index_{i,t-2}$ Two trading days lagged $Index_i$

Second, we cluster standard errors on both dimensions country level and time. The clustering is performed as per Thompson (2006) and Cameron, Gelbach and Miller (2006) which show that clustering on both dimension simultaneously accounts for the firm and time effects. We use the Stata ado command -cluster2- written by Mitchell Petersen.

Insert Table 7 here.

Insert Table 8 here.

Tables 7 and 8 list the results of the equally-weighted and value-weighted indices respectively clustered by both country level and date[9]. For the equally weighted index, Ramadan's first ten days and Ramadan 27th are associated with a drop of 0.001% and increase of 0.003% in returns, respectively. Ramadan's second and last thirds, last five odd and event days are not statistically significant.

In the case of the value weighted index, Ramadan's last ten days, last five odd days, and Ramadan 27 are associated with a 0.250%, 0.244%, and 0.496% statistically significant increases in returns at the 5% level. The last five even days are associated with an increase of 0.251% which significant at the 10% level. Ramadan as a whole, its first and second ten days are not statistically significant.

Additionally, we test the sensitivity of our key findings to all possible combinations of inclusion/exclusion of all control variables using Stata's –checkrob- command. The sensitivity analysis results in Table 9 shows that Ramadan's last ten days,

[9] The results for the equally-weighted index also confirm the main findings, but have been omitted for brevity. Please contact the author to access them.

its last five odd days, and Ramadan 27th remain positive and statistically significant 100 percent of the time regardless of the combination of control variables.

Insert* Table 9 *here.

7. Investigating the Underlying Mechanism:

A discussion of the mechanism underlying the holy day effect is in order. Short of a divine intervention, well beyond the earthly confines of this paper, five channels can lead to the statistically significant impact of holy days on market returns. The first channel is that higher returns on Ramadan are resulting from the liquidity premium demanded by active participants during the decreased market capitalization on holy days. The second channel posits that the holy days effect is resulting from an alteration in the composition of active traders. The third and fourth channels explore whether the effect results from a change in the composition of traded stocks. The fifth channel is that the heightened faith experience on holy days affects the mood of investors, thus affecting their decision making process. We will investigate all these channels given that they are not mutually exclusive.

The first channel is a liquidity premium story. It predicts that, on average, trading volume would decrease as a result of physical exhaustion from fasting. This decrease can impact firms across the board or especially riskier stocks which require higher concentration and therefore are avoided by fasting traders. As a result of the drop in trading volume, active participants expect a liquidity premium.

If the observed effect on stock returns is resulting solely from the change in traded volume on holy days, then the holy day impact on market returns would be eliminated or

severely reduced when controlling for the level of traded volume in the returns regression. If however, another mechanism is contributing to or causing the change then controlling for volume in the return regression will not eliminate the holy day effect. To test this, we estimate the following firm-date fixed effect panel regression using Stata's –xtivreg2- command and include country fixed effect dummy controls. We use robust Newey and West (1987) heteroskedasticity-autocorrelation-consistent standard errors with twelve lags:

$$Ret_{i,t} = \beta_0 + \beta_1 Holy\_Day_{i,t} + \beta_2 Vol_{i,t} + \beta_3 MSCI_t + \beta_4 \sum_{J=2}^{6} D_t + \beta_5 \sum_{J=2}^{12} M_t + \beta_6 Ret_{i,t-1} + \beta_7 Ret_{i,t-2} + \varepsilon$$

where:

$Vol_{i,t}$ = the trading volume of firm i on day t.

The results are listed in Table 10. Controlling for traded volume has not affected the statistical significance or direction of the holy day effect on the return of stocks.

Insert* Table 10 h*ere.

The second channel which may cause the holy day effect is an alteration in the composition of the active traders themselves due to a change in the trading behavior of more religious traders on holy days. Shifting the composition of the pool of active traders towards or away from more religious traders on holy days might affect the composition of traded stocks these days.

To test for this second mechanism, we would ideally use identifying data on the composition of active traders in a given day, and look for changes in the composition of the pool of traders on holy days. However, such data is not publicly reported for any of

the investigated stock markets due to obvious confidentiality and liability concerns. Therefore, in order to test for the first mechanism, we resort to an indirect test to separate traders by their religious capital. Specifically, we look for a change in the composition of traded stocks that is associated with a shift in the composition of traders towards (or away from) religiously observant traders. Observant Muslim traders steer away from trading in non-Shariah compliant stocks. Shariah is the Islamic law code which regulates many aspects of Muslim daily life, including the type of permissible investments. Islamic law prohibits observant Muslims from investing in firms with a debt to equity ratio higher than 33% or those whose revenue stream comes from economic activities that are outlawed in Islamic law. These non-Shariah compliant activities include alcohol, gambling, tobacco, adult entertainment, pork products, arms and weapons, financial and insurance companies. Firms that function in any of these according to their North American Industry Classification System (NAICS) code are designated non-Shariah compliant. NAICS codes are obtained from the Compustat Database. The market capitalization of Shariah compliant companies is 36% of the total market capitalization in the dataset. We use this separating behavior between traders based on their religiosity to investigate whether the composition of active traders changes on holy days. To this end, we estimate the following Hausman Taylor model to maintain firm-date fixed effects while exploring Shariah attributes that are constant within the panel using Stata's -xthtaylor- command:

$$\begin{aligned} Vol_{i,t} = \beta_0 + \beta_1\, Holy\_Day_{j,t} + \beta_2\, Shariah_i + \beta_3\, (Shariah_i \times \\ Holy\_Day_{j,t}) + \beta_4\, Muslim_j + \beta_5\, MSCI_t + \beta_6 \sum_{J=2}^{6} D_t \\ + \beta_7 \sum_{J=2}^{12} M_t + \beta_8\, Vol_{i,t-1} + \beta_9\, Vol_{i,t-2} + \varepsilon \end{aligned}$$

where,

$Shariah_i$ = a dummy variable that takes the value 1 if firm (i) is Shariah compliant, and 0 otherwise.

We assume that on non-holy days, both religiously observant and non observant traders trade Shariah compliant firms, but only non-religiously observant ones trade non-Shariah compliant firms. Therefore, if fewer religiously observant traders participate in the trading activity on holy days, the traded volume of Shariah compliant firms decreases while that of non-Shariah compliant firms remains the same. If this argument holds, the coefficient of the interaction term ($Shariah_i$ X $Holy\_Day_{j,t}$) should be negative and significant. The results of this regression are listed in **Table 11**. The coefficients of the interaction terms (Shariah X $Holy\_Day_{i,t}$) are not statistically significant except for the last ten days and the five even days where it is positive and significant at the 10% and 5% levels, respectively. This indicates that the proportion of religious traders active on the holy days under investigation is more on the last five even days and last ten days, but not different on our two key categories of holy days, the last five odd days and Ramadan 27^{th}. Therefore the second mechanism is not supported.

Insert Table 11 here.

The third mechanism explores whether the composition of traded stock changes due to physical aspects associated with worship. For example, perhaps trading in risky stocks requires higher concentration which leads fasting traders to steer away from such stocks. We test for this by analyzing the Holy Day effect on days when fasting is more physically strenuous in order to separate physical aspect of the fast from the spiritual one. We examine the effect of high temperatures on returns in Ramadan. Since fasting Muslims abstain from eating and drinking anything, even water, fasting is harder on

hotter days and subjects the body to increased dehydration. We run the following firm-date fixed effect panel regression using Stata's –xtivreg2- command and include country fixed effect dummy controls. We use robust Newey and West (1987) heteroskedasticity-autocorrelation-consistent standard errors with twelve lags:

$$\begin{aligned} Ret_{i,t} = \; & \beta_0 + \beta_1 \, Holy\_Day_{i,t} + \beta_2 \, Temp_{j,t} + \beta_3 \, (Temp_{j,t} \times Holy\_Day_{j,t}) + \beta_4 \, Vol_{i,t} \\ & + \beta_5 \, MSCI_t + \beta_6 \sum_{J=2}^{6} D_t + \beta_7 \sum_{J=2}^{12} M_t + \beta_8 \, Ret_{i,t-1} + \beta_9 \, Ret_{i,t-2} + \varepsilon \end{aligned}$$

where:

$Temp_{j,t}$ = The actual maximum daily temperature on day (t) in the city where the stock exchange of firm (i) is listed. Measured in Fahrenheit and obtained from the National Oceanic and Atmospheric Administration.

Insert Table 12 here.

Table 12 displays the results of the aforementioned regression. The coefficients of Ramadan as a whole are positive and significant, with the exception of its first ten days which is not significant. The interaction term between the holy days and the temperature is negative and significant for all categories of holy days except for its first ten days. It is worth noting, that upon controlling for temperature, the coefficient for Ramadan as a whole and the last five even days become positive and significant. Thus, while returns increase on Ramadan's holy days, they decrease on hotter holy days. The previous test provides indication of two effects on returns, a negative effect linked to physical aspects of the fast, and a positive effect. The positive effect itself can result from a change in the composition of traded stocks due to fasting or can be driven by the mood of traders.[10]

[10] It is worth noting here the relationship between temperatures and return is positive as opposed to the finding of Cao and Wei (2005). However, it should be noted that Cao and Wei (2005) test average daily temperature while we test the actual maximum temperature on a given day. Unlike Cao and Wei (2005),

The fourth mechanism investigates whether the composition of traded stocks changes on holy days due to changes in risk tolerance of physically exhausted traders. To test for this mechanism, we look for a change in the composition of traded stocks that is consistent with a change in risk tolerance. We use the market capitalization of firms as a proxy for their risk. Firms with smaller market capitalization can be viewed as illiquid and have higher transaction costs as per Amihud and Mendelson (1986). Smaller size can also reflect lower ability to absorb shocks. Consistent with these arguments, market capitalization has been found by Banz (1981), Reinganum (1981), and Fama and French (1992) to be negatively correlated with the return of firms.

To test for a change in the risk tolerance of traders on holy days, we divide our portfolio into ten deciles based on firm's average market capitalization across the whole period. Daily market capitalizations are calculated in US dollars using monthly exchange rates from the CEIC database. We include a dummy for each decile and an interaction variable for the deciles and the holy day dummy. We estimate the following Hausman Taylor model to maintain firm-date fixed effects while exploring decile attributes that are constant within the panel:

$$\begin{aligned} Vol_{i,j,t} = {} & \beta_0 + \sum_{k=1}^{10} \beta_1 Mkt\_Decile_i + \beta_2 Holy\_Day_{j,t} + \sum_{k=1}^{10} \beta_3 \\ & (Mkt\_Decile_i \text{ X } Holy\_Day_{j,t}) + \beta_4 MSCI_t + \beta_5 \\ & \sum_{J=2}^{6} D_t + \beta_6 \sum_{k=2}^{12} M_t + \beta_7 Vol_{i,t-1} + \beta_8 Vol_{i,t-2} + \varepsilon \end{aligned}$$

where,

Mkt_Decile_i = Ten dummy variables that take the value 1 if firm (i) is in that respective market capitalization decile of its exchange rate, and 0 otherwise.

this paper includes month controls to separating the temperature effect from the calendar one. Finally, this paper investigates a different country sample than that of Cao and Wei (2005) as none of our countries are present in their sample.

The results listed in Table 13 show that trading volume for firms in the highest decile of market capitalization increases during the first and second third of Ramadan, but decreases during its last third, both on odd and even days. These changes in trading volume may explain some of the observed changes in return during Ramadan. The existing literature predicts that companies with higher market capitalization earn lower return, all else equal. Thus when less trading volume comes from these firms during Ramadan's last third; the market's average return increases. However, our strongest effect in size (Ramadan 27th) has not experienced differentiated trading behavior across market capitalization classifications. Thus, while we find some support for a change in the composition of traded stock, other channels must be explored to explain the Ramadan 27th result.

Insert Table 13 here.

The fifth channel is mood based. It posits that markets are bided up on holy days due to psychological cognitive changes. This can result from a change in the mood of investors after a heightened religious experience on holy days. This mood explanation is consistent with a number of studies that have linked mood to changes in stock market returns. These studies are presented in the literature review section of this paper. Previous research on emotions documented the influence of emotional states on cognitive processes such as information processing (Tiedens & Linton, 2001) and risk perceptions (Lerner and Keltner, 2001; Isen, Nygren & Ashby, 1988). Furthermore, research has gone beyond the valence of the emotions to study the impact of the appraisal content of those emotions. The Appraisal-tendency-Framework, (ATF) posits that "specific emotions give

rise to specific cognitive and motivational processes, which account for the effects of each emotion upon judgment and decision making" (Han, Lerner, & Keltner, 2007).

To assess this channel, we introduce a new Muslim holy day, Ashoura, which occurs on the tenth day of the first Hijri month of Muharram. Ashoura has a different emotional impact for Muslims than Ramadan. On that day, Sunni Muslims celebrate the exile and deliverance of Moses and the Israelites from the Pharaoh. Shia, on the other hand, mourn the murder and subsequent mutilation of Hussein ibn Ali, the grandson of the prophet Mohamad at the Battle of Karbala on Ashoura in 680AD. This is a sad day for Shia marked by public rites and displays of mourning and traditional self flagellation using swords, chains and blades. Black mourning attire is worn on that day.

This negative emotional valence experienced by Shia makes studying the impact of religious experience on financial markets on Ashoura especially interesting. The negative emotions expected to negatively affect their valuation of stock market returns. It is well established that negative mood distorts peoples' perceptions and judgments towards greater negativity (e.g., Carson & Adams, 1980; Cunningham, 1988; Gorn, Goldberg, & Basu, 1993; Johnson & Tversky, 1983; Mayer, Gaschke, Braverman, & Evans, 1992; Wright & Bower, 1992).[11] Studies have documented that subjects that were induced with negative emotions made more accurate judgments without consideration to whether the outcomes were desired or not (e.g., Alloy and Abramson, 1979, Alloy, Abramson, and Viscusi, 1981; Alloy and Abramson, 1982), and were less likely to underestimate the probability of negative events, or to overestimate the possibility of positive ones (Alloy and Ahrens, 1987). Such subjects were also less likely to perceive

[11] Raghunathan, R., & Pham, M. T. (1999). All negative moods are not equal: Motivational influences of anxiety and sadness on decision making. Organizational Behavior and Human Decision Processes, 79, 57.

the world as under their control when it is, instead, subject to exogenous forces (Golin, Terrell, and Johnson, 1977), and were less likely to overestimate their own abilities in ambiguous task situations (Tabachnik, Crocker, and Alloy, 1983)[12].

First, we investigate the impact of Ashoura on stock market returns. Unlike the holier days of Ramadan whose heightened worship occurs on the night before the holy day, the observance of Ashoura occurs during the day itself. Therefore, we include in our Ashoura dummy variable the day of Ashoura and the calendar day after it. Given that the negative impact of Ashoura is localized to Shia, we focus on the sub sample of countries with more significant Shia population. This subsample includes countries with Shia share of population exceeding 2% percent. These include: Kuwait (21% Shia), Pakistan (12% Shia), Saudi Arabia (12% Shia),Turkey (12% Shia), and Qatar (8% Shia),. We estimate the following regression:

$$Ret_{i,j,t} = \beta_0 + \beta_1 Ashoura_{j,t} + \beta_2 Vol_{i,t} + \beta_3 MSCI_t + \beta_5 \sum_{J=2}^{6} D_t + \beta_6 \sum_{J=2}^{12} M_t + + \beta_7 Ret_{i,t-1} + \beta_8 Ret_{i,t-2} + \varepsilon$$

where,

$Ashoura_{j,t}$ = a dummy variable that takes the value 1 if day (t) or day (t-1) was Ashoura in country i, and 0 otherwise.

Insert Table 14 here.

Table 14 lists the results of this regression which show that the coefficient for Ashoura is not statistically significant. To further assess the mood channel, we exploit the emotional differences experienced by Shia and Sunni on Ashoura. We expect the mood effect to cause Shia traders to bid down stock returns given the negative emotions they

[12] Staw, B., Barsade, S., (1993). Affect and Managerial Performance: A Test of the Sadder-but-Wiser vs. Happier-and-Smarter Hypotheses. Administrative Science Quarterly, 38, pp. 304-331.

experience on Ashoura. Ideally, we would separate the behavior of traders according to whether they are Sunni or Shia. Given that we are unable to access this information, we proxy for the relative composition of Shia and Sunni traders in the pool of traders using population averages. To that end, we estimate the following regression:

$$Ret_{i,j,t} = \beta_0 + \beta_1 Ashoura_{j,t} + \beta_2 Shia_j + \beta_3 (Ashoura_{j,t} \times Shia_j) + \beta 4\ Vol_{i,t} + \beta_5 MSCI_t + \beta_6 \sum_{J=2}^{6} D_t + \beta_7 \sum_{J=2}^{12} M_t + \beta_8 Ret_{i,t-1} + \beta_9 Ret_{i,t-2} + \varepsilon$$

where,

$Ashoura_{j,t}$ = a dummy variable that takes the value 1 if day t was Ashoura in country i, and 0 otherwise.

$Shia_j$ = The percent of country (j)'s population that is Shia as reported by the Pew Research Center report, "Mapping the Global Muslim Population", the October 2009.

If the mood of Shia investors is effecting the return on stocks on Ashoura, then this negative effect should be captured by the interaction term ($Ashoura_{j,t} \times Shia_j$). Column (2) of Table 14 lists the results. The interaction variable ($Ashoura_{j,t} \times Shia_j$) is indeed negative and statistically significant. Also of interest is that the main Ashoura effect is now positive and significant. These results lend credibility to the mood channels as a driver for the anomalous returns on holy days.

8. Conclusion

This study examines the impact of religious experience on financial markets. It investigates the effect of the Muslim holy day of Ramadan on the daily returns of ten Muslim financial markets over the period January 1995 to August 2012. Muslim holy days are designated using the Muslim *Hijri* lunar calendar which enables us to avoid

potential seasonal effects. The fact that Muslim countries differ from each other in the methods used to establish the beginnings of lunar months enables us to lessen the impact of contemporaneous events and cross market linkages.

The study utilizes the heterogeneity of worship intensity within the month of Ramadan to validate that the measured effects are a result of the religious experiences not material commercial effects. The religious capital during Ramadan's last ten days is alternating, with its last odd days having higher religious capital than its last five even ones. Consistent with this we document a statistically significant 0.14% increase in returns on the last five odd days. The intensity of faith experience culminates on Ramadan's 27^{th} day. The magnitude of the holy day effect is consistent with the importance of Ramadan's holy days as the increase in returns culminates on Ramadan 29^{th} and 27^{th} at statistically significant 0.784% and 0.452%, respectively.

Additionally, the paper investigates the underlying mechanism behind this holy day effect. The paper explores five potential mechanisms that can cause the holy day effect. The first channel that we explore is the liquidity premium. Controlling for traded volume does not eliminate the statistically significant change in returns on holy days. Second, we explore whether the effect is driven by a change in the composition of active traders on holy days. We test for it by separating the trading of religiously observant investors from the rest using firm compliance with the Islamic Shariah. The results of our regressions do not establish support for this channel. Third, we separate physical aspects of fasting from spiritual ones through evaluating the impact of warmer holy days on returns. We find evidence of two effects, a positive main holy day effect, and a negative one associated with higher temperature on those holy days. Fourth, we assess whether the

holy day affect is caused by a change in the composition of traded stocks according to their riskiness. We construct ten deciles of market capitalizations to proxy for firm riskiness. We find evidence for a shift in trading volume away from firms with the largest market capitalization during Ramadan's last ten days. Finally, we test whether mood changes on holy days are causing the change in return. To do that, we use another Muslim holiday, Ashoura, which differs in valence from Ramadan for Shia Muslims. We find a statistically significant drop of 12.13% in returns on Ashoura for every 1% increase in the proportion of Shia in the population.

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Appendix A

Table 1 Summary of the Financial Markets and Returns Data

Country	Stock Exchange	Market Cap[13] (USD Bn)	Local Trading[14]	Listed Companies	# of Obs	Date		Market Return (%)			
						First	Last	Mean	Std. Dev.	Min	Max
Egypt	Cairo Stock Exchange	61	79%	340	324,710	Jun-1995	Aug-2012	0.0005	0.098	-0.969	49.679
Indonesia	Jakarta Stock Exchange	405	65%	355	1,019,886	May-1988	Aug-2012	0.0017	0.104	-0.968	69.000
Jordan	Amman Stock Exchange	27	48%	245	358,339	Jul-1993	Aug-2012	0.0000	0.055	-0.901	19.111
Kuwait	Kuwait Stock Exchange	78	46%	213	282,493	Dec-1999	Aug-2012	-0.0002	0.035	-0.910	5.694
Malaysia	Bursa Malaysia	458	33%	112	3,352,493	Dec-1985	Aug-2012	0.0008	0.101	-0.981	106.500
Morocco	Casablanca Stock Exchange	52	77%	80	145,487	Jun-1995	Aug-2012	0.0003	0.036	-0.906	9.600
Pakistan	Karachi Stock Exchange	41	80%	403	756,591	Aug-1992	Aug-2012	0.0014	0.067	-0.960	21.500
Qatar	Qatar Stock Exchange	128	65%	42	70,289	Apr-2002	Aug-2012	0.0004	0.029	-0.607	1.536
Saudi Arabia	Saudi Stock Exchange	378	89%	155	244,074	Jan-2000	Aug-2012	0.0003	0.040	-0.854	8.924
Turkey	Istanbul Stock Exchange	270	34%	329	1,094,541	Apr-1989	Aug-2012	0.0007	0.056	-0.999	23.643

[13] Market capitalizations are for August 2012.

[14] Percent of local trading is for the year 2012, except for Qatar and Pakistan which is for 2013, Morocco 2011, and Turkey 2010.

Table 2 Correlation of Financial Markets Returns for Equal (plain) and Value Weighted (shaded) Indices

	EGY	IDN	JOR	KWT	MAR	MYS	PAK	QAT	SAU	TUR	MSCI
EGY	1	0.09	0.00	0.14	0.08	0.16	0.11	-0.04	0.21	0.04	0.14
IDN	0.03	1	-0.03	0.17	0.19	0.73	0.23	0.14	0.24	0.15	0.17
JOR	0.23	-0.04	1	0.07	0.17	0.00	0.22	0.01	0.09	0.07	0.05
KWT	0.02	0.13	-0.13	1	0.09	0.24	0.19	0.00	0.36	0.17	0.07
MAR	0.15	0.12	0.07	0.01	1	0.23	0.26	0.12	0.22	0.01	0.07
MYS	0.15	0.65	0.05	0.06	0.05	1	0.28	0.15	0.28	0.09	0.16
PAK	0.04	0.22	0.12	0.14	0.07	0.21	1	-0.05	0.14	0.08	0.04
QAT	0.10	0.08	-0.02	-0.06	0.07	0.11	-0.08	1	0.38	0.17	0.00
SAU	0.08	0.08	0.11	0.12	0.12	0.07	0.12	0.26	1	0.32	0.09
TUR	0.10	0.22	-0.01	0.08	0.07	0.30	0.08	0.08	0.14	1	0.26
MSCI	0.12	0.14	0.04	0.04	0.09	0.17	0.04	0.01	0.10	0.27	1

Table 3 Summary Statistics of Variables

	Obs	Mean (%)	Std. Dev. (%)	Min (%)	Max (%)
Daily Returns	5,860,648	0.094	8.692	-99.905	10650.000
Volume	5,860,648	2.09E+07	6.37E+08	0.000	2.29E+11
Market Cap (USD)	5,854,383	7.61E+12	1.57E+14	25000	1.39E+16
MSCI Return	5,860,648	0.017	1.252	-48.715	66.910
Ramadan	5,860,648	0.085	0.279	0.000	1.000
Ramadan 1-10	5,860,648	0.030	0.170	0.000	1.000
Ramadan 11-20	5,860,648	0.030	0.172	0.000	1.000
Ramadan 21-30	5,860,648	0.025	0.156	0.000	1.000
Odd_Days	5,860,648	0.013	0.114	0.000	1.000
Even_Days	5,860,648	0.012	0.109	0.000	1.000
Ramadan 27th	5,860,648	0.003	0.054	0.000	1.000
Ashoura	955,170	0.001	0.032	0.000	1.000
Shia	955,170	0.142	0.038	0.100	0.225
Sunday	5,860,648	0.000	0.000	0.000	0.000
Monday	5,860,648	0.198	0.399	0.000	1.000
Tuesday	5,860,648	0.212	0.409	0.000	1.000
Wednesday	5,860,648	0.215	0.411	0.000	1.000
Thursday	5,860,648	0.201	0.401	0.000	1.000
Friday	5,860,648	0.172	0.378	0.000	1.000
Saturday	5,860,648	0.000	0.000	0.000	0.000
January	5,860,648	0.081	0.273	0.000	1.000
February	5,860,648	0.074	0.262	0.000	1.000
March	5,860,648	0.089	0.285	0.000	1.000
April	5,860,648	0.087	0.282	0.000	1.000
May	5,860,648	0.087	0.282	0.000	1.000
June	5,860,648	0.089	0.285	0.000	1.000
July	5,860,648	0.091	0.288	0.000	1.000
August	5,860,648	0.085	0.278	0.000	1.000
September	5,860,648	0.079	0.269	0.000	1.000
October	5,860,648	0.080	0.272	0.000	1.000
November	5,860,648	0.076	0.265	0.000	1.000
December	5,860,648	0.081	0.272	0.000	1.000

Table 4 Mean of Daily Returns on Holy Days and All Other Days

	Obs	Mean (%)	Std. Dev. (%)	Min (%)	Max (%)	t-test
Ramadan All	498,683	0.051	5.968	-97.826	1047.368	3.592 (0.0003)
Ramadan 1-10	173,671	-0.152	5.832	-90.153	843.750	11.607 (0.000)
Ramadan 11-20	178,122	0.193	5.597	-97.826	550.000	4.496 (0.000)
Ramadan 21-30	146,890	0.120	6.510	-95.000	1047.368	0.963 (0.3355)
Odd_Days	76,664	0.185	7.510	-95.000	1047.368	2.696 (0.007)
Even_Days	70,226	0.050	5.203	-79.892	300.000	1.425 (0.154)
Ramadan_27th	16,971	0.524	5.110	-77.719	220.455	6.244 (0.000)
Ashoura	1,001	0.059	3.802	-15.088	32.5123	0.322§ (0.7472)
All Other Days	5,347,791	0.100	8.911	-99.905	10650.000	

Notes: "Obs" denote the number of observations used to compute the mean and other statistics. "Ramadan All" refers to the mean daily return during the whole month of Ramadan, "Ramadan 1-10" refers to the mean daily return during the first ten days of Ramadan, "Ramadan 11-20" refers to the mean daily return during the middle ten days of Ramadan, "Ramadan 21-30" refers to the mean daily return during the last ten days of Ramadan, "Odd Days" refers to the mean daily return during the odd last ten days of Ramadan, "Even Days" refers to the mean daily return during the even last ten days of Ramadan, "Ramadan 27th" refers to the mean daily return on the 27th day of Ramadan, "Ashoura" refers to the mean daily return on the day of Ashoura, "All Other" refers to the mean daily return on all day other than Ramadan and Ashoura. "t-test" refers to the t-test that the mean of returns on the specific holy day are not different from the mean of returns on all other days other than Ramadan. Figures in brackets under the "t-test" denote the two sided p-value for the t-test.
§ T-test versus non-Ashoura days for the subsample including Kuwait, Pakistan, Qatar, Saudi Arabia and Turkey which are used in the Table 14 regression.

Table 5 Returns Regression Controlling for the MSCI, Day of the Week and Month of the Year

	(1)	(2)	(3)	(4)
	Daily Returns	**Daily Returns**	**Daily Returns**	**Daily Returns**
Ramadan	-0.0049			
	(0.011)			
Ramadan 1-10		-0.1400***		
		(0.017)		
Ramadan 11-20		0.0891***		
		(0.018)		
Ramadan 21-30		0.0415**		
		(0.019)		
Odd_Days			0.1400***	
			(0.028)	
Even_Days			-0.0597***	
			(0.021)	
Ramadan 21				-0.3030***
				(0.051)
Ramadan 22				-0.5280***
				(0.044)
Ramadan 23				-0.0210
				(0.075)
Ramadan 24				-0.2470***
				(0.041)
Ramadan 25				-0.0295
				(0.077)
Ramadan 26				0.2630***
				(0.037)
Ramadan 27				0.4520***
				(0.041)
Ramadan 28				0.3850***
				(0.051)
Ramadan 29				0.7840***
				(0.054)
Ramadan 30				0.2610***
				(0.089)
MSCI Return	0.3470***	0.3460***	0.3470***	0.3470***
	(0.042)	(0.042)	(0.042)	(0.042)
One day lagged return	-0.0453***	-0.0453***	-0.0453***	-0.0453***
	(0.015)	(0.015)	(0.015)	(0.015)
Two days lagged return	-0.0028	-0.0028	-0.0028	-0.00276
	(0.003)	(0.003)	(0.003)	(0.003)
N	5860643	5860643	5860643	5860643
*** p<0.1, ** p<0.05, *** p<0.01**				
Daily returns and change in volume are in percentage form (multiplied by 100). Figures in brackets under the coefficients are Newey and West (1987) heteroskedasticity-autocorrelation-consistent standard errors. Tuesday and April are dropped. Saturday and Sunday were automatically omitted because of collinearity by Stata.				

Table 6 Separate Country Returns Regression Results Controlling for change in volume, MSCI, Day of the Week and Month of the Year

	Ramadan	Ramadan 1-10	Ramadan 11-20	Ramadan 21-30	Odd Days	Even Days	Ramadan 27th	*N*
Egypt	0.0897***	0.2220***	-0.2760***	0.3500***	0.2410***	0.5040***	0.7380***	205244
	(0.034)	(0.050)	(0.056)	(0.052)	(0.073)	(0.067)	(0.133)	
Indonesia	-0.0149	-0.3160***	0.2390***	0.045	0.1790***	-0.0978	0.5650***	795100
	(0.027)	(0.050)	(0.041)	(0.043)	(0.061)	(0.062)	(0.124)	
Jordan	0.1700***	-0.0007	0.2110***	0.3090***	0.3810***	0.1680	0.5220***	248119
	(0.035)	(0.038)	(0.058)	(0.058)	(0.048)	(0.104)	(0.104)	
Kuwait	0.0553*	-0.1640***	-0.0785	0.4410***	0.4130***	0.5330***	0.6740***	167115
	(0.034)	(0.049)	(0.054)	(0.051)	(0.067)	(0.076)	(0.116)	
Morocco	-0.1300***	-0.2350***	-0.1340**	-0.0250	-0.0883	0.1420**	0.0933	95859
	(0.041)	(0.067)	(0.066)	(0.074)	(0.125)	(0.068)	(0.136)	
Malaysia	-0.0232	-0.1370***	0.1300***	-0.1210***	0.0425	-0.2970***	0.3390***	2835633
	(0.018)	(0.023)	(0.035)	(0.031)	(0.050)	(0.031)	(0.061)	
Pakistan	0.2390***	-0.1240***	0.2160***	0.7750***	0.6680***	0.8600***	1.0560***	644642
	(0.032)	(0.045)	(0.050)	(0.059)	(0.089)	(0.083)	(0.236)	
Qatar	-0.1250	-0.1570	-0.0465	-0.1310	0.2040	-0.3840**	0.0546	11330
	(0.223)	(0.212)	(0.287)	(0.317)	(0.176)	(0.183)	(0.162)	
Saudi Arabia	-0.2540***	-0.1860***	-0.3640***	-0.1980***	0.2080***	-0.4020***	0.2930**	132082
	(0.038)	(0.052)	(0.054)	(0.065)	(0.071)	(0.097)	(0.119)	
Turkey	-0.2230***	-0.3350***	-0.2050***	-0.1170***	-0.0760***	-0.0448	0.3000***	725519
	(0.016)	(0.025)	(0.028)	(0.023)	(0.029)	(0.034)	(0.056)	
*** p<0.1, ** p<0.05, *** p<0.01**								
Daily returns and change in volume are in percentage form (multiplied by 100). Figures in brackets under the coefficients are Newey and West (1987) heteroskedasticity-autocorrelation-consistent standard errors. Tuesday and April are dropped.								

Table 7 Equally weighted Index Clustered by Both Country Level and Date

	(1)	(2)	(3)	(4)
	Return of Equally Weighted Index	**Return of Equally Weighted Index**	**Return of Equally Weighted Index**	**Return of Equally Weighted Index**
Ramadan	-0.0000			
	(0.000)			
Ramadan 1-10		-0.0015***		
		(0.001)		
Ramadan 11-20		0.0004		
		(0.001)		
Ramadan 21-30		0.0012		
		(0.001)		
Odd_Days			0.0011	
			(0.001)	
Even_Days			0.0014	
			(0.001)	
Ramadan 27th				0.0029***
				(0.001)
MSCI Return	0.0016***	0.0016***	0.0016***	0.0016***
	(0.001)	(0.001)	(0.001)	(0.001)
One day lagged return	0.0099	0.0090	0.0088	0.0099
	(0.043)	(0.043)	(0.043)	(0.044)
Two days lagged return	0.1190**	0.1190**	0.1200**	0.1190**
	(0.055)	(0.055)	(0.055)	(0.055)
Constant	0.0008**	0.0008**	0.0008**	0.0008**
	(0.000)	(0.000)	(0.000)	(0.000)
N	23131	23131	23131	23131
Day of the Week Dummy	Yes	Yes	Yes	Yes
Month of the Week Dummy Variables	Yes	Yes	Yes	Yes
Country Dummy Variables	Yes	Yes	Yes	Yes
Firm Level Cluster	Yes	Yes	Yes	Yes
Date Level Cluster	Yes	Yes	Yes	Yes
*** p<0.1, ** p<0.05, *** p<0.01**				
Daily returns and change in volume are in percentage form (multiplied by 100). Figures in brackets under the coefficients are standard errors clustered on both dimensions country level and date. The clustering is performed as per Thompson (2006) and by Cameron, Gelbach and Miller (2006) using the Stata ado command –cluster2				

Table 8 Value Weighted Index Return Clustered by Both Country Level and Date

	(1)	(2)	(3)	(4)
	Return of Value Weighted Index	**Return of Value Weighted Index**	**Return of Value Weighted Index**	**Return of Value Weighted Index**
Ramadan	0.0903			
	(0.056)			
Ramadan 1-10		-0.0640		
		(0.063)		
Ramadan 11-20		0.1070		
		(0.095)		
Ramadan 21-30		0.2500**		
		(0.107)		
Odd_Days			0.2440***	
			(0.079)	
Even_Days			0.2510*	
			(0.148)	
Ramadan 27th				0.4960**
				(0.198)
MSCI Return	0.1660***	0.1650***	0.1660***	0.1660***
	(0.057)	(0.057)	(0.057)	(0.057)
One Day Lagged Return	0.0798***	0.0794***	0.0796***	0.0797***
	(0.014)	(0.014)	(0.014)	(0.014)
Two Days Lagged Return	0.0157*	0.0155*	0.0156*	0.0157*
	(0.009)	(0.009)	(0.009)	(0.009)
Constant	-0.0061	-0.0061	-0.0055	-0.0038
	(0.059	(0.059	(0.059	(0.059)
N	25847	25847	25847	25847
Day of the Week Dummy	Yes	Yes	Yes	Yes
Month of the Week Dummy Variables	Yes	Yes	Yes	Yes
Country Dummy Variables	Yes	Yes	Yes	Yes
Firm Level Cluster	Yes	Yes	Yes	Yes
Date Level Cluster	Yes	Yes	Yes	Yes
*** p<0.1, ** p<0.05, *** p<0.01**				

Daily returns are in percentage form (multiplied by 100). Figures in brackets under the coefficients are standard errors clustered on both dimensions country level and date. The clustering is performed as per Thompson (2006) and by Cameron, Gelbach and Miller (2006) using the Stata ado command –cluster2- cluster2.ado ---- written by Mitchell Petersen. Tuesday, April and Kuwait are dropped. Saturday and Sunday were automatically omitted by Stata because of collinearity.

Table 9 Sensitivity Of The Main Results To The Inclusion Of All Combination Of Control Variables

Variable	Maximum Coefficient	Minimum Coefficient	Mean Coefficient	Mean Standard Error	Share of Regressions Significant at the 5-percernt Level	Share of Regressions where the Coefficient Sign is Positive	Share of Regressions where the Coefficient Sign is Negative	Average t-Value
Ramadan	0.072	0.003	0.023652	0.050	0.000%	100%	0.000%	0.469
Ramadan 1-10	-0.099	-0.170	-0.131	0.077	0.292%	0.000%	100%	1.700
Ramadan 11-20	0.088	0.013	0.029	0.097	0.000%	100%	0.000%	0.296
Ramadan 21-30	0.252	0.181	0.197	0.081	100%	100%	0.000%	2.422
Odd_Days	0.244	0.183	0.196	0.068	100%	100%	0.000%	2.901
Even_Days	0.261	0.183	0.204	0.124	3.49%	100%	0.000%	1.658
Ramadan 27th	0.539	0.481	0.510	0.165	100%	100%	0.000%	3.096

Daily returns are in percentage form (multiplied by 100). Standard errors clustered on both dimensions country level and date. The clustering is performed as per Thompson (2006) and by Cameron, Gelbach and Miller (2006) using the Stata ado command –cluster2- written by Mitchell Petersen. The above sensitivity analysis is conducted using Stata's –checkrob- command written by Mikkel Barslund

Table 10 Returns Regression Controlling for the Change in Volume, and All Other Controls

	(1)	(2)	(3)	(4)
	Daily Returns	**Daily Returns**	**Daily Returns**	**Daily Returns**
Ramadan	0.0009			
	(0.011)			
Ramadan 1-10		-0.1210***		
		(0.017)		
Ramadan 11-20		0.0773***		
		(0.019)		
Ramadan 21-30		0.0530***		
		(0.019)		
Odd_Days			0.1420***	
			(0.029)	
Even_Days			-0.0410**	
			(0.021)	
Ramadan 21				-0.3630***
				(0.052)
Ramadan 22				-0.4680***
				(0.043)
Ramadan 23				0.0047
				(0.076)
Ramadan 24				-0.2290***
				(0.043)
Ramadan 25				-0.0229
				(0.079)
Ramadan 26				0.2670***
				(0.0364)
Ramadan 27				0.4580***
				(0.0411)
Ramadan 28				0.3600***
				(0.045)
Ramadan 29				0.8290***
				(0.056)
Ramadan 30				0.2240**
				(0.087)
Volume	6.46e-11***	6.46e-11***	6.46e-11***	6.48e-11***
	(5.98E-12)	(5.98E-12)	(5.98E-12)	(5.98e-12)
MSCI Return	0.3540***	0.3540***	0.3540***	0.3550***
	(0.044)	(0.044)	(0.044)	(0.0440)
One day lagged return	-0.0362***	-0.0362***	-0.0362***	-0.0362***
	(0.012)	(0.012)	(0.012)	(0.012)
Two days lagged return	-0.0014	-0.0014	-0.0014	-0.0014
	(0.003)	(0.003)	(0.003)	(0.003)
N	5611486	5611486	5611486	5611486
Day of the Week Dummy	Yes	Yes	Yes	Yes
Month of the Week Dummy Variables	Yes	Yes	Yes	Yes
Country Dummy Variables	Yes	Yes	Yes	Yes
Firm Level FE	Yes	Yes	Yes	Yes
Date Level FE	Yes	Yes	Yes	Yes
* p<0.1, ** p<0.05, *** p<0.01				
Daily returns and change in volume are in percentage form (multiplied by 100). Figures in brackets under the coefficients are Newey and West (1987) heteroskedasticity-autocorrelation-consistent standard errors. Tuesday and April are dropped. Saturday and Sunday were automatically omitted because of collinearity by Stata.				

Table 11 Shariah Compliant Volume Regression

	(1)	(2)	(3)	(4)
	Volume	**Volume**	**Volume**	**Volume**
Ramadan	-932109			
	(772499)			
(Ramadan x Shariah)	-126149			
	(1E+06)			
Ramadan 1-10		-857668		
		(1E+06)		
Ramadan 11-20		669344		
		(1E+06)		
Ramadan 21-30		-2945906.5000**		
		(1E+06)		
(Ramadan 1-10 x Shariah)		-2E+06		
		(2E+06)		
(Ramadan 11-20 x Shariah)		-462979		
		(2E+06)		
(Ramadan 21-30 x Shariah)		3068305.5000*		
		(2E+06)		
Odd_Days			-5532902.6000***	
			(2E+06)	
Even_Days			-195871	
			(2E+06)	
(Odd_Days x Shariah)			962275	
			(3E+06)	
(Even_Days x Shariah)			5558854.7000**	
			(3E+06)	
Ramadan 27th				1511494
				(4E+06)
(Ramadan 27th x Shariah)				6743915
				(5E+06)
Shariah	-1797905.4000***	-1796107.6000***	-1883000.4000***	-1829177.9000***
	(486228)	(486218)	(480615)	(478737)
MSCI Return	409331.4000***	409725.4000***	411518.1000***	408187.2000***
	(113456)	(113533)	(113456)	(113453)
One day lagged volume	0.6210***	0.6210***	0.6210***	0.6210***
	(0.000)	(0.000)	(0.000)	(0.000)
Two days lagged volume	0.2490***	0.2490***	0.2490***	0.2490***
	(0.000)	(0.000)	(0.000)	(0.000)
Constant	-1E+06	-1E+06	-2E+06	-2E+06
	(1E+07)	(1E+07)	(1E+07)	(1E+07)
N	5611499	5611499	5611499	5611499
Day of the Week Dummy	Yes	Yes	Yes	Yes
Month of the Week Dummy Variables	Yes	Yes	Yes	Yes
Country Dummy Variables	Yes	Yes	Yes	Yes
Firm Level FE	Yes	Yes	Yes	Yes
Date Level FE	Yes	Yes	Yes	Yes
*** p<0.1, ** p<0.05, *** p<0.01**				
Daily returns and change in volume are in percentage form (multiplied by 100). Figures in brackets under the coefficients are standard errors from the Hausman Taylor model. Tuesday and April are dropped. Saturday and Sunday were automatically omitted by Stata because of collinearity.				

Table 12 Returns Regression on Maximum Daily Temperatures and All Other Controls

	(1)	(2)	(3)	(4)
	Daily Return	**Daily Return**	**Daily Return**	**Daily Return**
Ramadan	0.4630***			
	(0.063)			
(Ramadan x Temp)	-0.0049***			
	(0.001)			
Ramadan 1-10		-0.0363		
		(0.110)		
Ramadan 11-20		0.2860***		
		(0.103)		
Ramadan 21-30		0.9710***		
		(0.112)		
(Ramadan 1-10 x Temp)		-0.0007		
		(0.001)		
(Ramadan 11-20 x Temp)		-0.0020*		
		(0.001)		
(Ramadan 21-30 x Temp)		-0.0101***		
		(0.001)		
Odd_Days			0.9980***	
			(0.145)	
Even_Days			0.9170***	
			(0.153)	
(Odd Days x Temp)			-0.0094***	
			(0.002)	
(Even Days x Temp)			-0.0105***	
			(0.002)	
Ramadan 27th				1.0030***
				(0.222)
(Ramadan 27th x Temp)				-0.0060**
				(0.003)
Temp	0.0029***	0.0029***	0.0029***	0.0028***
	(0.000)	(0.000)	(0.000)	(0.000)
Volume	6.48e-11***	6.50e-11***	6.51e-11***	6.52e-11***
	(6.00e-12)	(6.01e-12)	(6.02e-12)	(6.02e-12)
MSCI Return	0.3500***	0.3490***	0.3500***	0.3500***
	(0.045)	(0.045)	(0.045)	(0.045)
One day lagged return	-0.0371***	-0.0372***	-0.0371***	-0.0371***
	(0.013)	(0.013)	(0.013)	(0.013)
Two days lagged return	-0.0017	-0.0017	-0.0017	-0.0017
	(0.003)	(0.003)	(0.003)	(0.003)
N	5542294	5542294	5542294	5542294
Day of the Week Dummy	Yes	Yes	Yes	Yes
Month of the Week Dummy Variables	Yes	Yes	Yes	Yes
Country Dummy Variables	Yes	Yes	Yes	Yes
Firm Level FE	Yes	Yes	Yes	Yes
Date Level FE	Yes	Yes	Yes	Yes
*** p<0.1, ** p<0.05, *** p<0.01**				
Daily returns and change in volume are in percentage form (multiplied by 100). Figures in brackets under the coefficients are Newey and West (1987) heteroskedasticity-autocorrelation-consistent standard errors. Tuesday and April are dropped. Saturday and Sunday were automatically omitted by Stata because of collinearity.				

Table 13 Market Deciles Regressions

	(1)	(2)	(3)	(4)
	Volume	**Volume**	**Volume**	**Volume**
Ramadan	-925209.9000			
	(1575227.200)			
(Ramadan×Market_Cap 1)	-195429.2000			
	(2336861.600)			
(Ramadan×Market_Cap 2)	-111535.1000			
	(2218405.800)			
(Ramadan×Market_Cap 3)	-51472.3000			
	(2203558.700)			
(Ramadan×Market_Cap 4)	-34564.8000			
	(2208897.800)			
(Ramadan×Market_Cap 6)	-35774.2000			
	(2232339.300)			
(Ramadan×Market_Cap 7)	-32349.8000			
	(2241430.200)			
(Ramadan×Market_Cap 8)	-30926.3000			
	(2248969.200)			
(Ramadan×Market_Cap 9)	-683768.7000			
	(2245102.300)			
(Ramadan×Market_Cap 10)	2327029.4000			
	(2410599.100)			
Ramadan 1-10		-796751.0000		
		(2587545.800)		
Ramadan 11-20		-956824.4000		
		(2550924.400)		
Ramadan 21-30		-1063145.7000		
		(2801082.000)		
(Ramadan 1-10xMarket_Cap 1)		-129554.4000		
		(3841399.800)		
(Ramadan 1-10xMarket_Cap 2)		-92263.6000		
		(3661275.700)		
(Ramadan 1-10xMarket_Cap 3)		29590.1000		
		(3623733.400)		
(Ramadan 1-10xMarket_Cap 4)		-1901.0000		
		(3636573.200)		
(Ramadan 1-10xMarket_Cap 6)		6148.2000		
		(3675031.700)		
(Ramadan 1-10xMarket_Cap 7)		70978.2000		
		(3687737.600)		
(Ramadan 1-10xMarket_Cap 8)		211155.1000		
		(3702505.400)		
(Ramadan 1-10xMarket_Cap 9)		-1098545.5000		
		(3688342.600)		
(Ramadan 1-10xMarket_Cap 10)		17258256.9000***		
		(3962784.200)		
(Ramadan 11-20xMarket_Cap 1)		-253547.9000		
		(3776218.300)		
(Ramadan 11-20xMarket_Cap 2)		-156430.9000		
		(3596389.500)		
(Ramadan 11-20xMarket_Cap 3)		-118524.3000		
		(3573539.200)		
(Ramadan 11-20xMarket_Cap 4)		-34154.9000		

		(3585764.300)		
(Ramadan 11-20xMarket_Cap 6)		-80691.6000		
		(3625753.200)		
(Ramadan 11-20xMarket_Cap 7)		-14718.1000		
		(3642876.700)		
(Ramadan 11-20xMarket_Cap 8)		-67098.6000		
		(3659644.500)		
(Ramadan 11-20xMarket_Cap 9)		1393865.8000		
		(3664202.100)		
(Ramadan 11-20xMarket_Cap 10)		23918910.8000***		
		(3953389.300)		
(Ramadan 21-30xMarket_Cap 1)		-203511.0000		
		(4220467.100)		
(Ramadan 21-30xMarket_Cap 2)		-75697.6000		
		(3961821.300)		
(Ramadan 21-30xMarket_Cap 3)		-67528.5000		
		(3947577.800)		
(Ramadan 21-30xMarket_Cap 4)		-74099.6000		
		(3949199.700)		
(Ramadan 21-30xMarket_Cap 6)		-33263.4000		
		(3990118.700)		
(Ramadan 21-30xMarket_Cap 7)		-179217.1000		
		(4006406.500)		
(Ramadan 21-30xMarket_Cap 8)		-266497.2000		
		(4008404.700)		
(Ramadan 21-30xMarket_Cap 9)		-2620739.3000		
		(3994274.500)		
(Ramadan 21-30xMarket_Cap 10)		-39202758.7000***		
		(4258734.700)		
Odd_Days			-1041935.3000	
			(3832181.500)	
Even_Days			-1088245.5000	
			(4032922.400)	
(Odd_DaysxMarket_Cap 1)			-309738.7000	
			(5794722.800)	
(Odd_DaysxMarket_Cap 2)			-165930.8000	
			(5423982.200)	
(Odd_DaysxMarket_Cap 3)			-126032.6000	
			(5416742.100)	
(Odd_DaysxMarket_Cap 4)			-132997.5000	
			(5416185.900)	
(Odd_DaysxMarket_Cap 6)			-46503.9000	
			(5476899.200)	
(Odd_DaysxMarket_Cap 7)			-381741.4000	
			(5492885.900)	
(Odd_DaysxMarket_Cap 8)			188061.8000	
			(5492907.900)	
(Odd_DaysxMarket_Cap 9)			-2343447.9000	
			(5449699.700)	
(Odd_DaysxMarket_Cap 10)			-55725497.1000***	
			(5761442.600)	
(Even_DaysxMarket_Cap 1)			-137285.2000	
			(6067410.400)	

(Even_DaysxMarket_Cap 2)			6512.1000	
			(5710792.900)	
(Even_DaysxMarket_Cap 3)			-16990.1000	
			(5676036.500)	
(Even_DaysxMarket_Cap 4)			-21947.5000	
			(5681870.300)	
(Even_DaysxMarket_Cap 6)			-25203.4000	
			(5735704.600)	
(Even_DaysxMarket_Cap 7)			25992.9000	
			(5766518.600)	
(Even_DaysxMarket_Cap 8)			-804696.5000	
			(5771423.500)	
(Even_DaysxMarket_Cap 9)			-3055245.9000	
			(5778215.600)	
(Even_DaysxMarket_Cap 10)			-22032850.3000***	
			(6222373.000)	
Ramadan 27th				-707019.6000
				(8014798.200)
(Ramadan 27th ×Market_Cap 1)				-458944.5000
				(12446596.200)
(Ramadan 27th ×Market_Cap 2)				-213277.2000
				(11262790.100)
(Ramadan 27th ×Market_Cap 3)				-183876.5000
				(11326460.200)
(Ramadan 27th ×Market_Cap 4)				-263464.4000
				(11324535.000)
(Ramadan 27th ×Market_Cap 6)				-159423.6000
				(11540451.800)
(Ramadan 27th ×Market_Cap 7)				-151345.3000
				(11547661.600)
(Ramadan 27th ×Market_Cap 8)				935508.9000
				(11492560.400)
(Ramadan 27th ×Market_Cap 9)				-250332.6000
				(11494186.100)
(Ramadan 27th ×Market_Cap 10)				-15613238.5000
				(12384993.500)
Market _Cap 1	-31629.4000	-20993.7000	-40173.3000	-46176.7000
	(6912048.100)	(6898657.300)	(6867999.300)	(6919101.000)
Market _Cap 2	-45925.0000	-47002.9000	-58939.3000	-59367.6000
	(7095580.500)	(7091894.600)	(7047394.800)	(7117612.800)
Market _Cap 3	-36384.1000	-39482.1000	-44881.0000	-52829.3000
	(7194814.300)	(7192893.800)	(7159349.400)	(7227585.700)
Market _Cap 4	-2934.7000	-4341.6000	-6221.9000	-7727.8000
	(7363640.800)	(7361387.300)	(7328511.700)	(7400457.500)
Market _Cap 6	69801.0000	68096.9000	77187.1000	53339.7000
	(7511889.700)	(7504718.000)	(7456278.600)	(7536930.100)
Market _Cap 7	378028.3000	370671.8000	394716.8000	368421.6000
	(7628126.500)	(7621736.900)	(7573272.400)	(7642715.400)
Market _Cap 8	549022.2000	546896.8000	569782.8000	535711.9000
	(7592897.200)	(7587628.300)	(7540670.800)	(7617019.100)
Market _Cap 9	1464853.4000	1451949.2000	1491908.6000	1389414.4000
	(8230429.200)	(8225332.000)	(8199727.200)	(8269875.800)
Market _Cap 10	27556856.4000**	27468312.9**	28806825.5000***	27656137.6000**

	(11038866.000)	(11022255.700)	(11007735.200)	(11099141.000)
MSCI Return	410356.000***	417698.7000***	419541.8000***	410232.1000***
	(113527.100)	(113605.000)	(113528.700)	(113526.000)
One day lagged volume	0.6210***	0.6210***	0.6210***	0.6210***
	(0.000)	(0.000)	(0.000)	(0.000)
Two days lagged volume	0.2490***	0.2490***	0.2490***	0.2490***
	(0.000)	(0.000)	(0.000)	(0.000)
Constant	-1041465.7000	-1043434.4000	-1160504.0000	-1052067.8000
	(15587450.200)	(15585213.400)	(15571871.600)	(15603787.500)
N	5608198	5608198	5608198	5608198
Day of the Week Dummy	Yes	Yes	Yes	Yes
Month of the Week Dummy Variables	Yes	Yes	Yes	Yes
Country Dummy Variables	Yes	Yes	Yes	Yes
Firm Level FE	Yes	Yes	Yes	Yes
Date Level FE	Yes	Yes	Yes	Yes
*** p<0.01, ** p<0.05, * p<0.1				
Daily returns and change in volume are in percentage form (multiplied by 100). Figures in brackets under the coefficients are standard errors from the Hausman Taylor model. Tuesday and April are dropped. Saturday and Sunday were automatically omitted by Stata because of collinearity.				

Table 14 Ashoura Regression

	(1)	(2)
	Daily Return	**Daily Return**
Ashoura	0.0067	1.8820***
	(0.182)	(0.597)
Shia	-2.6320**	-2.6020**
	(1.238)	(1.238)
Interaction variable (Shia * Ashoura)		-12.1300***
		(3.677)
Volume	6.53e-08***	6.53e-08***
	(1.24e-09)	(1.24e-09)
MSCI Return	0.1380***	0.1380***
	(0.004)	(0.004)
One day lagged return	-0.0638***	-0.0638***
	(0.001)	(0.001)
Two days lagged return	-0.0233***	-0.0234***
	(0.001)	(0.001)
Constant	0.4820***	0.4770***
	(0.182)	(0.182)
N	889,294	889,294
Day of the Week Dummy	Yes	Yes
Month of the Year Dummy Variables	Yes	Yes
Country Dummy Variables	Yes	Yes
Firm Level FE	Yes	Yes
Date Level FE	Yes	Yes
*** p<0.1, ** p<0.05, *** p<0.01**		
Daily returns and change in volume are in percentage form (multiplied by 100). Figures in brackets under the coefficients are Newey and West (1987) heteroskedasticity-autocorrelation-consistent standard errors. Tuesday and April are dropped. Saturday and Sunday were automatically omitted by Stata because of collinearity.		