# IMPACT OF ISLAMIC EVENTS ON PAKISTAN STOCK EXCHANGE (KSE-100) RETURNS

Nadeem Iqbal\*, Sajid Iqbal \*\*

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#### **ABSTRACT**

The intent of the study is to assess the impact of Islamic events on Pakistani Stock exchange returns. The study is assessing Islamic events i-e Moḥārrām, Rābī ūl Āāwāl event, 1<sup>st</sup> Ramzan event, 1<sup>st</sup> Ṣḥīwāl event and 10<sup>th</sup> Zīl Ḥājj event respectively on market returns. For this, regression, correlation and Jārqūe-Berā test are used. The results have concluded that Moharram, 10<sup>th</sup> Zil Hajj have negative impact while Rabi ul Awal, Ramazan start and first Shiwal has significant positive impact on stock returns as these are positive sentiment. The study is providing a valuable guideline for investors and decision makers in a way to control market practices and arbitrage roles to control such extremeness of key stakeholders during these events regarding market trading.

<sup>\*</sup> Faculty member, Department of Business Administration, Ghazi University D.G Khan, Punjab, Pakistan. Email: <a href="mailto:drnadeemiqbal1@gmail.com">drnadeemiqbal1@gmail.com</a> ORCID ID: <a href="https://orcid.org/0000-0002-0602-8333">https://orcid.org/0000-0002-0602-8333</a>

<sup>\*\*</sup> Faculty Member, School of Management Studies, The University of Faisalabad, Faisalabad, Pakistan. Email: <a href="mailto:sajidiqbal.edu@gmail.com">sajidiqbal.edu@gmail.com</a> ORCID ID: <a href="mailto:https://orcid.org/0000-0001-7729-8464">https://orcid.org/0000-0001-7729-8464</a>

**KEYWORDS:** Islamic Event Anomalies, Stock Market Returns, arbitrage, Regression, Correlation,

#### 1 INTRODUCTION

According to traditional finance philosophy the return distribution should be equal across total working days of the week, month and year but there are empirical evidences for the calendar anomalies. Also, there should be no difference in the returns of the financial instruments due time in which these returns are observed. It was established that financial instruments returns are affected by any particular time period such as holiday's effect, weekend effect and Islamic calendar effects. These phenomena referred as irregularity in finance literature. Anomalistic behavior stipulates the behavior about market behavior by adversely behaving from efficient hypothesis of the market. Islamic events patterns have a significant results in returns of thirty days of period specifically in Pakistan, <sup>1</sup>. Such frequented movement of the market return because of religious events is based on the market efficiency movement. Such events are less investigated in Pakistani context specifically. These attitudes and sentiments lead those shuffles or supports the stock market in a supportive way. It is necessary to evaluate the precise and quantitative assessment of these Islamic events on stock returns of KSE.

Numerous techniques have been used to evaluate the impact of these events on KSE return for example, have found that <sup>2</sup> investors are also

<sup>&</sup>lt;sup>1</sup> Ahmad Aizuddin Hamzah and Haneffa Muchlis Gazali, "The Roles of Islamic Financing towards the Successful of Islamic Micro Entreprise: A Study in Labuan," *International Journal of Business, Economics and Law* 8, no. 1 (2015): 5–8.

<sup>&</sup>lt;sup>2</sup> Mohd Rahim Khamis, "Behavioural Response Patterns on the Organisational Factors Influencing Compliance Behaviour of Business Zakat," *Journal of Contemporary Islamic Studies* 2, no. 1 (2016): 69–84.

sentimental and their behavior cause shuffling the stock market volatility. Such reaction has positive and negative reactions depending upon circumstances. While, <sup>3</sup> have found negative investor sentimental reaction impact in their study to analysis the unexpected price innovation in GCC countries and have concluded significant contributions. Moreover, <sup>4</sup> investigated the Ramadan effect on the tourism industry and have found significant correlation that because of Ramadan effect tourism industry is strongly impacted in emirates state. It is the month of the Ramadan that has strong spiritual, cognitive, Islamic and motivational connection among the people. The Muslims communities have bullish behavior in the buying toward the house hold goods in local and potential markets, <sup>5</sup> and<sup>6</sup>.

Not only in such markets specifically such trend is also found in the financial market towards securities or stocks buying. Hence, it has strong connection with market movements mainly as being the month of Ramadan. And such effects are not only because of seasonal anomalies and Islamic anomalies also because strong regional and observational climate forces<sup>7</sup>.

<sup>&</sup>lt;sup>3</sup> Jolly Sahni, Alawiya Alwy, and Meshael Al-Assaf, "Corporate Governance in Family Business: Evidence from Saudi Arabia," *International Journal of Economic Research* 14, no. 8 (2017): 39–57.

<sup>&</sup>lt;sup>4</sup> Umme Salma Mujtaba, "Ramadan: The Month of Fasting for Muslims, and Tourism Studies — Mapping the Unexplored Connection," *Tourism Management Perspectives* 19 (2016): 170–77, https://doi.org/10.1016/j.tmp.2015.11.001.

<sup>&</sup>lt;sup>5</sup> Dawood Ashraf, "Performance Evaluation of Islamic Mutual Funds Relative to Conventional Funds: Empirical Evidence from Saudi Arabia," *International Journal of Islamic and Middle Eastern Finance and Management* 6, no. 2 (2013): 105–21, https://doi.org/10.1108/17538391311329815.

<sup>&</sup>lt;sup>6</sup> Hesham Merdad and M. Kabir Hassan, "Islamic Mutual Funds' Performance in Saudi Arabia," in *Contemporary Islamic Finance: Innovations, Applications, and Best Practices*, 2013, 303–21, https://doi.org/10.1002/9781118653814.ch20.

<sup>&</sup>lt;sup>7</sup> K E Kunkel et al., "Observations and Regional Climate Model Simulations of Heavy Precipitation Events and Seasonal Anomalies: A Comparison," *Journal of* 

Today financial markets are diversified and are much comparatively vulnerable. And because of such, competitiveness various factors pinch corporate returns in stock market including traditional financial factors and social factors i-e social & religious festivals/event. Thus, a problem is found in Pakistani stock market also that because of such religious (Islamic) event the trends of Karachi stock market are variant. Hence, to resolve this issue the current study is planned to investigate it that to what extent these Islamic events like Ashoora, Rabi-ul-Awal, Ramadan Start, Eid-ul-F<sup>8</sup> itir&zillhajj event effects on stock market returns. And if yes then what would be the possible remediation techniques of it to make returns sequential and ideal – study will also provide suitable implications. Market returns are diversely investigated in financial field and have led comprehensive output regarding their findings, <sup>9</sup>. So market returns with Islamic event are not much investigated and has less investigation around the globe and topic is hot in this sense. And in Asian context there is much less investigation regarding Islamic events on stock market returns. Therefore such returns are investigating with specified events. The present study is covering the identified gap by data and interpolative findings. Hence, study shall conclude specified and supportive implications for financial systems and associated units, <sup>10</sup>. This study is grounded on frame

*Hydrometeorology* 3, no. 3 (2002): 322–34, https://doi.org/10.1175/1525-7541(2002)003<0322:OARCMS>2.0.CO;2.

<sup>&</sup>lt;sup>8</sup> Sivagowry Sriananthakumar and Seema Narayan, "Are Prolonged Conflict and Tension Deterrents for Stock Market Integration? The Case of Sri Lanka," *International Review of Economics and Finance* 39 (2015): 504–20, https://doi.org/10.1016/j.iref.2015.08.001.

<sup>&</sup>lt;sup>9</sup> Mei Ping Chen, Pei Fen Chen, and Chien Chiang Lee, "Asymmetric Effects of Investor Sentiment on Industry Stock Returns: Panel Data Evidence," *Emerging Markets Review* 14, no. 1 (2013): 35–54, https://doi.org/10.1016/j.ememar.2012.11.001.

<sup>&</sup>lt;sup>10</sup> Bo Zhu and Feng Niu, "Investor Sentiment, Accounting Information and Stock Price: Evidence from China," *Pacific Basin Finance Journal* 38 (2016): 125–34, https://doi.org/10.1016/j.pacfin.2016.03.010.

of prospect theory. Prospect theory is extended by<sup>11</sup>. It comments about market investors that they decide among the provided circumstances and alternatives too. When, they have two alternatives having one as less chance of risk to earn and other more risky than first one. It is behaved by them towards less risky. In contrast, when investors have more chance to lose then they decide to stop their trading and to save the amount what they have. Similarly in this study, events are like pinching factors as previous study concluded and these events affects negatively/positively up to their nature of existence. So a market runner behaves up to it and this theory is taken as base line of the present study<sup>12</sup>.

This study is an effort to answer the questions such as whether Islamic calendar months (Muharrm to Zil-haj) significantly affect the Pakistani stock market returns. Whether Pakistani stock market shows the significant abnormal return in the pre and post period of Islamic calendar events such as Eidul Fitr and Adha, Ashora, 12th RabiulAwwal and Ramadhan, <sup>13</sup>.Keeping in view the above questions, objective of this study is to explore the empirical significant evidence for the impact of selected Islamic calendar effect on Pakistani stock market returns. For the investigation of the Islamic calendar effect, two approaches have been used: Event study and Regression analysis. In event methodology, effect

<sup>&</sup>lt;sup>11</sup> Nadeem Iqbal and Muhammad Ramzan Akhtar, "Statistical Evaluation, Measuring and Managing Poverty in Rural Pakistan," *Pakistan Journal of Statistics* 31, no. 6 (2015): 709–16.

<sup>&</sup>lt;sup>12</sup> M A Siddiqui and Z Mehmood, "Measurement of Income Inequality and Socioeconomic Indicators of Poverty in the Four Provinces of Pakistan," *European Journal of Social Sciences* 21, no. 2 (2011): 322–35, https://doi.org/Export Date 9 July 2012 Source Scopus.

Hossein Askari, Zamir Iqbal, and Abbas Mirakhor, "Islamic Finance, Conventional Finance, and Globalization," in *Globalization and Islamic Finance*, 2009, 59–77, http://dx.doi.org/10.1002/9781118390467.ch3.

of five Islamic calendar events namely the month of Ramadan, Eidain (Fitr and Adha), Ashora and Eid Milad un Nabi on the Pakistani stock market returns are examined, <sup>14</sup>. Furthermore, regression analysis has been used to analyze Islamic calendar effect on stock market returns. Moreover, the current study incorporated prospect theory as a theoretical frame work.

Thus, second section for literature review, third section will explain methodology, fourth about results analysis and discussion and fifth part clarifies the conclusion and policy implication.

#### 2. Literature Review

Previous investigations in finance are executed very tremendously and currently the field of finance is being diverse and a new scheme. Likely, behavioral finance is introduced where verity of modern angles are being investigated including religious factors counteraction.

Such religious factor basically determines the sentiment of that financial stakeholder

<sup>15</sup>. Such religious research work is executed on the bases of Gregorian calendar. Hence, such calendar provides two angles to evaluate time frame i-e lunar and solar time based framework. And Hijri calendar is pronounced as lunar time frame. This calendar is implemented in Islamic

<sup>15</sup> Naveed Ahmad and Muhammad Sheeraz, "The Effect of Internal Marketing on Employee Retention in Pakistani Banks," *International Journal of Academic Research in Business and Social Sciences* 2, no. 8 (2012): 270–80.

<sup>&</sup>lt;sup>14</sup> Muslima Zahan and Ron S Kenett, "Hedging Instruments in Conventional and Islamic Finance," *Journal of Applied Corporate Finance* 14, no. 4 (2011): 82–94, https://doi.org/10.1285/i2037-3627v3n1p1.

countries normally, 16.

Thus, few studies investigated the Islamic event anomalies with stock markets in variant context of the world. Impact of Ramadan is found positive on stock market that stock market returns are positively integrated win the month of Ramadan specifically in Pakistan <sup>17</sup>

Moreover, <sup>18</sup>investigated the impact of Ramadan on market prices specifically in the context of turkey and has found significant results that stock market behaves positively in Ramadan Islamic month of Hijri calendar. Further, <sup>19</sup> has found significant results in this coherence by investigating Islamic events with returns in Tehran stock market and has found significant results in Iranian context. <sup>20</sup> Investigated calendar and Islamic anomalies by focusing the context in Pakistan. They have concluded comprehensive results as significant effect of Friday, insignificant week first day, after 15 days in month are found significant from calendar effects and Islamic months Ramadan is found significant, well-mannered associated and uniformly positive. Meanwhile, the authors used OLS assumptions to test and report.

<sup>&</sup>lt;sup>16</sup> A I Hunjra et al., "The Impact of Macroeconomic Variables on Stock Prices in Pakistan," *International Journal of Economics and Empirical Research*, vol. 2, 2014, http://www.tesdo.org/Publication.aspx.

<sup>&</sup>lt;sup>17</sup> Muhammad Salman Khan, "Macroeconomic Variables & Samp; Its Impact on KSE-100 Index," *Universal Journal of Accounting and Finance* 2, no. 2 (2014): 33–39, https://doi.org/10.13189/ujaf.2014.020201.

<sup>&</sup>lt;sup>18</sup> Shaista Wasiuzzaman and Noura Abdullah Al-Musehel, "Mood, Religious Experience and the Ramadan Effect," *International Journal of Emerging Markets* 13, no. 1 (2018): 290–307, https://doi.org/10.1108/IJoEM-01-2017-0001.

<sup>&</sup>lt;sup>19</sup> Heitham Al-Hajieh, Keith Redhead, and Timothy Rodgers, "Investor Sentiment and Calendar Anomaly Effects: A Case Study of the Impact of Ramadan on Islamic Middle Eastern Markets," *Research in International Business and Finance* 25, no. 3 (2011): 345–56, https://doi.org/10.1016/j.ribaf.2011.03.004.

<sup>&</sup>lt;sup>20</sup> Adeel Javed and Bashir A Fida, "Islamic Project Financing in Pakistan: Current Challenges and Opportunities Ahead," *IRANIAN JOURNAL OF MANAGEMENT STUDIES* 8, no. 1 (2015): 47–71.

<sup>21</sup>investigated seasonal anomalies with sharia and nifty index in Asian region. They have compared the returns of the one day of both index and have comparatively evaluated, similarly week end day returns, after one month returns and later on return mean is also evaluated in this way. And the study concluded first second and third segment results as significant. Moreover, <sup>22</sup> argued that Islamic markets are financial growing dual than the conventional setups. Furthered, it is also observed that it is the Ramadan that helps people to be spiritual and to create link or sentimental orientation with religious behavior.

investigated the religious beliefs by taking Islamic events into accounts by checking the impact of these on market prices or returns in Pakistan. By relying on the previous researcher argument about religion is a keen source that shuffles one learning, values, rituals and attitude to behave, concluded that there is significant impact of Islamic events on the stock market of Pakistan. The researchers have taken, Eid-ūl-fiṭer, Ramadan, and other events into the account by concluding that market gains and capita; gains both are also dependent on the religious events. Hence, the market returns, deviations, mean and other statistical tabulations revealed uniform results in this favor.

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<sup>&</sup>lt;sup>21</sup> Paul Olivier Klein, Rima Turk, and Laurent Weill, "Religiosity vs. Well-Being Effects on Investor Behavior," *Journal of Economic Behavior and Organization* 138 (2017): 50–62, https://doi.org/10.1016/j.jebo.2017.04.009.

<sup>&</sup>lt;sup>22</sup> Syed Faiq Najeeb and Shahul Hameed Mohamed Ibrahim, "Professionalizing the Role of Shari'ah Auditors: How Malaysia Can Generate Economic Benefits," *Pacific Basin Finance Journal* 28 (2014): 91–109, https://doi.org/10.1016/j.pacfin.2013.10.009.

<sup>&</sup>lt;sup>23</sup> John Braithwaite and Ali Gohar, "Restorative Justice, Policing and Insurgency: Learning from Pakistan," *Law and Society Review* 48, no. 3 (2014): 531–61, https://doi.org/10.1111/lasr.12091.

<sup>24</sup>conducted the study of Islamic events, stock market returns by taking Rābī ūl Āwāl, Rāmādān, Mohārrām and Zīll Hājj as base. The researcher took data from stock market of Pakistan and has used ARDL approach to test. Thus, the results of the study concluded significant that there is significant impact of the Islamic events on the stock market of Pakistan. Moreover, <sup>25</sup>argued that there is significant association of the Islamic rituals, events, and market volatility and investor mood. They also talked about it that whenever an investor is in happy mood the market trading is found in stock market moving up wards and vice versa. The Islamic school of thought says that when an individual is in good mood it means he has well in health. And such symbol of goodness when leads to trade in Islamic month then the fruit is also pulpy and lush that rewards in bulk to that person wonderfully. This cycle is working on spirituality, sensed health and on good attitude. Hence, it concluded that there is vast role of the mood, being Islamic, fundamentalism and Islamic teachings on the learning behavior of any Muslim that later on being as investor speculators or scholar behaves sentimentally that rises anomaly i-e Islamic fundamental anomaly. Various other studies used quantitative research tools in different fields such as <sup>26</sup> measured the impact of energy security for South Asia including Nepal and <sup>27</sup> assess the economic viability and production capacity of wind renewable energy in Pakistan.

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<sup>&</sup>lt;sup>24</sup> Khalid Mustafa, "The Islamic Calendar Effetc on Karachi Stock Market," *Pakistan Business Review*, 2011, 562–74.

<sup>&</sup>lt;sup>25</sup> Fahad Almudhaf, "The Islamic Calendar Effects: Evidence from Twelve Stock Markets," *International Research Journal of Finance and Economics* 87, no. 87 (2012). <sup>26</sup> M. Mohsin et al., "Assessing Oil Supply Security of South Asia," *Energy* 155 (2018): 438–47, https://doi.org/10.1016/J.ENERGY.2018.04.116.

<sup>&</sup>lt;sup>27</sup> M. Mohsin, A. K. Rasheed, and R. Saidur, "Economic Viability and Production Capacity of Wind Generated Renewable Hydrogen," *International Journal of Hydrogen Energy*, 2018, https://doi.org/10.1016/j.ijhydene.2017.12.113.

## 2.1 Study Hypothesis

H1: There is significant negative impact of Āṣḥoorā Event on Stock Market Returns.

H2: There is significant impact of positive Eïd Milad-un-Nabi on Stock Returns.

H3: There is significant positive impact of first Ramadan on Stock Returns.

H4: There is significant impact of positive Eid-ūl-Fiter on Stock Market Returns.

H5: There is significant negative Impact of Eid-ūl-Āzḥā on Stock Market Returns.

## 3. Methodology

Our investigation is explanatory in nature. Thus, researchers plan to explain consequences on market returns due to religious rituals in Pakistan. The data for investigation is secondary acquired from Pakistan stock exchange Pakistan (P.S.E Ltd.). So, the population of study comprises on Pakistani listed companies at Karachi stock exchange. The sample comprises on companies listed at KSE-100 index. While, standing on the shoulders of the giants here individual companies' data is acquired from K.S.E, S.B.P & business recorder databases<sup>28</sup>. And the data range for investigation is comprised from January 01 2008 to December 2015.

As far as sampling is concern here, simple random sampling method is employed to obtain more clear results due to randomization. In P.S.E 548 companies' data is found available out of 638 listed. Moreover, 35

<sup>&</sup>lt;sup>28</sup> Anwar Halari et al., "Islamic Calendar Anomalies: Evidence from Pakistani Firm-Level Data," *Quarterly Review of Economics and Finance* 58 (2015): 64–73, https://doi.org/10.1016/j.qref.2015.02.004.

company's market prices are not properly adjusted, 29 other companies are improperly traded and few others have nor reported their statements yet. So the cut-point 33% of sampling is used and 37 companies are selected as sample of study for analysis. For analysis of sample two kinds of variables are selected i-e Islamic events and market returns of companies <sup>29</sup>.

The study has selected Islamic events; 10<sup>th</sup>Moḥārrūm, 12<sup>th</sup> Rābī-ūl-Āwāl, 01<sup>st</sup>Rmadan, 01<sup>st</sup>Shiwal and 10<sup>th</sup>Zilahj as independent variables. While dependent variable of the study is market returns. And to measure these events dummies are used as 0 and 1. Dummy 1 is placed on date before event conditionally if market operated and remain open. Similarly, 0 as dummy is assigned if market was close and not operated. And these events are categorized into groups up to this structure. While, market returns are obtained by dividing last day returns on current day market returns. The following econometric model is developed for linear regression, descriptive and independent sample t-test analysis <sup>30</sup>.

$$MRt = \alpha + \beta_1(D_1) + \beta_2(D_2) + \beta_3(D_3) + \beta_4(D_4) + \beta_5(D_5) + e_t$$

The above model shows the Islamic events as 10<sup>th</sup>Moharram (D1), 12<sup>th</sup> Rābi-ūl-Āwāl (D2), 01<sup>st</sup> Ramadan (D3), 01<sup>st</sup>Shiwal (D4) and D5 AS 10<sup>th</sup>zil-hajj event. Thus, these dummies are categorized in five groups that are as follows with event proxies,

Table 1. Variables Measurement Group Wise

<sup>&</sup>lt;sup>29</sup> Muhammad A. Cheema and Gilbert V. Nartea, "Cross-Sectional and Time-Series Momentum Returns: Are Islamic Stocks Different?," *Applied Economics* 50, no. 54 (2018): 5830–45, https://doi.org/10.1080/00036846.2018.1488068.

<sup>(2018): 5830–45,</sup> https://doi.org/10.1080/00036846.2018.1488068.

Than El Ouadghiri and Jonathan Peillex, "Public Attention to 'Islamic Terrorism' and Stock Market Returns," *Journal of Comparative Economics*, 2018, https://doi.org/10.1016/j.jce.2018.07.014.

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Group Name	Proxies of Measurement
Group 01	05 Days before 10 <sup>th</sup> Moharrum
Group 02	05 Days before 12 Rabi-ul-Awal
Group 03	05 Days before 1 <sup>st</sup> Ramadan
Group 04	05 Days before 1 <sup>st</sup> Shiwal
Group 05	05 Days before 10 <sup>th</sup> Zill-Hajj

Such event are categorized in group 01 to 05 because we have obtained data of market opening and tabulated dummy 1 on the day if market was open before event and dummy 0 if market is closed due to any holiday. And later these are compared with market return of events as per date and that day returns. Moreover, the MRt shows market returns of stocks. While,  $\beta_1$ ,  $\beta_2$ ,  $\beta_3$ ,  $\beta_4$ ,  $\beta_5$  are variables coefficients with (e) as error tem at (t) time. Numerous researchers used the regression analysis to conduct latest research applications<sup>31</sup>.

## 4. Result Analysis and Discussion

Table 2. Descriptive Statistics

Mean	SD	Skewnes	Kurtosi	Jarq.Bera
			S	
.5591	1.341	-0.75	5.52	111.47**
.1661	1.151	0.08	6.78	201.73**
2.212	1.007	-0.27	6.63	173.66**
293	1.338	0.31	5.93	98.89**
.376	1.668	0.06	6.87	167.09**
	.5591 .1661 2.212 293	.5591 1.341 .1661 1.151 2.212 1.007 293 1.338	.5591 1.341 -0.75 .1661 1.151 0.08 2.212 1.007 -0.27 293 1.338 0.31	s       .5591     1.341     -0.75     5.52       .1661     1.151     0.08     6.78       2.212     1.007     -0.27     6.63      293     1.338     0.31     5.93

In above table, descriptive summary of the study is tabulated. And variables are categorized as groups because of their unit of measurement as mentioned in methodology section. Here the mean and standard

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<sup>&</sup>lt;sup>31</sup> Young-Taft Mohammad Elian and Tai, "Stock Market Reaction to Debt-Based Securities: Empirical Evidence," - *Frontiers in Finance and Economics* 11, no. 2 (2014): 46–72.

deviation value represents the individual values as per measurement parameter. Skewnes and kurtosis are measured by using the Kendall-Stuart model to identify the nature of data and variables. Here, Moharrum and Ramadan effect are negatively skewed as -0.75 & -0.27. While, other are positive. Moreover, Jarque-Bera test is applied to know the normality, here \* shows five percent significance for normality as parameter and results revealed it as normal with value < 0.01.

Table 3ANOVA

Model	Sum of Square	Mean Square		F	Sig
Regression	25.406	6	7.261	2.1	.06
Residual	446.23	193	4.671		
Total	471.63	199			

Table 3 explains the ANOVA results. The sum of square in regression is 25.406, in residual 446.23 and in total is 472.63 by illustrating model. While, F Statistics is 2.1 at 0.06 significance level. Hence, the model is important at 0.1 significance level. Till here by employing basic techniques behavior of variables is checked and are working significantly in accordance to parameters. So the liner regression is being applied to evaluate causal associations among stock return and fundamental anomalies constructs.

**Table.4 Regression Analysis** 

Variables	Coefficient	S.E	t	P.value
05 Days before 10 <sup>th</sup> Moharrum	.5591	3.11	1.67	0.04
05 Days before 12 Rabi-ul-Awal	.1661	2.97	1.78	0.067
05 Days before 1 <sup>st</sup> Ramadan	2.2121	2.97	1.54	0.055
05 Days before 1 <sup>st</sup> Shiwal	2937	2.97	-1.6	0.071
05 Days before 10 <sup>th</sup> Zill- Hajj	.3759	2.97	1.99	0.05

There are several reasons to apply regression such as it is well linked with study rationale that it explain casual impact between variables. Secondly, it is deep rooted in statistical ground with sensible assumptions as compare to other models. Thirdly, it is considered as widely adaptive technique in deductive studies where dependent variable linearly associates with independents because it explains very clearly the behavior of both sides of any model. Moreover, it becomes understood very easily. Therefore, as our prime objective we have applied linear regression because of having sound base, explains this model due to linear nature of model. So, table 4 explains the linear regression results regarding all events incorporated with study rationale. Thus, the coefficient of Moharram event is 0.5591 and is found positively significant at 0.04 (p<0.1). The coefficient of Rābi ūl Āwāl event is 0.1661 positively significant at 0.067. The coefficient value of 1<sup>st</sup> Rāmādān is 2.2121 significant at 0.055 (p < 0.1), 1<sup>st</sup>Shiwal is found negatively significant at 0.071 (P<0.1) with coefficient of -0.2937. And the 10<sup>th</sup>zillhajj is found positively significant at 0.05 (P<0.1) with coefficient of 0.3759.

Table.5 ARCH GARCH Statistics (Mean based Equation Result)

Group	Mean	SD	Skew	Kurtosis
Category				
μ	-0.0211	0.22	-1.96*	16.13**
	-0.0031	0.26	0.06	1.96**
10 <sup>th</sup> Moharrum				
05 Days before	0.0393	0.29	3.39*	16.94**
12 Rabi-ul-Awal				
05 Days before	0.1734	0.28	-1.09*	5.34**
1 <sup>st</sup> Ramadan				
05 Days before	0.0652	0.39	0.77*	10.67**
1 <sup>st</sup> Shiwal				

05 Days before	0.0794	0.33	1.13*	8.87**
10 <sup>th</sup> Zill-Hajj				

Table.6 ARCH GARCH Statistics (Variance based Equation Result)

Group	Mean	SD	Skew	Kurtosis
Category				
θ	-0.0024	0.02	-1.74*	7.76**
05 Days before	0.0267	0.06	2.64*	8.11**
10 <sup>th</sup> Moharrum				
05 Days before	-0.0036	0.01	-0.31	5.43**
12 Rabi-ul-Awal				
05 Days before	-0.0037	0.04	-0.83*	5.01**
1 <sup>st</sup> Ramadan				
05 Days before	-0.0044	0.03	-2.44*	7.77**
1 <sup>st</sup> Shiwal				
05 Days before	0.0031	0.04	-0.22	6.89**
10 <sup>th</sup> Zill-Hajj				
ARCH	0.1263	0.06	1.26*	4.68**
GARCH	0.6839	0.15	-1.78*	4.52**

The above tables show the concise results of the 37 listed companies as selected on 33% as per sample selection criteria. And it represents the TGARCH results of study. This model is applied to check the results more than section wise because one side we have heuristics fundamental behaviors is independent and oppositely there is return – more volatile behavior having variable as dependent. <sup>32</sup> Pointed out that such nature of volatile and fundamental behavior causes constant change in error term due to constant variation in standard error. It evolves in those financial models that are highly volatile in their origin. Our results have shown significant impact but keenly considering above arguments we have applied GARCH model that measures volatile trends in data and show

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<sup>&</sup>lt;sup>32</sup> Fadillah Mansor; Ishaq Bhatti, "The Performance of the Islamic Mutual Funds in Malaysia: Risk and Return Ana

their movement. Moreover, at present our main concern was to find, visualize and conclude time variations in our data by incorporating auto regressive conditional model/design (ARCD/M) and for this we steep-ted forward to apply TGARCH model.

Relying on all of above, tables are divided into two parts i-e one as mean based results and second the variance based results to check time based variations and incorporation of data errors in terms or models. Moreover, these results are categorized further into columns. The first column shows the mean effect of the events on stock prices and second deviation of both equations. Next two columns reveal the maximum and minimum effect among study rationale. While, Skewnes and kurtosis are used as normality parameters and \*\* are added here for the matter of significance of events. These statistical measures revealed significant impact of events on returns in both equations, with 0.1% level of significance. Comprehensively, in mean equation Moḥārūm is found negatively significant, Rābi-ūl-Āwāl, Ramadan, shiwal and Zill Hajj as positively significant. And in variance equation except Moharram's event all other are found as negatively impacting the market returns. Hence, ARCH & GARCH concluded significantly positive impact of the events separately and sequentially with very light time variations in first two columns.

#### 5. Conclusion and Policy Implication

The study hase developed an investigatory study about the impact of major Islamic events on KSE returns. The study reveal the Islamic events impact on stock return. For this purpose, the researchers have covered Pakistani stock exchange contextually and have applied simple random sampling to it. The present study have suggested five research hypothesis as Moḥārrām and Eiḍ ūl Āzḥā affecting negatively to stock returns because Moharram is event considered as unhappy event but Eiḍ-Ūl-Āzḥā is event of happiness

with long vacations of Hajj Bait Ullah that closes market more than normal time. Others i-e Eid-Milād-Dun-Nabi, 1<sup>st</sup> Rāmāzān & Eid-Ūl-Fiter affecting as positively to returns – these all are also happiness events but with short vacations that injects dual sentiments as sentiment of happiness and market reopens within three days. So these two sentiments results in positive. Therefore, literature persuades them as positively sensing. Results of regression concluded as accepting three hypothesis i-e Rāmāzān Start, Eid Milād Ūn Nābī & Eid ūl Fiter and rejecting two i-e Muharram and Eid Ūl Āzḥā as affecting positively in this study. Moreover, ARCH GARCH results showed that except Eid ūl āzḥā other hypothesis accepted as per mean results. Similarly, variance results in table four also result same – rejecting Eid-ūl Āzḥā except others. Hence, findings resulted that there is significant impact of all events as per their nature on returns of stock exchange.

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