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# Islamic Calendar Anomalies Reshaping Investor Behavior: A Qualitative Study

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## Abstract

**Aim:** The objective of this study is to explore how investors execute decisions in persistence of Islamic anomalies in context of Pakistan stock exchange. Applying interpretive approach, data was acquired from PSX investor by asking a series of questions through an interview protocol. Interviews were conducted by using semi-structured interview approach. The responses were explored using NVivo 10.0 plus software. The results of the study indicated Islamic anomalies are changing emotions and perceptions of investors due to their past experience and perceived market consequences, and biased behaviors. Due to Islamic anomalies investors decisions are found to be biased and depict a self-serving, anchoring and overconfident behavior. Moreover, various conventional market factors (e.g. market capitalization, price earning and capita market line fluctuation etc.) are constant and reshaping investor decisions. Promotion of corporate culture, controlling mispricing, conducting awareness/ training sessions on rationality, capital gain than price gain is seriously required in local context. This is the first qualitative study investigating Islamic Calendar anomalies and PSX investors, leading to the formulation of sound policy implications.

**Keywords:** behavioral biases, investor psychology, investor decision making, islamic calendar anomalies, thematic analysis

## Introduction

Market anomalies such as calendar anomalies have raised serious problems for

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stock markets, especially in emerging or developing countries (e.g., Pakistan). Islamic Calendar anomalies (e.g., *Ashoora*, *12<sup>th</sup> Rabi-ul-Awal*, *Eid-ul-Fitar* and *10<sup>th</sup> Zill-Hajj*) are regarded as the key or central elements of market anomalies. Since last two decades, in context of Pakistan Stock Exchange (PSX), Islamic Calendar anomalies significantly changed market environment, abruptly fluctuating capital market line (CML), funds flow, portfolio investment and risk seeking behaviors. Consequently, Islamic Calendar anomalies (ICA) affected primary and secondary market of PSX and alarmed investors to take cautious investment decisions. Interestingly, ICA affected portfolio investment and loaded a robust pressure on investor behavior. Thus, the motivation of this research is to explore role of ICA in formulating investor behavior.

Conventionally, stock market investors invest in risky and risk free investments by settling risk factor through diversification. Conversely, conventional approach is contradictory to the behavioral approach, as it focuses on market trends and behaviors (e.g. market anomalies), investor psychology, biased behaviors and sentiments. However, cited behavioral aspects are antecedents of financial decision making and have a great impact on equity market performance, volatility, market capitalization and market returns. Thus, behavioral facets (e.g. Islamic Calendar anomalies and others) have major role in financial activities of stock markets like PSX. Moreover, investor psychology and behaviors are emerging concerns in the present times and helps in getting a know-how of biased in decision among individuals due to a diverse state of affairs (e.g. affiliation with an event, financial announcements and anomalistic behaviors).<sup>1</sup>

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<sup>1</sup>Fatima Syed and Naimat U. Khan, "Islamic Calendar Anomalies: Evidence from Pakistan," *Business and Economic Review* 9, no. 3 (2017): 104–122; Anwar Halari et al., "Islamic Calendar Anomalies: Evidence from Pakistani Firm-Level Data," *The Quarterly Review of Economics and Finance* 58 (2015): 64–73; Kalimullah Khan, Muhammad Ali Nasir, and Matteo Rossi, "The Calendar Anomalies on Performance and Volatility of Stock Market: The Effects of Ramadan on Karachi Stock Exchange," *Global Business and Economics Review* 19, no. 1 (2017): 54–69; Usman Majeed et al., "Islamic Calendar Events and Stock Market Reaction: Evidence from Pakistan," *Science International* 27, no. 3 (2015): 2559–2567; Mohamad Al-Ississ, "The Holy Day Effect," *Journal of Behavioral and Experimental Finance* 5 (2015); 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).

Extending to it, multiple facets of behavioral finance highlight that behavioral variables such as investor perception, sentiments<sup>2</sup> emotions<sup>3</sup> and biased beliefs<sup>4</sup> affects investor decision-making, particularly during the time span of Islamic Calendar anomalies. Contextually, PSX market is not performing efficiently as it is inclined to irrationality, along with affecting investor psychology; dramatically forcing investors to execute irrational decisions concerning PSX investment. Evidently, PSX is mean variant, highly volatile, less efficient, financially fragile and lack a democratic corporate culture. Hence, PSX investors are observed as irrational during Islamic events (e.g. Islamic Calendar anomalies). This problem is a major hurdle in PSX growth, stability, consistency and efficiency and recent inquiry intends to resolve this problem. Thus, lack of empirical findings intends to explore an alternative approach of finance (e.g., behavioral finance) and will help to understand the investor decision-making process, resulting from Islamic Calendar anomalies. Our study is explicitly answering how the investor decisions in PSX equity market are affected by Islamic Calendar anomalies and which of the Islamic Calendar anomaly is most probable to affect investor decisions.

The rationale of study has several aspects:

- i. PSX investors are complex, multifactor and scantily investigated qualitatively. To the best of our understanding, this is a pioneer study that intends to explore various aspects of investor decision-making process, keeping in mind the recent conceptualization and approach.
- ii. The study intends to contribute investor decisions and market anomalies by exploring Islamic Calendar anomalies.
- iii. In literature of behavioral finance, empirical studies on Islamic Calendar anomalies have failed to contribute theoretically in terms of investor decision-making processes and variation in findings can be observed. To confirm this declaration, we conceptualized and explored recent framework to present a pragmatic stance.
- iv. Thus, the study is contributing both theoretically and practically by investigating an unexplored phenomena to enhance the credibility of prospect

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<sup>2</sup>Marwa Jaziri and Mouna Abdelhedi, "Islamic Occasions and Investor Sentiment," *International Journal of Islamic and Middle Eastern Finance and Management* 11, no. 2 (2018): 194–212.

<sup>3</sup>Shaista Wasiuzzaman, "Religious Anomalies in Islamic Stock Markets: The Hajj Effect in Saudi Arabia," *Journal of Asset Management* 18, no. 3 (2017): 157–162.

<sup>4</sup>Vikash Ramiah et al., "A Behavioural Finance Approach to Working Capital Management," *The European Journal of Finance* 22, no. 8–9 (2016): 662–687.

theory<sup>5</sup> and by guiding real time policies that can be employed to deal with decisional procrastination and irrationality in PSX specifically.

## 2. Theoretical Framework

Past studies widely discuss asymmetrical association of financial markets and negate the efficient market hypothesis (EMH) during financial year. In previous literature, findings of ICA indicated that stock market returns are persistent with Islamic events i.e., *Ashoora*, *Eid-Milad-Un-Nabi*, Start of *Ramazan*, *Eid-ul-Fitar* and *Eid-ul-Azha*.<sup>6</sup> Such holy events (e.g. ICA) are significant in changing decisions of investors, where vicinity of investor is highly intact with religion. Moreover, this association extends significance of consequences on psychology of investors such as cognitive sense and behavior that makes investors biased.<sup>7</sup> Thus, authors<sup>8</sup> noticed positive association of behavioral facets (e.g., motivation, perception, cognitive self-confidence, numeracy and knowledge based experience) with market decisions of returns, specifically in Ramadan, as highly volatile transactions have been observed with average monthly returns and are highly profitable comparatively.

Moreover, researches highlight that market illiquidity makes investor behavior pessimistic.<sup>9</sup> Numerous researchers<sup>10</sup> also assert that mixed responses of investors towards Islamic events plays a vital role in molding their rational decisions into biased decisions. For instance, investors are prone to be more biased in *Ashoora* - an event of sorrow where pessimistic participation leads to negative association to market performance, whereas in *Ramazan*, active participation is represented by

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<sup>5</sup>Daniel Kahneman and Amos Tversky, "Prospect Theory: An Analysis of Decision under Risk," *Econometrica* 47, no. 2 (1979): 263–292.

<sup>6</sup>Irfan Ali, Waheed Akhter, and Namrah Ashraf, "Impact of Muslim Holy Days on Asian Stock Markets: An Empirical Evidence," *Cogent Economics and Finance* 5, no. 1 (2017): 1311096.

<sup>7</sup>Muhammad Akmal and Muhammad Usman Abbasi, "Ramadan Effect on Price Movements: Evidence from Pakistan," (State Bank of Pakistan, Research Department, 2010).

<sup>8</sup>Al-Hajieh, Redhead, and Rodgers, "Investor Sentiment and Calendar Anomaly Effects."

<sup>9</sup>Byomakesh Debata, Saumya Ranjan Dash, and Jitendra Mahakud, "Investor Sentiment and Emerging Stock Market Liquidity," *Finance Research Letters* 26 (2018): 15–31.

<sup>10</sup>J. P. Bialkowski et al., "Do Mutual Fund Managers Exploit the Ramadan Anomaly," *Evidence from Turkey, University of Canterbury, Christchurch NZ*, 2011.

investors because the month is considered as a blessing and denotes holy happiness.

Similarly, authors<sup>11</sup> revealed significant link between investor emotions and decision-making during Islamic anomalies in Turkish context of mutual funds market. Again, such emotions converts a raw perception to a biased perception that affects performance of market managers negatively and prevents them to plan their desired time for suitable opportunity to maximize the returns.<sup>12</sup> Moreover, Islamic anomalies are also termed as a main participant in the economy and are linked to financial activation, particularly in Pakistani context. It also has significant association with investor perceptions, emotions and decisions.<sup>13</sup> Conclusively, it can be suggested that perceptions, emotions and behavioral biases have significant association with decision-making of investors during Islamic Calendar anomalies. So, we propose that:

***Proposition 1.*** *Islamic Calendar anomalies will affect investor decision-making*

***Proposition 2.*** *The behavioral factors (e.g. investor perception, emotions and biased behaviors) will affect Investor decisions*

***Proposition 2.1.*** *Investors will be Overconfident and biased during decisions-making*

***Proposition 2.2.*** *Investors will be anchoring bias during decision-making*

***Proposition 2.3:*** *Investors will be self-servingly biased during decision-making*

### 3. Methodology

The ontology of study is to check the association of investor's perception, emotions and biased behaviors with decisions executed by them during persistence of Islamic events. The epistemological posture of our research is based on social constructionism, which assumes that the developed knowledge is contextual with focused conditions and interim. The researchers of the study acknowledge the socio-culture assumptions in relation to the participants of the study and hence will employ useful instruments to access the findings of the result. The study is exploratory and will assess investor's decision-making mechanisms. For this,

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<sup>11</sup> Jędrzej Białkowski et al., "Do Mutual Fund Managers Exploit the Ramadan Anomaly? Evidence from Turkey," *Emerging Markets Review* 15 (2013): 211–232.

<sup>12</sup> Rima Turk Ariss, Rasoul Rezvanian, and Seyed M. Mehdian, "Calendar Anomalies in the Gulf Cooperation Council Stock Markets," *Emerging Markets Review* 12, no. 3 (2011): 293–307.

<sup>13</sup> Halari et al., "Islamic Calendar Anomalies."

interpretative approach will be used to investigate the realities and perceptions of participants. PSX investors will be considered as the population of the study and investors from both Lahore and Islamabad stock markets will be used as pre-owned sample.

The sample for the study is selected through “purposive sampling,” as it will allow to select participants that suitable for the study. Secondly, this sampling method has been selected due to lack of statistical data and determinants of study sample. Moreover, purposive sampling is up abetted by snowball sampling, as gaining access to informative and participative participants in underdeveloped context like Pakistan is very difficult. The sample for the study has been selected from various financial institutions like SECP, KSE-ISB and SBP, however they played no role in the provision of data.

For the study, researchers used personal networking and employed snowball sampling to locate PSX investors. For this, they located 12 stock market investors as per their relevance to study and these participants were selected from Lahore and Islamabad to escalate the verity of their work behavior and experiences. However, just to add, these sampling techniques have been widely criticized due to low levels of randomness and representation. But such criticism is only relevant to positivist approach of inquiry, while this study is epistemologically working under social constructionism instead of positivist inquiry.

The flexible criteria is planned to recruit sample for study in order to attain richness of sample.

- i. Being Muslim only
- ii. Participants purely investing and speculating their own investments
- iii. Operating business in PSX from last two years
- iv. Either single or married
- v. Either male or female or special gender
- vi. Either operating in any listed sector of PSX
- vii. Being directly or indirectly involved in decision making.

The participants were recruited by personal networking technique. They were contacted via telephone to plan the location and day of the interview. However, all the details related to the study were shared with them on the telephone. The participants were also mailed an information letter (See appendix-I). The participants were given the freedom to select the venue of the interview. So out of twelve, eleven interviews were conducted at office, while one interview was conducted via Skype.

The interview guide was pre-planned. The researchers conducted semi-structured interviews to explore the perception, emotions and biased behavior of investors while making decisions. Also, the researchers asked some questions that were not included in the interview guide, in a bid to gauge the unanticipated responses of the participants. The schedule of interview was delivered to participants before interview, so that participants could inform about their availability schedules and necessary measures could be taken to record interviews via recording instruments. The time span of interviews ranged between 25 and 40 minutes. In all the interviews participants actively participated and responded to the questions because consent (See appendix-II) was already taken from them. All the interviews were conducted in Urdu language and were transcribed into English with the help of a professional translator.

Researchers developed the scheduled of the interview by:

- i. Conducting a rigorous study of literature by following study objectives.
- ii. Taking help and assistance from a professor to enhance the reliability of the research design and strengthening the research questions.
- iii. Checking the ambiguity, validity and accuracy of questions by conducting two semi-structured pilot interviews.
- iv. The questions of the study were developed as semi-structured and only the demographic part was planned as structured.

Interviews conducted by researchers were transcribed into English which refined and rectified grammatical mistakes in transcription of these interviews by adopting a denaturalized way, as English is not the first language of participants. To analyze transcribed responses, thematic analysis will be conducted to generate the themes and various underlying patterns in the transcription, in relevance to the theoretical frame of investigation being investigated. To enhance the quality of the study, face-to-face interviews will be conducted. Conclusively, the rationale of the study, contextual choice, and appropriateness of method, process of research, access to sample, selection, and unit of analysis were clearly explained to the participants. Moreover, the sample were given full confidence that their confidentiality will be maintained on priority basis and their information would not be shared with anyone. The participants were also informed that their response would be included in a research paper and possibly in the publication of paper as well. The participants were also awarded the opportunity to see the transcription of the interview. It was informed to all the participants that they can withdraw from the interview at any given stage and after their withdrawal their data shall be wasted.



#### 4. Analysis of Study

This section is categorized into three parts: demographic information, basic understanding/valuing perception, emotions and biases and behavioral determinants in decision-making during Islamic Calendar anomalies.

##### 4.1 Demographic Orientation of Investors

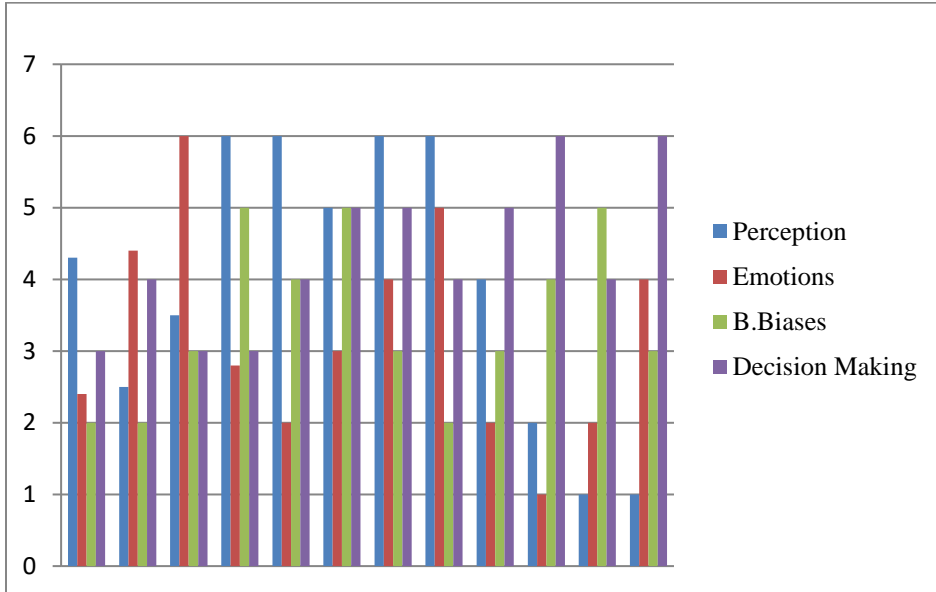
**Table 1. Participants Demographics**

Demographics	Categories	Frequency	Percent
Gender	Male	12	100.0
	Female	0	000.0
Religion	Muslims	12	100.0
	Non-Muslim	0	000.0
Business	Self-Owned	12	100.0
	Partnership	0	000.0
Experience	Equal to 2 Years	4	33.3
	More than 2 Years	8	66.7
Marital Status	Single	0	000.0
	Married	12	100.0
Operating	In Listed Companies	12	100.0
	Non Listed Companies	0	000.0
Involvement in Decisions	Direct	8	66.7
	Indirect	4	33.3
	Not Involved	0	000.0

Table 1 highlights investor's profile where entire sample of 12 participants consists of males and are Muslims. As mentioned earlier, the study objective is to investigate the Islamic Calendar anomalies so prospectively the Muslim population was targeted. Moreover, all the participants are running their own businesses, out of which 4 individuals have experience of two years in the stock market, while eight have experience of more than two years. Moreover, all individuals are married, operating only in the listed companies at the Pakistani stock exchange. Their direct involvement in the decision-making processes is 66.7 percent, while indirect decisional involvement– conditional with agents/expert advice is around 33.3 percent. The figure above highlights the generic information of the participants and access their information by running them through SPSS V.23.

### 4.2 Preliminary Findings

During the thematic analysis, four main themes were extracted from the data including perception, emotions, behavioral biases and decision-making as described in figure no 1 with their power. These themes will be considered important for further analysis as well.



**Graph 1.** Strength of the Themes

**Table 2.** Relative Power of Central Themes

Participants	Perception	Emotions	Biases	Decision-making
A	4	5	12	9
B	3	4	7	4
C	4	2	6	6
D	2	5	4	4
E	5	6	5	7
F	3	4	2	3
G	4	5	3	2
H	3	6	7	8
I	4	5	6	10
J	5	4	2	2
K	4	3	1	5
L	3	5	1	5

Thematic analysis was extended by conducting content analysis via QSR NVIVO. 10 Plus for confirmation of themes are shown in graph 1 and details of the information via content analysis are presented in table 2.

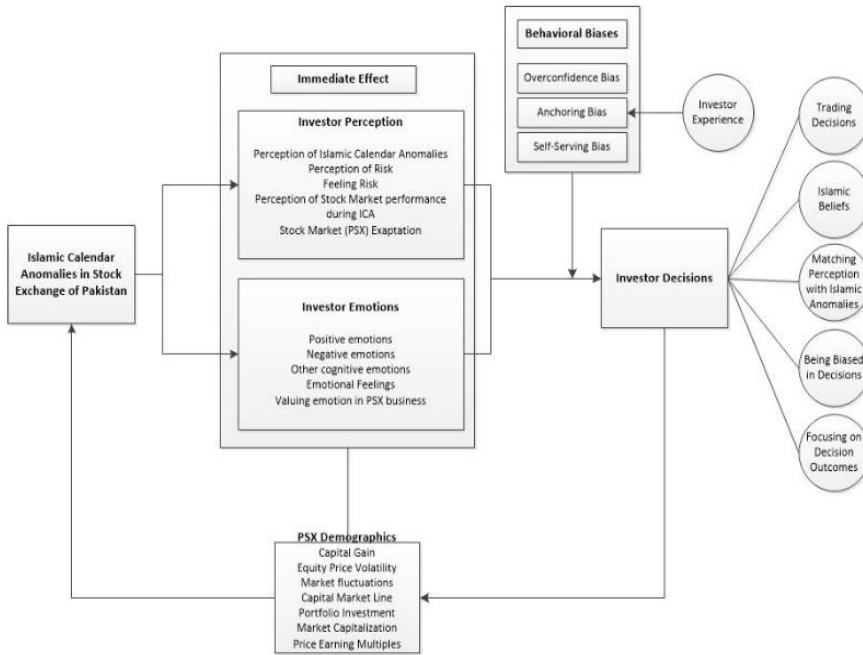
**Table 3. Frequency of Major Themes**

Name	Source	References
INVESTOR'S PERCEPTION	12	107
Your perception about stock market	10	21
Your knowledge about Islamic events	10	14
Role of Islamic Anomalies in Stock market	8	23
Expectancy of expected returns due to Islamic Calendar anomalies	9	17
Value provision approach to Islamic Calendar anomalies	11	19
INVESTOR'S EMOTIONS	12	97
Control on feelings in critical situations via Islamic anomalies	12	37
Market graph variation Vs Decisional Variations	11	23
Being nervous in case of not attaining as per expectations	11	12
Share of concerns with peer	10	7
Respecting emotions	9	3
BEHAVIOURAL BIASES	12	111
Perceiving emotionally	8	31
Perceiving rationally	7	6
Attribution of Success	8	22
Market Experience	9	27
Valuing company credit sale	10	18
Taking decisions more than confidence level	11	24
Rise or fall in confidence in respect of market performance	11	17
ANOMALIES & DECISION MAKING	11	78
Trading during Islamic anomalies persistence in market	8	12
Perception about of securities prices on via religious anomalies	7	34
Nature of financial operations during Holy anomalies existence	9	26
Role of anomalies in decision-making	7	11
Being biased during such anomalies in decisions	6	9

By doing both content and thematic analysis, the researchers accurately extracted themes explaining and exploring the study interest. Moreover, negative and positive items are also highlighted that affect the working in relation to behavioral factors, pinching to decisions of investors as reported in the table below.

**Table 4.** Extraction of Main Themes

Theme	Frequency	Parameters
Perception of Investors	87	Self-Perception
		Prior Knowledge
		Islamic events
		Hopes or Expectancies
		Valuing Emotions
Emotion of Investors	82	Grip on Emotions
		Nervousness during losing days
		Win/lose during Islamic anomalies
		Sharing of business information in peer
		Highly valuing emotions in decisions
Behavioral Biases	94	Overconfidence Bias
		Self-serving Bias
		Anchoring Bias
Decision Making	83	Trading and Islamic anomalies
		Outcomes of such trades
		Matching perception with outcomes during anomalies
		Being biased with anomalies
		Taking Biased decisions



**Fig 1.** Factors Construction and Conceptual Model\*

\*Source: Thematic Analysis of Recent Study Data

These figures indicate eleven prime factors that shape the main themes. Also, four factors mainly create themes of perception, three items build emotions and four create biasedness themes, uniformly from content and thematic analysis of the study. Thus, three main themes (e.g. biased behaviors, emotion and perception of investor) have direct existence and association with their decision-making.

### 4.3 Understanding Behavioral Facets

The main aim to report this section is to clarify the understanding of participants about their perception, biased motives and emotions towards Islamic Calendar anomalies on the basis of the collected qualitative data. This will help to justify that (i) to what extent participants have understanding about these facets, (ii) how they value these, and (iii) do they really value them or not. Following excerpts illustrates how investors view their decision-making processes and perceptions:

*“I believe Pakistani stock market is in a critical situation these days because in Pakistan various financial regulations are evolving, government is going to end its tenure, Prime minster is already changed by the court orders and last budget*

*is near to be announced where we are not having any sort of favorable sentiment to investors, economy and public. So, all of these events have affected P.S.X adversely” (I)*

The above excerpt, (I) has been quoted by 34-year old, running his business in P.S.X. In his interview he talked about the importance of his perception regarding stock market in recent days. His words highlight the abnormal conditions prevalent in the stock market that are unfavorable for his business objectives. He also stated that his perception has been influenced by various other reasons as well.

*“I perceive significant influences of various national issues on our stock market and on investments because the national climate is speedily evolving with various political developments and religious influences.” (E)*

Similarly, (E) is also revealing his perception about the stock market because it is affecting as well as changing social and national climate of the country, which has a macro impact on the stock market.

*“Being Muslim I respect my religious ideology and fundamentals and have seen stock market being affected by these. I and my family celebrate Holy events as per Islamic Hijri calendar. And I really value emotions in trading these Holy events (Islamic Anomalies).” (D)*

(E) and (I) believe that stock market is found affected by national and social issues but here (D) narrated that stock market is also found affected by religious events in Pakistani context. It’s entirely an emotional activity; therefore investors value emotions instead of rationality.

*“What I observed and seen through my experience in stock market that Islamic events/anomalies have greater impact on market performance due to various other market sentiments i.e. extensive buying or selling trend, investor’s objectives and needs, sudden birth of any disaster or loss and announcements of dividend especially.” (B)*

Here Mr. (B) having nine years of experience in this field clarified the sound reasons, providing a rationale of Islamic events and how they affect the market performance. He also narrated that by controlling these mentioned market sentiments the major influence of Islamic Calendar anomalies can be reduced.

*“During these Islamic events majority of investors limit their trading activities in stock market. And everyone wants to celebrate these events freely by spending time with their family instead of doing business in these days. So this rolling effect actually results from not being available behavior displayed on the part of investors. It leads investors to settle their trading by closing them through their perception/position about market and by taking overconfident, anchoring,*

*optimistic, self-serving and herding decisions. Collaterally, this behavior damages stock market performance.” (C)*

The above statement was stated by Mr.(C), who have 12 years of experience in listed companies and business and hence has clearly explained the behavior as well as the reasons behind this behavior of investors that ultimately affects P.S.X during Islamic calendar anomalies. These reasons are unique, precise, but actual reasons are much bigger than them.

#### 4.4 Investors Behavioral Features and Decision-Making

*“I usually found myself much careful during my decisions and my behavioral orientation like taking care while executing them. I perceive the matters much critically, as it is necessary while working in the stock market that is based on assumptions and relies on personal experience as well, with insertion of some sort of biasness to acquire the returns” (A)*

Mr. (A) highlights his pessimistic behavior in relation to the stock market and takes much care while making important decisions. He is also found taking advices from his agents and peers while making a decision, therefore he is somewhat biased due to the suggestions given by peer groups to gain the returns.

*“I spend good time on my business by watching market position on hourly basis, reading newspapers and trading in various stocks. I feel I am self-biased, as I am well aware of the market conditions. So my awareness is my motivation in taking decisions. I perceive market on the basis of various informative mechanisms and trades. My attitude and emotion is found close to market variation. Hence, my decisions are also found changing as per market variations. (H)*

In above narrative, Mr. (H) explained that he is somewhat biased due to his awareness about the market conditions. He claims that his decisions are based on his knowledge levels and hence are coherent to market disparity.

*“Financial trading imbalances are a strong faceting market mechanism, but I am operating this business from last one decade. I am well aware of market conditions, changing scenarios and time wise movement of stock market. So, I am rarely trapped in bad situations. On many occasions, I bailed out due to my experience, instincts and at times working with full confidence and taking higher risk. Therefore, I feel lucky that I am rewarded in a good way due to being behavioral instead of being rational always.” (L)*

Mr. (L), who has 11 years plus experience in stock market of Pakistan, believes that his perception are based on experience named as anchoring bias in literature. He also claims that at times he makes decisions overconfidently and get reward.

He proudly considers himself to be behaviorally biased and uses emotional behavior in his business operations as well.

*“Emotions are very important element of human behavior. Without emotions operating the stock market business is meaningless. Less emotions means that a person will take less care to secure his/her business. His orientation to take or avoid risk will reduce and finally he would be out. Being an investor, my emotions are truly based on the conditions of the market. Also, there is a role of biased behavior in my trading activates because one cannot set aside these behavioral elements, completely. As much we negate their existence in our behavior or trading, we cannot replicate the reality that as humans these elements are part of our behavior and influence our paddle movements” (F)*

Here Mr. (F) asserts that behavioral components are unavoidable. These are stationary part of a man’s life and hence play a significant role in investor’s rationale to plan or execute distinct decisions.

#### 4.5 Behavioral Aspects, Islamic Calendar Abnormality and Decision-Making

*“Basically Islamic Calendar oddity is a different phenomenon and the stock market is divergent to it. One is pure religious aspect, while the other is pure financial matter of business. These both join one another notably with consolidation of the investor’s working. I am watching it as a triangle residing on these three factors.” (K)*

Mr. (K) highlighted the significance of Islamic Calendar variations in scope of decision-making and behavioral aspects. He added that these are interrelated episodes because of investor role which is purely based on his behavior. Hence, there is striking coalition in attitude of investors to making decisions in companionship of Islamic anomalies.

*“As I said earlier, I mainly focus on market price of particular securities in which I invest. And due to these events, market prices shuffle with greater variation than normal days. So, I follow carefully that variation trend which results due to Islamic Calendar anomalies to take secure decisions. To attain such security, I use behavioral shortcuts in my decisions as well. Therefore, I feel my behavior is both emotional and biased while making decisions during these holy anomalies.” (B)*

Mr. (B) has also second the statement of Mr. (K) that his behavior is largely influenced due to Islamic anomalies and he feels his decisions are both biased and emotional to some extent.

*“Behavioral ingredients are always there in decisions either people accept it or not. But an anomaly of Islamic Calendar varies on a monthly basis. Some months are cheered in Muslim community and are named as events of happiness like start*



*of Ramadan and Eid Ul Fitr etc. While rest of the events are epitomizes sorrow like Ashoora. So during the happy days, I found stock market business flourishing, while investors were pessimistic towards trade during sorrowful days. Therefore, one can say that these events i.e. anomalies have an impact on trading and behavior of investor.” (A)*

Mr. A has also supported the previous arguments that there is a significant relationship between investor behavior and Islamic anomalies in terms of decision-making. Investor sentiments during these months are also different. Hence, Islamic behavioral factors i.e. perception, biases and emotions have significant link with decision making during Islamic anomalies.

*“My trading is enacted on the basis of cost and benefits. I can’t work on it more sentimentally or emotionally, one-sidedly. Pakistani stock market works and results in a mix way. One day graph results outstandingly and on other day it works in a very negative way. So I work here with my all senses by following my judgments and experience from Islamic anomalies consequences of the previous year.” (F)*

Mr. (F) also supported the other participant’s response that his behavior changes due to changes occurring in stock market routinely and hence he uses experience by taking prior year’s Islamic anomalistic ramification as basis to take sound decisions in the running year. Thus, Islamic anomalies shuffles conduct of investors significantly by changing their behavior for concerned settlements.

## 5. Discussion

The results of the study highlight that investor PSX are found working with several behavioral aspects that affects their decision-making processes during Islamic Calendar anomalies i.e. perception, emotions and biases during Islamic events. Moreover, perception and emotionality are leading the investors to take biased decisions. Such biased decisions are taken by them due to their vast experience in this domain that also makes them overconfident and self-serving as anchoring in their conducts, by comparing costs and benefits during these calendar anomalies. Thus, results reinforced the proposition of the study that during Islamic anomalies investor’s emotions, perception and their biased behaviors have noteworthy connection with their decision-making. Moreover, these findings are coherent to prospect theory that investors are found risk taker when market is resulting commendatory return and are found vertiginous throughout the period when market is not awarding handsome returns. The study results are generalized to Pakistani context.

## 5.1 Conclusion and Recommendations

The study intent is to explore antecedents of investor decision-making during Islamic events/anomalies. For this, study is flooded on groundings of Prospect theory by conducting thematic and content analysis. This analysis was conducted on a sample of 12 respondents, who asserted that during Islamic anomalies investors decisions are not affected but also rely on their emotions, perception and self-generated biased behaviors. Thus, the study findings are supporting the propositions of the study. The study recommends key stakeholders (i) to design strong and consistent policies to promote rational corporate financial culture in PSX and sister concerns, (ii) maximize the role of market agents to avoid self-generated heuristics by the investors themselves, (iii) launching multiple extensive scheme of training programs for investors and agents to promote rationalism in financial matters, (iv) enhancing investor awareness through various sessions for long term capital gains instead of being price conscious or short term investors, and (v) redefining SECP to play a serious role for family owned funds management, mispricing, securities commercialization and investors rationality.

## 5.2 Limitations and Directions

A number of well-known institutions refused to participate in the study. Also, less practicality of investors' understanding with study intent was also challenging. On multiple occasions, the researchers probed the investors for right set of response. Extending the recent research, comparative analysis of cross-religion investors in the stock market, particularly in Muslim context could reveal new insights. Also, due to behavioral influences during these anomalies, investor decisions were found to be short-term. Hence, taking decisions on long-term basis and securing capital gain will prove to be a wonderful addition to this field. Moreover, why PSX investor prefers price gain in tenure of Islamic Calendar anomalies will act as a novel contribution as well.

## Appendix 1: Interview Protocol

### 1. Investor's Perception

- i. How you perceive Pakistan stock market nowadays?
- ii. What do you know about Islamic events?
- iii. Does these events play a vital role in stock market?
- iv. Do you think future returns will be affected by these Islamic events?
- v. Will these affected market returns be exposed to any risk?

- vi. Have you experienced these events towards your investment or return pattern favorably or adversely?
- vii. How you perceive importance of these events in stock market of Pakistan?

## 2. Investor's Emotion

- i. How you control your feelings during critical situations in Stock market due to these events?
- ii. Did you shuffle your emotional style in according to P.S.X business graph?
- iii. Do you feel nervous when things not going to your expectations?
- iv. Did you ever share your positive emotions with others in your peer?
- v. Do you value your emotions regarding your trading in these events? Or you feel your emotion as part of life like breathing?

## 3. Behavioral Biases (Self-Serving Bias, Anchor Behavior, Overconfidence Bias)

- i. Do you perceive things emotionally or rationally?
- ii. Do you attribute your success in stock market during these events to yourself or other factors?
- iii. Since how many years you are in this business?
- iv. Do you value your experience in taking decisions during these events for future?
- v. Do you also value credit sale of company in market for your credit sale decisions during these events?
- vi. Do you consider timely payment of returns by the company?
- vii. Do these factors build your confidence level in your business?
- viii. Will you do business confidently with that company as performing good?
- ix. Have you lost your confidence in trading when situations were critical for that company due to these events?

## 4. Islamic Events and Market Decisions

- i. How have you performed your trading activities during these events?
- ii. Did you experience market prices being affected due to inclusion of these events prevailing in financial calendar?

- iii. How you speculates or operates trading activities during Muharram, *Rabi Ul Awal*, *Ramadan* and *Zil Hajj* events?
- iv. How your sensed emotions and perceptions help you to take favorable decisions during these events?
- v. Did you ever notice being biased during your trading activities?

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