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The Islamic effect: Exploring the dynamics of Islamic events on sustainable performance of Islamic and conventional stock markets

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A B S T R A C T

This study attempts to investigate the effects of Islamic events on both Islamic and conventional stock markets and analyze which market reacts more pronouncedly to these events. From 2012 to 2022, the research used daily stock return data from eight nations: Kuwait, India, Nigeria, Malaysia, Pakistan, Qatar, Saudi Arabia, and the United Arab Emirates. The study examines how Islamic holidays such as Ashura, Eid Meelad ul Nabi, Eid ul Azha, and Ramadan affect both Islamic and Western stock markets. The researchers use the Generalized Autoregressive Conditional Heteroscedastic (GARCH) model to analyze the data. The results of this analysis show that Islamic events in India, Nigeria, Malaysia, Pakistan, and Qatar have a strong and favorable link with Islamic stock returns. However, it was discovered that there is a little correlation between Islamic events and Islamic stock returns in the remaining three nations. The study also reveals a strong and favorable correlation between Islamic events and conventional stock performance in all countries. By offering a comparative analysis of the effect of Islamic events on Islamic stock markets and mainstream stock markets, these findings add to the body of current material. Every religion has its own set of rituals that its adherents observe, and these rituals frequently have an impact on different economic and non-economic activities. This study sheds light on the precise connection between these events and stock market performance by examining the impact of Islamic occasions on both Islamic and conventional stock markets.

1. Introduction

Religion is considered one of the most essential yet necessary components of everyone's life and it is important to emphasize its significance in multiple aspects of a person's life. The calendar also shows two different types of anomalies, including the religious anomalies in which important dates based on the events are being mentioned like Eid ul Fitr, Ramadan, Ashura, Eid I Milad un-Nabi, and Eid ul Adha (Akash et al., 2019). On the other hand, there are non-conventional calendars where non-religious anomalies are mentioned like the pre-holiday effect, day of the month as well as turn of the month effect. Even the Stock markets have been reported to be largely affected because of the holidays or the occurrence of various events in multiple countries of the world. For example, a day before the holiday, stock markets and shares are mostly abnormal (Shah et al., 2017). However, some of the countries have shown positive pre-holiday effects like Australia, where the stock market is being positively impacted. The day turn of the month effect accounts for approximately 87% of the monthly market return,

December, January, and any other holiday in which fluctuation occurs. Day of the week effect examine that on Friday stock shows higher returns and lower returns on Monday because Monday occurs immediately after the weekend, any negative news that arrives in the market and at the start of the week the investor is unconfident and hesitating to invest after the days passes the investors became confident and start investing and the end of the week falls on Friday the return then become much higher (Satt, 2017). According to Bugan et al., (2022), January effect argues that especially in the UK the tax year ends in December, so investors sell their stock to decrease the tax obligation on capital gain, and in January investors start investing so there is an increase in demand for shares leading to higher returns in their investments. Opposing this suggestion that a close relation of tax year ending with the higher returns in January other studies found January seasonality where they did not have a tax year ending in December. January seasonality initiates in Australia where the tax year ends in July (Ali et al., 2017).

Based on multiple research studies, it has been mainly identified that there is an Islamic Shariah Compliant index, which is being followed by Muslims all around the world, and it further states that there are mostly capital gains that are correlated with the performance (Iqbal et al., 2019). According to Jebran and Chen (2017) when a person performs all his duties and activities based on the Islamic laws or Shariah, it is adopted and practiced by several other Muslims as well. For example, Islamic banks are usually the ones who have initiated a religious framework or policies based on which Islamic laws can be followed while performing banking activities like the provision of loans, mortgages etc. Islamic banks mostly rely upon different types of Islamic finance so that they can acquire some capital with the help of which they can run their business as well (Halari et al., 2015). Also, it helps in assessing any risks which are associated with trading and investment activities (Institute of Islamic Banking and insurance, 2022). Due to their enormous success within a very limited time frame, The Shariah index system has been acquiring massive popularity and success all around the world and it is expected that it might overtake the international community and become the most appropriate replacement for their current financial systems (Mitchell et al., 2014). Different types of Islamic financial instruments are being used and practiced in different Muslim countries, including the Islamic Sharia-compliant stock index, which helps by offering an alternative to the conventional financial system. It provides the financial assets and systems which follow the Islamic Shariah. Additionally, it is also important to highlight that these strategies have somewhat made the Islamic stock market so far, a bit more resilient to shocks and financial crises (Ali et al., 2022). Apart from that, it has also been identified that there is usually a common pattern in the interactions between the Islamic stock market and the potential for increased profits, which can be easily acquired through diversification. Although the most important element of these Islamic banks is following the Islamic rules and regulations in their financial systems and operations, additionally, it also happens to be most appropriate because of its potential for increasing profits on a large scale (Jaziri & Abdelhedi, 2018). The elements that are considered haram in Islam, like gharar, i.e., prohibition of interest and gambling, which involves excess of uncertainty, these aspects are not included in the Islamic stock market therefore there are very limited to minimal chances of fluctuations in the stock market. (Puteh, 2021).

According to Shahid and Sattar (2017), the world has been subjected to numerous challenges that were required to be overcome immediately during the global financial crisis (2008-09). However, after 2011, the world has also witnessed the regrowth face with stability in numerous sectors. The European Union debt crisis was huge, still, the countries formed a collaboration with each other and initiated several movements and joint ventures to overcome these crises (Mustafa, 2020). Based on the research report of Global Financial Stability Report (2019) it has been identified that there was a significant increase in the corporate and public debt, which has ultimately led to the financial vulnerability's phenomena. In such conditions, numerous researchers and scholars have paid attention to find out different ways with the help of which these financial vulnerabilities can be reduced and there could be more stability in terms of the economic conditions of the countries (Shah et al., 2017). For this purpose, light has been shed by various scholars on the Islamic laws of banking, also known as the Islamic Financial System (IFS). This system is dependent on the faith of Islam and the laws are completely aligned with the principles and strategies as proposed in Islam. Two important elements have been mainly emphasized for this purpose which include:

1. Primarily, it has been identified that the Islamic Financial System has more stability and increased growth as compared to the Conventional Financial Systems. Although the world has transitioned to a comparatively stable state after emerging from the global financial crisis in 2008-2009, research reports have declared that Financial Systems following the Islamic laws and Shariah have acquired increased growth comparatively in the last three years (Chkili, 2022).

2. Also, the Islamic Financial System highly emphasizes the ethical and fundamental rights of the people and believes in the provision of equality and justice to all individuals despite their class and economic conditions in the society. This system has played a significant role in underpinning the ethical challenges and social matters globally (Hijazi & Tabash, 2020).

Based on multiple research studies, it has also been identified that in 2018, Islamic Finance flourished on a large scale worldwide. The prices of oil rebounded in the year 2018, and the export commodities also increased to a considerable level. The reports proposed by the Islamic Financial Services Industry (IFSI) declared that in the year 2019, the total sum of Islamic Banking, Islamic Capital market, and Takaful was around USD 2 trillion, which occurred for the first time in the history of banking systems, and it was further surpassed in 2019 when the value reached to 2.19 trillion (Hassan et al., 2022). On the other hand, it has also been analyzed that the ICM alone acquired revenue worth 591.9 billion USD in 2019, which accounts for about 27% of the total share. Research has also revealed the fact that after the global financial crisis, and to date, investors

have been eagerly looking for more options and opportunities to invest in different areas which hold increased stability and growth in the economy (Raheman, 2015). For this purpose, these investors have been exploring the Islamic financing system on a large scale as they possess very little to minimal vulnerability due to their strict and clear laws and shariah. These Islamic Financing practices can also provide a new portfolio management system for investors (Puteh et al., 2021).

Based on the research conducted by Shah et al., (2017) it has been analyzed that different countries often follow different contexts of the banking system, however due to the emerging inclination towards Islamic financing system, the majority of the countries have been considering both the options and it depends on the investors which method they want to choose out of these two. The decisions of choosing the investment methods are often based upon the core beliefs of the investors, as well as their approach towards the maximum output and stability of the system (Khan et al., 2017). It has also been analyzed that the financial system of the two window banks is quite different from each other. For investors to invest in Islamic banking, it is essential that they follow the Sharia compliance principles and must also consider the financial instruments that are Shariah compliant so that the investors can avoid indulging in gambling and speculations (Jebran & Chen, 2017). For the investors to achieve its objective of maximizing wealth Islamic Finance must provide efficient and effective results. From an investment perspective, different Islamic events are important as they religiously urge the individual spirit. Several Islamic events occur during specific months which enhance the emotions of Muslims several times a year (Hamman, 2014).

Based on the findings of Bahloul et al., (2017) Islam is one of those religions that is considered as a complete set of beliefs, principles, and measures which are needed to be followed by its followers. It not only helps in providing faith and belief to a person, but it also guides the way of living a peaceful and prosperous life while abiding by the principles of Islam. Similarly, the financial system of Islam has been designed based on the principles and teachings of Islamic Shariah. Islam particularly prohibits the concept of interest, and that is why, most of the Islamic banking systems include such products where there is no involvement of Riba or Interest (Iqbal et al., 2019). This is called an interest-free banking system. Due to the development of the Islamic banking system, it has been gaining a huge number of customers and more and more people are becoming inclined towards their products. It has also been analyzed that the Islamic banking system has been appreciated and adopted by non-Muslims who want to have interest-free products. The common banks are also introducing their separate entities under the names of Islamic banking and provide both conventional and Islamic financial offers and products to the customers separately (Karim & Naeem, 2022). Based on the research study conducted by the State Bank of Pakistan, it has been declared that the Islamic banking system has been successfully followed in more than 300 institutions all over the world, in 75 countries including both Muslim and non-Muslim countries. The research further elaborates that the concept of Islamic banking has been growing rapidly since the year 1971 and since then there has been no turning back. While acquiring a growth rate of 15% every year, Islamic banks have successfully generated revenue or assets worth $65 billion (Bugan et al., 2022). But it is also important to note that this figure is still only 1% of bank assets worldwide, using conventional systems of financing. Considering the background of Islamic banking, it has been analyzed that the first Islamic bank was introduced in Egypt in the year 1963, whereas in Pakistan the first bank was introduced in the year 2002 (Shahid & Sattar, 2017). Research conducted by Asl et al. (2022) has also proposed that the current financial crises that have been witnessed all around the world are mainly due to interest-based economies and financial systems. The well-established economies of the world which had pretty successful markets and were leading the international financial systems were also hit by these financial global crises, as a result of which the interest rate was reduced to almost zero (Mezran & Perteghella, 2020). Due to this financial downfall, most of these countries have been taking a keen interest in Islamic financial systems rather than conventional ones. This is mainly because Islamic banking is not based on an interest rate system, but it is solely based on assets. The conventional systems are money-based systems and multiple research reports have depicted the fact that Islamic financial systems have not been affected by the financial crisis in any way (Nasir et al., 2017).

This study investigates the impact of Islamic events on both the Islamic stock market and the conventional stock market and analyses which respond more aggressively towards Islamic events. The study uses daily stock return data from eight countries throughout 2012-2022. The markets included are Kuwait, India, Nigeria, Malaysia, Pakistan, Qatar, Saudi Arabia and UAE. The study investigates the effect of Islamic events (Ashura, Eid Meelad ul Nabi, Eid ul Azha, Ramzan) on both Islamic and conventional stock markets (Ali et al., 2022).

The findings of Ali et al., (2017) showed that the existence of calendar anomalies pins the investor's interest in searching for and making strategies to earn an abnormal return. Researchers work on different Islamic calendar anomalies with various Islamic events in different periods of different Islamic regions. Many studies examine the impact of the Ramzan effect. Studies were conducted on the effect of Eid-ul-Azha on stock return. This paper analyzes the comparative response of Islamic calendar anomalies in the area of Islamic and conventional finance to study the performance of those who respond more in the case of conventional stock and Meezan index (Khan et al., 2018).

Every religion has its events performed by the followers of that religion, major of the economic and non-economic activities are influenced by these anomalies. Such anomalies show their effect on the market index. As many macroeconomic and microeconomic variables have different impacts on economic growth in developing and developed countries it needs to be found out that the effect of calendar anomalies also depends upon the nature of the economy (Puteh et al., 2021). According to the study, there are three research questions given below:

RQ1.   Is there any impact of Islamic events on the conventional stock Market?

RQ2.   Is there any impact of Islamic events on the Islamic stock market?

RQ3.   Do Islamic events have changing effects on Islamic and conventional stock markets?

This paper is structured into five sections, the first section describes the introduction of the study, the second section is related to the literature review of the study, the third section is concerned with the methodology of research, the fourth section is related to data finding and analysis and the last section is concerned with conclusion and recommendation.

2. Literature Review

2.1 Literature Review and Hypothesis Development

Over the past ten years, there has been substantial development and growth in the Islamic equity markets. The key driver of this expansion and advancement is the rise in the number of investors looking to invest in financial instruments that adhere to Shariah (Mustafa, 2020). Islamic equities markets are built on the Shariah (Islamic law) principles prohibiting interest, undue uncertainty, speculation, and participation in unethical financial transactions (Nasir et al., 2017). Studies comparing the performance of conventional and Islamic stocks have produced inconsistent findings (Al-Zoubi & Maghyereh, 2007). According to several studies, Islamic stocks outperform conventional stocks in terms of return and risk performance (Ali et al., 2022). According to certain other studies, Islamic stocks perform worse than mainstream stocks.

According to (Hamman et al., 2014) since the beginning of this decade, it has been analyzed those Muslim countries in particular have experienced rapid economic growth mainly due to their Islamic financial systems and there are multiple underlying reasons associated with it. In particular, the Islamic events have a key influence on the Stock market of both banking systems. Based on the research analysis from traditional finance philosophy, it has been declared that the return distribution should be constant throughout the year, despite any holiday, any social or religious events, or any other important occasions (Shah et al., 2017). However, the real experiences depict the opposite as there is a significant impact of these important days and events on the stock market and financial distribution. Keeping view of standards, financial securities returns have been affected due to holidays, weekends, or Islamic events effects (Li et al., 2021). This can be termed as irregularity in the finance literature. It has been further assumed that Islamic events have a relative effect on the returns of the day, particularly in Pakistan (Mitchell et al., 2014). These frequent movements often affect the Stock market, however, there are no precise calculations and observations regarding the impacts of these events on finances (Ahmed et al., 2023; Fahlevi, Ahmad, et al., 2023; Watto et al., 2023). The research study is meant to investigate further in this area and analyze the effects of different Islamic holidays and events on both conventional and Islamic stock markets. One of the additional factors that has been analyzed is that investors in these Stock markets are also emotional at times, and there are both Muslim and non-Muslim investors from all around the world (Nasir et al., 2017). Since the investors are often sentimental, their behavior often shuffles the Stock market and causes volatility (Ahmad et al., 2023; Meiryani et al., 2022). Such reactions usually impact on the Stock market in both positive and negative ways, depending upon the circumstances. One of the research studies have deeply assessed the Ramadan impact on Stock market deviations. It has been analyzed that the tourism industry is largely affected during Ramadan in the Emirates state. The vulnerability in the Stock market has largely increased because of variations in the sentimental approach of investors (Ali et al., 2022).

Prospect Theory

Considering the implementation of Prospect Theory, it has been analyzed that investors usually prefer choosing the less risky methods while investing. When they are being provided with certain circumstances and alternatives, the investors often prefer the methods that are less risky to earn. On the contrary, when investors have increased chances of losing, they immediately stop trading and save the amount that they have already earned (Iqbal et al., 2019). Thus, the study investigates whether these events have either a positive or negative impact on the Stock markets, which will be further discussed in detail in the following sections. Based on the previous literary analysis, it has been analyzed that different months of the Islamic calendar possess dynamic impacts on the Stock market of Muslim economies (Satt, 2017). For example, Ramadan has a positive effect on the Stock market, and the Stock market returns are positively integrated during this month, especially in Pakistan. During the holy month of Ramzan, Stock markets are also positively impacted in Turkey and other Muslim countries. On the other hand, there are other important days as well, which hold importance in the religious values of Muslims like Friday (Ratnasari et al., 2022), the first day of an insignificant week, and the day after 15 days in a month are found to be important for the Muslims (Ali et al., 2022).

A research study conducted by Mustafa (2011) adopted the ARDL approach to test and assess the impacts of these holy months on the Stock market. The results acquired from this study shows the significant impacts of these religious days on the Stock market of Pakistan. Apart from that, research has revealed that there is a significant association of these events, rituals, and days on the market volatility as well as the mood of the investors (Jebran & Chen 2017). The study also revealed that whenever the investors are in a happy or satisfactory mood, the Stock market will ultimately move upwards and vice versa. Based on the Islamic school of thought, it has been declared that when a person is in a happy or good mood, this means that they are healthy and wealthy enough. This results in increased trade and business which provides fruit that is also pulpy and

lush (Sandhu., 2017). This mainly occurs during the holy and fruitful months of Islam where the reward provided to the investors is increased according to them. This entire cycle and phenomenon are mainly based upon the concept of spirituality, sensed health, and good attitude. During the holy month of Ramadan, Muslims are mostly in good spirits and when people are in a good mood, they often make huge investments, and so happens in the month of Ramadan. Apart from that, it has also been determined that people are healthier and more active, and they must spend less on groceries which also encourages them to make more investments. This research is restricted to the results of the Islamic Stock market specifically, whereas the Conventional Stock market has a limited effect during these months mainly due to the presence of an increased number of non-Muslim investors as compared to the Muslim investors (Bahloul et al., 2017).

A research study also indicated the fact that multiple debates initiated in the modern financial concepts which were mainly introduced by Fama in 1970. According to this modern concept, the share prices in the Stock market are reflected by multiple elements. The Gregorian calendar, for instance, contains a variety of anomalies that can be categorized as the pre-holiday effect, holiday effect, Monday impact, midday effect, turn-of-the-day effect, day-of-the-month effect, and turn-of-the-month effect. As proposed by Hijazi & Tabash (2020) it has been analyzed that the day of the week effect has been observed in the Egyptian stock market, where the positive returns on Mondays are considerably significant as compared to the other days. This also led to the conclusion that their research study was somehow consistent with the weak form of efficiency. On the contrary, another research study conducted by Ali et al., (2022) followed the stock market of other countries like Malaysia, Indonesia, and Thailand from the period of June 2002 till August 2009. The research study highlighted that Mondays typically have a negative return in the stock market, with Fridays having a larger return than the other days of the week.

A research study that focused on the five calendar anomalies from the January effect, turn of the month effect, holiday effect, month of Ramadan effect, and Monday effect highlighted the impact of months in similar situations. The Adaptive Market Hypothesis was the subject of the study's investigation and testing. To do this, daily stock return data for the KSE-100 index have been collected over 24 years, starting in January 1992 and ending in December 2015 (Satt, 2017). The results and findings which have been acquired from these studies mainly suggest that the behavior of these anomalies has been significantly affected and evolved during all these years, and the performance usually varies and supports the Adaptive Market Hypothesis.

Concerning the importance of different months in both the Gregorian and Islamic calendar, a research study has been executed by Li et al., (2021) started from 1995 to 2011 and the results were assessed through descriptive statistics, ANOVA, and Kruskall Wallis & GARCH model. The findings of this study showed that anomalies are present in both types of calendars which also impacts the mood of the investors (Mezran & Pertheghella, 2021). By analyzing and learning the common patterns and trends in the past stock market, new investors can learn to invest in this area appropriately (Fahlevi et al., 2022; Fahlevi, Moeljadi, et al., 2023; Yusuf et al., 2023). Another research report investigated investor behavior and the impact of the Islamic calendar anomalies on their behavior. The study has acquired primary data collection for the Pakistan stock exchange, and the results which have been obtained showed that investors decisions in Pakistan are often bound because of Islamic calendar anomalies and they can be biased and self-serving (Bossman et al., 2022). However, some contributing factors are market capitalization, price to earnings and other market factors still possess certain effects on the investor's behavior of investment in the stock market. In support of this, Mathlouthi et al., (2022) also shared their idea that the Islamic Event days effect is significant on investor's behavior and trade is mostly maximized during December and January, whereas it is reduced considerably in September.

One of the research studies that had the most similar and relevant research to our research hypothesis was conducted by Aly et al., (2004) in which the authors contributed to this investigation by focusing on the stock market during the months of three main Islamic events which are Ramzan, Ashura and Hajj. The data has been acquired from the year 1998 till 201. And the GARCH model has been applied so that volatility in the data can be witnessed. The findings of this paper showed that there is a significant impact of Ashura and Ramadan on the stock markets especially on the ASI index whereas there is very limited to no effect of Hajj on the TASI index (Li et al., 2021). Similarly, Yousaf & Alokla (2022) represented the idea that there is also a significant impact on the herding behavior of Saudi or Gulf stock markets in particular, the stock market during COVID-19 was largely impacted in numerous ways. Gold and oil prices have also been proven to have a prominent impact on the Stock markets of the countries (Sitorus et al., 2023; Hakim et al., 2023). On the other hand, a research study has also been conducted by (Mitchell et al., 2014) in which Ramzan impact on Pakistan's Equity stock market has been assessed. This effect is examined through dummy variables in regression and applying the GARCH model the results of their data indicate that there is a negative and significant impact on volatility but no significant impact on the mean return seen. Iqbal et al., (2013) also executed the study in which data has been collected regarding the Ramzan effect and investors sentiments. 14 nations provided the data, which was gathered between 1989 and 2007. According to the findings of their study, stock returns are nine times higher, and volatility is lower during Ramadan than it is during other months of the year. A different research report suggested by (Sandhu A, 2015) examined the Islamic calendar anomalies in the Pakistan stock market KSE. Data were collected between 1995 and 2011, and a generalized Autoregressive Conditional Heteroskedasticity model was used to investigate the data's volatility from the mean value over Islamic months in the return of equity stocks traded on the Karachi Stock Exchange. It concluded that investors should develop an investment strategy considering the stock's trading time to obtain higher returns on a risk-adjusted basis (Sahabuddin et al., 2022a, 2022b).

In support of the Ramzan effect, another research analysis has been proposed by Puteh et al., (2021) in which the Ramzan effect on the Karachi Stock Exchange was investigated by the authors by using daily data from the KSE 100 indexes from January 2001 to December 2010. The authors concluded that Ramadan had a marginally favorable impact on the stock market. Additionally, volatility is minimal during the holy month of Ramadan (Bahloul et al., 2017). According to the study of Iqbal et al., (2019), the findings showed that authors have collected data from Bursa Istanbul Stock (BIST) mainly on 23 sectors. The data has been acquired from 1997 till 2015. The study has emphasized various elements like transportation, electricity, chemicals, and tourism and analyzed their impact on the stock returns. It has been concluded that the impact of these elements on tourism is high, which ultimately affects the stock market as well. Their study was divided into three sections, the first section was composed of the first 10 days of the month of Ramzan, the second section was composed of the next 10 days of Ramzan, and the third section was composed of the last 10 days of Ramzan and the result shows that the effect of first 10 days have positive and statistically significant influence on returns (Khan et al., 2017). Another research report presented by (Mathlouthi & Bahloul, 2022) studied the effect of Ramzan on PSX. Data for the study was acquired between January 2007 and December 2016 starting point. Time series regression has been utilized as a method to investigate the Ramzan effect on the data. Their study's findings demonstrate the existence of the Ramzan effect, and it was also investigated as to why returns are higher in the final 10 days of Ramadan and reach their peak on the 27th of Ramadan (Jawadi et al., 2014).

Jaziri and Abdelhedi (2018) deliberated the impact of Ramzan on Islamic Middle Eastern Markets and the researchers have found out that during the first and last five days of Ramzan, there is significant variation in stock market returns. Researchers also concluded that the overall Ramzan effect is statistically and positively significant; the associated gains throughout the month are enough to reduce the transaction cost which may provide a profitable trading strategy (GIll, 2010). Similarly, (Bugan et al., 2022) studied by taking the stock market return of 14 Muslim countries over the period 1989-2007. Their results show that the stock market returns are significantly higher during the month of Ramadan, and the holy days of Ashura and the stock market is less volatile during Ramzan than the rest of the year. On the other hand, (Bahloul et al., 2017a) studied the Ramzan effect by taking the data on stock returns of 17 Muslim countries' financial markets. Results concluded that the impacts of Ramzan on daily returns are positive whereas the impact of Ashura on daily return yields is negative. (Bahloul et al., 2017b) also studied the effect of the Month of Safar and Month of Ramzan on companies return listed in Iran Stock Exchange Six months data in single year taken which are comprised of two months before Muharram and Safar and two months after Muharram and Safar. Tools for the data used are (RM Anova) the findings of their study concluded that there is significant relation between stock market returns and Muharram and Safar (Satt, 2017).

In addition to this, Sonjaya and Wayhudi (2016) have studied by using five models starting from a single model and the last Conditional risk model. Results of all models show the Ramzan effect on returns in Karachi stock market. Results also show that the stock market is less volatile during the Holy month of Ramzan. Another research study has been proposed by Jawadi et al., (2014) in which the authors have investigated the Ramadan effect taking data from Saudi Arabian stock market and Generalized Auto Regressive Conditional Heteroskedasticity model applied for the volatility of data. The results mainly concluded that Volatility reduced during the Holy month of Ramzan. This anomaly is consistent with the trading activity during Ramzan (Hearn et al., 2011). (Ariss et al., 2011) studied a sample of data from seven Muslim countries. They concluded that herding behavior was significantly higher during Ramadan than non-Ramadan. The variation happened in returns of the stock market. Al-Khazali et al. (2017) studied Gregorian and lunar calendar anomalies by studying the variable Wednesday effect January, December, and Ramzan effect because the Wednesday is the day before weekend of stock market in Gulf countries so, they concluded that Wednesday is effective as well as the December and January effect. They also found that the prices fluctuate in December, January, Ramadan and on Wednesday (Bley & Saad, 2010; Al-Khazali et al., 2014). Ali et al. (2022) demonstrate that Islamic stock market is a shelter for investors in covid-19 if they hold the stock during this period.

3. Hypothesis Development

According to all above studies there was a positive and significant relation in the return of conventional stock and Islamic sharia-based instruments. However, there is debate regarding how Ashura (the Islamic month) affects the return of traditional stocks. The researcher in this case discovered ambiguity in the relationship between Ashura and both Islamic and conventional stock returns.

H_1: *There is a significant impact of Islamic events on conventional stock return.*

H_{1a}: *There is a relationship between Ashura stock returns and conventional stock returns.*

H_{1b}: *There is a relationship between Eid Milad un Nabi stock returns and conventional stock returns.*

H_{1c}: *There is a relationship between Eid ul Azha stock returns and conventional stock returns.*

H_{2d}: *There is a relationship between Ramzan stock returns and conventional stock returns.*

H_2: *There is a significant impact of Islamic events on Islamic Stock Market.*

H_{2a}: *There is a relationship between Ashura stock returns and Islamic stock returns.*

H₂ᵦ: *There is a relationship between Eid Milad un Nabi stock returns and Islamic stock returns.*

H₂ᵪ: *There is a relationship between Eid ul Azha stock returns and Islamic stock returns.*

H₂ᵤ: *There is a relationship between Ramzan stock returns and Islamic stock returns.*

3. Research Methodology

To analyses the development of the five well-known calendar effects and the occurrence of calendar anomalies, we investigate daily-returns of 8 countries over the period comprising 10 years (from 02 June 2012 to 26 February 2022) because there are lot of dynamic changes found in last 10 years in Islamic and conventional market like covid-10, trends, festival changes, and organization events etc. The following regression equation is estimated:

$$Rt = c + \beta Dt + \varepsilon t, t = 1, \dots, T$$

Rt stands for the stock index return, Dt for a representation of the pertinent calendar impacts and market conditions, and t for the error period, according to Urquhart and McGroarty (2014). Instead of using OLS regression, we use the GARCH (p, q) model to examine the impact of different calendar elements on the Pakistan stock market. Since it is the most dependable and simple model in the family of volatility models, as well as the model that is most commonly used and discussed in the literature, we adopt the GARCH (1, 1) regression model throughout our research (Engle, 2001). According to Urquhart and McGroarty (2014), the GARCH (1, 1) model "allows researchers to describe variance as conditional on the past variance and error, rather than fixed over the series." Therefore, we conduct the following GARCH (1, 1) regression to capture the time-varying behaviour of return of the KSE-100 index.

$$ht = \alpha 0 + \alpha 1\varepsilon t2\text{-}1 + \theta ht\text{-}1$$

The GARCH model coefficients are 0, 1, and &, and ht stands for the conditional variance for equity returns at time t and ht-1 for the conditional variance for equity returns at time t - 1. The non-normality property of the return series should not be captured by the GARCH model, despite the fact that it fits well and has the ability to do so for the desired characteristics of stock market returns.

Models

Rₜ = Ln (Pₜ/Pₜ₋₁)

Model 01	**Model 02**
Retₘᵢ = β₀ + β1X 1ᵢₜ + β2X2 ᵢₜ + B3X3 ᵢₜ + μ ᵢₜ	**Retᵪₛₘ = β₀ + β1X 1ᵢₜ + β2X2 ᵢₜ + B3X3 ᵢₜ + μ ᵢₜ**
where, Retmi = Return on daily Meezan index.	where, Retᵪₛₘ = Return on daily Conventional Stock Market Index.

Table 1
Market index

Country	Islamic Market Index	Conventional Market Index
India	MSCI India Islamic Index	National Stock Exchange of India
Pakistan	Meezan Market Index	KSE-100 Index
Nigeria	Nigerian Stock Exchange Lotus Islamic Index	Nigerian Exchange Limited
Kuwait	Boursa Kuwait Stock Index	BK Main 50
Saudi Arab	MSCI TADAWUL 30	Tadawul All Share
Malaysia	MSCI Malaysia Islamic Index (USD)	Bursa Malaysia Bhd
UAE	DFM Shari-a Index	Nasdaq Dubai
Qatar	Al Rayan Islamic Index (Price) Composition.	Qatar Stock Exchange

4. Research Data Analysis

4.1 Descriptive Statistics

Table 2 presents descriptive results of the variables involved for the proposed study of this paper. In Table 2, we find the descriptive statistics of all variables according to returns. Here are the mean values, standard deviation, kurtosis, skewness values, minimum and maximum returns. The observations for all samples of each variable is 2447 in 8 countries. There are four independent variables that are effects which are influencing conventional returns. These effects included Ashura returns, Ramzan returns, Eid ul azha returns and Eid ul milad un-Nabi returns.

Table 2
The summary of some basic statistics

	Mean	Median	SD	Kurtosis	Skewness	Min	Max	N
SAD-TRD	0.0003	0.0009	0.0109	10.918	-0.8106	-0.0832	0.0892	2447
SAD-ISL	0	0	0.001	124.201	-1.534	-0.0173	0.0164	2447
MAL-TRD	0	0.0001	0.0068	16.7553	-1.312	-0.0876	0.0431	2447
MAL-ISL	0	0	0.0078	7.9416	-0.428	-0.0683	0.0534	2447
IND-TRD	0.0002	0.0004	0.0124	10.5482	0.1356	-0.0697	0.1398	2447
IND-ISL	0.0002	0.0005	0.0101	6.567	-0.1318	-0.0613	0.0907	2447
UAE-TRD	0.0004	0.0004	0.0136	10.4715	0.0121	-0.0804	0.1305	2447
UAE-ISL	0.0002	0.0004	0.0116	39.6331	-2.4519	-0.1975	0.0738	2447
QTR-TRD	0.0002	0.0002	0.0097	10.9603	0.1914	-0.0817	0.0916	2447
QTR-ISL	0.0004	0.0003	0.01	9.0376	-0.0844	-0.0661	0.0888	2447
KWT-TRD	0.002	0	0.0952	2404.27	48.8163	-0.1211	4.6901	2447
KWT-ISL	0.0002	0.0004	0.0101	51.5055	-3.1433	-0.1795	0.0701	2447
NIG-TRD	0.0003	-0.0001	0.0103	5.7677	0.4861	-0.0503	0.0876	2447
NIG-ISL	0.0003	0	0.0076	10.9296	0.9213	-0.0448	0.0556	2447
PKS-TRD	0.0004	0.0006	0.0107	3.8125	-0.4604	-0.0686	0.048	2447
PKS-ISL	0.0004	0.0003	0.0126	3.6207	-0.2399	-0.0753	0.0639	2447

4.2 Results of Augmented Dicky Fuller Test for Stationary

In the below table, we find the stationary test in each return. The Augmented Dickey Fuller test is a frequently applied statistical test to detect if a particular Time series is stationary or not (ADF Test). It is one of the statistical tests that is most frequently used while analyzing the stationary of a series. Table 3 presents the results of the augmented Dicky Fuller test for Islamic market. According to results, all the returns are stationary at level because the significant value of all returns of 8 countries is less than 0.05. We also show the test value at 1%, 5% and 10% which are decreasing in each case.

Table 3
Results of Augmented Dicky Fuller Test for Stationary

Stock returns	ADF Test Stats	P Value	Critical Values			Remarks
			1% level	5% level	10% level	
India	-36.70584	0.0000	-3.43283	-2.86252	-2.56734	At Level
KWT	-20.92773	0.0000	-3.432834	-2.862523	-2.567339	At Level
MAL	-50.26733	0.0001	-3.432829	-2.862521	-2.567338	At Level
NIG	-30.07001	0.0000	-3.43283	-2.862522	-2.567338	At Level
PKS	-45.04849	0.0000	-3.432829	-2.862521	-2.567338	At Level
QTR	-41.65810	0.0000	-3.432829	-3.432829	-3.432829	At Level
SAD	-8.133043	0.0000	-3.432853	-2.862532	-2.567343	At Level
UAE	-47.07462	0.0000	-3.432829	-2.862521	-2.567338	At Level

4.3 GARCH Model

In our model, the dependent variable is Islamic stock returns, independent variables are Ramzan returns, Eid ul Azha returns, Eid Milad Un Nabi returns and Ashura returns. We took 8 stock markets of 8 countries including India, Nigeria, Pakistan, UAE, Qatar, Kuwait, Saudi Arabia and Malaysia. We calculated returns of each market and then estimate the GARCH model by following equation:

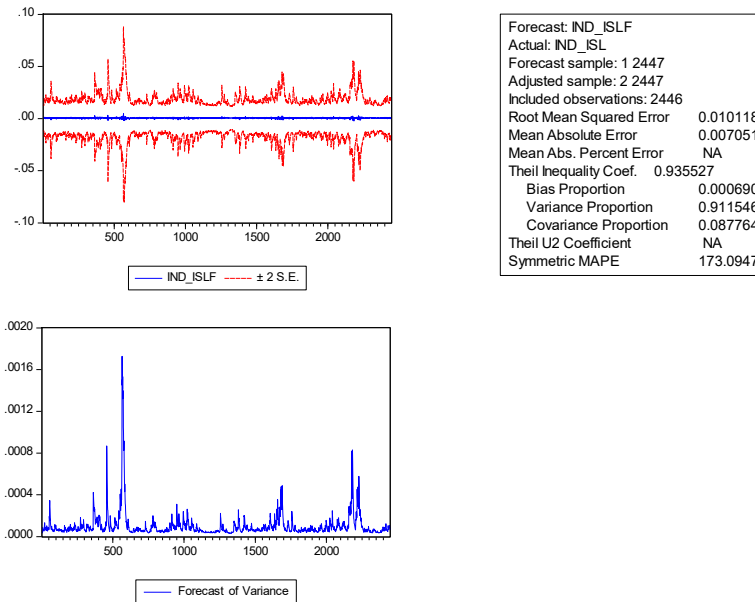$GARCH = C(2) + C(3)*RESID(-1)^2 + C(4)*GARCH(-1)$

Fig. 1. The results of the regression analysis

4.4 Main Results

In our model, the dependent variable is Islamic stock returns, independent variables are Ramzan returns, Eid ul Azha returns, Eid Milad Un Nabi returns and Ashura returns. We took 8 stock markets of 8 countries including India, Nigeria, Pakistan, UAE, Qatar, Kuwait, Saudi Arabia and Malaysia. The coefficients show the directions of relationship either positive or negative. The significance of Islamic events on conventional and Islamic returns at *** which is at 1%, ** at 5% and * at 10% on two tail hypotheses. Table 4 presents the summary of the results of the Islamic effect on Islamic returns.

Table 4

The summary of the results of the Islamic effect on Islamic return

Country	Variable	Coefficient	Std. Err.	z-Statistic
Kuwait	ASHURA Effect	-0.222515	0.387433	-0.574332
	EIDMILAD Effect	0.031122	0.11382	0.273435
	EIDAZHA Effect	-0.17618	0.298421	-0.590372
	RAMZAN Effect	0.00302	0.078187	0.038624
MALAYSIA	ASHURA Effect	1.49312	0.000262	9.332***
	EIDMILAD Effect	1.164911	0.041364	8.16257***
	EIDAZHA Effect	1.245908	0.055363	2.50444**
	RAMZAN Effect	1.061104	0.045303	3.42239***
Saudi Arab	ASHURA Effect	0.037091	0.271026	0.136855
	EIDMILAD Effect	-0.003454	0.027025	-0.127822
	EIDAZHA Effect	0.011638	0.008288	1.404151
	RAMZAN Effect	-0.03032	0.021537	-1.407821
Pakistan	ASHURA Effect	1.095334	0.060903	7.98481***
	EIDMILAD Effect	1.165567	0.027312	2.67565**
	EIDAZHA Effect	1.155562	0.024917	6.3756***
	RAMZAN Effect	1.217528	0.022867	3.24424***
India	ASHURA Effect	0.753073	0.015161	4.6713***
	EIDMILAD Effect	0.638838	0.045381	4.0771***
	EIDAZHA Effect	0.735863	0.024573	2.9458**
	RAMZAN Effect	0.685347	0.041148	6.6556***
Qatar	ASHURA Effect	1.097606	0.071069	5.44421***
	EIDMILAD Effect	0.784161	0.04946	1.85438*
	EIDAZHA Effect	0.929542	0.039082	3.78459***
	RAMZAN Effect	0.759766	0.028551	2.6108**
UAE	ASHURA Effect	0.040688	0.090576	0.449211
	EIDMILAD Effect	-0.027107	0.035453	-0.764579
	EIDAZHA Effect	-0.122731	0.257714	-0.476231
	RAMZAN Effect	-0.038074	0.057396	-0.663351
Nigeria	ASHURA Effect	0.71306	0.037831	8.84834***
	EIDMILAD Effect	1.223442	0.050005	2.46627**
	EIDAZHA Effect	0.891874	0.0305	2.24194**
	RAMZAN Effect	1.046645	0.049379	2.19598**

In addition, Table 5 presents the summary of the results of the effect of Islamic events on Islamic return.

Table 5
The results of the effect of Islamic events on Islamic return

Country	Variable	Coefficient	Std. Err.	z-Statistic
Kuwait	ASHURA Effect	0.688655	0.101694	6.771835***
	EIDMILAD Effect	0.85682	0.079071	10.83604***
	EIDAZHA Effect	1.198716	0.057748	20.75785***
	RAMZAN Effect	0.943455	0.038259	24.6599***
MALAYSIA	ASHURA Effect	0.600348	0.28184	21.30098***
	EIDMILAD Effect	0.767066	0.035312	21.72249***
	EIDAZHA Effect	0.650242	0.02189	9.70434***
	RAMZAN Effect	0.752401	0.026988	7.87894
Saudi Arab	ASHURA Effect	0.589836	0.030085	9.6057***
	EIDMILAD Effect	0.696109	0.109783	6.340753***
	EIDAZHA Effect	0.717012	0.031153	3.01583***
	RAMZAN Effect	0.750079	0.027622	7.15466***
Pakistan	ASHURA Effect	0.831901	0.037739	22.04336***
	EIDMILAD Effect	0.829019	0.17908	6.29386***
	EIDAZHA Effect	0.830889	0.015529	3.51133***
	RAMZAN Effect	0.799139	0.011866	6.34898***
India	ASHURA Effect	0.753073	0.015161	4.67132***
	EIDMILAD Effect	0.638838	0.045381	4.07707***
	EIDAZHA Effect	0.735863	0.024573	2.94581***
	RAMZAN Effect	0.685743	0.041148	6.65560***
Qatar	ASHURA Effect	0.718087	0.063737	11.26703***
	EIDMILAD Effect	1.022761	0.036152	8.29043***
	EIDAZHA Effect	0.88593	0.045395	9.51609***
	RAMZAN Effect	0.96312	0.033724	8.55863***
UAE	ASHURA Effect	1.21196	0.083779	4.46623***
	EIDMILAD Effect	1.12675	0.098279	11.4648***
	EIDAZHA Effect	0.096458	0.01962	4.91627***
	RAMZAN Effect	0.744903	0.048193	5.45665***
Nigeria	ASHURA Effect	0.71306	0.037831	8.84834***
	EIDMILAD Effect	1.223442	0.050005	4.46627***
	EIDAZHA Effect	0.891874	0.0305	9.24194***
	RAMZAN Effect	1.046645	0.049379	2.19598***

5. Discussion and Conclusion

The purpose of this study was to determine who responds more aggressively towards Islamic events either Islamic Stock Market or Conventional Stock Market stock. Many studies have been done on the non-economic factors including Islamic holy months of Ashura, Ramadan, Eid-Meelad-Un-Nabi and Eid-ul-Azha and Muharram to Zil-Haj that affect stock market performance.

This study uses Eviews.v.10 for applying data analysis. This applies stationarity in data by unit root tests which existed at level in all cases. Then this puts the data into SPSS.v.25 for factor analysis for each factor. The results show that all constructs have a score of more than 0.80 which is acceptable. Then this study runs the descriptive statistics for normality test which shows that data is normal. We run correlation matrix for two variable degrees of relationships.

This study tries to explore and illustrate how Islamic holidays and calendar months affect both the returns on Islamic stocks and the returns on conventional stocks. This study uses two models for GARCH analysis, one for taking Islamic events as an independent variable and Islamic stock returns as a dependent variable, and the other for taking Islamic events as an independent variable and Conventional stock returns as a dependent variable. Both the return on Islamic equities and the return on traditional stocks are used as dependent variables in this study. The conventional stock return results of for India, Malaysia, Nigeria, Qatar and Pakistan has significant and positive impact in all four events, Saudi Arabia has insignificant and positive impact, UAE and Kuwait has insignificant and positive impact on Ashura and Eid melad un-Nabi while insignificant and negative on Eid ul Azha and Ramzan.

The Islamic stock return results for India, Malaysia, Nigeria, Qatar and Pakistan have significant and positive impact in all four events, while Saudi Arabia, Kuwait and Qatar have insignificant and positive impact in all the four Islamic events. Three countries' results are insignificant due to many reasons like mixed populations of Muslim and Non-Muslims, cross cultural beliefs, no focus on Islamic events, public policy of the country and Islamic restricted principles for debt to use for investment, exploitation and speculation of prices. This study can say that the above 5 markets have almost Muslim investors who believe in these events. That's why the results are significant with stock returns in each case of events. On the other hand, the three market events have a mixed population and the above-mentioned reasons that's why they don't bother with these events.

These results add to the body of financial knowledge and show that the Islamic calendar causes an anomaly in both traditional stock returns and Islamic stock returns. This data demonstrates that throughout the Islamic calendar month, there are no discernible irregularities on the stock exchanges of Saudi Arabia, Qatar, Kuwait, India, the United Arab Emirates, Nigeria, and Pakistan. Unusual aspects of how these nations use the Islamic calendar The stock market demonstrates that investors can exceed the market in the presence of these calendar impacts, which goes against the market efficiency concept that no one can profit more than the market.

Anomalies improve forecasting abilities and increase investors' faith in their ability to forecast stock returns. By doing this, they outperform the market. Muslims who want to make quick profits on their investments can try to acquire stocks around the middle of Ramadan and sell them in the latter part of the month, ideally right after Eid ul-Fitr.

Ashura has positive relationships and significance with Islamic and conventional returns, this study is consistent with (Gill, 2010; Islam & Khaled, 2005). Eid un Nabi effect has significant relationship on conventional returns in all countries and insignificant with Islamic returns with Kuwait, Saudi Arabia and UAE, this result is consistent with (Sonjaya & Wahyudi, 2016; Mehdian et. Al., 2011; Satt, 2017). Eid ul Azha effect has positive and significant relationship with conventional returns in all countries and insignificant with Islamic returns with Kuwait, Saudi Arabia and UAE, the results are consistent with (Iqbal & Iqbal, 2018; Zulfiqar et al. 2015; Ali, Akhter & Ashraf, 2017). Ashura effect affects the conventional returns in all countries and Islamic returns except three countries. The results are consistent with (Imdad, Mehmood & Hamid, 2019; Aslam et. al., 2017; Zoubi et. al., 2017)

In the pre- and post-Ashura event window, positive, significant anomalous returns are also seen. It suggests that buying at the end of the Islamic calendar's last month (Zil-Haj) and selling at the end of the first week of Muharram will result in an investor making a profit that is above average. Transaction costs would certainly need to be considered, but if returns were shown, any such expenses would be taken into consideration. But over time, it might not be the best course of action because arbitrage policy only works in the short term and arbitrage is automatically adjusted by mean reversion and cannot provide good results over time.

A tiny group of individuals control a substantial portion of the stock market, which is likewise fragmented. As a result, they can use an arbitrage strategy to both affect and beat the market in the short term. For the first time, this study comprehensively examines the effects of positive and negative terms on stock returns of Islamic equities and equivalent non-Islamic (conventional) stocks in the context of financial news. The method of daily data collecting used in this study is distinctive and includes time-series on both positive and negative news language. Three innovative findings are presented by the empirical study in this article.

The first finding of this study was that written news, both positive and negative, can predict stock returns for Islamic and conventional equities from Saudi Arabia, Qatar, Kuwait, Nigeria, and Pakistan. Only traditional equity returns for developed countries and global market indices can be predicted by the news. Most of the stocks in these indexes are predicted by both in-sample and out-of-sample testing to have positive returns, with out-of-sample tests showing considerably better evidence of predictability. Second, where there is predictability, good news spreads more quickly than bad. This analysis finds that although positive phrases are far more prevalent, news has an unbalanced impact on returns.

Third, when investor earnings are calculated for a mean-variance investor from both good and negative written news, profits for Islamic enterprises are frequently higher than for conventional stocks. Across the six Islamic and eight conventional indexes for which evidence of predictability has been established, investors can make an average annual profit of 11.61% from Islamic equities and just 8.56% from conventional stocks. Islamic stocks produce an average yearly profit of 16.86% compared to conventional stocks, but only 12.12% for investors that pay attention to good news. Additionally, both positive and negative news-based results suggest that profits from Islamic stocks are higher than those from equivalent conventional stocks in at least three stock indices. As a result, buying Islamic stocks will be profitable for a mean-variance investor. This study provides examples to illustrate how profits can withstand a variety of time-series risk factors, including market risk, size-based risk, and momentum-induced risk. Our conclusion is followed by the main financial application of our results, which addresses the issue of where an investor should invest. According to our analysis, investors who maintain a portfolio of Islamic shares are likely to maximize gains if given the choice between a portfolio of conventional and Islamic stocks. It is typical for an investor with an Islamic portfolio to make 3–4% more each year than an investor with a non–Islamic portfolio.

This study has shown that the stock market behaves in an atypical way when it comes to returns. These anomalies' presence in the capital market has a negative effect on the market's effectiveness. It is a terrifying realization for those who make decisions. To combat the market's anomalistic inclinations and protect investors from anomalous outcomes, they should concentrate on putting these rules into practice. To lessen the effect of these irregularities on stock returns, Pakistan's State Bank of Pakistan (SBP) and Security Exchange of Pakistan (SECP) may be of great assistance.

The conclusions of this article are crucial for investors because they give them a clear picture of how events affect the prices of their shares in traditional or Islamic stock markets. This study has an impact on how speculators, portfolio managers, and new investors respond to Islamic occurrences in the stock markets.

6. Practical Implications and Theoretical Contribution

This research has few practical implications, like professionals must recognize venture opportunities and most investors will have efficient management in portfolio during four events. Investors will seek fast profits by buying shares in these events in Muslim and Non-Muslim Economies and selling off shares on different dates. It also implies that investors should make abnormal profits by buying at the end of Islamic calendar and sell it by mid or first week of Muharram before or after the Ashura event. Moreover, it cannot be a good strategy for arbitrators in the short run. On the other hand, they are adjusted through mean reversal automatically and they do not get a desirable outcome in the long run. Theoretically, portfolio investors deal with returns with high returns on a performance basis, as compared to risk at low level to conventional returns during Islamic events which induce the investor to enhance investments according to Islamic philosophy. Many academics argue that speculative trading should not be allowed in the Islamic market. However, the presence of speculators might increase market liquidity. Future research into the variations in equity market liquidity brought on by diverse investor trading styles will be more engaging.

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