IOSR Journal of Economics and Finance (IOSR-JEF)
e-ISSN: 2321-5933, p-ISSN: 2321-5925.Volume 6, Issue 1. Ver. II (Jan.-Feb. 2015), PP 50-61
www.iosrjournals.org

Stock Market's Reaction to Unanticipated Events – A Study of Pakistan

Ms. Sarah A. Ahmad
(School of Finance, Zhongnan University of Economics and Law, PRC)

Abstract: *Financial information is the blood stream of investment decision making. This research aims to examine changes in the performance of stock market around two major events. The events have been carefully selected to study the impact of both fortunate and unfortunate information on the stock market activity. The first event is the restoration of Mr. Iftikhar Muhammad Choudry as the Chief Justice of Pakistan on July 20th, 2007 and the second event selected is the assassination of former Prime Minister, Ms. Benazir Bhutto on December 27th, 2007 so the study will examine the period from June 2007 to February 2008. Both events occurred at a short span of each other and can provide valuable insight in the proceedings of stock market when investor activity soars. The information accompanying an unanticipated event may be available in varying degrees initially to the investors and the stock market may run the risk of a chaotic volatility. This study will find how Karachi Stock Exchange experienced reacted to these shocks.*

Keywords: *Banking Sector, External Shocks, Karachi Stock Exchange, Stock Market Reaction, Unanticipated Events*

I. Introduction

Whether it is an individual investor or an investment company, successful investment for every kind of market participant depends largely on the acquisition, understanding, analysis and interpretation of financial information. Financial information is the blood stream of investment decision making. This information can either be obtained easily by doing an in depth analysis of the company's financial statements or through a detailed analysis of market factors. Official announcements are a more reliable source; however rumors also play a significant role in the various decisions by market actors.

External factors like the changes in political, legal, administrative or social environment of the country are also a source of information that may have impact on the investments decisions of market participants, whether directly or indirectly. These factors may be investigated on a routine basis but a sudden shock in the form of an unanticipated event garners more attention because of its plausible effects on the market trends. Unanticipated events are sudden, random shocks that have not been calculated for by the investors. These may include acquisition announcement, bankruptcy declaration, corporate illegality, natural disasters like the October 8 earthquake, political changes like imposition of a martial law, a terrorist activity related issue etc.

It is the goal of investors to quantify every anticipated or unanticipated event and its potential effect on the market so as to be able to take informed decisions backed by a calculated risk. However, it is rather difficult to take decisions based on the information gathered regarding a sudden, unforeseen event. This is so because if a market is assumed to be inefficient then the information gathered about the event is not simultaneously priced in leaving some time for the informed market participants to take advantage from this situation. If the market is supposed to be efficient then the event is priced in simultaneously because the market participants re-evaluate their expectations about the firms.

Event study analysis is an important tool commonly used by researchers world over to assess and analyze the efficiency of a stock market. This tool has been effectively used to gauge the effects of an event on the stock market, and has proved to be especially efficacious in the area of corporate finance. An event, whether announced or unanticipated can have a strong impact on the stock market because stocks are a highly liquid form of investment and investors can take rapid decision regarding their sale or purchase based on the information they receive. If the event indicates that the keeping stocks may not be in favor of the investor, this information will be priced in and the stock market may experience a trend of bearish activity but in case of the event resulting in favorable information for the investors, the market may be in for a bullish trend.

The events have been carefully selected to study the impact of both fortunate and unfortunate information on the stock market activity. The first event is the restoration of Mr. Iftikhar Muhammad Choudry as the Chief Justice of Pakistan on July 20th, 2007 and the second event selected is the assassination of former Prime Minister, Ms. Benazir Bhutto on December 27th, 2007 so the study examines the period from June 2007 to January 2008. This study finds how KSE reacted to these shocks.

II. Review of Literature

Information is of significant value to investors, who make their investment decisions based on this information. Unanticipated events are sudden, random shocks that have not been calculated for by the investors. These may include acquisition announcement, bankruptcy declaration, corporate illegality, natural disasters like the October 8 earthquake in Pakistan, political changes like imposition of a martial law, a terrorist activity related issue etc.

It was only in 1960s that economists took up serious research on stock prices. This was triggered considerably by the establishment of the Center for Research in Securities Prices (CRSP) in the University of Chicago by James H. Lorie in 1960 (Franck and Christophe, 2012). The center was a revolutionary data source on all stocks being traded on the New York Stock Exchange since 1926. Before, it was a topic of interest for statisticians only. Their focus was primarily on the patterns exhibited by stock prices, whether they are serially correlated or follow a random walk. Technical analysis was assumed to be fairly indicative of stock price directions; however the identification of a pattern is often too late to be acted upon.

It was, therefore, concluded from the various studies conducted about the topic that daily stock price changes are independent and there are no fool-proof predictive methods to forecast future changes (Burton, 2003). Stock market's behavior is not like that of a 'mechanically imperfect roulette wheel' or the deficiencies would be identified and eliminated by the market players (Harry and Roberts, 1959). Roberts's paper was successful in laying the foundation of interest for scholarly pursuit in Stock market dynamics.

With the foundation laid, it was only a matter of time for the research to trigger in this area of interest. We can safely attribute the pioneering work in this field to Eugene Fama, who is famed for coining the phrase "efficient market", which he defined as,

"a market where there are large numbers of rational profit maximizers actively competing, with each trying to predict future market values of individual securities, and where important current information is almost freely available to all participants."

Eugene F. Fama, "Random Walks in Stock Market Prices" Financial Analysts Journal, Septembe, 1965

According to him, the current stock price reflects the accumulated information of the past prices or that the information about the past prices is efficiently processed by the market. This leads to the obvious conclusion that if the market is efficient, then the effect of every new piece of information will be priced in and reflected in the new stock price. If it is not the case, then there will be open opportunity for reaping abnormal profits. According to the efficient market hypothesis (Fama, 1970), the share prices would reflect this new information regarding the occurred event since the stock market reacts as investors reassess their expectations (Panayides and Gong, 2002) about the firms.

With the formulation of the Efficient Market Hypothesis, it was ready to be tested. A number of techniques were used to test the efficiency of the market. One of the major techniques used involved doing an intensive and detailed study on the serial correlation of the prices of securities (Cootner, 1964). Another similar approach involved testing different trading strategies used and recommended by various technical analysts to estimate their investment value. Both these studies were rigorously tried and tested but the results were not satisfactory. A different approach analyzing the nature of distribution of the returns was also used to test the efficiency of the market but gave mixed results.

A breakthrough in this search for testing market efficiency came with the introduction of event study methodology which relied on the researcher taking a sample of events and concluding results based on the sample. As an important tool frequently used in tests of market efficiency, the event study methodology is basically a statistical approach to measure the effects of an event. It is also used to examine how long it takes the market to return to its normal or usual position (Javid, 1999). These studies analyze the extent to which the stock market goes beyond or retracts from the original/normal around the time of the event's occurrence. There was continued evidence against statistical studies contributing to value addition and increasing evidence for market efficiency in studies conducted during the early 1970s.

Researchers have taken up the event study method with interest in analyzing the impact of an event on the stock prices and stock returns. The events being examined range from announcement of policy changes, changes in the organization's governance, to social and political occurrences involving natural disasters, terrorist attacks, military coups, national elections or some law and order situation. The prime motive for studying these events and their effect on the stocks is to test the efficiency of the market and whether the events being analyzed are priced in simultaneously or not. The methodological issues concerning the conduction and design of event studies were addressed in the early 1980s focusing on daily and monthly data (Brown and Warner, 1980).

Assuming that the researcher analyses an unfavorable event, the outcome will be dependent on whether the event was expected or not by the market and whether the market is efficient or not. We would expect the stock prices to experience a decline whether the event was anticipated or unanticipated but how soon this will be priced in would be a matter of how efficient the market is. In case of an efficient market, the unanticipated event will be priced in instantaneously but in case of an inefficient market, the drift from normal will be visible

sometime after the event. And in case of an expected event, the stock prices will show a declining trend some time before the event in an inefficient market and in an efficient market, stock prices are more likely to stabilize on the date of the event. Events that take place while the market is closed have been found to exhibit price movements when the market opens (Brookes, Patel and Su, 2003).

Empirical studies show an increasing evidence of stock market reacting instantaneously to disastrous events (Carter and Bettey, 2004). The sudden fluctuation in the stock prices following information of an event show the investors' review of future expected returns. These fluctuations, when considered as aggregate movements, reflect a whirlwind of activity. The impact on stock prices of firms is significant as a result of rapid investor activity because stocks and bonds are highly liquid and investors can easily and quickly change their decisions regarding their sale or purchase. The effect of an event can be better analyzed if the events being studied are unanticipated and the market is efficient so as to avoid any puzzling or unrelated effects within the event window (McWilliams and Siegel, 1997). Since the efficient market hypothesis is based on the assumption that the market takes possession of any information, whether it be macroeconomic or microeconomic information, to forecast the future stock prices, it is only rational to suppose that this information needs to be 'new and unpredictable' to examine the full effect of the hypothesis (Brooks, Patel, Su, 2003). In case of the event being disastrous, investors prefer to take money out of the stock market and invest in low risk, secure financial alternatives; this has the potential to turn into chaos which can result in an extended bearish trend in the stock market. However in case of the event being favorable, the stock market is likely to experience a wave of bullish activity.

An event study can provide valuable insight in the proceedings of stock market when investor activity suddenly increases. Following information of an unanticipated event, a sudden increase in investor activity has been observed in stock markets worldwide. This increased investor activity causes the volatility of security prices to increase and the volatility in the stock market resulting from an event, outlives the event itself (Javid, 2009). The information accompanying an unanticipated event may be available in varying degrees initially to the investors and the stock market may run the risk of a chaotic volatility. An event occurring when the market is still open gives the market participants the opportunity to immediately take position according to the information but for events that take place over night, there is a phase of no activity before the information is priced in. The effect of an event on the stock returns of an organization is determined by two elements-the nature of event structure and information structure (Damodaran, 1985).

The first event study analyzed the stock market's response to the announcement of stock splits (Fama, Fisher, Jensen and Roll, 1969). This provided useful insights in the complex workings of the stock market. The first event study paved way for other researchers conducting other similar useful studies. Another major event study analyzed the impact of sudden CEO deaths on the stock prices (Johnson, Magee, Nagarajan, and Newman, 1985). With an increase in research in this field, controversial evidence was highlighted. Event studies conducted late 1970s and early 1980s emphasized the seasonality (Rozeff and Kinney, 1976) in stock market and the major phenomena of 'Monday Effect' (Gibbons and Hess, 1981). The study indicated that some of the participants were aware of the effect and took advantage of it but with time their gains declined.

Event studies have been most successful in the field of corporate finance. Event studies have given significant results in areas like mergers and acquisitions creating shareholder value (Andrade, Mitchell and Stafford, 2001), internalization (Morck and Yeung, 1992), investments and value of firm (Im, Dow and Grover, 2001) and issuance of debt/equity (Jung, Kim, and Stulz 1996). Event studies conducted about whether or not mergers and acquisitions create shareholder value have contributed to understanding the reasons behind price movements in the market. Short-window studies have proven to be most reliable in this case, especially the three day window considering the day before and after the announcement including the main. Earlier studies have shown merger announcements to be positive for the target firm as the abnormal returns for these firms are favorable but no significant results have been assessed for the acquiring firms (Andrade, Mitchell and Stafford, 2001). There is also data leading to the conclusion that short-run reaction to mergers may overturn in the long run (Rosen, 2006).

Unforeseen events include natural disasters, terrorist activities and other sudden political and social activities. In the recent age, terrorism and natural disasters have been on the top of the list to wreak havoc in economies, particularly in international trade and finance. Financial markets are victimized by these events, either directly or indirectly and there is a trickledown effect of this on the global economy (Liargovas and Repousis, 2010). Empirical research on unanticipated events and the related market response shows abnormal returns based on the intensity and nature of the event. Following the September 11 attacks on the World Trade Centre, studies examined negative abnormal returns by the airline industry, with the market generally plunging on the first trading day after the attacks with the Dow Jones Industrial Average falling almost 684.81 points and the airline stocks particularly tumbling (Carter and Simkins, 2004). Research has shown that the negative effect of natural disasters is often offset to a certain limit by the opportunity of gain through premium from the insurance companies by the market participants (Angbazo and Narayanan, 1996).

In 1999, the study conducted in Pakistan analyzed the stock market's reaction to nuclear blasts by India and Pakistan (Javid and Ahmed, 1999). The results showed that Indian detonation caused a decline in the daily rate of return at Karachi Stock Exchange but an increase in the trading volume and volatility. Whereas the detonation by Pakistan had no significant effect on the average ROR but it also caused an increase volatility and trading volume. There is evidence of resilience of the banking and financial sector of Pakistan and it has been found to rebound and stabilize quicker (Javid, 2009). This study is being conducted with the purpose to add to the existing knowledge bank.

III. Overview of the Market

For this study, it is significant to present an overview of the Pakistani Stock Market for better understanding the workings of the complexities that arise in this market. The sample period under study is from June 2007 to February 2008. Pakistan has three stock exchanges, the earliest and most important of them is the Karachi Stock Exchange, established on the 18th of September, 1948. Later, the Lahore Stock Exchange was established in 1970 and the Islamabad Stock Exchange came into being in the year 1992. Even after the formation of the other two exchanges, the KSE remains the hub of market activity and hosts about 7 per cent of current trading.

KSE exhibited great development in listings and capitalization during 1960 and was hailed as one of the important emerging markets. However, in 1970, the economy's nationalization policy being implemented by the Pakistani government and increasing political disturbance in the country led to KSE slowly losing its standing. Although this continued for most of the decade, but the turn of the decade brought a welcomed relief in the perusal of policies focusing on privatization. This boded well for KSE but it actually regained its position after it was opened to international investors in the beginning of 1990. This policy injected new fervor in the market triggering an unparalleled bullish trend. This not only improved the market activity but also its size and depth. This spell of progress was, however, short lived and with time, KSE began losing its momentum again and found it unable to maintain that level of progress. This was the result of the ongoing economic and political precariousness in the country.

With the appointment of the new elected government in 1997, KSE showed a marked improvement. With the steep decline in the Eastern capital market and the sharp fall in the value of the currencies of eastern nations, the international market participants began off-loading their holdings the region. This situation in the international markets gave tremors to our stock market as well. With the nuclear detonations in May 1998 by India, KSE came under pressure with a downward trend which continued because of concerns regarding the lack of a secure environment twisted by the political statements of the Indian government. The stock market had to go through another wave of bearish activity when Pakistan tested its nuclear weapons. This was particularly because of extraneous factors involving sanctions imposed by a number of western nations on Pakistan as a result of these tests. The situation was heightened with the Pakistan's credit downgrading my Moody's and panic among participants to take their funds out of the market. Considering this other such incidents, the SECP outlined a set of guidelines in the start of the new millennium to be implemented in order to better the performance of all three stock exchanges and to align their operations with best worldwide practices. In the following years a number of actions were taken to improve the regulatory structure of the capital markets in the country. SECP also issued the Code of Corporate Governance in this regard. Exclusive importance was given to work done in the areas of risk mitigation and modernization of trading practices.

With regard to the progress of equity markets, a comprehensive convention began in KSE in 2003 and gained momentum in 2005 with the KSE index showing unparalleled performance and reaching a record level of 10,303 points. This slowed down decreased because of a number of factors including fund withdrawals, excessive buying in ready and selling in futures by agents and the lock-in effects of circuit breakers. From mid-March of 2005, KSE showed a bearish trend with the index declining to 6939 within a month. This huge movement from its earlier high point augured ill for the market. However the market was not closed as in earlier cases.

From June 2005, the market began a slow and steady climb back, which boded well for the shares but a sudden unanticipated calamity hit the nation striking grief and shock in the hearts of the citizens. It did not pass without leaving an impact on the stock market. The KSE index rose a considerable 300 points with a number of lead shares reaching saturation point and a significant increase in the market capital. The index continued its climb upwards because of the increased activity as the reconstruction and rehabilitation of the earthquake hit areas began. There was a fair amount of speculation which kept the bullish trend going. The sectors with focus on rebuilding were an active force in keeping the trend upward. By June 2006, KSE had gained a historic 65% increase from last year with the banking sector contributing the most in this phenomenal growth.

In the start of 2007, the stock market has a domination of UK and USA investors on the foreign portfolio investment in the equity market due to Pakistan's status as an ally in the war against terror but this situation puts Pakistan in a precarious position in case of investors taking away funds. July 3rd saw a gun battle

between the supporters of Lal Masjid and Pakistani security forces pulling the index down. However with the reinstallation of ChoudryIftikhar Hussain as the Chief Justice of Pakistan on July 20, the index began a feeble climb upwards. On November 3, 2007 was a day packed with action. Justice Abdul Hameed Dogar took oath as the the new Chief Justice of Pakistan, Benazir Bhutto, the former prime Minister of Pakistan returned, telephone lines and television channels were blocked and a state of emergency was declared by the then President of Pakistan, Pervaiz Musharraf. KSE 100 index slid 5% to close at 13,279.60 as market participants reacted to the imposition of emergency by the President. The fall was the biggest one-day decline on the KSE 100-share index for 16 months. December 27, 2007, the opposition leader, Benazir Bhutto was assassinated during an election rally in Rawalpindi. The KSE 100 index had touched the highest of 14,814 points a day before this event but it was closed for a three day period of national mourning but the New York's Dow Jones fell 1.4% and after the three day period KSE fell about 4.7% but the prices of securer investments like gold and government bonds rose.

Elections were conducted in Pakistan on February 18, 2008 with Yusuf Raza Gilani appointed the PM on March 22. The stock market recovered and did well for the year reaching even 15000 points on April 20 but then fell again when the State Bank unexpectedly increased interest rates. With the resignation of President Prevaiz Musharraf, KSE 100 index rose almost 4& but this rally in the market was short-lived and KSE set a floor for stock prices to avoid steep plunges. With the global financial crisis of 2008, KSE 100 index fell to 9187 points. In October 2009, a series of attacks left 122 people dead and the KSE experienced the worst hit of the year on October 19 when the KSE 100 index fell a whopping 426 points.In the five years, the number of listed companies in KSE declined to 574 but the KSE 100 Index saw a steady increase from 5865 points in December 2008 to 14676 points in August 2012.

IV. Methodology

In this research study, data of stock market variables is used. The information is mined from yearly reports of different financial companies listed in Karachi Stock Exchange, for the specified duration of time under study from June 2007 to February 2008. Different statistical tools are applied including Paired-Sample T-Test, Correlation, and Descriptive Statistics.

The basic aim of this research study is to explore the dynamics of the KSE. It focuses on analyzing the efficiency of the market taking into consideration the market's response to unforeseen events. The study is essentially quantitative in nature, dealing with mathematical models and theories and their interesting relationship with the hypothesis.

4.1 Sample

A sample of 16 financial firms including commercial banks and firms providing financial services listed in the KSE has been selected based on the availability of data and presence of companies during the period under study. Non probability sampling technique has been used in the selection of these companies. Initially the research sample comprised of 25 companies but later based on the availability of data, the sample had to be reduced to exclude companies that were of no use as regards information and active presence during the sample period. The sample is composed of daily data for both the events. In this study 30 days data before the event and 30 days data after the event has been collected for analysis. So the sample includes 60 days data for the first event for 16 companies and 60 days data for the second event for 16 companies.

4.2 Research Hypothesis

H1: There is significant impact of good news on share prices.
H2: There is significant impact of bad news on share prices.
H3: There is significant impact of good news on trading volume.
H4: There is significant impact of bad news on trading volume.

V. Findings

Taking into consideration all the research questions, the analysis was done using GRETL and the following results were generated for descriptive statistics, correlation and paired sample t-test.

5.1 Descriptive Statistics

Table 1. Descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
B.S.INDXB	30	62.9125	93.1125	8.528635E1	5.9341875
G.S.INDXB	30	81.4000	91.2719	8.871531E1	1.9995769
G.T.INDEXB	30	1.71E6	6.76E6	3.7377E6	1.41682E6
B.T.INDEXB	30	1.38E6	5.56E6	2.8878E6	1.11119E6

B.S.INDXA	30	83.2656	92.6969	8.643594E1	1.7571090
G.S.INDXA	30	73.9281	85.8625	8.069906E1	4.1542368
G.T.INDEXA	30	1.43E6	4.61E6	2.5244E6	7.30690E5
B.T.INDEXA	30	6.09E5	5.15E6	2.7299E6	1.18948E6
Valid N (listwise)	30				

The variables used are average share price before unfortunate event, average share price before fortunate event, average trading volume before fortunate event, average trading volume before unfortunate event, average share price after unfortunate event, average share price after fortunate event, average trading volume after fortunate event and average trading volume after unfortunate event.

Share price index before the unfortunate event has minimum value of 62.9129, maximum value of 93.1125, mean value of 8.528635E1 and standard deviation of 5.9341875. Share price index before the fortunate event has minimum value of 81.4000, maximum value of 91.2719, mean value of 8.871531E1 and standard deviation of 1.9995769. Trading volume index before the fortunate event has minimum value of 1.71E6, maximum value of 6.76E6, a mean value of 3.7377E6 and standard deviation of 1.41682E6. Trading volume index before unfortunate event has minimum value of 1.38E6, maximum value of 5.56E6, a mean value of 2.8878E6 and standard deviation of 1.11119E6. Share price index after the unfortunate event has minimum value of 83.2656, maximum value of 92.6969, mean value of 8.643594E1 and standard deviation of 1.7571090. Share price index after the fortunate event has minimum value of 73.9281, maximum value of 85.8625, mean value of 8.069906E1 and standard deviation of 4.1542368. Trading volume index after the fortunate event has minimum value of 1.43E6, maximum value of 4.61E6, a mean value of 2.5244E6 and standard deviation of 7.30690E5. Trading volume index after unfortunate event has minimum value of 6.09E5, maximum value of 5.15E6, a mean value of 2.7299E6 and standard deviation of 1.18948E6.

The difference between the minimum values before the unfortunate event and after unfortunate event of the share price index is considerable but the difference between the maximum values and the mean values is insignificant. However, the difference between the minimum, maximum and mean values of share price index, before and after the fortunate event has a considerable gap in all of them. The minimum value of the trading volume index before the unfortunate event has a wide gap but the maximum values and mean values of both variables are almost equal. Whereas there is a considerable difference between the minimum, maximum and mean values of trading volume index before and after the fortunate event.

5.2 Correlation

Correlation is used to measure the degree of association between two or more than two variables i.e. how strongly or weakly the variables are linked together.

Table 2 Correlation

		B.S.INDXB	G.S.INDXB	G.T.INDEXB	B.T.INDEXB	B.S.INDXA	G.S.INDXA	G.T.INDEXA	B.T.INDEXA
B.S.INDXB	Pearson Correlation	1	-.089	-.232	.277	-.170	-.530*	-.153	-.503*
	Sig. (2-tailed)		.638	.218	.139	.370	.003	.421	.005
	N	30	30	30	30	30	30	30	30
G.S.INDXB	Pearson Correlation	-.089	1	.080	-.464*	-.138	-.218	-.295	.253
	Sig. (2-tailed)	.638		.673	.010	.468	.248	.113	.177
	N	30	30	30	30	30	30	30	30
G.T.INDEXB	Pearson Correlation	-.232	.080	1	-.433*	.148	.480*	.193	-.060
	Sig. (2-tailed)	.218	.673		.017	.436	.007	.308	.753
	N	30	30	30	30	30	30	30	30
B.T.INDEXB	Pearson Correlation	.277	-.464*	-.433*	1	-.218	-.496*	.040	-.218
	Sig. (2-tailed)	.139	.010	.017		.247	.005	.835	.248
	N	30	30	30	30	30	30	30	30
B.S.INDXA	Pearson Correlation	-.170	-.138	.148	-.218	1	.332	.034	-.046
	Sig. (2-tailed)	.370	.468	.436	.247		.074	.857	.808
	N	30	30	30	30	30	30	30	30
G.S.INDXA	Pearson Correlation	-.530*	-.218	.480*	-.496*	.332	1	.150	.322
	Sig. (2-tailed)	.003	.248	.007	.005	.074		.428	.082
	N	30	30	30	30	30	30	30	30
G.T.INDEXA	Pearson Correlation	-.153	-.295	.193	.040	.034	.150	1	.019
	Sig. (2-tailed)	.421	.113	.308	.835	.857	.428		.919
	N	30	30	30	30	30	30	30	30
B.T.INDEXA	Pearson Correlation	-.503*	.253	-.060	-.218	-.046	.322	.019	1
	Sig. (2-tailed)	.005	.177	.753	.248	.808	.082	.919	
	N	30	30	30	30	30	30	30	30

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Table 2 shows correlations between all variables i.e. how strongly they are related. Correlation is measured in EVIEWS. This table tries to show relationship of all variables with each other. In this table the abbreviations used are B.S.INDXB, G.S.INDXB, G.T.INDEXB, B.T.INDEXB, B.S.INDXA, G.S.INDXA, G.T.INDEXA and B.T.INDEXAwhich stand for average share price before unfortunate event, average share price before fortunate event, average trading volume before fortunate event, average trading volume before unfortunate event, average share price after unfortunate event, average share price after fortunate event, average trading volume after fortunate event and average trading volume after unfortunate event respectively.

Share price index before and after the unfortunate event has a negative correlation coefficient of -.170. This means that if share price index before the unfortunate event increases, share price index after the unfortunate event decreases by 0.170 but the association between the two variables is weak. Share price index before and after the fortunate event has a negative correlation coefficient of -.218. This means that if share price index before the fortunate event increases, share price index after the fortunate event decreases by 0.218 but the association between the two variables is weak. Share price index before and trading volume index before the unfortunate event has a positive correlation coefficient of .277. This means that if share price index before the unfortunate event increases, trading volume index before the unfortunate event also increases by .277 but the association between the two variables is weak. Share price index and trading volume index after the unfortunate event have a negative correlation coefficient of -.046. This means that if share price index after the unfortunate event increases, trading volume index after the unfortunate event decreases by 0.046but the association between the two variables is very weak.

Share price index and trading volume index before the fortunate event have a positive correlation coefficient of .080. This means that if share price index before the fortunate event increases, trading volume index before the fortunate event also increases by .080 but the association between the two variables is very weak. Share price index and trading volume index after the fortunate event have a positive correlation coefficient of .150. This means that if share price index after the fortunate event increases, trading volume index after the fortunate event also increases by .150 but the association between the two variables is weak.

Trading volume index before and trading volume index after the fortunate event have a positive correlation coefficient of .193. This means that if trading volume index before the fortunate event increases, trading volume index after the fortunate event also increases by 0.193 but the association between the two variables is weak. Trading volume index before and trading volume index after the unfortunate event have a negative correlation coefficient of -.218. This means that if trading volume index before the unfortunate event increases, trading volume index after the unfortunate event decreases by 0.218 but the association between the two variables is weak.

5.3 Paired Samples T-Test

In this study, the data before and after the event has been analyzed to observe and calculate the difference in the share prices and trading volume before and after the events so as to analyze the effects of the events on the stock market.

Table 3 Paired Samples Statistics for Share Price Index of Fortunate Event

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	G.S.INDXB	8.871531E1	30	1.9995769	.3650711
	G.S.INDXA	8.069906E1	30	4.1542368	.7584564

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	G.S.INDXB & G.S.INDXA	30	-.218	.248

Table 3 uses two variables. The abbreviations used are G.S.INDX and, G.S.INDXA which stand for average share price before fortunate event and average share price after fortunate event respectively. There exists a statistically significant difference between the share price index before the fortunate event and the share price index after the fortunate event. Since the mean share price index before the fortunate event was greater than the share price index after the fortunate event, we can conclude that the fortunate event had a negative impact on the share price. This may be due to the investor's increased misgiving about the situation arising from this sudden change. The fortunate event that has been considered is the restoration of Chief Justice, which was in teeth of opposition from the ruling government; there were a lot of misgivings surrounding the situation

which shows that the investors took a cautious approach to what other events would lead from this fortunate event.

In the Paired Samples statistics box, the mean of share price index before the fortunate event is 8.87153E1 and that of share price index after the fortunate event is 8.069906E1. It can be observed that there is a significant difference between the two values which indicates that the sudden good news of Chief Justice's restoration positively affected investment behavior. The standard deviation for share price index before fortunate event is 1.9995769 and the standard deviation for share price index after fortunate event is 4.1542368. The number of daily observations for each is 30.

Table 4 Paired Samples Test for Share Price Index of Fortunate Event

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	G.S.INDXB - G.S.INDXA	8.0162499E0	4.9872210	.9105378	6.1539910	9.8785088	8.804	29	.000

Table 4 uses two variables. The abbreviations used are G.S.INDX and, G.S.INDXA which stand for share price index before the fortunate event and share price index after the fortunate event respectively. It can be observed from Table 4 that the t-value is 8.804 which, according to the rule of thumb, is greater than 2. This leads to the acceptance of alternative hypothesis that a fortunate event has an impact on share price index after the event. The sig. (2-Tailed) value is 0.00. This value is less than 0.05. Because of this we can conclude that there exists a statistically significant difference between the share price index before the fortunate event and the share price index after the fortunate event. Since the Table 3 reveals that the mean share price index before the fortunate event was greater than the share price index after the fortunate event, we can conclude that the fortunate event had a negative impact on the share price.

There exists a statistically significant difference between the share price index before the fortunate event and the share price index after the fortunate event. Since the mean share price index before the fortunate event was greater than the share price index after the fortunate event, we can conclude that the fortunate event had a negative impact on the share price. This may be due to the investor's increased misgiving about the situation arising from this sudden change. The fortunate event that has been considered is the restoration of Chief Justice, which was in teeth of opposition from the ruling government; there were a lot of misgivings surrounding the situation which shows that the investors took a cautious approach to what other events would lead from this fortunate event.

Table 5 Paired Samples Statistics for Trading Volume of Fortunate Event

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	G.T.INDEXB	3.7377E6	30	1.41682E6	2.58675E5
	G.T.INDEXA	2.5244E6	30	7.30690E5	1.33405E5

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	G.T.INDEXB & G.T.INDEXA	30	.193	.308

Table 5 uses two variables. The abbreviations used are G.T.INDEXB and, G.T.INDEXA which stand for trading volume index before fortunate event and trading volume index after fortunate event respectively. In the Paired Samples Statistics box, the mean of trading volume index before the fortunate event is 3.7377E6 and that of share price index after the fortunate event is 2.5244E6. It can be observed that there is a significant difference between the two values which indicates that the sudden good news had a significant effect on investor activity. The standard deviation for trading volume index before fortunate event is 1.41682E6 and the standard deviation for share price index after fortunate event is 7.30690E5. The number of daily observations for each is 30.

Table 6 Paired Samples Test for Trading Volume of Fortunate Event

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	G.T.INDEXB - G.T.INDEXA	1.21330E6	1.46380E6	2.67252E5	6.66711E5	1.75990E6	4.540	29	.000

Table 6 uses two variables. The abbreviations used are G.T.INDEXB and G.T.INDEXA which stand for trading volume index before the fortunate event and trading volume index after the fortunate event respectively.It can be observed from Table 6 that the t-value is 4.540 which, according to the rule of thumb is more than 2. This leads to the acceptance of alternative hypothesis that a fortunate event has an impact on trading volume index after the event. The sig. (2-Tailed) value is 0.00. This value is less than 0.05. Because of this we can conclude that there exists a statistically significant difference between the trading volume index before the fortunate event and the trading volume index after the fortunate event. Since the Table 5 reveals that the mean trading volume index before the fortunate event has a considerable difference from the trading volume index after the fortunate event, we can conclude that the fortunate event has a considerable impact on the trading volume.

There exists a statistically significant difference between the trading volume index before the fortunate event and the trading volume index after the fortunate event. Since the mean trading volume index before the fortunate event has a considerable difference from the trading volume index after the fortunate event, we can conclude that the fortunate event has a considerable impact on the trading volume.

Table 7 Paired Samples Statistics for Share Price of Unfortunate Event

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	B.S.INDXB	8.528635E1	30	5.9341875	1.0834295
	B.S.INDXA	8.643594E1	30	1.7571090	.3208027

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	B.S.INDXB & B.S.INDXA	30	-.170	.370

Table 7 uses two variables. The abbreviations used are B.S.INDXB and, B.S.INDXA which stand for share price index before unfortunate event and share price index after unfortunate event respectively. In the Paired Samples statistics box, the mean of share price index before the unfortunate event is 8.528635E1 and that of share price index after the unfortunate event is 8.643594E1. It can be observed that there is not a significant difference between the two values which indicates that the sudden bad news did not have a significant effect on investment behavior. The standard deviation for share price index before unfortunate event is 5.9341875 and the standard deviation for share price index after unfortunate event is 1.7571090. The number of daily observations for each is 30.

Table 8 Paired Samples Test for Share Price of Unfortunate Event

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	B.S.INDXB - B.S.INDXA	-1.1495834E0	6.4684405	1.1809703	-3.5649388	1.2657720	-.973	29	.338

Table 8 uses two variables. The abbreviations used are B.S.INDXB and B.S.INDXA which stand for share price index before the unfortunate event and share price index after the unfortunate event respectively.It can be observed from Table 8 that the t-value is -0.973 which, according to the rule of thumb, is less than 2. This leads to the rejection of alternative hypothesis that an unfortunate event has an impact on share price index after the event. The sig. (2-Tailed) value is 0.338. This value is more than 0.05. Because of this we can conclude that there exists a statistically insignificant difference between the share price index before the unfortunate event and the share price index after the unfortunate event. Since the Table 7 reveals that the mean share price index

before the unfortunate event has no considerable difference from the share price index after the unfortunate event, we can conclude that the unfortunate event does not have a considerable impact on the share price.

There exists a statistically insignificant difference between the share price index before the unfortunate event and the share price index after the unfortunate event. Since the mean share price index before the unfortunate event has no considerable difference from the share price index after the unfortunate event, we can conclude that the unfortunate event does not have a considerable impact on the share price. This may be due to the investor's increased misgiving about the volatility of situations arising from this sudden change. The unfortunate event that has been considered is the assassination of former prime Minister of Pakistan, Benazir Bhutto, which was a sudden shock to the country; there were a lot of misgivings surrounding the situation which shows that the investors took a cautious approach to what other events would result from this unfortunate event. This result is in accordance with other research results obtained by different researchers on similar lines (Javid, 2009). KSE has been found to give insignificant results for very weak efficiency and the event study considers significance for second level efficiency test. In accordance with previous researches, the result shows that KSE is inefficient in reacting to this unfortunate event.

Table 9 Paired Samples Statistics for Trading Volume of Unfortunate Event

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	B.T.INDEXB	2.8878E6	30	1.11119E6	2.02874E5
	B.T.INDEXA	2.7299E6	30	1.18948E6	2.17169E5

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	B.T.INDEXB & B.T.INDEXA	30	-.218	.248

Table 5.9 uses two variables. The abbreviations used are B.T.INDEXB and, B.T.INDEXA which stand for trading volume index before unfortunate event and trading volume index after unfortunate event respectively. In the Paired Samples Statistics box, the mean of trading volume index before the unfortunate event is 2.8878E6 and that of share price index after the unfortunate event is 2.7299E6. It can be observed that there is an insignificant difference between the two values which indicates that the sudden good news had an insignificant effect on investor activity. The standard deviation for trading volume index before unfortunate event is 1.11119E6 and the standard deviation for share price index after unfortunate event is 1.18948E6. The number of daily observations for each is 30.

Table 10 Paired Samples Test for Trading Volume of Unfortunate Event

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	B.T.INDEXB - B.T.INDEXA	1.57881E5	1.79572E6	3.27852E5	-5.12652E5	8.28414E5	.482	29	.634

Table 10 uses two variables. The abbreviations used are B.T.INDEXB and B.T.INDEXA which stand for trading volume index before the unfortunate event and trading volume index after the unfortunate event respectively.It can be observed from Table 10 that the t-value is 0.482 which, according to the rule of thumb, is less than 2. This leads to the rejection of alternative hypothesis that an unfortunate event has an impact on trading volume index after the event. The sig. (2-Tailed) value is 0.634. This value is more than 0.05. Because of this we can conclude that there exists a statistically insignificant difference between the trading volume index before the unfortunate event and the trading volume index after the unfortunate event. Since the Table 9 reveals that the mean trading volume index before the unfortunate event does not have a considerable difference from the trading volume index after the unfortunate event, we can conclude that the unfortunate event does not have a considerable impact on the trading volume.

There exists a statistically insignificant difference between the trading volume index before the unfortunate event and the trading volume index after the unfortunate event. Since the mean trading volume index before the unfortunate event does not have a considerable difference from the trading volume index after

the unfortunate event, we can conclude that the unfortunate event does not have a considerable impact on the trading volume.

VI. Conclusion

Information is considered important by the investors and it directs their investment activity. The importance of the acquisition of this information and to what length it helps informed investors in attaining advantage over the uninformed investors depends on how efficient the market is. This study focuses on investment behavior where no prior information is available to any market participant. If an event is priced in simultaneously, then it means that the market is efficient but if the event does not have a significant impact on share price index and trading volume index, then the market is considered to be unresponsive to events. In this study, impact of two unanticipated events was analyzed on Commercial banks listed in KSE. Both the events were carefully taken to have occurred within a reasonable duration of each other. The first event to be analyzed was the restoration of Chief Justice of Pakistan Iftikhar Mohammad Choudry on July 20, 2007 and the second event analyzed was the assassination of former Prime Minister of Pakistan Benazir Bhutto on December 27, 2008. The results obtained after processing and analyzing the data give an interesting view of KSE. The share price index and trading volume index before and after the fortunate event, both exhibited a change whereas the share price index and trading volume before and after the unfortunate event displayed no particular change. There is surprising evidence that a fortunate event impacted the share price and trading volume of commercial banks in KSE but the sudden shocking news of assassination did not have a significant impact on the share price and trading volume of commercial banks in KSE.

The findings show that investors are conservative to bad news but aggressive to good news with regards to the commercial banking sector of Pakistan. The unfortunate event analyzed in this study is of considerable magnitude in terms of its social and political impact. However, the findings show that market is unresponsive to bad news. This leads us to understand that a hasty decision on part of the investor as a result of unanticipated bad news may cause the investor loss if a move is made in the stock market with a view to gaining advantage.

Results show that the stock market is inefficient with regards to sudden bad news so the idea that it would have the same impact on every sector is ridiculous. The commercial banking sector of Pakistan survived the bad news however the same cannot be said for the manufacturing sector or the textile sector of Pakistan. Therefore the investor should understand the dynamics of the whole portfolio before taking an action based solely on the information as the same information may have different impact on different sectors and may have no impact on certain sectors.

References

[1] Jovanovic Franck, and Schinckus Christophe, Econophysics: A New Challenge for Financial Economics?, Conference paper, European Society for the History of Economic Thought, 2012.
[2] Burton G. Malkiel, The Efficient Market Hypothesis and Its Critics, Journal of Economic Perspectives, 17(1), 2003, 59 – 82.
[3] Harry and Roberts, Stock Market Patterns and Financial Analysis, Journal of Finance, 1959.
[4] E. Fama, Efficient Capital Markets: A Review of Theory and Empirical Work, Journal of Finance, 25(20), 1970.
[5] M. Panayides and X. Gong, The Stock Market Reaction to Merger and Acquisition Announcements in Liner Shipping, International Journal of Maritime Economic, 4, 2002.
[6] Paul. Cootner, The random character of stock market prices (MIT Press, 1964)
[7] Javid, Y. Attiya and Ayaz Ahmed, The Response of Karachi Stock Exchange to Nuclear Detonations, The Pakistan Development Review, 38(4), 1999, 778-786.
[8] S.J. Brown, and J.B. Warner, Measuring Security Price Performance, Journal of Financial Economics, 8, 1980.
[9] Raymond M. Brooks, Ajay Patel, Tie. Su, How the Equity Market Responds to Unanticipated Events, Journal of Business 76(1), 2003.
[10] David A. Carter, and Betty J. Simkins, The Market Reaction to Unanticipated Catastrophic Events: The Case of Airline Stock Returns and September 11 Attacks, The Quarterly Review of Economics and Finance 44, 2004, 539-558.
[11] A. McWilliams and D. Siegel, Event Studies in Management Research: Theoretical and Empirical Issues, The Academy of Management Journal, 40(3), 1997, 626-657.
[12] Javid, Y. Attiya, The Response of the Pakistani Stock Market to a Cataclysmic Event, NUST Journal of Business and Economics, 2(2), 2009, 19-40.
[13] AswathDamodaran, Economic Events, Information Structure, and the Return-Generating Process, Journal of Financial and Quantitative Analysis, 20, 1985, 423-434.
[14] E. Fama, L. Fisher, M. Jensen, and R. Roll, The Adjustment of Stock Prices to New Information, International Economic Review, 1969.
[15] W. Bruce Johnson, Robert P. Magee, Nandu J. Nagarajan and Harry A. Newman, An analysis of the stock price reaction to sudden executive deaths: Implications for the managerial labor market, Journal of Accounting and Economics, 7(1-3), 1985, 151-174.
[16] M.S. Rozeff and W.R. Kinney, Capital Market Seasonality: The Case of Stock Returns, Journal of Financial Economics, 3, 1976, 379-402.
[17] M. Gibbons and P. Hess, Day of the Week Effects and Asset Returns, Journal of Business, 54, 1981, 579-596.
[18] G. Andrade, M. Mitchell and E. Stafford, New Evidence and Perspectives on Mergers, Journal of Economic Perspectives, 15(2), 2001, 103-120.
[19] R. Morck and B. Yeung, Internationalization: An Event Study Test, Journal of International Economics,33(1-2), 1992, 41-56.

[20] K.S. Im, K.E Dow, and V. Grover, A Reexamination of IT Investment and the Market Value of the Firm an Event Study Methodology, Information Systems Research, 12(1), 2001, 103-117.
[21] K. Jung, Y.-C. Kim and R. Stulz, Timing, Investment Opportunities, Managerial Discretion, and the Security Issue Decision, Journal of Financial Economics, 42, 1996, 157-185.
[22] R. Rosen, Merger Momentum and Investor Sentiment: The Stock Market Reaction to Merger Announcements, The Journal of Business, 79(2), 2006, 987-1017.
[23] Liargovas, Panagiotis and Repousis, Spyridon, The Impact of Terrorism on Greek Banks' Stocks: An Event Study, International Research Journal of Finance and Economics, 51, 2010.
[24] L. Angbazo, and R. Narayanan, Catastrophic Shocks in the Property-Liability Insurance Industry: Evidence on Regularity and Contagion Effects, The Journal of Risk and Insurance, 63(4), 1996, 619-637.