

Impact of Pak-US Relationship News on KSE-100 Index

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The purpose of this paper is to examine the impact of Pak-US relationship news on Karachi Stock Exchange-100 index. This study contributes to the knowledge of market practitioners in understanding the risk associated with KSE returns in connection with the Pak-US relationship News. In order to carry out the present study, we have used the event study method of research. The study focuses on six events as a sample and analyzes their impact on KSE-100 index. The findings of the study reveal that Pak-US relationship news events do have significant impact on KSE-100 index. Our findings are in line with the previous studies done by Eagle and Ng (1993) & Tzachi, Z (2003). Research Limitations\Implications - Some events of significant importance such as US elections couldn't be included because the Index was frequently freezed due to global depression during 2008; these events could have enrich this study.

Keywords: Stock Market, News, Return, Volatility, Karachi stock Exchange, Market Reaction, Event Methodology.

Field of Research: Finance

1. Introduction

In recent years, the outcomes of Macroeconomics and political news on stock market returns have received considerable attention in financial literature. From this literature it is quite evident that these events happening around the world have major impact on the stock market returns of most countries. Therefore it is in the core interest of Industry practitioners that they need to evaluate the risk which is associated with the price of

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shares. Many questions have been raised like; what role do these news play in explaining the movement of stock prices? Do the responses of stock return to news vary depending upon? Business and economic condition? 'News play a significant role on the stock market, whether it has a positive impact or the negative impact; it raises or lowers the market returns' as Engle and Ng, 1993 detected asymmetry in the stock return volatility and they conclude that bad news (negative value of the unexpected returns) produces more volatility than good news (positive values of the unexpected returns) on the Japanese stock market.

There are few factors which explain the volatility in stock returns; Firstly large negative stock returns are more common than large positive ones, so stock returns are negatively skewed (this might be called "contemporaneous asymmetry"). Contemporaneous asymmetry shows up clearly in the pattern of extreme moves in stock prices in the postwar period. Of the five largest one-day movements in the S&P 500 index since World War II, four are declines in the index and only one is an increase. Of the ten largest movements, eight are declines and only two are increases (Cutler, Poterba, and Summers 1989) Second, extreme stock market movements are more common than would be expected if stock returns were drawn from a normal distribution, so stock returns have excess kurtosis. This is not just the result of changing volatility, because excess kurtosis remains after one normalizes returns by their estimated conditional standard deviations (Bollerslev 1987). The stock market decline on October 19, 1987 was a large drop even conditional on price movements observed earlier that month.

Third, volatility is typically higher after the stock market falls than after it rises, so stock returns are negatively correlated with future volatility (this might be called "predictive asymmetry"). Predictive asymmetry was first discussed by Black (1976), who argued that it could be due to the increase in leverage that occurs when the market value of a firm declines; however it seems that the leverage effect is too small to account for this phenomenon (Christie 1982, Schwert 1989). The objective of this paper will be to analyze the impact of Pak – USA relationship news on Karachi stock market 100 index returns since 1st Sept 2001 to 31st August 2008 and to give a substantial clue to the market practioners for minimizing risks will investing in stocks market.

2. Literature Review

A number of recent empirical studies have attempted to show the relationship between Macro economics/political events on stock market performance by using event study methodology. The impact of political risk on financial market was not conclusive, since earlier studies (cutler, Poterba, and summers, 1989) found little evidence of political news having a significant effect on US market. Several other studies of that time asset pricing had challenged the view that stock price movements are wholly attributable to the arrival of new information. Roll's, (1985) analysis of price fluctuations in the market for orange juice futures suggests that news about weather conditions, the primary determinant of the price of the underlying commodity, can explain only a small share of the variation in returns. Shiller's, (1981) claim that stock returns are too variable to be explained by shocks to future cash flows, or even by plausible variation in future discount rates, is also an

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argument for other sources of movement in asset prices. Frankel and Meese (1987) report similar difficulties in explaining exchange rate movements. French and Roll, (1986) demonstrate that the variation in stock prices is larger when the stock market is open than when it is closed, even during periods of similar information release about market fundamentals.

However, Campbell and Hentschell, (1992) studied the volatility in stock market; they found that changes in volatility of any magnitude might have important effect on required stock return and on the level of stock market prices. Fornari et al, 2002 studied the impact of news, expected and unexpected, on the Italian financial market between 1994 (when political election were held under a new bi-partisan institutional setup) and 1996 (whether Italian reentered the European exchange rate mechanism ERM) the influence of scheduled or unscheduled news is kept separate, since their effect on stock market is expected to be very different. They also found that the announcement of unscheduled news increases prices variability. Bittlingmayer (1998) shows that political uncertainty affected both stock market volatility and output in post-WWI Germany.

The United States experienced a devastating terrorist attack on September 11, 2001 when terrorists crashed hijacked commercial airliners, each loaded with as much as 25,000 gallons of jet fuel, into the two World Trade Center towers and the Pentagon. The attackers also crashed a fourth jet into the Pennsylvania countryside. Within two hours of the first attack, both 110-story twin towers of the World Trade Center had collapsed. Because of the attacks and the resulting damage to the New York City financial district, U.S. financial markets were closed until September 17. When the markets reopened, airline stock prices plummeted, in some cases by more than 60 percent. The overall market declined seven percent on September 17, its largest one-day point decline, although not its largest percentage decline.

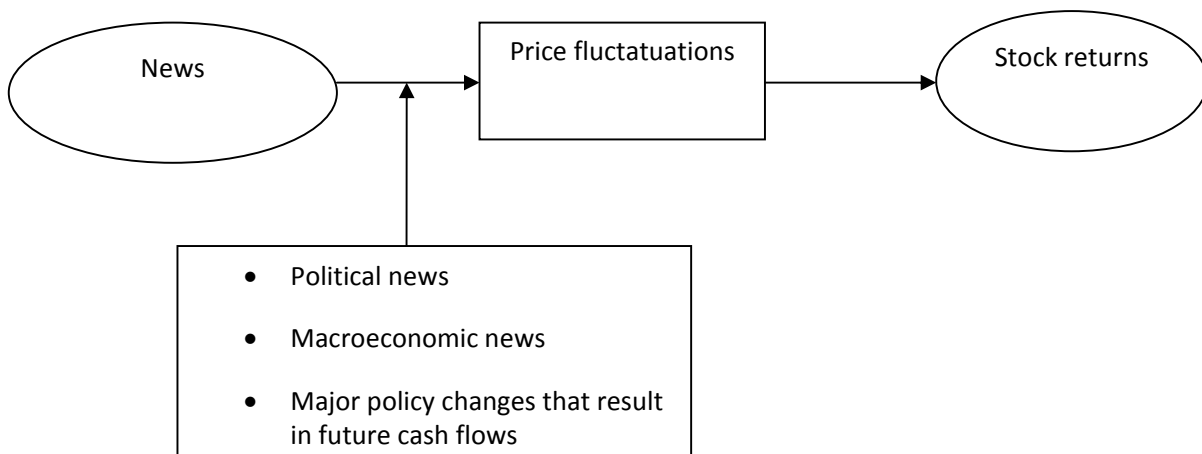
The impact of the 9/11 event immediately after the attacks; financial markets reacted around the world spreading uncertainty about the near future. All the stock markets showed a fall during trading day; many of them took months to recover; the average recovery period was recorded as 76 days; Quickest was 9 days by Slovean stock exchange where as Shanghai composite index could not recover the whole year however US equity recovered in 30 days (Cespedes and Christoher, 2003). Tzachi (2003) conducted a study to find the impact of political events on stock market of Israel. The study explored the relationship between stock prices and the political news; the purpose of the paper was to learn how Israeli stock market responds to changes in Israel political environment and especially events related to peace. Thus, the role of political events in explaining stock market variation is not only through their impact on future variables such as cash-flows, but is also through their effect on the degree of uncertainty in the stock market. This uncertainty may or may not translate into changes in future variables such as earnings or aggregate output, but it certainly has a discernible effect on current prices

3. Theoretical Framework

3.1 News

News is an independent variable factor in this model as upon it stock prices change. Market immediately incorporates all available information into the price of the traded entity. It is well established that the stock market is not an efficient market as it consists of numerous traders with differing strategies and interpretations of information. However there is substantial evidence to suggest that the stock market does incorporate new information into prices (Ederington and Lee 1993, 1995, 2001, Han and Ozocak 2002 et al).

The proposed conceptual model of the problem under study is as follows:



3.2 Stock Prices

The fluctuation in trading activity is not only explained by publically available information but also by non information trade due to events, short selling, and insider trader (Campbell, Grossman and Wang, 1993).

3.3 Macroeconomic News

In this case, macroeconomic news announcements include news about macroeconomic activity such as inflation, GDP, unemployment and innovations in interest rate. A lot of research is available which shows that the occurrence of news does affect the market, with the majority of research focusing on macroeconomic news, which provides an indication of

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the state of economy (Almeida, Goodhart et al). However macroeconomic news is relatively infrequent compared to asset specific information e.g. Simpson and Ramchander (2004) state that the United States of America releases 23 macroeconomic reports regularly, usually monthly, whilst Fung, Yu and Wai (2003) found an average over 373 news articles per asset per month. Not only is asset specific information more frequent but it has been shown to have a noticeable effect.

3.4 Major Political Events

Include all events such as National and International taking place at a particular point of time. Thus, the role of political events in explaining stock market variation is not only through their impact on future variables such as cash flows, but is also through their effect on the degree of uncertainty in the stock market. This uncertainty may or may not translate into changes in future variables such as earnings or aggregate output, but it certainly has a discernible effect on current prices. Tzachi (2003) conducted a study to find the impact of political events on stock market of Israel. The study explored the relationship between stock prices and the political news; the purpose of the paper was to learn how Israeli stock market responds to changes in Israel political environment and especially events related to peace.

3.5 Major Policy Changes

These results in future cash flows: all the changes in taxation policy and economic development reforms taking place which results in investors future expectations. An evidence of Russian stock markets by Bernd Hayo & Ali M. Kutan since the early 1990s, Russian policy makers have implemented major economic and financial reforms, resulting in the emergence of new financial instruments.

3.6 Price Fluctuations

In an efficient securities market we expect stock prices to adjust to news information very quickly. Patell and Wolfson (1984) find an initial price reaction to earnings and dividend announcements within a few minutes on the NYSE, but disturbances in the variance persist for several hours. Ederington and Lee (1993) examine the impact of scheduled macroeconomic news on interest rate and foreign exchange futures. They find that volatility is substantially higher than normal for roughly fifteen minutes after the news release and slightly elevated for several hours.

4. Methodology

Different events of PAK-US relationships were picked for analyzing their impact on stock exchange performance. These events being taken as independent and KSE being taking impact of these events is dependent. Thus it will not be wrong to say that the study basically looks at an event and sees its relationship to the KSE index. This study is therefore a causal study. This study is also using correlation to support its cause and effect

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relationship as the data of independent variable as explained later in the sampling procedure is qualitative in nature. The events taken as independent variables were brought to the scene through different media. The media chosen for data gathering for this Study is the print media. The nation wide circulated newspaper in Pakistan named Dawn has been selected for picking relevant news regarding the events under study for their impact on the Karachi stock market returns. The news was selected on the basis of their link with Pak-US relationship.

Table 1: Sample News Events

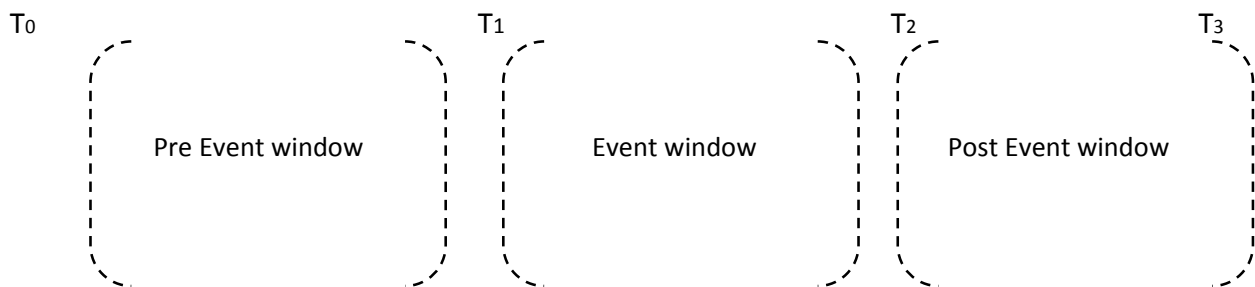
Sr. no	Event	Date
1	9\11 Terrorist attacks	11 September 2001
2	Denial Pearl assassination	4 th February 2002
3	War against terror	29 th January 2003
4	Wana Fight begins in North Waziristan	18 th March 2004
5	1 st US Drone Attack on Damadola FATA	13 January 2006
6	Musharraf resigns under US pressure	18 th August 2008

The data regarding daily closing index of Karachi Stock Exchange was collected from websites of Karachi Stock exchange and Business recorder. The daily closing index was gathered from 1st of September 2001 to 31st of August 2008. These observations do not include the days in the week when the stock market is closed or when it closed for other public holidays. The data gathered directed the study towards a scenario where both qualitative and quantitative Data was available. Regression analysis is the first option that comes to mind when confronted with such a situation. The event study methodology was used for this purpose. (As described by Mackinlay (1997) and Hayo and Kutan (2004) was used with regression analysis to quantify the qualitative data gathered for independent variables. Statistical software Minitab was put to use to calculate the regression. In the end a summary of results of the findings is summarized in the form of table. This has been done for all the events that are taken as independent in this study. The typical event study analysis starts with an event definition and then moves on to define the selection criteria for including different firms listed on the stock market. A regression equation is then

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devised to find out the abnormal returns. The illustration of three windows involved in event analysis is given below.

Fig 1: Estimation Windows



After having constructed the above criterion, we have to define the estimation window which Pre-event window in this case which involves 8 days prior to the event date in order to prevent it from influencing the normal returns. Next comes the design of the testing frame work for the abnormal returns. Important considerations are defining the null hypothesis and determining the techniques for aggregating the abnormal stock returns. Null hypothesis can be stated as follows

H0: News events have significant effect on stock market returns

H1: News events doesn't have significant effect on stock market returns

The statistical tests (version of t-test) are performed to tell the amount of abnormal returns that has occurred due to the occurrence of events understudy. This methodology have been used to work out the pre-event, event and post event windows for all the independent variables chosen in this study.

5. Results and Discussion

After having selected the major news events happened during the study period from 1st September 2001 to 31st September 2008. The six major events were selected as samples for analysis of the study. These events were analyzed through regression analysis and pos Hoc test summarized in tables given below:

Event 1. 9\11 terrorist Attacks (Table II)

constant	Pre-event	Post-Event	R-Square	F-Statistic	Post Hoc Test
-2388	3.6306	-0.895	0.805 or 80.5%	10.34	HSD[.05]=38.98; HSD[.01]=50.52 M1 vs. M2 P<.01
1107	0.9606	0.2250		Sig.	M1 vs. M3 P<.01
-2.17	3.78	-3.98		0.001	M2 vs. M3 P<.01
0.083	0.013	0.011			

From table II it is evident that the p-value is 0.001 which is $P < 0.05$ and therefore it is considered to be 'Highly' significant and as the p-value represents a decreasing index of the reliability of a result (Brownlee, 1960). We can safely conclude that the statistical significance of a result tells us the degree to which the result is "true". The R-square shows the strength of variables relative to each other the value of R-square is 0.805 which means that the event caused 80.5 % variation in the stock prices. The F- statistics clearly shows the intensity of fitness of the models as it is $F >$ table value and also p-value for F-test is less than 0.05 which shows the high strength of variables relative to each other. Similarly the Post Hoc test shows that all the three windows pre-event, Event and post event have significant relation with respect to each other.

Event 2. Denial Pearl Assassination (Table III)

constant	Pre-event	Post-Event	R-Square	F-Statistic	Post Hoc Test
-516	1.6097	-0.1222	0.721 Or 72.1%	6.48	HSD[.05]=56.77;
828.4	0.4482	0.3181			HSD[.01]=75.18
-0.62	3.59	-0.38		Sig. 0.001	M1 vs. M2 P<.01
0.561	0.016	0.717			M1 vs. M3 P<.01 M2 vs. M3 P<.01

From table III it is evident that the p-value is 0.001 which is $P < 0.05$ and therefore it is considered to be 'Highly' significant and as the p-value represents a decreasing index of the reliability of a result (Brownlee, 1960). We can safely conclude that the statistical significance of a result tells us the degree to which the result is "true". The R-square shows the strength of variables relative to each other the value of R-square is 0.721 which means that the event caused 72.1% variation in the stock prices. The F- statistics of 6.28 clearly shows the intensity of fitness of the models as it is $F >$ table value and also p-value for F-test is less than 0.05 which shows the high strength of variables relative to each other. Similarly the Post Hoc test shows that all the three windows pre-event, Event and post event have significant relation with respect to each other.

Event 3. War against Terror (Table IV)

constant	Pre-event	Post-Event	R-Square	F-Statistic	Post Hoc Test
1721	-0.14	0.169	0.524 Or 52.4%	2.75	HSD[.05]=15.93; HSD[.01]=21.1 M1 vs. M2 P<.01 M1 vs. M3 P<.01 M2 vs. M3 P<.01
480.8	0.2565	0.07446			
3.58	-0.54	2.28		Sig.	
0.016	0.610	0.072		0.001	

From table IV it is evident that the p-value is 0.001 which is $P < 0.05$ and therefore it is considered to be 'Highly' significant and as the p-value represents a decreasing index of the reliability of a result (Brownlee, 1960). We can safely conclude that the statistical significance of a result tells us the degree to which the result is "true". The R-square shows the strength of variables relative to each other the value of R-square is 0.524 which means that the event caused 52.4% variation in the stock prices. The F- statistics of 2.75 clearly shows the intensity of fitness of the models as it is $F >$ table value and also p-value for F-test is less than 0.05 which shows the high strength of variables relative to each other. Similarly the Post Hoc test shows that all the three windows pre-event, Event and post event have significant relation with respect to each other

Event 4. Wana Fight begins in North Waziristan (Table V)

constant	Pre-event	Post-Event	R-Square	F-Statistic	Post Hoc Test
3556	-0.4347	0.6952	0.887 Or 88.7%	19.66	HSD[.05]=51.53; HSD[.01]=68.24 M1 vs. M2 P<.01 M1 vs. M3 P<.01 M2 vs. M3 P<.01
1527	0.4367	0.1618			
2.33	-1.00	4.33		Sig.	
0.067	0.365	0.008		0.001	

From table V it is evident that the p-value is 0.001 which is $P < 0.05$ and therefore it is considered to be 'Highly' significant and as the p-value represents a decreasing index of the reliability of a result (Brownlee, 1960). We can safely conclude that the statistical significance of a result tells us the degree to which the result is "true". The R-square shows the strength of variables relative to each other the value of R-square is 0.887 which means that the event caused 88.7% variation in the stock prices. The F- statistics of 19.66 clearly shows the intensity of fitness of the models as it is $F >$ table value and also p-value for F-test is less than 0.05 which shows the high strength of variables relative to each other. Similarly the Post Hoc test shows that all the three windows pre-event, Event and post event have significant relation with respect to each other

Event 5. 1st US Drone Attack on Damadola FATA (Table VI)

constant	Pre-event	Post-Event	R-Square	F-Statistic	Post Hoc Test
9066	0.5010	-0.3554	0.587 Or 58.7%	3.55	HSD[.05]=131.36; HSD[.01]=173.96 M1 vs. M2 P<.01 M1 vs. M3 P<.01 M2 vs. M3 P<.01
1436	0.1923	0.2141			
6.31	2.61	-1.66			
0.001	0.158	0.048			
				Sig. 0.001	

From table V it is evident that the p-value is 0.001 which is $P < 0.05$ and therefore it is considered to be 'Highly' significant and as the p-value represents a decreasing index of the reliability of a result (Brownlee, 1960). We can safely conclude that the statistical significance of a result tells us the degree to which the result is "true". The R-square shows the strength of variables relative to each other the value of R-square is 0.887 which means that the event caused 88.7% variation in the stock prices. The F- statistics of 19.66 clearly shows the intensity of fitness of the models as it is $F >$ table value and also p-value for F-test is less than 0.05 which shows the high strength of variables relative to each other. Similarly the Post Hoc test shows that all the three windows pre-event, Event and post event have significant relation with respect to each other

Event 6. Musharraf resigns under US pressure (Table VII)

constant	Pre-event	Post-Event	R-Square	F-Statistic	Post Hoc Test
103479	-1.714	-8.825	0.901 Or 90.1%	22.7	HSD[.05]=593.66; HSD[.01]=786.18 M1 vs. M2 P<.01 M1 vs. M3 P<.01 M2 vs. M3 P<.01
1446	0.4864	1.608			
7.15	-2.41	-5.49		Sig.	
0.001	0.003	0.061		0.0077	

From table V it is evident that the p-value is 0.0077 which is $P < 0.05$ and therefore it is considered to be 'Highly' significant and as the p-value represents a decreasing index of the reliability of a result (Brownlee, 1960). We can safely conclude that the statistical significance of a result tells us the degree to which the result is "true". The R-square shows the strength of variables relative to each other the value of R-square is 0.901 which means that the event caused 90.1% variation in the stock prices. The F- statistics of 22.7 clearly shows the intensity of fitness of the models as it is $F >$ table value and also p-value for F-test is less than 0.05 which shows the high strength of variables relative to each other. Similarly the Post Hoc test shows that all the three windows pre-event, Event and post event have significant relation with respect to each other.

It is evident from the above that all the above news has significant impact on stock market returns in all models $P < .05$. It means that News events do have impact on stock market returns in either positive or negative way. The relationship of News events and stock market return is very obvious and strong as evident from R-square which in all the above events is greater than 0.5 (ranges from 0.524 to 0.901) which shows that these events counts for more than 50% variation in stock market returns. Stock market will gain or lose due to these positive or negative events related to Pak-US relationships. The F- statistics clearly shows the intensity of fitness of the models. (Ashfaq, 2005) Results of our study in line with previous studies that macroeconomic and political news impact stock market returns. Eagle and Ng (1993) found that good and bad news produce volatility in Japanese stock market returns and Hayo & Kutan (2004) analyzed the impact of news, oil prices and

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international financial market developments on daily returns on bond and stock markets. They found that Russian financial markets were sensitive to development in global markets, news and oil prices.

6. Conclusion

The study conducted is aimed at establishing the Pak–US news affect on the Karachi stock exchange 100 Index and from above analysis it can be concluded that events related to Pak-US relationship news have significant impact on KSE 100 index. As these findings are in line with the previous studies. Major news that is directly related to Pakistan and USA put to analyze the behavior of the stock market. After analysis it was found visible that Karachi stock exchange was reacting significantly in accordance with the event on the date. If the events are related to peace a clear increase and upward trend in the market was seems too visible. Similar act was found for the opposite news. If the news or events were related to some kind of tension or disputed issues, it would result in the downward trend in the market.

It can also be stated that the Pak-US relations have a very strong influence on the Barometer of Pakistan's Economy KSE-100 index. Index moves up when both the countries having good relations and a downward trend when there is a conflicting situation. This paper provides ample evidence to prove that PAK-US Relationship has significant strategic and economic importance. Previously this economic aspect of Pak-US Relationship has never been studied. Therefore this study conducted was aimed at studying the economic aspect of Pak-US Relationship keeping in view the current war on terror and the strategic importance of the relationship of both Atomic powers. The study also recommends that Pakistan has to be very proactive in containing terrorist activities such as event 2 assassination of Daniel Pearl (table III) and also US government should be careful no create problems for its strategic partner through activities such like Drone attacks as the have significant impact on Pakistan's economy evident from event 5 (table VI) In future some other political or macroeconomic or social/cultural events can be taken to observe their effect on stock market. Moreover some other statistical tools can be used to analyze the data

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