The Impact of Corporate Social Responsibility News Announcements on Shareholders' Wealth

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This study attempts to empirically examine the share price behavior around CSR news announcements through a standard event methodology proposed by Brown & Warner (1985) around an event window of 21 days. Based on a sample of 72 CSR news from 2009 to 2014, the study reports abnormal returns for 36 companies. Overall, the results of the study reveal that the average abnormal returns ($\overline{AR}$) and average cumulative abnormal returns $(\overline{CAR})$ are negative in the event window of 21 days. The Wilcoxon signed-rank test values of ($\overline{AR}$) is statistically significant on day -3, day 1, and day 8 respectively. Similarly, the Wilcoxon signed-rank test values of $(\overline{CAR})$ are also significant on day 2, day 8 and day 9. The study concludes that CSR news announcement has negative impact on shareholders' wealth as equity investors in Pakistan are short-term focused and consider engagement in CSR activities as an expense.

Keywords: CSR, event study, abnormal returns, cumulative abnormal returns

Corporate Social Responsibility (CSR) is defined as the legal, economic, ethical and charitable expectations of society from an organization. CSR has been an area of active debate among researchers and academicians. Consequently, companies around the world are nowadays taking keen interest in creating good environment, reducing the levels of global warming, providing employees with better work life environment and investing in the improvement of socio-health conditions in poor economies. On the other hand, wider effects of these activities have been discussed by scholars in their studies.

According to Friedman (1970), the only social responsibility of a firm is to maximize its profits and to maximize the wealth of its shareholders. The shareholders after investing their funds expect the managers to maximize their long-term returns and not to improve the world, as endorsed by the agency theory of Jensen and Meckling (1976). Hence, CSR is an expense that deprives shareholders of getting higher returns. However, there are certain moral arguments which contradict the point of view of Friedman, (Crane, Andrew & Matten, 2010).

According to Crane et al. (2010), in the success of a firm, a larger set of stakeholders are involved that includes, customers, employees, suppliers and the community where a firm is operating. A firm operating in a community is also responsible for the level of pollution caused to that community by giving rise to a social problem along with misuse of the natural resources, which are becoming extinct day by day.

There is ample empirical evidence which reveals that adopting such CSR activities not only improves the contextual conditions around a company, but also has a positive impact on the corporate value. The most prominent are Levitt (1980) and Carroll (1991) who argue that businesses should view CSR activities as an investment in a project and each dollar of investment in CSR should earn the equivalent returns if invested in other projects somewhere else. Thus, CSR should be viewed as a long-term investment which reaps benefits for a longer period of time.

Similarly, the impact of CSR on stock returns has been the focus of many scholars who report different results in their studies. The fact that there is a positive association between CSR activities and stock returns has

been reported by many researchers (see, Cheung et al. 2009; Wang, 2011; Arx & Ziegler, 2009; and Chollet & Cellier, 2011).

A number of arguments support the notion that CSR activities positively affect shareholders' wealth. First, CSR activities create positive publicity which increases sales and attracts investors because of which earnings of the company and its share price increase (Moskowitz, 1972). Second, companies conducting different CSR programs are sending positive signals to the market about their financial stability that they have enough funds even to invest in projects that are not generating any direct returns. Thirdly, people wish to associate themselves with a company that is more socially responsible. This can attract loyal and talented employees as well as socially desirable customers which in turn increase the sales revenue of the companies, thereby enhancing the corporate value.

However, there are also some reasons for negative association between CSR activities and stock returns. First, CSR is an expense that deprives shareholders of getting higher returns (Friedman 1970). Second, CSR sometimes can create negative publicity for the firm if such activities are carried out only for building positive publicity rather than improving or helping society and the community.

The negative association between CSR activities and stock returns has also been reported by many researchers (see Brammer, Brooks, & Pavelin, 2006; Halme & Niskanen 2001). However, contrary to these studies documenting positive and negative association between CSR activities and stock returns, the study of Mollet and Ziegler (2012), reports that there is no association between CSR activities and stock returns.

Hence, there are mixed views of researchers regarding the issue which portrays that the picture is still cloudy. In Pakistan, there is a dearth of empirical research on CSR. Our study attempts to explain the issue by empirically examining the share prices around CSR announcements through a standard event methodology proposed by Brown and Warner (1985).The study is of special significance to financial managers to know about the CSR decision whether it is reducing agency cost and enhancing shareholders' wealth or not. The shareholders and investors will benefit from this study in a way that when investing in a company, should they consider CSR to be relevant or irrelevant. The investigation of the current study will provide deeper insights regarding the issue and will add empirical findings regarding CSR and stock returns to the existing body of literature from Pakistan.

Literature Review and Hypothesis

The relationship between CSR and shareholders wealth is based primarily on agency theory and stakeholder theory. On the agency theory side, as per neo-classical economists, CSR activities negatively affect the shareholders wealth. According to neo-classical economist, Friedman (1970), the only social responsibility of a firm is to maximize its profits and to maximize the wealth of its shareholders. Hence, CSR is an expense that deprives shareholders of getting higher returns.

Smith and Sims (1985), Barbera and McConnell (1990) in their studies argue that investment in pollution control is something different from regular investment because these are imposed by the regulators; hence they are negative net present value investments. Another argument that supports the notion that environmental investments yield negative returns is that they may decrease the cash flows of an asset already in place. At the end, the authors of agency theory (e.g. McWilliams & Siegel, 2001) argue that CSR activities do not enhance the financial performance of the firm in the long-run. These notions support agency theory, magnifying the costs of CSR activities.

Contrary to agency theory, a number of stakeholder theory proponents presented their stance in favor of CSR activities that it enhances shareholders wealth. The most prominent are Levitt (1980) and Carroll (1991) who argue that businesses should view CSR activities as an investment in a project and each dollar of investment in CSR should earn the equivalent returns if invested in other projects somewhere else. Thus, CSR should be viewed as a long-term investment which reaps benefits for a longer period of time.

Also and Kapstein (2001) argues that socially responsible firms can attract socially responsible investors and can easily meet their financial requirements as compared to the firms not paying any attention towards their social image. Moreover, the proponents of stakeholder theory argue that in recent years, an increasing concern has been shown about corporate pollution by the individual as well as institutional investors. This view is supported by Cormier and Magnan (1997) who assert that in order to build positive corporate image, investment in environmental protection may be considered as valuable from shareholders' perspective. The empirical evidence also supports that environmental protection initiatives enhance the profits of the company.

There is enough empirical literature on the link between CSR and stock returns. One of the earlier studies in this regard is by Anderson and Frankle (1980). They examine the effect of voluntary social disclosures of Fortune 500 firms on stock returns and report that companies disclosing voluntary social information earn greater returns than the non-disclosing companies. This means that disclosures offer important information to the investors. However, as their analysis was not daily event analysis, therefore they failed to directly link the social disclosure with higher returns.

Shane and Spicer (1983) examine the relationship between environmental CSR activities and stock market performance and find a positive relationship. Hamilton (1995) also explores the relationship between environmental CSR activities and stock market performance and find similar results. Klassen and McLaughlin, (1996) adopt an event study to investigate the market reaction while including 140 events from NEXIS database over a period from 1985 to 1991. Their study documents positive abnormal returns following positive environmental initiatives and vice versa.

A similar study is by Rao (1996) using published reports of Wall Street Journal about air and water pollution from 1989 to 1993. The study reveald that unethical environmental initiatives do affect the stock returns by decreasing the share price for a considerable period of time. In the similar vein, Frooman (1997) also reports a significant decrease in shareholders wealth due to negative social and environmental information regarding the respective companies, in his meta-anlysis of 27 event studies and concludes that companies need to be more socially and responsible in order to maximize the wealth of their shareholders.

Hamilton, Jo, and Statman (1993) analyze the performance of both socially responsible and conventional mutual funds. They find that the performance of both mutual funds do not vary statistically and also, the market has shown no reaction to socially responsible mutual funds. Hall & Rieck (1998) examine the impact of positive corporate social actions on stock returns through an event study. They report that news regarding corporate donations have a significant positive impact on stock returns.However, companies engaged in manufacturing environment friendly products have shown positive imapct on stock returns on Day 0 but no commulative effect from -5 to +5 period. Also companies invloved in other voluntary social actions did not have any significant impact on stock returns.

However, Brammer, Brooks and Pavelin (2006) offer contrasting findings for the UK market. They report lower stock returns to the firms investing significantly in CSR programs while abnormal returns to the firms with lowest investment in CSR programs. Thereby, they conclude that CSR has a negative impact on shareholders' wealth. The study also differentiates the impact of different dimensions of CSR and reveals that social CSR programs yield the lowest stock returns, followed by environmental CSR programs and then the employment and societal CSR programs respectively.

However, contrary to the UK market, the US market does value different dimensions of CSR. The study by Bird et al. (2007) reveals these facts about CSR. While investigating different dimensions of CSR for the period 1991 to 2003, they find that the market has valued most of the firms achieving minimum levels of investment in environment and diversity as required by law. Further, the market also values employees' relations but not the social dimension of CSR. Overall, the study concludes that companies engaged in different CSR programs are valued by the market.

Patten (2008) in his study investigated the stock market reaction to the announcements of corporate donations for the 2004 tsunami relief in Southeast Asia. The results of the study establisha positive significant 5-day cumulative abnormal returns. It has been documented that the different timings of press releases have not influenced the stock market but the amount of donations did.

Arx and Ziegler (2009) investigate the impact of CSR on shareholders' wealth in US and Europe for the period 2003 to 2006. They find that the US and European markets do value the environmental as well as social programs of the companies. However, the average monthly positive effect of CSR on stock returns seemed more robust in US than Europe. They also report that with simple CAPM, the results were more significant than Fama and French, four-factor Carhart Models.

However, these results were not much in line to what Cellier and Chollet, (2010) have documented in their study. They find that the different dimensions of CSR have different results on stock returns in the European market. Their results reveal that human rights dimension of CSR has a positive impact; environmental and human resources dimensions of CSR have a negative impact while societal dimension of CSR has a mixed impact on stock returns. Overall, the study concludes that the European market does value the CSR activities.

However, the study of Mollet and Ziegler (2012) negates the findings of Arx and Ziegler (2009); Cellier and Chollet, (2010). They find that CSR has no impact on stock returns in both US and European markets while using the "four-factor Carhart Model" for the period 1998 to 2009.

Besides US and European markets, studies in this area have also been conducted in the Asian markets whereby a general concensus has been developed that CSR actitivites positively affect the wealth of the shareholders. This view is supported by Cheung et, al. (2009) who find positve association between CSR activities and stock returns in the Asian markets.

Similarly, study by Wang (2011) reports that Taiwan stock exchange values the CSR activities, i.e. CSR activities have a significant positive impact on stock performance of the companies. Similarly, Gupta and Goldar (2005) also find a negative market reaction to environmental unfriendly news in the Indian market. However, these studies are in stark contrast to Hong and Hwang (2001) who report weak evidences of the negative market reaction to the individual companies being responsible in environmental accidents, in the context of the Korean stock market.

It is evident from the literature presented above that different scholars have documented different results in their studies over the years and have not provided any conclusive evidence. As Bird et al. (2007)'s study reveals that market's reaction changes over time towards CSR. The researchers have established that CSR activities have either an impact (positive or negative) or no impact on shareholders wealth over the years in different parts of the world. Further, different dimensions of CSR have been proven to affect stock returns differently. Thus the literature on the subject reports mixed results.

In Pakistan, there is a dearth of empirical research on CSR. In order to check the impact of CSR news announcements on shareholders' wealth, the following hypothesis are tested in our study:
1. **H0:** There is significant negative impact of CSR news announcement on the shareholders' wealth.
2. **H1:** There is significant positive impact of CSR news announcement on the shareholders' wealth.

Method

There are many dimensions of CSR. Companies announce and carry on different CSR activities. Furthermore, a number of other events also take place about which a company makes an announcement. Such other events could be dividend announcements, merger and acquisitions etc. Thus, it is necessary to define criteria for selecting the sample of the study. Therefore, criteria based sampling technique is used for selecting the sample of the study. The following criterion is used for selecting the sample:

i. Only those companies are included in the sample which has at least one CSR announcements during the study period.

ii. Companies with minimum of one CSR announcements and maximum four CSR announcements are included.
iii. Those CSR announcements are discarded that overlapped with any other news or announcements of the company.
iv. CSR announcements from a wider spectrum of sectors among the 34 sectors of KSE are selected and not just from one particular sector or industry.

Based on the above criteria, a number of websites are searched for collecting the data. The press releases about CSR initiatives and announcements from 2009 to 2014 are gathered from www.tribune.com.pk, www.dailytimes.com.pk, www.pakistannewswire.net, www.pakistanpressreleases.com and www.pakistannewsreleases.com. Further, companies' official websites are also accessed for collecting the CSR news. The historical share prices data and market indices are collected from the official website of KSE(www.kse.com)and business recorder (www.brecorder.com).A total of 85 CSR news and press releases of 40 companies were collected from these various websites. However, after matching it with above mentioned criteria of the study, 13 news of four companies are discarded. Thus the final sample contains 72 CSR announcements of 36 companies for the period 2009 to 2014.

Event Study Procedure

The study analyzes the impact of CSR news announcements on shareholders wealth through a standard event methodology proposed by Brown and Warner (1985). Event study is one of the most extensive and accepted research methodologies in finance for analyzing the impacts of different news or announcements and decisions of the management of the company on shareholders' wealth. It measures the reaction of stock prices to various events.

In this study, an event window of 21 days has been used, starting from day -10 and ending on day +10 with day 0 as the day of CSR announcement.
For calculating abnormal returns, the study uses the following formula:

$$AR_{i,t} = R_{i,t} - E(R_{i,t})$$

Where $AR_{i,t}$ represents abnormal returns, $R_{i,t}$ represents actual returns and $E(R_{i,t})$ is the expected returns of the company i at time t respectively.

Actual returns can be computed either through discrete approach or logarithmic approach (Strong, 1992). However, "theoretically, logarithmic returns are analytically more tractable when linking sub-period returns to form returns over longer intervals and empirically, logarithmic returns are more likely to be normally distributed and so conform to the assumptions of standard statistical techniques" (Strong 1992).
Therefore, for calculating actual returns, the study uses logarithmic returns and is calculated as:

$$R_{i,t} = ln\left(\frac{P_{i,t}}{P_{i,t-1}}\right)$$

Where $R_{i,t}$ is the stock return of company i on day t, ln is the natural logarithm, $P_{i,t}$ is the stock price of company i on day t and $P_{i,t-1}$ is the stock price of company i on previous day.

To estimate expected returns, market model is used, introduced by Petit (1972) in his study. The market model estimates the intercept and slope parameters by regressing the stock returns against market returns.

$$E(R)_{i,t} = \alpha_i + \beta_i(Rm_t)$$

Where $E(R)_{i,t}$ is the expected return of a security and (Rm_t) is the market return which in this case is KSE 100 index, α_i is the intercept, β_i is the slope and is a measure of systematic risk.

The parameters α and β are computed in the estimation period. In this study an estimation window of 60 days is used starting from day -70 and ending on day -11. In this estimation window, the parameters of the market model are estimated by using stock returns and market returns. Hereafter, these parameters are used in the 21 day event window in order to calculate expected returns or returns adjusted for risk. Similar to the actual returns, logarithmic returns are computed for the market returns, using the following formula:

$$Rm_t = ln\left(\frac{KSE100_t}{KSE100_{t-1}}\right)$$

Where Rm_t, is the market return on day t, $KSE100_t$ is the market index on day t, $KSE100_{t-1}$ is the market index on the previous day and ln is the natural logarithm.

After calculating AR for each and every firm, the average abnormal returns ($\overline{AR}$) cross sectional across firms are then computed. This will represent the market adjusted mean abnormal returns. This is done to check what an individual can expect the abnormal returns to be on the average for the whole firms rather than a single firm on any day in the event window.

Average abnormal returns are computed using the following formula:

$$\overline{AR}_t = \sum \frac{AR_t}{n}$$

Where $\overline{AR}t$ is the average abnormal return of all firms on day t, $\sum AR_t$ is the sum of the abnormal returns of all firms on day t and n is the total number of observations.

To check the significance of these $\overline{AR}$, the study uses non-parametric Wicoxon signed-rank and to accept or reject the null hypothesis that the $\overline{AR}$ are equal to zero. This would mean that CSR announcements have no impact on stock returns.

The Wilcoxon signed-rank test is performed for the null hypothesis as follows at 5 percent significance level as follows:

$$W = |\sum_{i=1}^{N_r} [\text{sgn}(x_{2,i} - x_{1,i}) \cdot R_i]|$$

$$z = \frac{W - 0.5}{\sigma_W}, \sigma_W = \sqrt{\frac{N_r(N_r + 1)(2N_r + 1)}{6}}$$

The abnormal returns are also aggregated along time within two time intervals for each day which gives daily cumulative abnormal returns (CAR) for each company. After calculating CAR for each and every firm, the average of these CAR cross sectional across firms are then computed. This will represent the market adjusted mean cumulative abnormal returns. This is done to check what an individual can expect the cumulative abnormal returns to be on the average for the whole firms rather than a single firm.

$$\overline{CAR}_t = \sum \frac{CAR_{it}}{n}$$

Where $\overline{CAR}_t$, is the average cumulative abnormal return of all firms on day t, $\sum CAR_{i,t}$ is the sum of the cumulative abnormal returns of all firms on day t and n is the total number of observations.

To check the significance of these $\overline{CAR}$, the study uses non-parametric Wilcoxon signed-rank testand to accept or reject the null hypothesis that the $\overline{CAR}$ is equal to zero.

The study also went for a regression analysis after controlling for different variables in order to check the impact of other variables on stock returns. Cumulative abnormal returns (CARs) are used as a proxy for stock returns in the regression analysis. Similar to Flammer (2013), the following regression equation has been estimated:

$$CAR_{ijs} = \alpha_j + \alpha_s + \beta X_{ijs} + \varepsilon_{ijs}$$

Where CAR is the cumulative abnormal return of the individual firm by aggregating the abnormal returns of 5 days of the individual firms, i.e. $CAR(-2\ to\ +2)$, i is the indexes firms, j is the indexes events, and s is the indexes industries. α_j represent event fixed effect while α_s represent industry fixed effect, X represent a vector for all control variables, β is the coefficient of all control variables and ε is the error term.

The control variables include age, size, profitability and market to book value of the firms. Age is calculated by taking the log of the age of the firm since its inception, size is calculated by taking the log of the total assets, profitability is calculated through net income to total assets ratio and market to book value is the ratio of market value to book value of equity.

Results

Table 1 presents descriptive statistics of abnormal returns. The first column depicts the event window of 21 days. The second column depicts the average of the abnormal returns whereby it is evident that all the mean values of abnormal returns are negative within the 21 day event window. The third column depicts the standard deviation around the average values. Fourth and fifth column depicts the minimum and maximum values in the abnormal returns. Sixth column depicts the skewness of the data and it is evident that the data is distributed towards the left. The last column depicts kurtosis of the data which shows that the abnormal returns are leptokurtic and having a very high peak. Hence the data is not normal.

Table1
Descriptive Statistics (Abnormal Returns)

Days	$\overline{AR}$	S.D	Minimum	Maximum	Skewness	Kurtosis
Day -10	-.0160	.14431	-1.20912	0.065964	-8.17429	68.48596
Day -09	-.0180	.14632	-1.229373	0.055166	-8.210058	68.87921
Day -8	-.0126	.14772	-1.236441	0.056333	-8.226941	69.07393
Day -7	-.0177	.14755	-1.23856	0.043427	-8.19749	68.71098
Day -6	-.0152	.14404	-1.205848	0.089262	-8.168517	68.43119
Day -5	-.0148	.14911	-1.25029	0.062622	-8.231493	69.11637
Day -4	-.0159	.14842	-1.245195	0.068922	-8.220037	68.99959
Day -3	-.0214	.14549	-1.230373	0.038189	-8.305305	69.93747
Day -2	-.0138	.14547	-1.210818	0.139479	-8.045677	67.16477
Day -1	-.0199	.14792	-1.240579	0.056358	-8.130484	67.94789
Day 0	-.0145	.14769	-1.23004	0.078353	-8.067986	67.20473
Day 1	-.0182	.14704	-1.237092	0.086095	-8.240157	69.23846
Day 2	-.0237	.14821	-1.219308	0.053246	-7.66728	61.90422
Day 3	-.0172	.14788	-1.236765	0.10101	-8.110574	67.76712
Day 4	-.0173	.14780	-1.236078	0.05971	-8.112316	67.75249
Day 5	-.0176	.14704	-1.230618	0.10098	-8.11646	67.86237
Day 6	-.0143	.14708	-1.224134	0.05954	-8.058933	67.0632
Day 7	-.0179	.14529	-1.224337	0.049768	-8.286082	69.73
Day 8	-.0222	.14499	-1.220003	0.043346	-8.163185	68.2589
Day 9	-.0138	.15322	-1.233162	0.361093	-7.084995	58.89229
Day 10	-.0220	.14838	-1.240341	0.062671	-8.022835	66.5697

Table2 depicts the results of Wilcoxon signed-rank test of abnormal returns for a sample of 72 observations. The first column depicts the event window of 21 days. The second column depicts the average of the abnormal returns. The third and fourth columns show the Wilcoxon singed-rank t-tests values (represented by W-value) and their respective probabilities.

Table2
Wilcoxon Signed Ranks test (Abnormal Returns)

Days	$\overline{AR}$	W-value	Significance
Day -10	-.0160	-.572	.567
Day -09	-.0180	-1.027	.304
Day -8	-.0126	-1.369	.171
Day -7	-.0177	-.634	.526
Day -6	-.0152	-.230	.818
Day -5	-.0148	-.701	.483
Day -4	-.0159	-.337	.736
Day -3	-.0214	**-2.211**	.027
Day -2	-.0138	-.163	.871
Day -1	-.0199	-.965	.334
Day 0	-.0145	-.791	.429
Day 1	-.0182	**-1.734**	.083
Day 2	-.0237	-1.487	.137
Day 3	-.0172	-.544	.586
Day 4	-.0173	-.623	.533
Day 5	-.0176	-.527	.598
Day 6	-.0143	-.965	.334
Day 7	-.0179	-.915	.360
Day 8	-.0222	**-2.424**	.015
Day 9	-.0138	-.505	.614
Day 10	-.0220	-1.437	.151

It is evident in Table2 that the average abnormal returns (given in column two) are negative in the event window of 21 days. Looking at the W-values (Wilcoxon signed-rank test) and their respective probabilities (given in column third and fourth respectively), it is evident that on day 1; its value is significant at 10 percent level of significance. This means that the market has shown negative reaction one day after the announcements of CSR activities, i.e. an investor loss 1.73 percent one day after the CSR announcement. This effectively means that the announcement of CSR activities has been negatively perceived by the investors.

The W-value is also statistically significant on day -3 and day 8 respectively. However, the W-values are not statistically significant for rest of the days pre and post within the event window.

Graph-1 Average Abnormal Returns to the announcements of CSR activities

The above graph shows the pattern of average abnormal returns for a 21 day event window. It is clear from the graph that all the returns are negative and is different from zero. The abnormal returns are statistically significant only for day -3, day 1 and day 8 respectively.

The descriptive statistics of cumulative abnormal returns are presented in Table 3. Similar to Table 1, the sixth and seven columns shows that the data is distributed towards the leftand also the cumulative abnormal returns are leptokurtic and having a very high peak. Hence the data is not normal.

Table 3
Descriptive Statistics (Cumulative Abnormal Returns)

Days	CAR	S.D	Minimum	Maximum	Skewness	Kurtosis
Day -10	-0.01598	0.144315	-1.20912	0.0659642	-8.1742899	68.48596
Day -09	-0.03395	0.289084	-2.438493	0.1010362	-8.3300869	70.235705
Day -8	-0.03057	0.292461	-2.465813	0.0789504	-8.3583756	70.549408
Day -7	-0.0303	0.294121	-2.475001	0.0864984	-8.3121535	70.027602
Day -6	-0.03294	0.290074	-2.444408	0.0982136	-8.3158515	70.076413
Day -5	-0.03002	0.29202	-2.456139	0.117409	-8.2989732	69.89345
Day -4	-0.03071	0.29644	-2.495486	0.1110341	-8.3197777	70.123087
Day -3	-0.03736	0.292787	-2.475569	0.0686905	-8.3609394	70.58045
Day -2	-0.03521	0.289233	-2.441191	0.1180187	-8.3321044	70.260138
Day -1	-0.03368	0.292031	-2.451397	0.1431814	-8.2089374	68.877897
Day 0	-0.03441	0.293447	-2.470619	0.0896941	-8.2823149	69.681487
Day 1	-0.03269	0.292296	-2.467132	0.0902565	-8.3638342	70.619142
Day 2	-0.04191	0.292414	-2.4564	0.088912	-8.1577555	68.125567
Day 3	-0.04096	0.293621	-2.456073	0.0989377	-8.0623292	67.035714
Day 4	-0.03453	0.294335	-2.472843	0.1166924	-8.2271644	69.056504
Day 5	-0.03492	0.293032	-2.466696	0.1166618	-8.2712553	69.56412
Day 6	-0.0319	0.291606	-2.454753	0.0793388	-8.3046003	69.913019
Day 7	-0.03221	0.291145	-2.448472	0.0920062	-8.275757	69.58105
Day 8	-0.04018	0.289026	-2.44434	0.075796	-8.3328321	70.24662
Day 9	-0.03604	0.293316	-2.453165	0.3290413	-8.07513	67.588405
Day 10	-0.03576	0.294088	-2.473503	0.2000539	-8.2386743	69.236052

Table 4 depicts the results of Wilcoxon signed-rank test for cumulative abnormal returns. The first column depicts the event window of 21 days. The second column depicts the average of cumulative abnormal returns whereby it is evident that all the mean values of cumulative abnormal returns are negative within the 21 day event window. The third and fourth columns show the Wilcoxon singed-rank t-tests values (represented by W-value) and their respective significance.

Table 4
Wilcoxon Signed-Rank Test (Cumulative Abnormal Returns)

Days	CAR	W-value	Significance
Day -10	-.0160	-.572	.567
Day -9	-.0340	-.634	.526
Day -8	-.0306	-.752	.452
Day -7	-.0303	-.634	.526
Day -6	-.0329	-.617	.537
Day -5	-.0300	-.157	.875
Day -4	-.0307	-.107	.915

Day -3	-.0374	-1.279	.201
Day -2	-.0352	-1.049	.294
Day -1	-.0337	-.600	.548
Day 0	-.0344	-.314	.753
Day 1	-.0327	-.550	.582
Day 2	-.0419	**-1.751**	.080
Day 3	-.0410	-1.139	.255
Day 4	-.0345	-.365	.715
Day 5	-.0349	-.466	.641
Day 6	-.0319	-.617	.537
Day 7	-.0322	-.370	.711
Day 8	-.0402	**-2.104**	.035
Day 9	-.0360	**-1.886**	.059
Day 10	-.0358	-.875	.381

In Table4, it is evident that all the $\overline{CAR}$sare negative in the event window of 21 days. While looking at the W-value (Wilcoxon signed-rank test) and their respective significance (given in column third and fourth respectively), it is evident that on day 2,the cumulative abnormal returns are significant at 10 percent level of significance and on day 8 and day 9, the cumulative abnormal returns are significant at 5 percent level of significance respectively.

This effectively means that cumulatively the market has shown negative reaction on day 2, day 8 and day 9 after the announcements of CSR activities, i.e. an investor loss 4.19percent value if holds shares cumulatively for two days (day 1 and day 2), loss 4.02 percent value and 3. 6 percent value if holds shares cumulatively for two days (day 7 and day 8) (day 8 and day 9) respectively.

The negative reaction suggests that investors view CSR activities as an expense which decreases their value. These results are somewhat similar to what Brammer et al., (2006) have proved in their study, whereby, they concluded that CSR has a negative impact on shareholders' wealth.

Graph-2 Average Cumulative Abnormal Returns to the announcements of CSR activities
The above graph shows the pattern of average cumulative abnormal returns for a 21 day event window. It is clear from the graph that all the returns are negative and is different from zero. This means that announcements

of CSR activities have a negative impact on shareholders' wealth. These average cumulative abnormal returns are statistically significant for day 2, day 8 and day 9 respectively.

In order to check the impact of other control variables on cumulative abnormal returns (CAR), the study uses regression analysis similar to that of Flammer (2013). This study has applied four models of regression analysis for CAR(-2, 2).

Table 5

Regression Analysis of Cumulative Abnormal Returns (-2, 2)

VARIABLES	Model 1 CAR (-2, 2)	Model 1 CAR (-2, 2)	Model 1 CAR (-2, 2)	Model 1 CAR (-2, 2)
Size	0.00848	0.0186	0.00604	0.0188
	(0.00849)	(0.0148)	(0.00861)	(0.0148)
Age	-0.0250	-0.0602	-0.0341	-0.0718
	(0.0257)	(0.0473)	(0.0263)	(0.0478)
Profitability	0.0496	0.0506	0.0438	0.0166
	(0.0640)	(0.123)	(0.0644)	(0.125)
Mvbv	-3.96e-05	0.000271	-1.78e-05	0.000430
	(0.000163)	(0.000621)	(0.000164)	(0.000629)
2.news			0.0189	0.0203
			(0.0163)	(0.0185)
3.news			0.0340	0.0410
			(0.0221)	(0.0253)
4.news			0.0200	0.0237
			(0.0312)	(0.0352)
Constant	-0.0436	-0.0561	-0.0272	-0.0553
	(0.0542)	(0.107)	(0.0551)	(0.107)
Observations	57	57	57	57
R-squared	0.038	0.215	0.095	0.280
Industry Effects	No	Yes	No	Yes
News Effects	No	No	Yes	Yes

Standard errors in parentheses
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

In Table 5, Model 1 shows the impact of control variables on CAR (-2, 2) without industry and event fixed effects. The results show that after excluding for both industry and event fixed effects, the results of all control variables are insignificant. This means that firm specific variables have no significant impact on cumulative abnormal returns.

Model 2 shows the impact of control variables on CAR (-2, 2) after including industry fixed effect and excluding event fixed effect. The study used industry fixed effect to check the CARs across all industries. The results show that all the 17 industries have no significant impact on CAR (coefficients of the industry dummies are not shown). This means that all the CARs are similar across all industries. Similarly, the results of all control variables are insignificant just like model 1.

Model 3 presents the impact of control variables on CAR (-2, 2) after including event fixed effect and excluding industry fixed effect. However, the results of all control variables along with event dummies are insignificant. This means that firm specific variables as well as CSR events have no significant impact on cumulative abnormal returns.

Finally, model 4 includes control variables along with industry and event dummies. The results show that control variables still have an insignificant impact on CARs. Also, all of the event dummies are insignificant showing that event effects have insignificant impact on CARs even after controlling for firm specific variables.

This shows that CAR are not influenced by CSR events and other variables. Also Like previous models, none of the industry dummies are significant.

Based on these results, it is concluded that the insignificant impact of CSR on CARs could be because of reduced sample size, as the study has excluded year 2014 from its regression analysis. Only 57 CSR events were included in the regression analysis.

Conclusion
In recent years, companies have engaged enormously in CSR activities. Companies around the world are nowadays taking keen interest in crafting a good environment, reducing the levels of global warming, providing employees with better work life and investing in the improvement of socio-health conditions in poor economies. On the other hand, wider effects of these activities have been discussed by researchers in their studies. There is ample empirical evidence that engaging in such CSR activities not only improves the contextual conditions around a company but also impacts the value of that company in a positive way.

This study attempts to explain the above mentioned issue by empirically examining the share price behavior around CSR news announcements through a standard event methodology proposed by Brown and Warner (1985) using the non-parametric Wilcoxon signed-rank test for testing the significance of abnormal returns around an event window of 21 days. Based on a sample of 72 CSR news from 2009 to 2014, the study finds abnormal returns for 36 companies.

Overall the results of the study revealed that the average abnormal returns ($\overline{AR}$) are negative in the event window of 21 days. While looking at the W-values (Wilcoxon signed-rank test) and their respective probabilities, the study documented significant negative abnormal returns on day -3, day 1 and day 8 respectively. Similarly, the study also documented negative $\overline{CAR}$ in the event window of 21 days. The Wilcoxon values were significant on day 2, day 8 and day 9. Based on these results, the alternative hypothesis of the study is accepted, i.e. CSR announcement has significant negative impact on shareholders' wealth.

The study also applied regression analysis after controlling for size, age, profitability and market to book value of equity along with industry fixed effect and event fixed effect. However, all the results of the regressions analysis were insignificant which might be because of the reduced sample size.

It can be concluded from the results of our study that CSR news announcements have negative impact on the shareholders' wealth as shareholders view the engagement of their company in the CSR activities as an expense rather than a long-term investment in the contextual conditions. The plausible reason for such results is that in developing countries such as Pakistan, investors compel corporate managers to produce high short-term profits, which is not possible by engaging in CSR activities as expenditures on such activities are long-term investment in the competitive context of the companies (Porter & Kramer, 2006; Atiq & Karatas-Ozkan, 2013). Thus, these long-term investments may not necessarily yield short-term profits and may even, supress them. Therefore, investors react negatively to CSR news announcements and consider CSR expense as an agency cost, as revealed by our study. Based on the results of the study, we recommend that as soon as CSR news is announced, equity investors with a short-term focus should sell the shares of the respective company, in order to avoid ending up with negative realized returns.

Future Research
The results of the study are somewhat similar to what Brammer, Brooks and Pavelin (2006) report in their study. However, results of regression analysis were insignificant. It is recommended that future studies should consider a broader set of news sample in order to get a clearer picture of the phenomenon under investigation. Furthermore, the regression analysis in this study is limited to a period of five years only, i.e. from 2009 to 2013 because of the unavailability of data for the year 2014. It is therefore recommended that future studies should also consider years onwards 2013 and a broader set of events in their regression analysis.

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