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The Effect of Dividend Announcements on Stock Prices in Capital Market of Bangladesh: The Case of Dhaka Stock Exchange

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Abstract: *This study analyzes the effect of different types of dividend announcements on the stock prices in Dhaka Stock Exchange during both bullish market in 2010 and bearish market in 2011. The different types of dividends are cash dividend, stock dividend, and combination of cash and stock dividend. The study empirically examines the abnormal returns in the prices of stocks listed with Dhaka Stock Exchange occurring as a result of cash dividend announcements only, stock dividend announcements only and combined cash and stock dividend announcements during 2010 and 2011 using conventional event study approach especially market adjusted model. The study concluded that there are significant negative abnormal returns in stock prices as a result of cash dividend announcements, but no significant abnormal returns in stock prices in response to stock dividend announcements, and combined cash and stock dividend announcements during both bullish market in 2010 and bearish market in 2011.*

Keywords: *Stock Dividend, Cash Dividend, Normal Gain, Abnormal Gain*

Background of the Study

This report is prepared to analyze the effect of corporate declarations such as cash dividend, stock dividend, or the combination of both stock and cash dividend on the prices of stocks in Dhaka Stock Exchange both during a bullish market and also during a bearish market. Corporations declare dividends, either cash or stock dividends, for the benefit of the shareholders. The main aim of corporate managers is to maximize shareholders' wealth. This aim of increasing shareholders' wealth can be achieved through different financing and investment decisions. Apart from the investment and financing decisions, corporate managers also need to take decisions regarding payment of dividends on a regular basis. Although question remains whether paying out earnings in the form of dividends would increase shareholders' value.

A lot of theoretical as well as empirical researches have been done over the last few decades regarding the impact of dividend announcements on stock prices. Usually giving

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out dividends is adjusted by decline in the stock prices. So eventually there is no impact of dividend on the asset value of the shareholders. The disclosure of dividend information is mandatory in the capital market of Bangladesh since it might have implications on the mindset of investors towards any particular stock.

Like many other stock markets of the world, it is also forbidden in the stock market of Bangladesh to trade with insider information since such information seriously affects the prices of the stocks when it comes out to the general investors. From the point of view of the stock market regulators, it is very important to restrict trading with insider information since it has an impact on the overall stock market. Generally, it is well observed that announcement of dividends have impacts on the stock prices of any particular company. Therefore the disclosure of dividend information is always considered as price sensitive information.

Normally, dividends are paid as either stock dividends or cash dividends or a combination of both. Some companies listed with Dhaka Stock Exchange pay only cash dividends, some pay only stock dividends, and some pay a combination of both stock dividends and cash dividends. When cash dividends are paid by companies, the shareholders get the benefit of direct cash income. On the other hand, when stock dividends are paid, shareholders get the benefit of increased amount of ownership in the respective companies.

Sometimes investors in the stock markets have different perceptions towards stock dividends and cash dividends. Some investors prefer stock dividend and some prefer cash dividend and some prefer a combination of both. Investors often react differently to the announcement of stock dividends and cash dividends. Most of the works done by previous researchers mainly analyzed the impact of overall dividend announcement on stock price. They didn’t distinguish between announcements of stock dividend and cash dividend separately. Although Rahman, Amin, and Siddikee (2012) worked on the effect of stock dividend and cash dividend announcements separately on share prices and concluded that for companies giving stock dividend, there are significant negative returns on the days prior to the announcement day and positive returns after the announcement day. On the other hand, there have been no significant positive or negative returns for the stocks of companies declaring only cash dividend. And there have not been any previous works on the impact of combined cash and stock dividend announcements on stock prices.

Moreover, the reactions of investors to different types of dividend announcements might be different during bearish trends than the way the investors react to dividend announcements during bullish trends. Investors might react either more favourably to dividend announcements in bearish market as compared to bullish market or less favourably in bearish market as compared to bullish market.

In this study, we will focus on the impact of different types of dividend announcements separately, which are only cash dividend, only stock dividend, and combination of stock and cash dividends, on the stock prices during two different important periods of the capital market of Bangladesh. One is in 2010 during which time the capital market of Bangladesh was on a massive bullish trend and another one is in 2011 during which time the capital market of Bangladesh was crashing drastically.

Thus the main purpose of this study is to determine and evaluate whether there are any impact of announcements of only cash dividends, only stock dividends, or a combination of stock and cash dividends on stock prices during bullish market and bearish market separately.

Objectives of the Study

The objectives of the study are:

1. To determine the effect of cash dividend announcements on the stock returns during bullish market and bearish market.
2. To determine the effect of stock dividend announcements on the stock returns during bullish market and bearish market.
3. To determine the effect of combined cash and stock dividend announcements on the stock returns during bullish market and bearish market.

Scope of the Study

Since this study is aimed at assessing the impact of dividend announcements on stock prices during bullish and bearish market, so we had to select two specific consecutive timelines when the capital market of Bangladesh were in bullish trend in one timeline and bearish in another. The capital market of Bangladesh was in bullish trend in the year 2010 before it crashed and turned into bearish in the year 2011. The impacts of dividend announcements in these two consecutive years could have been compared to assess how investors reacted to the news of dividend announcements during these two contrast scenarios. Thus, the years 2010 and 2011 have been selected to assess the effect of dividend announcements on stock prices during bullish and bearish trends respectively.

Limitations of the Study

The limitations of this study are as follows:

1. Time was not long enough to conduct this type of study more thoroughly.
2. Data collection and sorting were quite time consuming. Price data of different stocks for the year 2010 and 2011 were not available on the website of Dhaka Stock Exchange. They had to be collected from other sources.

3. Sample size for each types of dividend announcements are quite small since most companies listed with the Dhaka Stock Exchange do not declare same type of dividends each year. It is seen that most of the companies declared different type of dividends in 2010 and 2011. As such, only a few companies were found and thus selected for this study who declared same type of dividends in 2010 and 2011.
4. The length of the event window, i.e. the number of days before and after the event date selected for the study, is quite small which is only 5 days before and after the event date since the record date of some of the selected companies were found to be just on the sixth day after the event date. It would have become difficult to calculate the abnormal return after the record date as prices are usually adjusted after the record date.

Literature Review

So far, many studies have been conducted regarding the impact of dividend announcements on stock returns in different countries. The results of those studies show mixed pattern of impacts of dividend announcements on stock prices.

Hamid (2003) carried out an empirical study on DSE to determine the effect of dividend announcements on stock prices and found out that there is a negative relation between dividend announcements and stock return. He conducted the study on a sample of 137 companies listed in the Dhaka Stock Exchange with an event window of 61 days, 30 days before and after the event date. He found that shareholders lost almost 20 percent of value of their shares over the entire 60 days period. He concluded that stock values are irrelevant to dividend payments. Hamid used the traditional event study approach to determine the impact of dividend announcements on stock prices.

Another study conducted by Mehndiratta and Gupta (2010), points out that investors can earn abnormal returns from their stocks after the event date. Though, they didn’t find any abnormal return in the days preceding the announcement date. They conducted the study on a sample of fifteen listed companies in the National Stock Exchange with an event period of 60 days, 30 days before the event day and 30 days after the event day. They used a two stage approach to determine the response of stock prices to dividend announcements. The first stage consisted of estimation of parameters like beta based on ex-post returns on stocks and market index. And the second stage involved using these parameters to calculate abnormal returns around the event day.

In another study on effect of dividend announcements on prices of stock listed in Dhaka Stock Exchange conducted by Mamun, Hoque, and Mamun (2013), it was concluded that dividend declarations didn’t bring any gains to the investors. Rather the investors had to take loses due to substantial fall in prices of the stocks in their holdings both in the days before the event day and the days after the event day. They used the conventional event study methodology to determine the impact of dividend announcements on stock returns on a sample of 74 companies listed with the Dhaka Stock Exchange. They used a period of 61 days as the event window for their research.

Dharmaratne (2013) conducted a study on the effect of dividend announcements on stock prices listed in Colombo Stock Exchange. The study employed the conventional event study approach with a sample of 61 companies which have made 137 dividend announcements from 1999 to 2005. The study found out that stock prices reacted positively in response to dividend announcements. Stock prices were found to be increasing whether the dividend announced increased, or decreased, or even if there was no change in amount of dividend announced as compared to previous year's declarations.

Gunalp, Kadioglu, and Kilic (2010) in a study on securities listed with the Istanbul Stock Exchange, tried to assess the effect of cash dividend announcements on stock prices. They used a sample of 80 companies which have made 429 cash dividend announcements from 2003 to 2009. They concluded that there is a significant negative relationship between cash dividend announcements and stock returns after the announcement date. But there were no abnormal returns before the announcement day, leading to the conclusion that the regulation and supervision by the stock market regulators of Turkey are effective enough in preventing significant information leakage prior to the announcement day.

In a study on the stock price behavior in response to different types of news announcements in London Stock Exchange by Tucker, Guermat, and Prasert (2012), it was found that corporate events convey important economic information to investors. The study was conducted to analyze the stock price return of 100 UK companies in response to various news announcements. A data of 8,000 news announcements over a period of 10 years were collected. The conventional event study approach was used to assess the impact of the news announcements. It was found that investors react strongly to the news that have long-term economic implications, and do not react strongly to the news where economic implications are ambiguous. It was also seen that investors react more strongly to negative news than they react to positive news. There were clear signs of asymmetric reaction, sluggishness, over and under reaction, and information leakage.

Rahman, Amin, and Siddikee (2012) in a research tried to analyze the effect of different types of dividend announcements such as cash dividend and stock dividend on stock prices. They took a sample of 16 firms which declared only stock dividend and 23 firms which declared only cash dividend for the period of January 1, 2007 to December 31, 2007. By using the event study approach they concluded that there was no evidence of abnormal return on the announcements day. But they found that in case of stock dividend, there were significant negative returns on the days prior to the announcement day, and positive returns on the post-announcement days. However, in case of cash dividend announcements they found that there were no abnormal returns during the entire event window.

Methodology

Event Study Method

This study used the conventional Event Study Methodology which is generally used to assess the impact of dividend announcements on prices of the stock. Event Study Methodology is a commonly used statistical technique that helps in determining the effect of new firm-specific information on the prices of the stocks of those particular firms.

In an Event Study Methodology, the date of announcement of dividends is considered as the event date. Although there are several models of event study method, here the Market Adjusted Model is used to assess whether there are any abnormal returns of stock prices or not in response to dividend announcements. According to the Market Adjusted Model, the return of the index of the stock exchange is considered as the expected return. The DSE General Index is used to determine the expected return.

Event studies start with developing the hypothesis about how a particular event may affect the value of a firm. The hypothesis is to be developed based on the initial task of defining the event of interest and then identifying the period across which the stock prices of the selected firms will be examined. The period over which the hypothesis is to be tested is called the event window.

A total of 11 days have been selected as the event window i.e. 5 days before the announcement day and 5 days after the announcement day. The announcement day is also called the event day. The event day is considered as the Day 0. Whereas the 5 days prior to the event day is denoted with negative sign counted from Day -5 to Day -1. And the 5 days after the event day is denoted with positive sign counted from Day +1 to Day +5. Thus the event window ranges from Day -5 to Day +5. Once the hypothesis is developed, the main task of calculating abnormal return and testing the significance of the abnormal return begins.

The first step in an event study is to find the daily return of the sample stocks and the market index. The return of the stock is calculated from the closing prices of the selected stocks by using the following formula:

$$R_{it} = (P_{it} - P_{it-1}) / P_{it-1}$$

Where, R_{it} represents daily return of stock i on day t, P_{it} is the closing price of stock i on day t, and P_{it-1} is the closing price of stock i on day t-1.

Similarly the return of the market index is calculated from the following formula:

$$R_{mt} = (I_t - I_{t-1}) / I_{t-1}$$

R_{mt} represents the daily market index return on day t, I_t is the DSE General Index point on day t, and I_{t-1} is the DSE General Index point on day t-1.

Once the daily return of the sample stocks and the market index is calculated, then the abnormal return of each selected individual stocks is calculated for each day of the event window by using the formula already mentioned in the introduction chapter:

$$AR_{it} = R_{it} - R_{mt}$$

Where,

AR_{it} represents the daily abnormal return of the stock i at day t

R_{it} represents daily return of stock i at day t

R_{mt} represents the daily market index return on day t

The third step includes the calculation of average abnormal return of all the sample stocks for each day of the event window by using the following formula:

$$AR_t = \Sigma AR_{it} / N$$

Where, AR_t is the average abnormal return for N number of stocks. In this paper N = 10.

After the calculation of Average Abnormal Return (AAR), the Cumulative Abnormal Return (CAR) is calculated over the event window staring from first day of the event window and continued up to the last day of the event window.

Once the Average Abnormal Return and Cumulative Abnormal Return is calculated, t-test statistics was performed to determine whether the market adjusted abnormal return of the sample stocks has been statistically significant or not.

Hypothesis Development

Since this study mainly assesses whether there are any impact of cash dividend announcements only, stock dividend announcements only, and combined cash and stock dividend announcements on stock prices during bullish trends in 2010 and bearish trends in 2011, so statistically the null hypothesis of this study should be that there is no abnormal return of stock prices due to the announcement of dividends.

Therefore, the null hypothesis in case of cash dividend announcements for the years 2010 and 2011 are:

H_0 = There is no abnormal return of stock prices due to the announcement of cash dividend during bullish market in 2010.

H_0 = There is no abnormal return of stock prices due to the announcement of cash dividend during bearish market in 2011.

The null hypothesis in case of stock dividend announcements for the years 2010 and 2011 are:

H_0 = There is no abnormal return of stock prices due to the announcement of stock dividend during bullish market in 2010.

H_0 = There is no abnormal return of stock prices due to the announcement of stock dividend during bearish market in 2011.

And the null hypothesis in case of combined cash and stock dividend announcements for the years 2010 and 2011 are:

H_0 = There is no abnormal return of stock prices due to the announcement of combined cash and stock dividend during bullish market in 2010.

H_0 = There is no abnormal return of stock prices due to the announcement of combined cash and stock dividend during bearish market in 2011.

Sample Selection

The samples were selected based on the criteria that each company declared same type of dividends during bullish trend in 2010 and also during bearish trend in 2011. The sample companies should be the same for both the bullish trend and the bearish trend. Companies were selected through carefully observing the dividends announced. At first, 20 companies were selected for each type of dividend announcements made during bullish trend in 2010. Once a total of 60 companies were selected, 20 for each type of dividends, the announcements made by these same companies during the year 2011 were checked thoroughly. It was found that not all the companies declared same type of dividends in both years. As such the number of companies had to be reduced considerably. Later it was found that only 10 companies remained who declared only cash dividends during both 2010 and 2011, whereas 13 companies remained in the category of only stock dividend announcements during both bullish and bearish periods, and 15 companies remained in the category of combined stock and cash dividend announcements during both periods. But in order to keep equal number of samples for all three categories of dividend announcements, the sample size for stock dividend announcements and combined cash and stock dividend announcements were reduced to 10 from 13 and 15 respectively.

Among other criteria considered for selecting the samples, one is that each of the companies has to be actively traded within the event window. But luckily all of the finally selected 30 companies were found to be being actively traded.

And lastly, when the final sample of 30 companies were chosen for the study, it was carefully noted whether the price data of all these companies are available or not for the years 2010 and 2011. And none of the companies were found without missing any particular day’s price data surrounding the event day.

Data Collection

The data for conducting this research were collected from different sources. At first the Event Dates i.e. dividend announcement dates for each of the selected companies were identified from the news of the respective companies available at www.stockbangladesh.com

Then the closing prices of 2010 and 2011 surrounding the event date for all the stocks were obtained from www.stockbangladesh.com too. And once the closing prices were obtained, the corresponding points of the DSE General Index were obtained from the website of Dhaka Stock Exchange.

Findings and Discussion

In this chapter of the report we will examine the outcome of our analysis based on the hypotheses developed in the previous chapter. We will examine the results one by one for each type of dividend announcements made during bullish market and bearish market.

Results of Cash Dividend Announcements

The average abnormal returns are calculated for all the sample stocks to assess whether there were any abnormal returns in response to the cash dividend announcements during 2010 and 2011. The results were statistically tested by using t-test to determine the significance of the returns.

Table – 1: The Average Abnormal Return (AAR) of the stock prices in response to cash dividend announcements along with the T-Statistics and Cumulative Abnormal Return (CAR) during bullish market in 2010.

Day relative to Event Date	Average Abnormal Return (AAR)	T-Statistics	Cumulative Abnormal Return (CAR)
-5	-0.62%	-1.666530	-0.62%
-4	-0.27%	-0.475619	-0.89%
-3	0.23%	0.548645	-0.67%
-2	0.80%	0.613130	0.13%
-1	-0.35%	-0.378749	-0.22%
0	-2.60%	-2.109779	-2.82%
1	0.55%	0.363405	-2.27%
2	0.87%	0.768107	-1.40%
3	-0.93%	-0.815347	-2.33%
4	-0.04%	-0.045104	-2.37%
5	0.77%	0.754453	-1.60%

It can be seen from the Table 1 that the Average Abnormal Return on the day of announcement i.e. day 0, fell to -2.6% which is also found to be statistically significant at 5% level of significance during bullish market in 2010. Although it can be seen that the stock prices generated negative returns on 3 days out of the 5 days prior to the day of announcement (day -5, day -4, and day -1) but none of them were found to be statistically significant at 5% level of significance. On the other hand, investors gained positive returns on 3 days out of the 5 post announcement days (day +1, day +2, and day +5), but still none of them were statistically significant. This indicates that announcement of cash dividend came as a shock to the investors on the announcement day which lead to significant negative return. But the investors absorbed the bad news quickly and started trading normally from the next day.

Furthermore, it can be seen that the cumulated abnormal return has been in an up and down movement. Starting from being at loss before the announcement, it showed some positive return for the investors on day -2, but then again became negative on day -1. And it was on the announcement day when investors faced the highest loss. Although the loss amount decreased on post announcement days, yet there were losses in all the 5 post announcements days. These negative returns suggest that investors might have reacted negatively to the dividend announcement.

Table – 2: The Average Abnormal Return (AAR) of the stock prices in response to cash dividend announcements along with the T-Statistics and Cumulative Abnormal Return (CAR) during bearish market in 2011.

Day relative to Event Date	Average Abnormal Return (AAR)	T-Statistics	Cumulative Abnormal Return (CAR)
-5	0.52%	0.650968	0.52%
-4	-0.54%	-1.827830	-0.02%
-3	-0.30%	-0.408294	-0.32%
-2	-1.17%	-1.934922	-1.49%
-1	-0.39%	-0.376199	-1.88%
0	-4.82%	-2.635647	-6.70%
1	-0.45%	-0.372852	-7.15%
2	0.12%	0.185114	-7.03%
3	0.39%	0.507173	-6.64%
4	1.27%	1.661772	-5.37%
5	0.80%	0.936569	-4.57%

From Table 2 it is evident that investors faced a loss of 4.82% on their investment on the day of announcement of cash dividend which is statistically significant at 5% level of significance during bearish market in 2011. Except the first day of the window i.e. day -5, the stocks generated negative returns in last four days before the announcement day (i.e. day -4, day -3, day -2, and day -1) although the results were significant only on day -4 and day -2 at significance level of 5%. The investors had to take losses on first post announcement day, i.e. on day +1, but after that, investors had positive returns against their stocks although none of those gains were statistically significant. This suggests that investors were not so excited by the news of cash dividend announcements in 2011.

The cumulative abnormal returns were found to be showing negative return for all the days of the event window except day -5 where it was 0.52%. The highest negative return was on the first post announcement day (day +1) where it was -7.15% which indicates that investors responded very negatively to the dividend announcements. A negative CAR on day +5 indicates that the investors had to take losses during the entire event period.

Results of Stock Dividend Announcements

The average abnormal returns are calculated for the sample stocks to assess whether there were any abnormal returns in response to the stock dividend announcements during 2010 and 2011. The results were statistically tested by using t-test to determine the significance of the returns.

Table – 3: The Average Abnormal Return (AAR) of the stock prices in response to stock dividend announcements along with the T-Statistics and Cumulative Abnormal Return (CAR) during bullish market in 2010.

Day relative to Event Date	Average Abnormal Return (AAR)	T-Statistics	Cumulative Abnormal Return (CAR)
-5	0.22%	0.227831	0.22%
-4	1.22%	1.401073	1.44%
-3	0.07%	0.094139	1.51%
-2	-1.17%	-1.317078	0.34%
-1	-0.42%	-0.704557	-0.07%
0	1.12%	1.056678	1.04%
1	-0.17%	-0.121264	0.87%
2	0.87%	0.964414	1.74%
3	-0.59%	-0.630870	1.14%
4	0.23%	0.250803	1.37%
5	1.74%	2.096761	3.11%

From Table 3 it can be seen that investors gained positive returns from day -5 to day -3 but still those positive returns were not statistically significant at the level of 5% significance. Then the Average Abnormal Return appeared to register negative returns on day -2 and day -1. But again the AAR showed positive return on the announcement day followed by negative returns on day +1 and day+ 3 only. The rest of the days (day +2, day +4, and day +5) recorded positive returns, but only the return on day +5 was significant at 5% level of significance. This suggests that investors responded positively to the news of the dividend declaration on the announcement day, but again started behaving normally until the fifth post announcement day.

The cumulative abnormal return remained positive for all the days in the event window except on day -1, but then again became positive for the rest of the days. This suggests that investors had negative ideas about the dividend announcements until the news truly came out. A significant positive CAR on day +5 indicates that investors made profits on their investments during the event window period.

Table – 4: The Average Abnormal Return (AAR) of the stock prices in response to stock dividend announcements along with the T-Statistics and Cumulative Abnormal Return (CAR) during bearish market in 2011.

Day relative to Event Date	Average Abnormal Return (AAR)	T-Statistics	Cumulative Abnormal Return (CAR)
-5	0.09%	0.155918	0.09%
-4	0.91%	0.786398	1.00%
-3	-0.17%	-0.217909	0.83%
-2	-1.12%	-3.576647	-0.29%
-1	-1.07%	-1.523411	-1.36%
0	-2.37%	-1.716877	-3.73%
1	-0.31%	-0.277927	-4.04%
2	0.38%	0.668326	-3.66%
3	0.74%	1.345662	-2.92%
4	-0.99%	-1.278435	-3.91%
5	-0.12%	-0.142213	-4.03%

From Table 4 it can be clearly seen that the average abnormal return recorded negative returns from day -3 to day +1 where the negative return on day -2 were significant at the rate of 5% significance level. This suggests that the news of dividend announcement were already leaked well before the announcement date which the investors found quite dissatisfactory. But positive returns on the next two consecutive days indicate that investors adjusted themselves to the dividend announcements.

Although the cumulative abnormal return were positive on the first two days of the event window but it became negative from day -2 to the last day of the window. High negative cumulative returns on day 0, day +1, day +4, and day +5 suggests that investors were not satisfied at all about the stock dividend announcements.

Results of Combined Cash and Stock Dividend Announcements

The average abnormal returns are calculated for the sample stocks to assess whether there were any abnormal returns in response to the announcements of combined cash and stock dividend during 2010 and 2011. The results were statistically tested by using t-test to determine the significance of the returns.

Table – 5: The Average Abnormal Return (AAR) of the stock prices in response to combined cash and stock dividend announcements along with the T-Statistics and Cumulative Abnormal Return (CAR) during bullish market in 2010.

Day relative to Event Date	Average Abnormal Return (AAR)	T-Statistics	Cumulative Abnormal Return (CAR)
-5	1.01%	1.292225	1.01%
-4	1.24%	1.004615	2.25%
-3	-0.21%	-0.254853	2.04%
-2	-1.57%	-2.409369	0.47%
-1	-0.41%	-0.470103	0.06%
0	1.29%	0.964745	1.34%
1	-0.28%	-0.332127	1.06%
2	-0.32%	-0.547717	0.73%
3	-0.45%	-0.955670	0.29%
4	0.31%	0.433048	0.59%
5	-0.56%	-0.469904	0.04%

From Table 5 it can be identified that although there were positive returns on day -5 and day -4, but the returns fell to negative percentages from day -3 to day -1 leading to the suggestion that there was a leakage of the announcement news which was not satisfactory at all for the investors. The investors' loss of 1.57% on day -2 was statistically significant at 5% level of significance. But on the day of announcement, the average abnormal return recorded positive return leading to the suggestion that investors somewhat were satisfied with the announcement although it was not statistically significant. Then again returns became negative on post-announcement days except on day +4.

But the cumulative abnormal returns for all the event days were found to be positive leading to the conclusion that investors earned positive overall returns during the entire period of the event window.

Table – 6: The Average Abnormal Return (AAR) of the stock prices in response to combined cash and stock dividend announcements along with the T-Statistics and Cumulative Abnormal Return (CAR) during bearish market in 2011.

Day relative to Event Date	Average Abnormal Return (AAR)	T-Statistics	Cumulative Abnormal Return (CAR)
-5	1.05%	1.850373	1.05%
-4	0.62%	1.158601	1.66%
-3	-0.86%	-2.032567	0.80%
-2	-2.06%	-3.257608	-1.26%
-1	0.52%	0.644820	-0.74%
0	0.03%	0.015475	-0.71%
1	-0.17%	-0.200793	-0.88%
2	1.01%	1.725908	0.13%
3	-0.31%	-0.730642	-0.18%
4	0.63%	1.185691	0.45%
5	0.63%	0.834570	1.08%

From Table 6 it can be seen that despite the significant positive return on day -5 at 5% level of significance, there was significant negative returns i.e. losses for the investors, on day -3 and day -2 at 5% level of significance. Although there was positive return on the day of announcement, but it was not statistically significant. And on the post announcement days, there were up and down changes between positive and negative returns but none of these returns were statistically significant at 5% significance level.

The negative cumulative abnormal return from day -2 to day +1 shows that investors got the information of the dividend announcement earlier before official declaration and were not satisfied with the declaration. But positive cumulative returns on day +4 and day +5 indicate that investors got themselves adjusted to the announcement.

Conclusion

The main purpose of this study was to determine whether the announcement of cash dividends, stock dividends, or a combination of cash and stock dividends during bullish market and bearish market affects the stock prices in Dhaka Stock Exchange. The research was conducted on a sample of 30 companies, 10 for each type of dividends. The study used traditional event study approach to analyze the effect. As per the event study approach, the average abnormal returns were calculated and then the cumulative abnormal returns were also calculated from the average abnormal return. The significance of the average abnormal returns was tested by calculating t-Statistics. Before starting the calculations, 6 null hypotheses were developed for the three different types of dividend announcements for bullish market in 2010 and bearish market in 2011.

From the findings discussed in the previous chapter, we can see that the announcements of cash dividend generated significant negative returns both during bullish and bearish markets on the announcement days. These significant negative returns might indicate that the amount of cash dividends declared by the companies didn't fulfil the expectations of the investors. And thus they reacted negatively. It can be seen that the negative returns in 2011 was higher than the negative returns during bullish market in 2010. This reflects that investors were more dissatisfied by the news of dividend announcements in 2011 than they were in 2010.

Since there were significant abnormal negative returns during both bullish market of 2010 and bearish market of 2011, so we reject both of the null hypotheses of cash dividend announcement developed for bullish market and bearish market.

In case of stock dividend announcements, we can see from the findings discussed in the previous chapter that the announcements of stock dividend during bullish market in 2010 generated positive return on the day of announcement but it was not statistically significant. On the other hand, the announcement of stock dividends during bearish market in 2011 generated negative return on the announcement day which was not also statistically significant. Since the results in 2010 and 2011 were not significant, so we can conclude that investors were neither motivated nor dissatisfied by the dividend announcements of 2010 and 2011 respectively.

Since the abnormal returns were not significant during both 2010 and 2011, so we accept both the hypotheses that there is no abnormal return of stock prices due to the announcement of stock dividend during bullish market in 2010 and no abnormal return of stock prices due to the announcement of stock dividend during bearish market in 2011.

And in case of combined cash and stock dividend announcements, we can see that although there were positive returns on the announcement days of combined cash and stock dividends during bullish market as well as bearish market yet none of these returns were statistically significant at 5% level of significance. These non-significant positive returns indicate that investors were not responsive to the announcement of combined cash and stock dividend both in 2010 and 2011.

Since there were no significant abnormal returns during both 2010 and 2011, so we accept the hypotheses that there is no abnormal return of stock prices due to the announcement of combined cash and stock dividend during bullish market in 2010 and no abnormal return of stock prices due to the announcement of combined cash and stock dividend during bearish market in 2011.

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Appendices

Appendix A: List of Companies selected to assess the Effect of Cash Dividend Announcements on Stock Prices and their Announcements Dates during 2010 and 2011

Company Name	Dividend Announcement Date during Bullish Market	Dividend Announcement Date during Bearish Market
ACI Limited	21-Apr-10	21-Apr-11
Apex Adelchi Footwear Ltd.	07-Apr-10	27-Mar-11
Apex Tannery Ltd.	11-Aug-10	14-Aug-11
Bata Shoe Company (BD) Ltd.	20-Apr-10	21-Apr-11
Berger Paints Bangladesh Ltd.	12-Apr-10	07-Mar-11
Delta Spinners Ltd.	12-Dec-10	01-Nov-11
Glaxo SmithKline Ltd.	17-Feb-10	13-Feb-11
Heidelberg Cement Bangladesh Ltd.	15-Apr-10	20-Apr-11
Meghna Cement Mills Ltd.	02-May-10	23-May-11
Reckitt Benckiser (BD) Ltd.	27-Apr-10	18-Apr-11

Appendix B: List of Companies selected to assess the Effect of Stock Dividend Announcements on Stock Prices and their Announcements Dates during 2010 and 2011

Company Name	Dividend Announcement Date during Bullish Market	Dividend Announcement Date during Bearish Market
Bangladesh Finance & Investment Company Ltd.	21-Apr-10	10-Apr-11
Beximco Pharmaceuticals Ltd.	29-Apr-10	28-Apr-11
BSRM Steel Ltd.	18-Apr-10	03-Apr-11
Metro Spinning Ltd.'2010	11-Oct-10	27-Oct-11
Pioneer Insurance Company Ltd.	12-Apr-10	26-Apr-11
Premier Bank Limited	17-Feb-10	06-Mar-11
Quasem Drycells Ltd.	19-Oct-10	23-Oct-11
Summit Power Ltd.	30-Mar-10	30-Mar-11
The City Bank Limited	30-Mar-10	31-Mar-11
Uttara Finance & Investment Ltd.	10-May-10	24-Apr-11

Appendix C: List of Companies selected to assess the Effect of Combined Cash and Stock Dividend Announcements on Stock Prices and their Announcements Dates during 2010 and 2011

Company Name	Dividend Announcement Date during Bullish Market	Dividend Announcement Date during Bearish Market
AB Bank Ltd.	02-May-10	08-May-11
Confidence Cement Ltd.	11-Mar-10	28-Apr-11
DESCO	31-Oct-10	30-Oct-11
Meghna Petroleum Limited	10-May-10	15-Mar-11
Olympic Industries Ltd.	31-Oct-10	30-Oct-11
Prime Bank Ltd.	24-Feb-10	20-Feb-11
Renata Ltd.	25-Apr-10	02-May-11
Square Pharmaceuticals Ltd.	18-Jul-10	24-Jul-11
Square Textiles Ltd.	22-Apr-10	20-Apr-11
United Leasing Company Ltd.	10-Feb-10	03-Apr-11