

# PRICE REACTION TO DIVIDEND INITIATIONS AND OMISSIONS IN EMERGING MARKET: EVIDENCE FROM PRE AND POST MARKET CRISIS IN BANGLADESH

Sabur Mollah, University of Botswana

## ABSTRACT

*Dividend signalling and information content of dividends are areas of interest in financial literature. A vast majority of the research conducted on information content of dividend. However, no study has examined the effectiveness of dividend announcements as a signalling device in the stock market of Bangladesh. This study employs conventional event study methodology to investigate whether dividend announcements convey information to the market or whether investors dividend announcements as the signalling device of the firm's prospects. The analysis is completed for the time period before and after the 1998 market crisis in Bangladesh. The sample consists of cash dividend announcements for Dhaka Stock Exchange (DSE) listed firms preceding and following the market crisis. The empirical results suggest that the reactions to dividend announcements are not significant either preceding or following the financial crisis in Bangladesh, therefore, announcements of dividends neither convey information to the market nor do investors consider dividend announcements as a signal.*

## INTRODUCTION

Numerous studies conducted in different countries have documented that the announcement of changes in dividends and earnings convey specific information to the market (Pettit, 1972; Charest, 1978; Aharony and Swary, 1980; Woolridge, 1982 and 1983; Asquith and Mullins, 1983; Brickley, 1983; Divecha and Morse, 1983; Benesh *et al.* 1984; Dielman and Oppenheimer, 1984; Eades *et al.* 1985; Wansley and Lane, 1987; Aharony *et al.* 1988; Born, 1988; Ghosh and Woolridge, 1988; Healey and Palepu, 1988; Ghosh and Woolridge, 1991; John and Lang, 1991; Marsh, 1993; and Abeyratna *et al.* 1996). However, recent studies that have examined the simultaneous announcements by firms have discovered that the signal of dividends and earnings may either corroborate or contradict each other or, in consequence, influence the level of any abnormal returns, which are earned by investors (Kane *et al.* 1984; Easton, 1991; Eddy and Seifert, 1992). Nevertheless, previous empirical studies suggest that positive (negative) dividend change announcements produce positive (negative) common stock price changes (Asquith and Mullions, 1983; Healey and Palepu, 1988; and Michaely *et al.* 1995).

The price reaction to the announcements of dividends in the Dhaka Stock market of Bangladesh is likely to be different from developed markets. Therefore, this study attempts to investigate whether dividend announcement convey information to the security market of Bangladesh or whether investors in Bangladesh consider dividend announcements as the signaling device of firm's future prospects. After the financial crisis in Bangladesh market in 1998, there were a significant changes in institutional setting such as the introduction of online trading system and as well as Central Depository System (CDS) but there was no significant change in the legal framework as the controlling mechanism for the stock market. To compare the price reaction to dividend announcements in the preceding and following financial crisis and to test whether financial reform in the stock market of Bangladesh in 1998 brings any change in the market scenario, this study captures dividend initiations, omissions, and dividend maintaining announcements in the pre and post financial crisis in Bangladesh. The empirical results suggest that

security prices do not react to dividend initiations, omissions or unchanged dividend announcements and financial reform does not help to improve the market scenario.

The rest of this paper is divided into four sections. The reviews of all the major theoretical and empirical evidence along with the critical evaluation for identifying the security price reactions to the announcements of dividends are included in section II. Section III contains the description of data and methodology of the empirical analysis. The empirical results are reported in section IV. The summary and the concluding remarks are incorporated in section V.

## THEORETICAL BACKGROUND

Miller and Modigliani (M-M) (1961) provide the most comprehensive argument in support of the irrelevance of dividends. M-M maintained that dividend policy has no effect on the share prices of the firm, i.e., whether profit is paid as dividend or retained does not make any difference. Under the condition of perfect capital markets, rational investors, and the absence of tax discrimination, (i.e. between dividend income and capital gains), given the firm's investment policy, its dividend policy may have no influence on the market price of shares (Miller and Modigliani, 1966).

On the other hand, the bird-in-the-hand theory claims that stockholders prefer dividend payments to earnings; therefore, dividend policy is relevant to the value of shares. The leading proponents of the bird-in-the-hand theory (Gordon, 1962; and Lintner, 1962) view that stockholders value a dollar received in dividends more highly than a dollar of earnings retained. Gordon (1963) and Walter (1963) also support the dividend relevance doctrine.

Michaely et al. (1995) investigate both the immediate reaction to the initiation or omission of dividends and the long term post announcement price performance and their findings are quite consistent with prior empirical evidence (e.g., Asquith and Mullins, 1983; and Healey and Palepu, 1988) that dividend omission leads to price drops and prices increase as a result of dividend initiation.

Kalay and Loewenstein (1985) find that during a three-day period surrounding dividend announcement, the actual returns, on average, significantly exceed both the returns predicted by the market model and the average daily returns realized over a recent period. Nevertheless, they mention that the market reaction to dividend announcements is sluggish, i.e., the excess returns persist for up to four trading days after the announcement date. In a subsequent study, Eades *et al.* (1985), find that for the sub-sample of dividend announcements that are separated sufficiently from ex-dividend dates, there is no evidence of sluggishness. They confirm that the market reaction to dividend announcements is biased.

Bajaj and Vijh (1995) that the average excess returns to all dividend announcements increases as the firm size and stock price decreases presented different results. Their findings on the firm size and stock price effects suggest that the observed price reactions may be due to microstructure-based reasons. Market microstructure can affect stock prices during dividend announcement periods for two reasons: the spillover of tax-related trading around ex-dividend days and trading behavior related to the dissemination of dividend information. The summary of the major empirical studies on the security price reaction to dividend announcements are presented in Table 1.

Despite a vast majority of studies published on price reaction to dividend announcements in the developed markets, very few are in the emerging markets. However, most of those studies employed event study methodology but researchers applied a variety of approaches and considered different event study periods to analyze the data. Overall, the empirical results suggest that that positive dividend change announcements produce positive stock prices and vice versa.

Table 1: Major Studies on Price Reaction to the Announcements of Dividend

Author(s)	Data Set	Method Used	Findings Regarding Security Price Reaction
1. Aharony and Swary, 1980	384 dividend increasing, 47 dividend decreasing, and 2968 dividend maintained announcements for NYSE listed 149 industrial firms for the period of 1/1/1963 – 31/12/1976.	(1) Measurement of Abnormal Performance, and (2) Cumulative Effects of Abnormal Returns Approach of the event study methodology for the period of $\pm 10$ days.	1) Dividend increasing announcements: stock price increases. 2) Dividend decreasing announcement: stock price decreases. 3) Dividend maintained announcements: no change in stock prices.
2. Asquith and Mullins, 1983	All dividend initiation announcements of 168 NYSE listed firms for the period of 1954-1963.	(1) T-Test Approach of average excess return, and (2) Regression Approach of the event study methodology for the period of $\pm 10$ days.	Dividend initiation announcements: stock price increases and in general increases shareholders wealth.
3. Woolridge, 1983	317 dividend-increasing announcement and 50 dividend decreasing announcements of NYSE listed 225 firms for the period of 1970-1977.	Comparison Period Return Approach of the event study methodology for the period of $\pm 10$ days.	1) Dividend increasing announcements: stock price increases. 2) Dividend decreasing announcement: stock price decreases.
4. Fehr's et al. 1988	1015 dividend increasing, and 65 dividend decreasing announcements of US firms for the period of 1/1/1980 – 31/12/1984.	(1) Measurement of Abnormal Performance, and (2) Cumulative Effects of Abnormal Returns Approach of the event study methodology for the period of $\pm 5$ days.	1) Dividend increasing announcements: stock price increases. 2) Dividend decreasing announcement: stock price decreases.
5. Woolridge and Ghosh, 1988	408 announcements of dividend cut of NYSE listed 12 firms for the period of 1971-1982.	Comparison Period Return Approach of the event study methodology (period of $\pm 1$ Quarter).	Dividend cuts announcement: stock price falls.
6. Eddy and Seifert, 1992	Contemporaneous and non-contemporaneous dividend announcements of 1111 US firm for the period of 1983-1985.	(1) Mean Adjusted Return Approach, and (2) Regression Approach of the event study methodology for the period of -3 days and +1 day.	1) Price reaction to the joint announcement is significantly greater than just one single announcement. 2) Price reaction to the announcement of joint announcement is approximately twice that to a non-contemporaneous announcement. 3) Price reaction to joint contradictory announcement is not significant.
7. Dhillon and Johnson, 1994	61 dividend increasing, and 70 dividend decreasing announcements of NYSE listed firms for the period of 1/1/1978 – 31/12/1987.	Mean Adjusted Return Approach of the event study methodology for the period of $\pm 10$ days.	1) Dividend increasing announcements: stock price increases. 2) Dividend decreasing announcement: stock price decreases.
8. Michaely et al. 1995	561 cash dividend initiations and 887 cash dividend omissions announcement of NYSE listed firms for the period of 1964-1988.	Buy-and-hold strategy of the event study methodology for the period of $\pm 1$ day.	1) Dividend initiation announcements: stock price increases. 2) Dividend omission announcement: short-term price impact is negative.
9. Abeyratna et al. 1996	Dividend increase, decrease, and maintained announcements of 617 UK firms for the period of 1/1/1991 – 30/6/1991.	Measurement of Abnormal Performance (T-Test) Approach of the event study methodology for the period of $\pm 1$ day.	1) Dividend increasing announcements: stock price increases. 2) Dividend decreasing announcement: stock price decreases.
10. Impson, 1997	660-dividend decrease announcement of US unregulated firms (1974 – 1993) and 65 dividend decrease announcements of US public utility period of 1974 – 1993.	Regression Approach of the event study methodology for the period of $\pm 1$ day.	Dividend decrease by public utilities prompt stronger negative market reactions than similar announcements by unregulated firms.

The empirical part of this paper investigates the security price reaction to the announcement of dividends in an emerging market. The dividend announcements are divided into three categories: good news/dividend initiations, bad news/dividend omissions and no news/dividend maintaining announcements. An event study methodology is used considering four event periods (60, 30, 20, and 10 days preceding and following the announcement of dividends) to compare the mean abnormal returns between the observed period (preceding the announcement) and the comparison period (following the announcement) and to examine whether the abnormal returns preceding and following the announcements are significantly different from zero.

## DATA AND METHODOLOGY

This section of the paper employs a conventional event study methodology to examine the stock price reaction to the announcement of dividends. The announcement day is defined as the event day (Day = 0), which is the day before the day on which dividend announcement news is published in the daily newspapers or in the daily stock price quotations. The observation periods are -60 days, -30 days, -20 days and -10 days of the event day; +60 days, +30 days, +20 days and +10 days of the event day are the comparison periods for the study.

Primarily, all of the listed companies of Dhaka Stock Exchange are considered as the population of this study for the period of 1988-2003. However, as because of financial crisis in Asian financial markets in 1997/98 and a great deal of speculation, Dhaka stock market crashed in 1998. An automated trading system replaced the traditional outcry trading and government reformed Security Exchange Commission (SEC) regulations to protect general investors and to ensure transparency in the securities market of Bangladesh, therefore, this study focused on the preceding (1988-1997) and following (1999-2003) market reform of Bangladesh. A part of the market data was collected from the Dhaka Stock Exchange price quotations, published and unpublished records of the Dhaka Stock Exchange, and the data channel (DataStream), and the rest of the data was collected from Dhaka Stock exchange database. The announcement dates are obtained from the Dhaka Stock Exchange daily price quotations for this study.

Daily share price returns are estimated according to the following equation (dividends are not included to estimate the stock returns):

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

Where,

$R_{it}$  = Stock return on day 't'

$P_{it}$  = Stock price on day 't' and

$P_{it-1}$  = Stock price on day 't-1'

Abnormal returns are calculated according to the following equation:

$$AR_{it} = R_{it} - E(R_{it}) \quad (2)$$

Where,

$AR_{it}$  = Abnormal return on day 't' and

$E(R_{it})$  = Expected return on day 't'

The expected return is derived using the well-known market model and based on the previous 300 days of the event study period.

Therefore, the expected returns 'E(R<sub>it</sub>)' are calculated as:

$$E(R_{it}) = \hat{\alpha} + \hat{\beta} R_{mt} \quad (3)$$

Where,

$\hat{\alpha}$  = Predicted Value of Constant term  
 $\hat{\beta}$  = Predicted Value of Beta Coefficient, and  
 $R_{mt}$  = Market return on day 't'  $\{( \text{Price Index}_t - \text{Price Index}_{t-1} ) / \text{Price Index}_{t-1} \}$

The Dhaka Stock Exchange index comprises both frequently and infrequently traded shares. However, it is also known that frequently traded shares cause upward bias and infrequently traded shares cause downward bias. Scholes and Williams (1977) and Dimson (1979) explained the problem of infrequent trading bias in the financial markets and mentioned the problem of using OLS model. They suggest considering lag and lead factor for adjusting upward and downward bias. On the other hand, Bartholdy and Allan (1994) considered Scholes and Williams (1977) and Dimson's (1979) suggested lag and lead factors alongside the OLS model but they found more stability of the coefficients in case of using the OLS model. Therefore, using the market model for predicting constant terms ( $\hat{\alpha}$ ) and beta coefficients ( $\hat{\beta}$ ) is quite justified for this study.

All cash dividend announcements of the listed firms of the Dhaka Stock Exchange over the period of 1988-2003 are primarily considered as the sample of the study. There were 801 cash dividend announcements in the sample period but 59 of them we excluded as the announcements for year 1998. Out of remaining 742 announcements, 232 cash dividend announcements are excluded because those announcements accompanied earnings and/or rights and/or stock dividend announcements and/or the announcements were made in the event study period. Therefore, the final sample consists of 510 cash dividend announcements amongst 352 announcements in the preceding and 158 in the following financial crisis in the stock market of Bangladesh. There are 198 dividend increasing announcements (initiations), 79 dividend-decreasing announcements (omissions), and 75 dividend maintaining announcements in the pre-crisis sample (1988-97) and 70 increasing (initiations), 46 decreasing (omissions), and 42 dividend maintaining announcements in the post-crisis sample (1999-03).

Hypothesis of the study:

$H_0$ : *The mean abnormal returns of the observation period and comparison period are not significantly different from zero.*

The empirical part of this paper investigates the security price reaction to the announcement of increasing dividends (initiations), decreasing dividends (omissions) and maintaining dividends. To investigate the security price reaction to the announcement of dividends, the empirical part compares the abnormal returns of the observation and comparison period for four event study periods ( $\pm 60$  days,  $\pm 30$  days,  $\pm 20$  days and  $\pm 10$  days) simultaneously.

## EMPIRICAL EVIDENCE

We discussed the empirical results in this section. The discussion is broken down into three parts. The first part discusses the price reaction to good news or dividend initiations. The second part discusses the price reaction to bad news or dividend omissions. Finally, the third part discusses the price reaction to no news or dividend maintaining announcements.

### Good News/Dividend Initiations

The mean abnormal returns in the pre-crisis sample are -.0087%, -.028%, -.0062% and -.010% in the observation periods -60 days, -30 days, -20 days, and -10 days respectively but these returns decrease in the comparison periods +60 days, +30 days, and +20 days, and +10 days (-.12%, -.16%, -.15%, and -.012). However, the mean abnormal returns in the post-crisis sample are -.20%, -.22%, -.28%, and -.31% in the observation periods -60 days, -30 days, -20 days, and -10 days respectively but these returns slightly increase in the comparison periods +20 days, and +10 days (-.24%, and -.28%) and decreases in +30 days (-.23%), but remains unchanged in +60 days(-.20%). Despite a slight decrease of returns after the increasing announcements in the pre-crisis sample, the effect of the announcement is mixed in the post-crisis sample; therefore, the signal of this sort of announcement is unclear (see table 2).

The correlation coefficients between abnormal returns of observation periods and comparison periods of the pre-crisis sample are -.232, -.076, -.243, and .116 and the probability values are .075, .690, .301, and .750 respectively for  $\pm 60$  days,  $\pm 30$  days,  $\pm 20$  days and  $\pm 10$  days. However, the correlation coefficients between abnormal returns of observation periods and comparison periods of the post-crisis sample are -.019, -.062, -.228, and -.108 and the probability values are .886, .745, .334, and .766 respectively for  $\pm 60$  days,  $\pm 30$  days,  $\pm 20$  days and  $\pm 10$  days. The correlation coefficients indicate a negative relationship between the abnormal returns of the observation periods and comparison periods for dividend initiations in all the study periods ( $\pm 60$  days,  $\pm 30$  days,  $\pm 20$  days and  $\pm 10$  days) except pre-crisis  $\pm 10$  days. Nevertheless, these results do not explain a high degree significant correlation between the abnormal returns of observation periods and comparison periods even in a single pair (see table 3).

The mean difference between the abnormal returns of the observation and the comparison periods of the pre-crisis samples are .0012, .0013, .0014, and .0001 respectively for  $\pm 60$  days,  $\pm 30$  days,  $\pm 20$  days and  $\pm 10$  days. However, the mean difference between the abnormal returns of the observation and the comparison periods of the post-crisis sample are .0001, .0001, -.0004, and -.0003 respectively for  $\pm 60$  days,  $\pm 30$  days,  $\pm 20$  days, and  $\pm 10$  days. The t-values of the pre-crisis sample are 1.772, 1.681, 1.340, and .016 respectively. Their probability values are .082, .103, .196, and .987 respectively for  $\pm 60$  days,  $\pm 30$  days,  $\pm 20$  days and  $\pm 10$  days. However, the t-values and the probability values of post-crisis sample are .023, .086, -.208 and -.105, and .981, .932, .837 and .919 respectively for  $\pm 60$  days,  $\pm 30$  days,  $\pm 20$  days and  $\pm 10$  days. These results failed to imply that the mean difference of the abnormal returns between observation and comparison periods is not significantly different from zero either in the preceding or following financial crisis sample (see table 4). Nevertheless, the sequence charts of the abnormal returns for the event study periods of  $\pm 60$ ,  $\pm 30$ ,  $\pm 20$ , and  $\pm 10$  days (Figure 1 and 2) support the same argument. Therefore, the empirical evidence contradicts with the previous studies of price reactions to dividend initiations (see Table 4).

Figure 1: Good News/Dividend Initiations: Pre-crisis Sample (1988-1997)

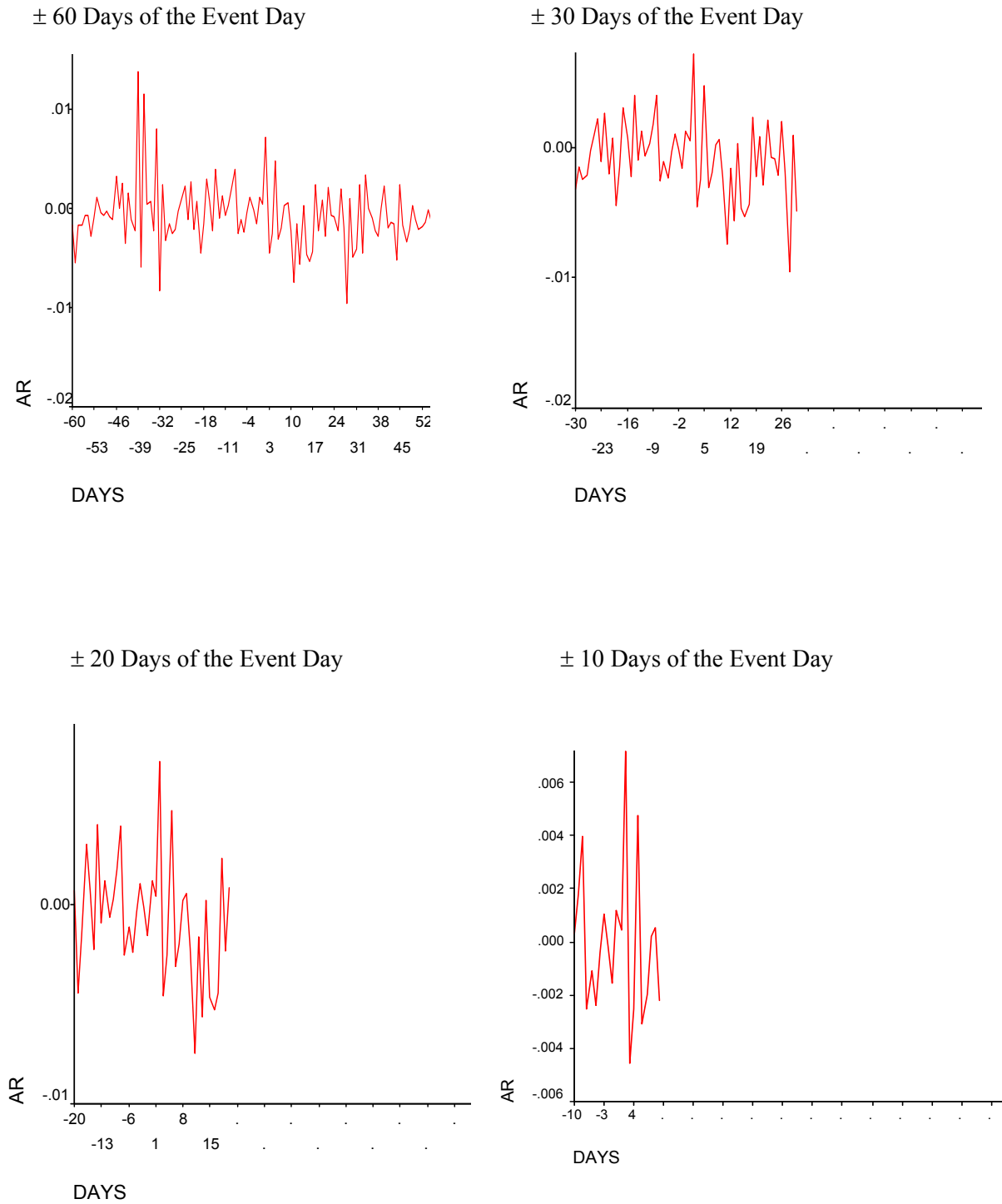
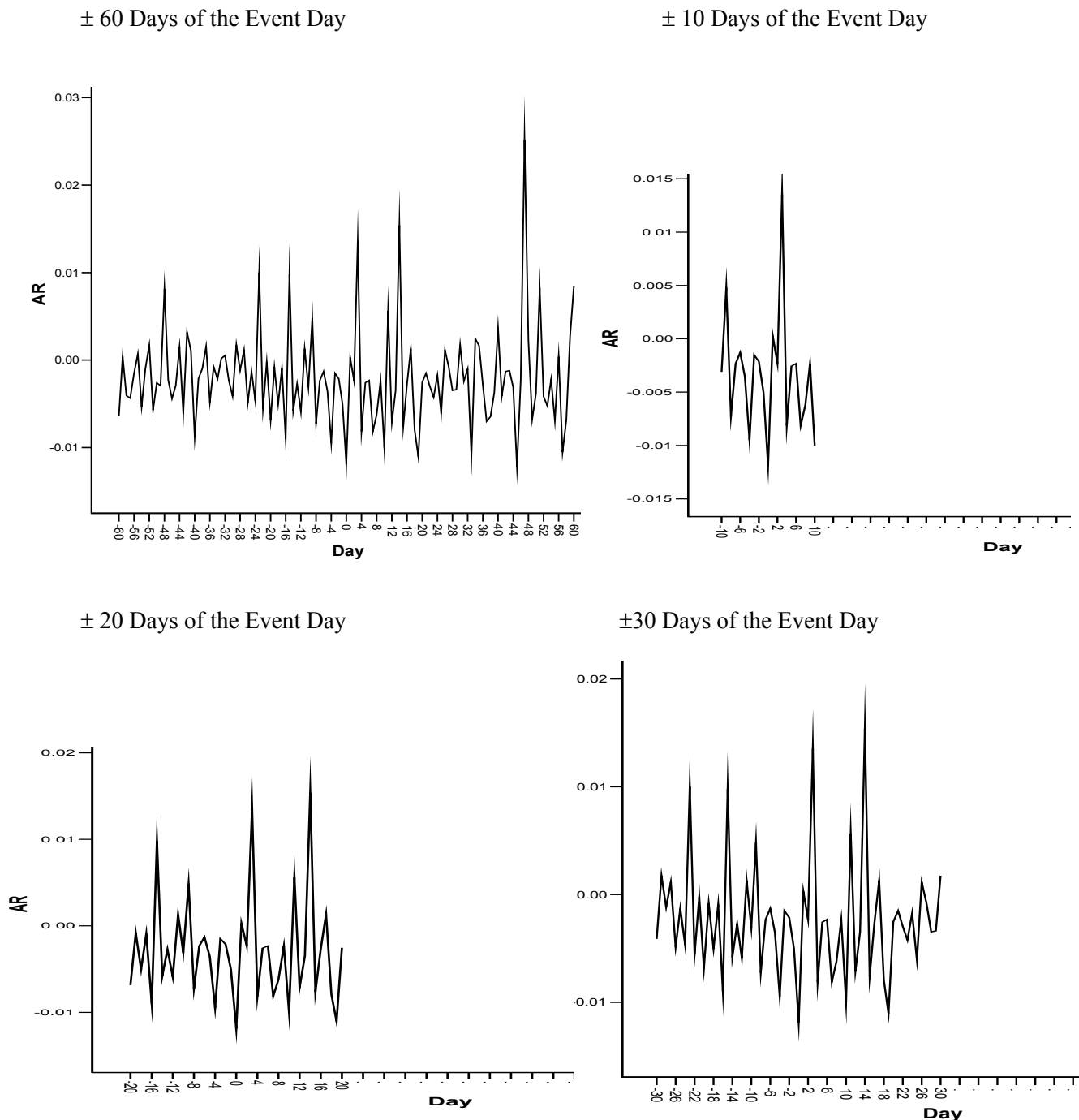


Figure 2: Good News: Post-crisis Sample (1999-2003)



Bad News/Dividend Omissions

The mean abnormal returns in the pre-crisis sample are .75%, -.76%, -.77% and -.81% in the observation periods -60 days, -30 days, -20 days, and -10 days respectively, but these returns decrease in the comparison periods +60 days, +30 days, and +20 days, and +10 days (-.91%, -.89%, -.96%, and -1.03%). However, the mean abnormal returns in the post-crisis sample are .02%, .01%, -.03% and -.18% in the observation periods -60 days, -30 days, -20 days, and -10 days respectively, but these returns also



decrease in the comparison periods +60 days, +30 days, +20 days, and +10 days (-.04%, -.31%, -.41% and -.76%). Despite a slight decrease in the returns after the bad news, the significance is irrelevant in terms of size after the decreasing dividend announcement (see table 2).

The correlation coefficients between abnormal returns of observation periods and comparison periods of the pre-crisis sample are .029, -.330, -.603, and -.630 and their probability values are .829, .075, .005, and .051 respectively for  $\pm 60$  days,  $\pm 30$  days,  $\pm 20$  days and  $\pm 10$  days. However, the correlation coefficients between abnormal returns of observation periods and comparison periods in the post-crisis sample are -.200, -.018, -.134, and -.222 and their probability values are .126, .926, .573, and .537 respectively for  $\pm 60$  days,  $\pm 30$  days,  $\pm 20$  days and  $\pm 10$  days. The correlation coefficients indicate a negative relationship between the abnormal returns of the observation periods and the comparison periods for the dividend decreasing announcements in all the study periods ( $\pm 60$  days,  $\pm 30$  days,  $\pm 20$  days and  $\pm 10$  days) but failed to explain a very high level of significance in either pair (see table 3).

The mean difference between the abnormal returns of the observation and the comparison periods in the pre-crisis sample are .0166, .0013, .0019, and .0022 respectively for  $\pm 60$  days,  $\pm 30$  days,  $\pm 20$  days and  $\pm 10$  days. However, the mean differences between the abnormal returns of the observation and the comparison periods in the post-crisis sample are .0006, .0032, .0038, and .0058 respectively for  $\pm 60$  days,  $\pm 30$  days,  $\pm 20$  days and  $\pm 10$  days. The t-values and the probability values of the pre-crisis sample are 1.243, 1.559, 1.683, and 1.261, and .219, .130, .109, and .239 respectively for  $\pm 60$  days,  $\pm 30$  days,  $\pm 20$  days and  $\pm 10$  days. However, the t-values and the probability values of the post-crisis sample are .410, 1.577, 1.230, and 1.084 and their probability values are .683, .126, .234, and .307 respectively for  $\pm 60$  days,  $\pm 30$  days,  $\pm 20$  days and  $\pm 10$  days. These results, however, imply that the mean difference of the returns is not significantly different from zero. The sequence charts of the abnormal returns for the event study periods (Figure 3 and 4) also support the same argument. Nevertheless, the abnormal returns of the differential periods are not significantly different from zero. Despite the empirical results narrowly support the previous studies that dividend omissions produce negative stock prices (Asquith and Mullins, 1983; Healey and Palepu, 1988; and Michaely et al. 1995), the t-values are not significant in either pair in the current study, which makes the situation so ambiguous and indeed tough to come to a conclusion that security prices react negatively to dividend omissions (see table 4).

#### No News/Dividend Maintaining Announcements

The mean abnormal returns in the pre-crisis sample are .04%, .05%, .06%, and .10% in the observation periods -60 days, -30 days, -20 days, and -10 days respectively, but these returns decrease in the comparison period +60 days, +30 days, and +20 days, and +10 days (-.051%, -.16%, -.20% and -.21%). However, the mean abnormal returns in the post-crisis sample are -.55%, -1.15%, -1.22%, and -1.16% in the observation periods -60 days, -30 days, -20 days, and -10 days respectively, but these returns increase in the comparison periods +60 days, +30 days, and +20 days (0.04%, 1.08%, and 1.30%) but slightly decrease in +10 days (-1.19). Despite the decrease of returns after the maintaining dividend announcement in the pre-crisis sample, the post-crisis sample produced unexpected results except  $\pm 10$  days period (Table 2).

Figure 3: Bad News/Dividend Omissions: Pre-crisis Sample (1988-1997)

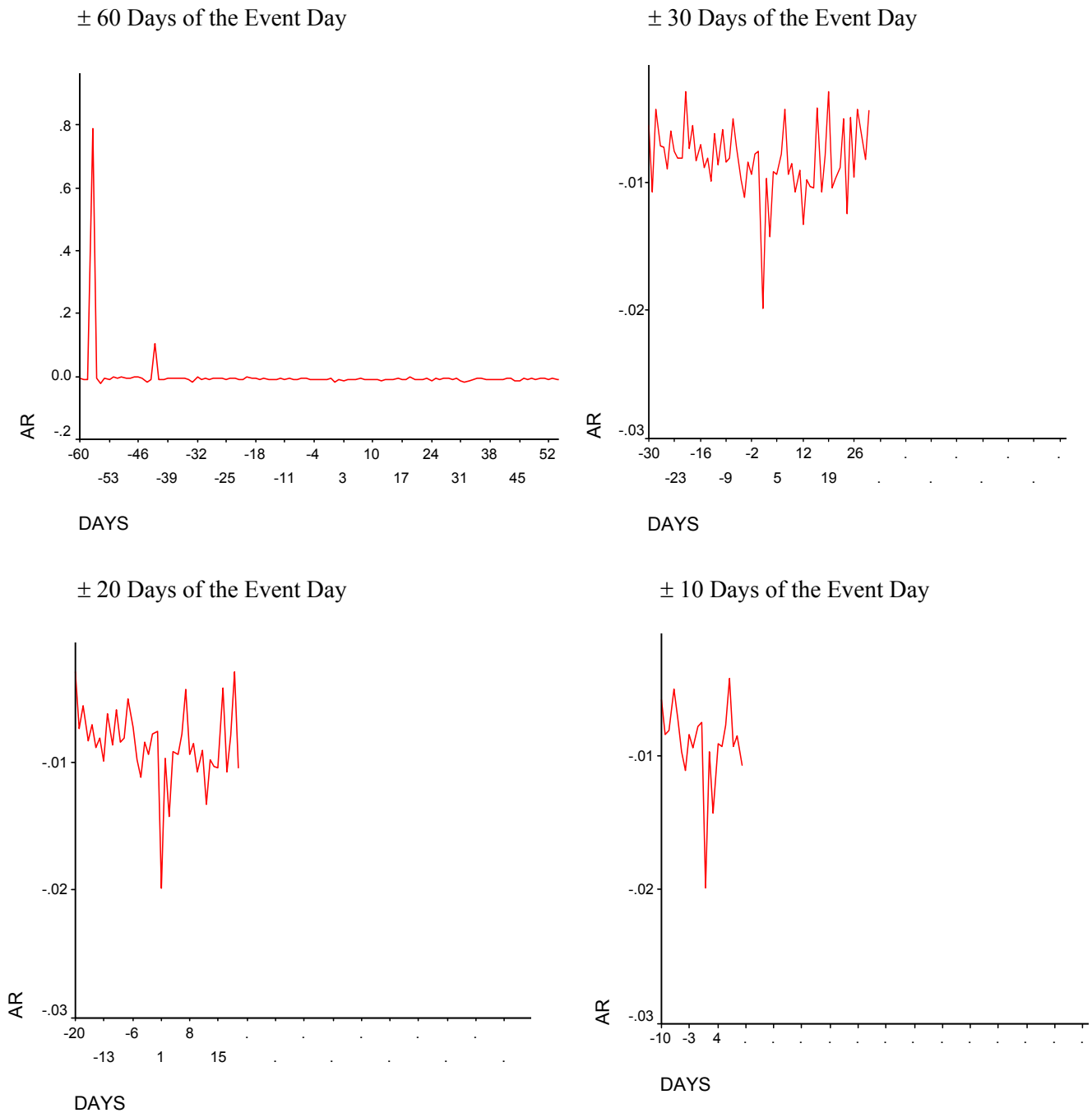


Figure 4: Bad News/Dividend Omissions: Post-crisis Sample (1999-2003)

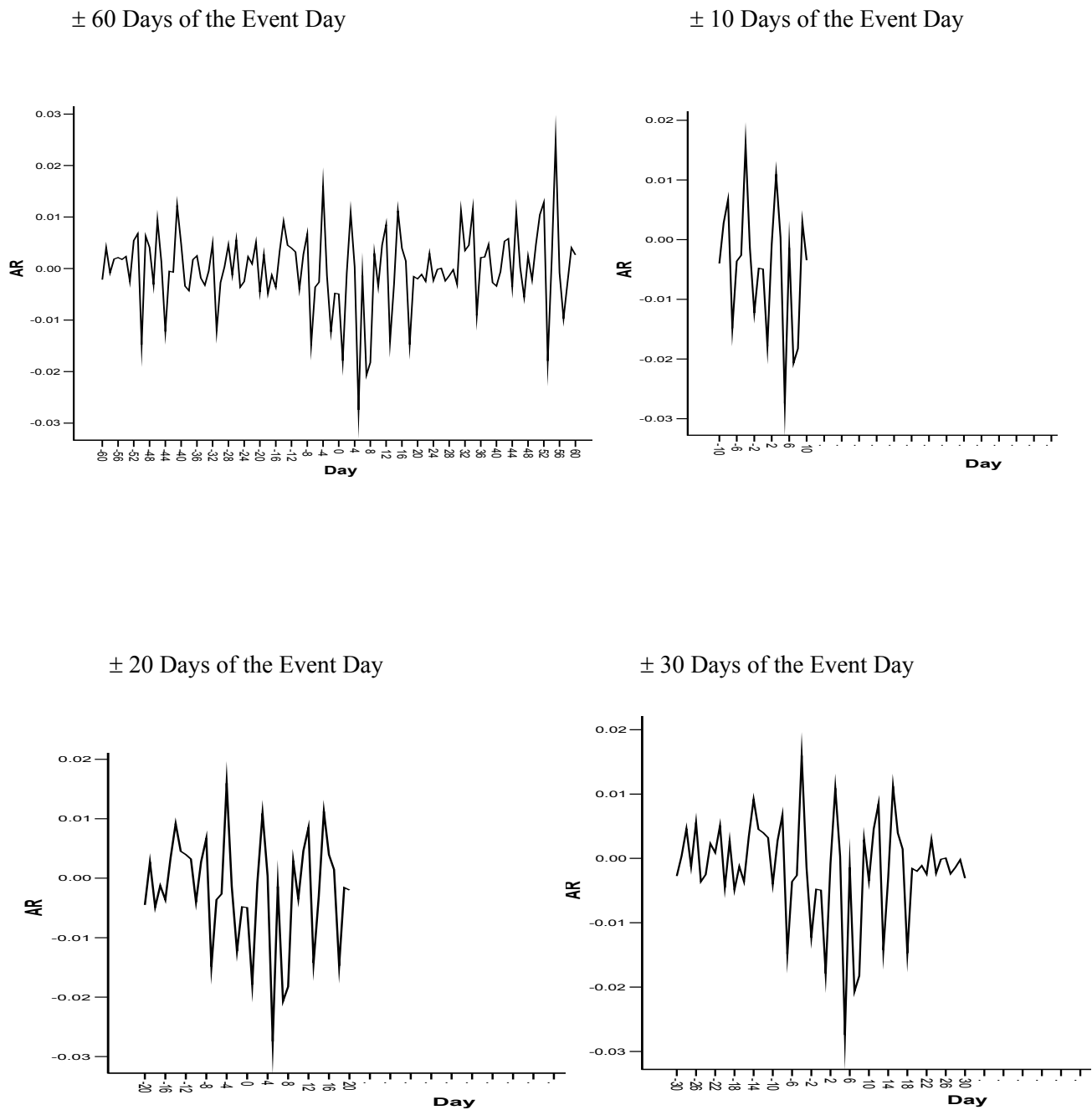


Table 2: Paired Samples Statistics

Good News						
Period	Pre-crisis Period (1988-1997)			Post-crisis Period (1999-2003)		
	N	Mean	Std. Deviation	N	Mean	Std. Deviation
- 60 Days	198	-0.0001	0.0035	70	-0.0020	0.0040
+ 60 Days	198	-0.0012	0.0029	70	-0.0020	0.0065
- 30 Days	198	-0.0003	0.0021	70	-0.0022	0.0046
+ 30 Days	198	-0.0015	0.0035	70	-0.0023	0.0059
- 20 Days	198	-0.0001	0.0022	70	-0.0028	0.0046
+ 20 Days	198	-0.0015	0.0036	70	-0.0024	0.0071
- 10 Days	198	-0.0001	0.0020	70	-0.0031	0.0039
+ 10 Days	198	-0.0001	0.0036	70	-0.0028	0.0067
Bad News						
Period	Pre-crisis Period (1988-1997)			Post-crisis Period (1999-2003)		
	N	Mean	Std. Deviation	N	Mean	Std. Deviation
- 60 Days	79	0.0075	0.1036	46	0.0002	0.0060
+ 60 Days	79	-0.009	0.0034	46	-0.0004	0.0090
- 30 Days	79	-0.0076	0.0019	46	0.0001	0.0061
+ 30 Days	79	-0.0089	0.0035	46	-0.0031	0.0091
- 20 Days	79	-0.0077	0.0019	46	-0.0003	0.0071
+ 20 Days	79	-0.0096	0.0037	46	-0.0041	0.0110
- 10 Days	79	-0.0081	0.0018	46	-0.0018	0.0089
+ 10 Days	79	-0.0103	0.0042	46	-0.0076	0.0125
No News						
Period	Pre-crisis Period (1988-1997)			Post-crisis Period (1999-2003)		
	N	Mean	Std. Deviation	N	Mean	Std. Deviation
- 60 Days	75	0.0004	0.0033	42	-0.0055	0.0506
+ 60 Days	75	-0.0005	0.0035	42	0.0004	0.0814
- 30 Days	75	0.0005	0.0043	42	-0.0115	0.0023
+ 30 Days	75	-0.0016	0.0030	42	0.0108	0.1140
- 20 Days	75	0.0006	0.0050	42	-0.0122	0.0020
+ 20 Days	75	-0.0020	0.0028	42	0.0130	0.1282
- 10 Days	75	0.0010	0.0061	42	-0.0116	0.0018
+ 10 Days	75	-0.0021	0.0035	42	-0.0119	0.0099

The correlation coefficients between abnormal returns of observation periods and comparison periods of the pre-crisis sample are .039, -.219, -.037, and -.407 and the probability values are .770, .244, .876, and .243 respectively for  $\pm 60$  days,  $\pm 30$  days,  $\pm 20$  days and  $\pm 10$  days. However, the correlation coefficients between abnormal returns of observation periods and comparison periods of the post-crisis sample are -.009, .139, .461, and -.234 and the probability values are .947, .464, .041, and .516 respectively for  $\pm 60$  days,  $\pm 30$  days,  $\pm 20$  days and  $\pm 10$  days. Though the correlation coefficients between the abnormal returns of the observation and comparison periods for dividend maintaining announcements in all the study sample ( $\pm 60$  days,  $\pm 30$  days,  $\pm 20$  days, and  $\pm 10$  days) are in the opposite direction both in the pre and post crisis, the results are not statistically significant at the higher level in either pair (Table 3).

Table 3: Good News: Paired Samples Correlation

<b>Good News</b>				
Period	Pre-crisis Period (1988-1997)		Post-crisis Period (1999-2003)	
	N	Correlation	N	Correlation
± 60 Days	198	-0.232*	70	-0.019
± 30 Days	198	-0.076	70	-0.062
± 20 Days	198	-0.243	70	-0.228
± 10 Days	198	0.116	70	-0.108
<b>Bad News</b>				
Period	Pre-crisis Period (1988-1997)		Post-crisis Period (1999-2003)	
	N	Correlation	N	Correlation
± 60 Days	79	0.029	46	-0.200
± 30 Days	79	-0.330*	46	-0.018
± 20 Days	79	-0.603***	46	-0.134
± 10 Days	79	-0.630*	46	-0.222
<b>No News</b>				
Period	Pre-crisis Period (1988-1997)		Post-crisis Period (1999-2003)	
	N	Correlation	N	Correlation
± 60 Days	75	0.039	42	-0.009
± 30 Days	75	-0.219	42	0.139
± 20 Days	75	-0.037	42	0.461**
± 10 Days	75	-0.407	42	-0.234

\*\*\*Significant at 1% level \*\*Significant at 5% level \*Significant at 10% level

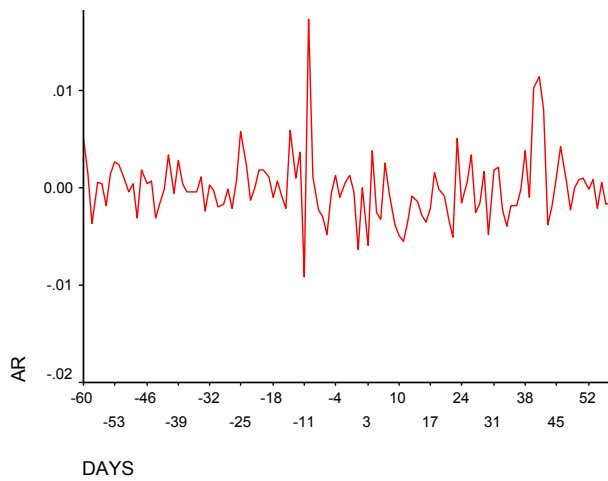
The mean difference between the abnormal returns of the observation and the comparison periods of the pre-crisis sample are .0009, .0021, .0026, and .0031 respectively for ±60 days, ±30 days, ±20 days and ±10 days. However, the mean difference between the abnormal returns of the observation and the comparison periods of the post-crisis sample are -.0059, -.0224, -.0252, and .0003 respectively for ±60 days, ±30 days, ±20 days and ±10 days. The t-values and the probability values of the pre-crisis sample are 1.491, 2.005, 1.974, and 1.207, and .141, .054, .063, and .258 respectively for ±60 days, ±30 days, ±20 days and ±10 days. However, the t-values and the probability values of the post-crisis sample are -.477, -1.077, -.885, and .100, and .635, .291, .387, and .923 respectively for ±60 days, ±30 days, ±20 days and ±10 days. These results imply that the mean difference of the abnormal returns between the observation and comparison periods is not significantly different from zero. Nevertheless, the sequence charts of the abnormal returns for the event study periods (Figures 5 and 6) also support the empirical evidence of this study. Therefore, the empirical evidence of this study contradicts with the previous studies that security prices do not react to the dividend maintaining announcements (see Table 4).

Despite a slight change in the post-crisis sample, overall the empirical results failed to reject the announcement effect hypothesis that the security returns in Bangladesh stock market decrease after dividend initiations, omissions, and dividend maintenance in the pre-crisis sample but scenario is little bit different in the post-crisis sample, i.e., security returns increase in dividend initiations and maintenance but decrease in dividend omissions. Nevertheless, the signaling effect of the announcements appears ineffective as because t-statistics are not significant at a very high level. This is the clear symptom of ineffectiveness of dividend announcements in the emerging market of Bangladesh. Therefore, the announcement of dividends does not carry any new information to the market. These results also strongly reject the signaling theory of dividends. Most important reasons for the ineffectiveness of the announcements of dividend in an emerging market are the insider trading and because of that, information incorporates the market prices before the announcements. The other reason is that the insiders are involved in motivated trading before and after the announcement of dividends. As we already mentioned that insiders hold higher percentage of stocks in Bangladesh. Usually insiders start to buy back shares before the annual general meeting (AGM) for higher voting rights that causes higher demand of shares

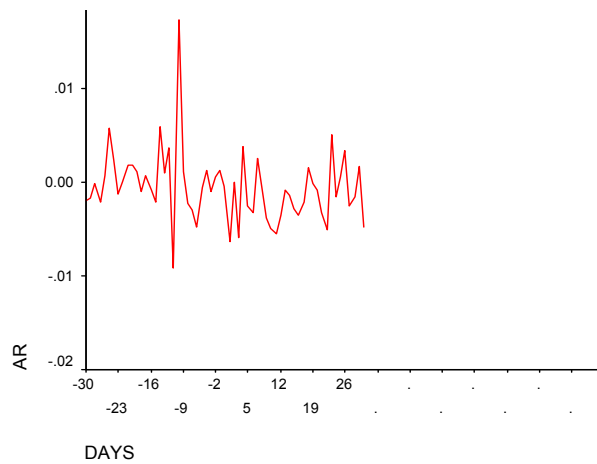
and consequently higher share returns and as insiders off load shares after AGM, that causes huge supply of shares and consequently returns decrease after the annual general meeting.

Figure 5: No News/Dividend Maintenance: Pre-crisis Sample (1988-1997)

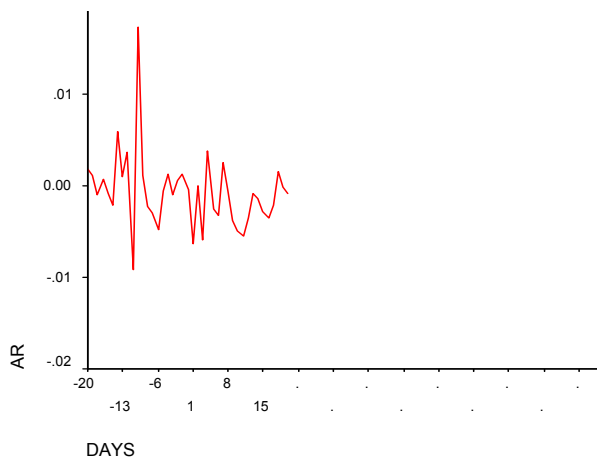
± 60 Days of the Event Day



± 30 Days of the Event Day



± 20 Days of the Event Day



± 10 Days of the Event Day

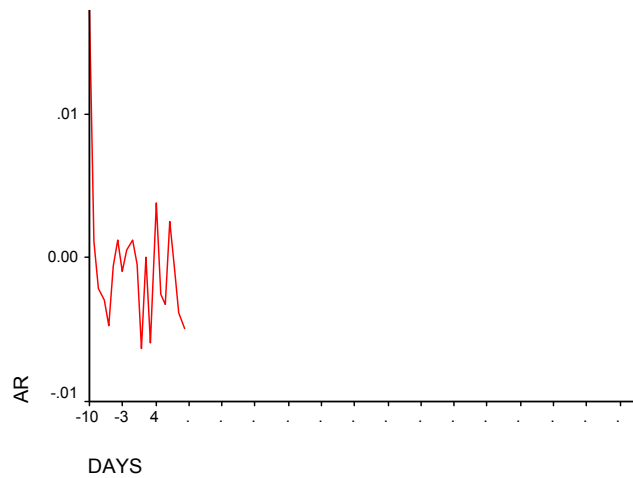


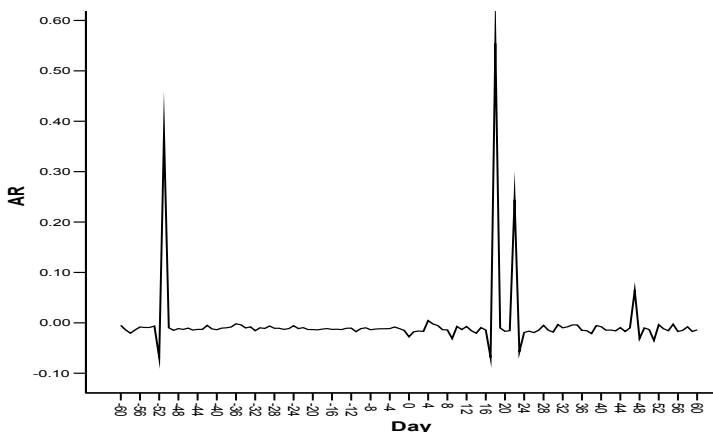
Table 4: Paired Samples T-Test

Good News										
Period	Pre-crisis Period (1988-1997)					Post-crisis Period (1999-03)				
	Mean	Std. Deviation	95% Confidence Interval of the Difference		T Value	Mean	Std. Deviation	95% Confidence Interval of the Difference		T Value
			Lower	Upper				Upper	Lower	
± 60 Days	0.0012	0.0050	-0.0001	0.0025	1.772*	0.0001	0.0077	-0.0020	0.0020	0.023
± 30 Days	0.0013	0.0042	-0.0003	0.0029	1.681	0.0001	0.0077	-0.0028	0.0030	0.086
± 20 Days	0.0014	0.0047	-0.0008	0.0036	1.340	-0.0004	0.0092	-0.0048	0.0040	-0.208
± 10 Days	0.0001	0.0039	-0.0028	0.0029	0.016	-0.0003	0.0080	-0.0060	0.0055	-0.105
Bad News										
Period	Pre-crisis Period (1988-1997)					Post-crisis Period (1999-03)				
	Mean	Std. Deviation	95% Confidence Interval of the Difference		T Value	Mean	Std. Deviation	95% Confidence Interval of the Difference		T Value
			Lower	Upper				Lower	Upper	
± 60 Days	0.0166	0.1035	-0.0101	0.04.34	1.243	0.0006	0.0117	-0.0024	0.0036	0.410
± 30 Days	0.0013	0.0045	-0.0004	0.0029	1.559	0.0032	0.0110	-0.0009	0.0073	1.577
± 20 Days	0.0019	0.0050	-0.0004	0.0043	1.683	0.0038	0.0139	-0.0027	0.0103	1.230
± 10 Days	0.0022	0.0055	-0.0017	0.0061	1.261	0.0058	0.0168	-0.0063	0.0178	1.084
No News										
Period	Pre-crisis Period (1988-1997)					Post-crisis Period (1999-03)				
	Mean	Std. Deviation	95% Confidence Interval of the Difference		T Value	Mean	Std. Deviation	95% Confidence Interval of the Difference		T Value
			Lower	Upper				Lower	Upper	
± 60 Days	0.0009	0.0048	-0.0003	0.0021	1.491	-0.0059	0.0962	-0.0308	0.0189	-0.477
± 30 Days	0.0021	0.0058	-0.0001	0.0042	2.005*	-0.0224	0.1137	-0.0648	0.0201	-1.077
± 20 Days	0.0026	0.0058	-0.0002	0.0053	1.974*	-0.0252	0.1273	-0.0848	0.0344	-0.885
± 10 Days	0.0031	0.0081	-0.0027	0.0089	1.207	0.0003	0.0105	-0.0072	0.0079	0.100

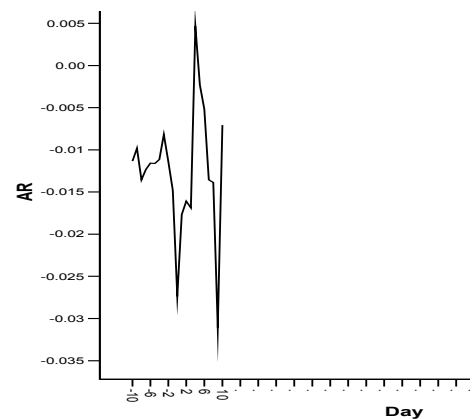
\*Significant at 10% level

Figure 6: No News/Dividend Maintenance: Post-crisis Sample (1999-2003)

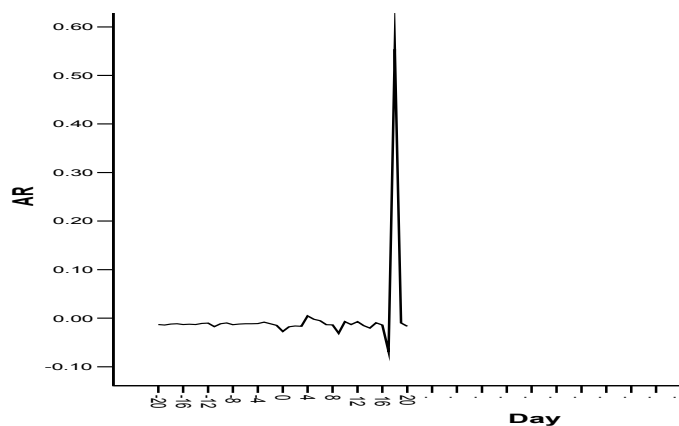
± 60 Days of the Event Day



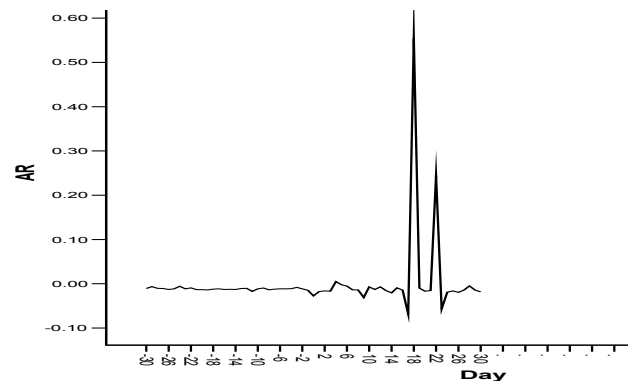
± 10 Days of the Event Day



± 20 Days of the Event Day



± 30 Days of the Event Day



Ineffectiveness of dividend announcements also causes for many other reasons including companies announce dividends but they often do delay in paying dividends to shareholders, after the book closure companies take long time to transfer the ownership, etc. For these and many other reasons, the shareholders are always skeptical about the activities of the management and they do not trust management with full confidence. Finally, the lower level of law enforcement in the market and ineffectiveness of the regulatory bodies is also a significant cause of distortion in the market.

## CONCLUSION

A vast majority of the studies found dividend announcements as a strong signaling device, which influence the security prices but the issue of the effect of dividend announcements on security prices is still inconclusive. The major objective of this paper is to identify whether dividend announcements convey information to the market or whether investors consider the announcement of dividends as a signal of the firm's future prospects, i.e., to see the security price reaction to the announcement of dividends in an emerging market. The empirical results reject the dividend-signaling hypothesis that dividend announcements do not convey any information about the companies listed on the Dhaka Stock Exchange. After the financial crisis in Dhaka stock market of Bangladesh in 1998, there were significant changes in institutional setting but there was no change in the legal framework as the controlling mechanism. The market also fails to come up with a significant reform following the financial crisis in Bangladesh, therefore, the reform does not help to improve the market scenario.

## REFERENCES

- Abeyratna, G., A. A. Lonie, D. M. Power, and C. D. Sinclair (1996), "The Influence of Company Financial Performance on the Interpretation of Dividend and Earnings Signals: A Study of Accounting and Market Based Data", *British Accounting Review* 28, pp.229-247.
- Aharony, J. and I. Swary, 1980, Quarterly Dividend and Earning Announcements and Stockholders' Returns: An Empirical Analysis, *Journal of Finance* 35, 1-12.
- Aharony, J., H. Falk, and I. Swary, 1988, Information Content of Dividend Increases: The Case of Regulated Utilities, *Journal of Business Finance and Accounting* 15, 401-414.



- Bajaj M., and A. M. Vijh, 1995, Trading Behavior and the Unbiasedness of the Market Reaction to Dividend Announcements, *Journal of Finance* 50, 255-279.
- Bartholdy, J., and R. Allan, 1994, Thin Trading and the Estimation of Betas: The Efficiency of Alternative Techniques, *The Journal of Financial Research* 17, 241-254.
- Brickley, J. A., 1983, Shareholder Wealth, Information Signaling and the Specially Designated Dividend: An Empirical Study, *Journal of Financial Economics* 12, 187-209.
- Benesh, G. A.; A. J. Keown; and J. M. Pinkerton, 1984, Examination of Market Reaction to Substantial Shifts in Dividend Policy, *Journal of Financial Research* 7, 131-142.
- Born, J. A., 1988, Insider Ownership and Signals: Evidence from Dividend Initiation Announcement Effect, *Financial Management* 17, 38-45.
- Charest, G., 1978, Dividend Information, Stock Returns, and Market Efficiency, *Journal of Financial Economics* 6, 297-330.
- Pettit, R., 1972, Dividend Announcements, Security Performance, and Capital Market Efficiency, *Journal of Finance* 27, 993-1007.
- Dielman, T. E. and H. R. Oppenheimer, 1984, An Examination of Investor Behavior During Periods of Large Dividend Changes, *Journal of Financial and Quantitative Analysis* 19, 197-216.
- Dimson, E., 1979, Risk Measurement When Shares are Subject to Infrequent Trading, *Journal of Financial Economics* 7, 197-226.
- Divecha, A. and D. Morse, 1983, Market Responses to Dividend Increases and Changes in Payout Ratios, *Journal of Financial and Quantitative Analysis* 18, 163-73.
- Eades, K. M., P. J. Hess, and E. H. Kim, 1985, Market Rationality and Dividend Announcements, *Journal of Financial Economics* 13, 581-604.
- Easton, S., 1991, Earnings and Dividends: Is There an Interaction Effect ?, *Journal of Business Finance and Accounting* 18, 255-266.
- Eddy, A. and B. Seifert, 1992, Stock Price Reactions to Dividend and Earnings Announcements: Contemporaneous versus Noncontemporaneous Announcements, *Journal of Financial Research* 15, 207-217.
- Ghosh, C. and J. R. Woolridge, 1988, An Analysis of Shareholder Reaction to Dividend Cuts and Omissions, *Journal of Financial Research* 11, 281-94.
- Ghosh, C. and J. R. Woolridge, 1991, Dividend Omissions and Stock Market Rationality, *Journal of Business Finance and Accounting* 18, 315-330.
- Gordon, M. J., 1962, The Savings, Investment and Valuation of the Corporation, *Review of Economics and Statistics* 45, 37-51.
- Gordon, M. J., 1963, Optimum Investment and Financing Policy, *Journal of Finance* 18, 264-272.

Healy, P. M., and K. G. Palepu, 1988, Earnings Information Conveyed by Dividend Initiations and Omissions, *Journal of Financial Economics* 21, 149-175.

John, K., and H. P. Lang, 1991, Insider Trading Around Dividend Announcements: Theory and Evidence, *Journal of Finance* 46, 1361-1389.

Kalay, A., and U. Loewenstein, 1985, Predictable Events and Excess Returns: The Case of Dividend Announcements, *Journal of Financial Economics* 14, 423-450.

Kane, A., Lee, Y. K. and A. Marcus, 1984, Earnings and Dividend Announcements: Is There a Corroboration Effect ?, *Journal of Finance* 39, 1091-1099.

Lintner, J., 1962, Dividends, Earnings, Leverage, Stock Prices and the Supply of Capital to Corporations, *The Review of Economics and Statistics* 44, 243-269.

Marsh, P., 1993, Dividend Announcements and Stock Price Performance, Paper Presented at the Financial Markets Group Conference on Dividend and Earnings Forecasting and Valuation, London School of Economics, March 23.

Michaely, R., R. H. Thaler, and K. L. Womack, 1995, Price Reactions to Dividend Initiations and Omissions: Overreaction or Drift ?, *Journal of Finance* 50, 573-608.

Miller, M. H., and F. Modigliani, 1961, Dividend Policy Growth and the Valuation of Shares, *Journal of Business* 34, 411-433.

Miller, M. H., and F. Modigliani, 1966, Some Estimates of the Cost of Capital to the Electric Utility Industry, 1954-57, *American Economic Review* 56, 333-91.

Scholes, M., and J. Williams, 1977, Estimating Betas from Nonsynchronous Data, *Journal of Financial Economics*, 5, 309-327.

Walter, J. E., 1963, Dividend Policy: Its Influence on the Value of the Enterprise, *Journal of Finance* 18, 280-291.

Wansley, J. W. and W. R. Lane, 1987, A Financial Profile of the Dividend Initiating Firm, *Journal of Business Finance and Accounting* 14, 425-436.

Woolridge, J. R., 1982, The Information Content of Dividend Changes, *Journal of Financial Research* 5, 237-247.

Woolridge, J. R., 1983, Dividend Changes and Security Prices, *Journal of Finance* 38, 1607-1615.