Investigating the Relationship between Dividend Announcements and Stock Prices: A Study on the CSE-30 Index

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Abstract

Despite the theoretical arguments that dividend payments do not add value to shareholders in the absence of taxes and market imperfections, companies still pay dividends to their shareholders, which can influence stock prices. This study investigates the impact of dividend announcements on the stock prices of companies listed under Bangladesh's CSE-30 index of the Chittagong Stock Exchange. Using a standard event study methodology, the empirical analysis of this study examines the stock price reaction for 44 days surrounding the dividend announcement dates. The paired t-test and correlation analysis results demonstrate that the stock price reaction to dividend announcement is statistically significant. The findings also suggest that dividend announcements convey a message to shareholders, which is reflected in the changes in stock prices. One of the major limitations of this study is its narrow focus on a specific group of financially stable and strong companies listed under the CSE-30 index. Future research may expand the scope to provide a more comprehensive understanding of the impact of dividend announcements on companies' stock prices in the Bangladeshi stock market.

Keywords: *Event study; CSE-30 index; Dividend announcement; Stock price; Dividend theories.*

Background of the Study

Dividend policy, a cornerstone of corporate finance, has intrigued scholars and practitioners alike since the inception of Joint Stock Companies. It is now difficult to conceive of a time when the primary objective of public company managers was not to maximize shareholder returns. For decades, it has been widely recognized that public firms should try to enhance their earnings to satisfy stock markets without

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consideration for the interests of corporate stakeholders; this approach is commonly known as shareholder wealth maximization. To achieve this objective, managers decide about funding, investments, and dividends. Investment decisions involve selecting positive NPV (net present value) projects, while financing decisions include choosing an appropriate capital structure that reduces the firm's cost of capital [1]. In addition, management must make a regular dividend decision, which involves deciding whether to distribute profits to shareholders to compensate for agency problems [2].

However, there is still no clear answer to the fundamental question of whether or not distributing a portion of a company's profits in the form of dividends can increase the value of the shares held by shareholders. Black [3] famously remarked that the dividend puzzle persists, with its pieces eluding easy alignment despite decades of research. In this sense, the academic research on dividend policy may be broken down into two schools of thought: dividend irrelevance and dividend relevance. These ideas are contradictory, and neither gives comprehensive or sufficient guidelines [4]. Despite this, both schools strive to establish their perspectives, leading to the dividend controversy. Over the last several decades, a substantial amount of empirical and theoretical study has been undertaken on the consequences of dividends. This research examines the effect of information on the stock prices of companies included in the CSE-30 index of the Chittagong Stock Exchange (CSE). In Bangladesh, where the capital market plays a pivotal role in economic development, understanding dividend policy implications is paramount.

The Rationale of the Study
Dividend policy represents a critical aspect of a firm's financial strategy, encompassing decisions regarding the allocation of profits to shareholders. As it contributes to the growth of domestic industry, trade, commerce, and market capitalization, the capital market is regarded as a crucial field for investment in all nations, including Bangladesh [5]. While dividends serve as signals of financial health and managerial confidence, the intricacies of dividend policy remain elusive. Scholars have traditionally approached dividend policy from two perspectives: intention-based theories and market reaction studies. This study focuses on the latter, aiming to elucidate how dividend policy influences the market value of listed companies. However, investors consider a number of factors before investing in particular securities, with return on investment (ROI) being one of the most important considerations, with dividend announcements playing a role [6-7]. In addition, the

announcement of dividends has a crucial impact on stock price fluctuations [8]. For this study, the following research question has been developed:

RQ: *Does the announcement of dividends significantly impact the stock prices of companies listed in the CSE-30 index of Bangladesh?*

This study aims to address this gap in knowledge by focusing on the specific context of the Bangladeshi stock market. The Bangladeshi market has undergone significant changes since prior research was conducted, with regulatory improvements by the Securities and Exchange Commission (SEC) and potentially evolving investor behavior. These developments might influence the relationship between dividend announcements and stock prices compared to findings from prior research conducted in different contexts. This study seeks to determine the effect of dividend announcements on the stock prices of CSE-30 firms. Consequently, this research is significant because it provides CSE investors with insight into the stock market's response to dividend announcements, which could be used to make more rational and effective investment choices. In addition, by analyzing the effect of dividend announcements on stock prices, this study contributes fresh perspectives to analyzing the stock market.

The following sections will first discuss the theoretical background and relevant literature. Then, we will explain the methodology used in this study. Subsequently, we will present the analysis results and discuss their implications. Finally, we will conclude the paper by summarizing the key findings, limitations, and future research directions.

Theoretical Background

In finance, stock price maximization is a central focus, and several theories regarding the relationship between stock returns and dividend policies have been recognized in the literature. Miller and Modigliani [9] posited the Dividend Irrelevance Theory, which leads one to believe that in an ideal world, one in which transaction and floatation costs do not exist, corporate and personal taxes, and the expectations of all individuals concerning a company's future profit and investment are similar, the distribution of dividends does not affect the value of a company's share prices and the value of the company. Additionally, they suggested that how a company splits its earnings stream between dividends and retained earnings determines the value of a company, not just its earnings power and the risk associated with its assets. A boost in

company, not just its earnings power and the risk associated with its assets. A boost in the dividend distribution should result in a loss of capital for current shareholders, and the two effects would cancel each other out if they were to coincide. Changes in dividends are hypothesized to relate to the trade-off between future selling price and present income. Even though the data cannot support M&M's ideal world, the dividend Irrelevance theory is essential to developing other theories that can explain the flaws in the actual world [4].

However, the real world is imperfect, and theories such as the Signalling theory [10] have been developed to account for such imperfections, especially the asymmetric information problem. According to the Signalling Theory, dividend announcements have information content. According to this theory, executives utilize cash dividend announcements to signal changes in anticipation of the company's prospects in the imperfect market. The information content must be accurate since it will cause shareholders to respond to the announcement, affecting the firm's share prices. However, discussions regarding the nature of the information content disseminated to the market through dividend announcements are ongoing.

In addition to the cash flow hypothesis, there is also the clientele effect theory, which argues that investors have specific preferences for receiving dividends, and companies must adjust their dividend policy to cater to these preferences to maintain their shareholder base [9]. This theory suggests that companies can attract investors who prefer high dividends by offering higher dividends, while companies can attract investors who prefer capital gains by retaining earnings and investing in profitable projects. Thus, changes in dividend policy can cause shifts in the composition of a company's shareholder base, leading to changes in its stock price. Another theory related to dividend policy is the agency cost hypothesis, which suggests that managers may use dividend policy to reduce agency costs between shareholders and managers [2]. By paying dividends, managers signal shareholders that they are confident in the company's future earnings and are less likely to waste excess cash on unprofitable projects. This reduces the risk of agency costs such as excessive managerial compensation, empire-building, or other forms of managerial opportunism. The agency cost hypothesis suggests that changes in dividend policy can affect stock prices by signaling changes in managerial confidence and reducing agency costs. Overall, the different theories related to dividend policy suggest that dividend announcements can convey valuable information to investors, affecting their expectations of future cash flows, the composition of a company's shareholder base, and the degree of agency

company's stock price, making the study of dividend policy an important area of research in finance.

Furthermore, the free cash flow hypothesis (FCFH) suggests that when a company has excess funds, managers may use these funds to undertake projects with negative net present values (NPVs) but still provide managers with private benefits, such as higher salaries, perks, or empire building. This misuse of funds decreases the firm's value and negatively affects shareholders. Jensen [11] proposed that dividend payments serve as a mechanism for disciplining managers by reducing their discretionary power over free cash flows. Hence, according to FCFH, the announcement of dividend payments increases the stock price because it signals a decrease in the potential for managers to waste free cash flows.

According to Easterbrook's [12] agency cost hypothesis, when control of a corporation is divorced from ownership, it creates the possibility that managers would take advantage of the resources available to the company for their benefit. The owners (investors) are protected against the activities of the management by the receipt of a consistent cash dividend payment. This serves as a protection for the owners. On the other hand, a decrease in the dividend might result in increased access to funds created internally by the firm, which would result in the company's management allocating a more significant proportion of its resources toward perks and luxuries for themselves. In this example, the agency cost theory predicts that a drop in cash dividends would result in a fall in the business's equity value, which leads to the conclusion that the news will negatively influence stock prices [4].

The stock market's reaction to dividend announcements has been the subject of a significant amount of research from various empirical studies. Researchers have shown a considerable positive association between the return of a stock and the announcement of adjustments in dividends, particularly when the announcement is made in isolation from other corporate news [6, 13-15]. The ideas of Gordon [16-17] and Walter [18], who contend that dividend policy and investment policy are interwoven, with one impacting the other, have supported the view that dividend relevance is essential. They claim that the selection of an acceptable dividend policy cannot be isolated from investment policy and that it can have a direct influence on the value of the company.

Over the last few decades, substantial empirical and theoretical research has examined the effects of dividends [3-4, 8, 19-28]. In principle, a cash dividend is nothing more than compensation given to shareholders for their existing ownership in the firm. As a

result, in an ideal environment free from taxes, transaction fees, and prohibitions, a cash dividend should not affect shareholder value [9, 29-30]. On the other hand, in the actual world, whenever there is a change in the dividend policy, it is frequently followed by a change in the market price of the stocks. Graham et al. [31] advanced the economic argument for investor preference for dividend income. In contrast, Gordon [8, 16] and Walter [32] advanced the concept of dividend relevance, which has since been developed into a theory that proposes that the current stock price of a company reflects the present value of all expected future dividend payments.

According to the bird-in-the-hand theory, which was proposed by Lintner [33], Gordon [16], and Bhattacharya [34], the payment of a dividend that is more than the amount of earnings retained is highly valued by shareholders. As a result, dividend policy is crucial in determining the value of shares. The knowledge that a company will issue any dividend contributes to the positive association between dividend yields and the returns on common stock, which may be attributed to the fact that this knowledge contains valuable information [35]. Dhillon and Johnson [36] researched the reaction of stock and bond prices to dividend changes. They discovered that the stock market had a favorable reaction to dividend increases, which may be explained by the redistribution of wealth between bondholders and stockholders as well as the information content of the market [4]. Their findings lend credence to the hypothesis of wealth redistribution but do not preclude the possibility of the information content hypothesis. In addition to this, they discovered that the reaction of the price of bonds to the announcement of significant dividend adjustments is the reverse of the reaction of the price of stocks, which runs counter to the findings of Handjinicolaou and Kalay [1], who discovered that bond prices are unaffected by increases in dividends but are negatively impacted by decreases in dividends. Dhillon and Johnson [36] claim their results support the information content theory.

According to Black and Scholes [37], businesses that raise the amount of dividends they pay out should not anticipate any particular impact on the price of their shares. A change in the dividend may cause a brief shift in price since the market can interpret the move as indicating anything regarding prospective future earnings. However, these short-term effects will be null and void if it can be established beyond a reasonable doubt that the adjustment was not made due to any shift in projections regarding future earnings. As a result, a company may choose to select its dividend policies based on the premise that swings in dividend policy will have no long-term influence on the stock price. After that, some scholars sought to grasp the mystery behind the payout.

They concluded that receiving dividends is not in an investor's best interest if their marginal tax rate is more significant than zero. In addition, they discovered that an investor's after-tax expected rate of return relies not only on the dividend yield but also on the investor's exposure to systematic risk [38, 39-40]. This led to the hypothesis that dividends could be responsible for some tax-induced effects on stock prices. The amount of the optimal dividend is inversely connected to personal tax rates. Thus, subject to their tax rates, average investors would prefer less cash dividends if taxable. Optimal dividend size is directly tied to stock price [41]. As a direct result, the price of a company's shares typically drops after the announcement of a dividend increase.

Additionally, some studies have found that the relationship between dividends and stock prices is not linear but follows a U-shaped curve [4, 15, 37]. This shows that there may be an ideal amount of dividend distribution that optimizes shareholder value, beyond which future dividend increases may have little influence on stock prices. Factors such as firm size, growth prospects, and industry also affect the relationship between dividends and stock prices [36]. The relationship between dividends and stock prices is complex and varies depending on the context and factors involved.

Uddin and Chowdhury [42] examined how dividend announcements affect shareholder wealth using daily cumulative abnormal return (CAR) and daily market-adjusted abnormal return (MARR). The relative daily percentage price fluctuation in dividend-paying equities concerning the average market stock price variation was what the term "MARR" meant. This was done in order to illustrate the relationship between the two. On the other hand, CAR was defined as the measure of the investor's total return over a period beginning well before the dividend announcement and ending well after the day the dividend was announced. This period included before and after the day the dividend was announced. The research examined thirty representative examples of dividend-paying firms listed on the Chittagong Stock Exchange. The study findings reveal that MARR was not statistically significant on the dividend announcement day. This would imply that the market reacts prior to the official release of the payout. According to the CAR finding, investors lost more value during the period when the dividend was paid out than the value they earned during the period when the dividend was paid out. Based on these data, a dividend declaration provides no information regarding the firms' future profits or cash flows.

The purpose of the research carried out by Hossain et al. [43] was for the authors to investigate the factors that determine the stock price and return movements of firms listed on the Dhaka Stock Exchange (DSE). The research looked at various aspects, including the number of publicly traded securities, initial public offerings, earnings per share, dividends per share, and the dividend payout ratio. Stock price determination was also studied concerning other macroeconomic variables such as GDP, savings, per capita income, export/import, investment, foreign currency reserve, consumption, inflation rate, money supply, advance interest rate, and deposit interest rate. The authors discovered that a dividend yield has an inverse association with the price of any stock. In a separate piece of research that Rahman and Rahman [44] conducted, the authors analyzed how the value of stocks on the DSE changed in the days leading up to the ex-dividend date. The data suggested a rise in stock values, which ran counter to the anticipated trend of a decline. This hints that owners value capital gains more than dividends, which is a reasonable conclusion.

Materials and Methods

Event studies have become a widespread tool for analyzing stock market research since their introduction by Fama et al. [45] and Ball and Brown [46-47]. The standard event study has been adopted as the typical method for evaluating the impact of an event, such as news or event, on stock price reaction [48, 49]. The purpose of this study is to investigate the impact that dividend announcements have on stock prices. To do so, we analyzed the behavior of stock prices for a number of different firms in the 44 days that followed the dividend announcement date. The stock price 30 days before the date that the dividend will be announced (the pre-event window), the stock price after seven days of the date that the dividend will be announced (the market adjustment period), and the stock price before seven days of the record date are all included in the 44 days (market response to the period of availing dividend benefit). The data was analyzed using Excel 2013 and IBM Statistics SPSS 23.0. Even though dividend announcements contain price-sensitive information, we will test the hypothesis that they do not significantly impact the movement of the stock prices of the companies that are included in the Selective Index CSE-30 listed on the Chittagong Stock Exchange (CSE). This will be done by comparing the results of our test to the results of a control group.

Sample Selection

This study examines the impact of dividend announcements on the stock prices of all firms included in the CSE Selective Index (CSE-30) between May 1, 2017, and April 30, 2018. The study's time frame covers May 1, 2017, to April 30, 2018. The sample period included 30 companies that were selected based on several criteria, including five banks, five pharmaceuticals and chemicals companies, six energy-producing companies, as well as companies from textiles and clothing, services and property, life insurance, leasing and finance, general insurance, foods and allied engineering and electrical, and miscellaneous industries. The sample firms were chosen using a selection process that took into account the following two fundamental methodological conditions:

   a) companies that declared their dividends 30 days after May 1, 2017, and

   b) companies that announced their record dates within April 30, 2018.

The significance of these requirements lies in the fact that they guarantee that the stock price data, record dates, and dividend announcement dates are consistent with the study's methodology. This helps prevent needless complications while ensuring unbiased findings are obtained. In order to evaluate whether or not there was a compatibility issue with the technique, the research needed information on 30 days of trade preceding the date of the dividend announcement. Accordingly, out of the 30 companies listed under the CSE Selective Index CSE-30, all 30 companies were selected for the study.

Event Window

When conducting event studies, it is necessary to determine the period covering which the prices of the relevant financial instruments will be analyzed. It is usual practice to refer to this time frame as the event window [50-51]. In this particular investigation, the event window is calculated to span 44 days, beginning 30 days before the date of the dividend announcement and concluding 14 days after the date of the announcement. The date $t = 0$ is used to specify the dividend announcement date, with a pre-event window of 30 days and a post-event window of 14 days, each divided into two equal portions. The date of the dividend announcement, regarded as the date of declaration relating to the distribution of dividends by the respective Board of Directors of the firms, is used as the reference point. This data is used as the starting point for the calculation.

To analyze the effect of dividend announcements on stock prices, the post-event window has been split into two parts: the "price adjustment period," which begins one to seven days after the announcement with no price limit date, and the "market response to the period of availing dividend benefit," which begins one to seven days before the record date. This division has been made to account for not all price changes, which may be solely due to dividend announcements, as some price changes may occur to avail of dividend benefits. By dividing the post-event window into two intervals, the full impact of the dividend announcement can be better observed.

The Event Study Approach

The event study is a tried-and-true approach to doing research. That has been utilized in a variety of management studies to investigate the impact of firm actions on economic value [52], new product introductions [53], CEO incentives [54], earnings press releases [55-56], and other aspects of business management. This study applies the Standard Event Study Technique introduced by Campbell et al. [51]. This technique analyses anomalous returns in stock prices during the event window. This study aims to determine how dividend announcements affect stock prices. The difference between the actual returns and the returns projected by the market model determines abnormal returns, abbreviated as AR_{it}.

$$AR_{it} = R_{it} - \left(\hat{\alpha}_i + \hat{\beta}_i R_{mt}\right)$$

The Standard Event Study Technique is a well-known approach created by Campbell et al. [51] and is used to evaluate different events' influence on enterprises' economic worth. This method involves analyzing abnormal returns (AR_s), which are the difference between the actual returns and returns predicted by the market model during the event window. As soon as the market becomes aware of an occurrence, the price of a company's security will alter if the incident influences the company's present or future earnings. Calculating pre-event and post-event abnormal returns (ARs) as well as cumulative abnormal returns ($CARs$) is one way to investigate whether or not an occurrence has an impact on the value of a company. The statistical significance of CARs is then examined to conclude the test results. This study uses the Standard Event Study Technique to investigate the impact of dividend announcements on the stock prices of companies listed in the CSE Selective Index [49, 52-56].

Despite the significance of market efficiency, the conventional event study approach was first utilized in this investigation to construct a market model for forecasting the returns of the relevant sample. This approach was recommended by Campbell et al.

[51]. The model used ordinary least square regression to estimate the parameters (α, β) over three months prior to the event when the daily equity price return for the relevant business (R_{it}) is regressed onto the appropriate industry index (R_{mt}). However, in many cases, the adjusted R^2 between the two variables was found to be very low, pointing to a tenuous connection between the price index of the sector as a whole and the price index of individual companies because the index contains both actively traded shares and those that are only sometimes traded. Additionally, regularly traded shares caused an upward bias, while infrequently traded shares caused a downward bias. Therefore, an alternative method was developed for this study that considered the movement of the industry index but avoided using a regression model to compute abnormal returns and examine the event's impact.

Alternate Approach: Market Adjusted Returns

In this study, market-adjusted equity prices, also known as *Adj R_{it}*, are utilized to identify the movement of financial prices during the event window that is not attributable to factors that influence the industry index. After eliminating all of the samples that might have been contaminated from the initial list, it was decided that a final sample size of thirty samples would be sufficient. The market-adjusted equity prices of these samples in the event windows are analyzed to test the hypothesis. The market-adjusted price of equity (*i*) for a day (*t*) in the pre-event window is calculated as:

$$Adj\ R_t = \frac{R_{it}}{100 + 30\ day\ Average\ Industry\ Index\ Growth} \times 100$$

For the post-event window, the market-adjusted price in the post-event window of equity (*i*) for a day (*t*) is calculated as follows. This applies both for the price adjustment period, which lasts seven days after the date associated with the dividend announcement when there is no price limit, and for the price adjustment period, which lasts seven days before the record date or market response to the period of availing dividend benefit:

$$Adj\ R_t = \frac{R_{it}}{100 + 7\ day\ Average\ Industry\ Index\ Growth} \times 100$$

The aggregate market-adjusted equity returns (*AR*) for a day (*t*) were then determined by adding up the prices of all 30 businesses included in the event window. This was done so that the hypothesis could be tested.

$$AdjR_t(AR_t) = \sum_{i=1}^{30} Adj\ R_t$$

The behavior of market-adjusted equity returns for each day is then observed between two windows: the pre-event window (30 days before the dividend announcement date) and the post-event window (7 days after no price limit date related to the dividend announcement and 7 days before the record date), in order to conclude.

Analysis and Discussions

The main hypothesis of this study is that the announcement of dividends has a significant effect on the stock prices of selected companies (H_A), whereas the "null hypothesis" maintains that dividend announcements do not include any information that could affect stock prices, the evidence suggests otherwise (H_0). As the pre-event and post-event window prices were found to be normally distributed and independent of one another, a paired sample t-test at a confidence level of 95% was utilized in order to test these hypotheses. The level of confidence used in this test was 95%. In addition, correlation analyses were performed between the adjusted stock return during the thirty days before the dividend announcement and the seven days following the date, and there was no price limit associated with the dividend announcement. These analyses were also performed between the thirty days prior to the date of the dividend announcement and the seven days before the record date.

Empirical Results

The research investigates how the declaration of a dividend affects the price of the stocks of 30 different firms. The findings suggest that the effect of dividend announcements on stock price movement is insignificant. The average stock return index is Tk. 130.20 prior to the announcement but drops to Tk. 122.78 following the price adjustment (7 days after the no price limit date related to the dividend announcement). However, the adjusted mean return index increases to Tk. 134.95 when investors wish to avail of the dividend benefit (7 days before the record date). This implies that the dividend announcement has a less substantial influence on stock price changes during the price adjustment period, but the time leading up to the record date has a relatively more significant rate of increase.

The information provided in Table 3, Table 4, and Table 5 shows the historical data for the stock prices, including their mean values and standard deviations. These tables were obtained by analyzing data from CSE's website. Table 6 and 7 compare the mean stock price and standard deviation between the pre-event and post-event windows. Table 1 displays the result of the paired sample t-test. Meanwhile, Table 2 contains information regarding the coefficient of correlation and coefficient of determination.

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Dev.	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Average price of Pre-Event Window - Average price of Market Adjustment Period	7.41333	19.03008	3.47440	0.30738	14.51928	2.134	29	0.041
Pair 2	Average price of Pre-Event Window - Average price of 7 Days before Record Date	-4.75667	24.49793	4.47269	-13.90435	4.39101	-1.063	29	0.296

Table 1. Hypothesis Test with Paired Sample Test[1]

Model Summary

Model	Variable	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	The average price of the market adjustment period	0.993[a]	0.986	0.986	15.61930
2	The average price of 7 days before the record date	0.985[b]	0.970	0.968	24.72671

a. Predictors: (Constant), Average price of Pre-Event Window

b. Predictors: (Constant), Average price of Pre-Event Window

Table 2. Coefficient of Correlation and Coefficient of Determination[2]

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[1] Computed in IBM Statistics SPSS 21.0 which shows the t – value to test the hypothesis

[2] Coefficient of correlation and *goodness of fit* test

Our study provides compelling evidence that the announcement of dividends significantly impacts stock prices. By using the paired *t*-test at a 95% confidence level, we found that the *t*-value was more significant than 1.699 (2.134 between the pre-event price and market-adjusted price, and -1.063 between the pre-event price and the time for availing dividend benefits), which lends credence to our alternative hypothesis that the announcement of the dividend does contain information that could affect prices. Furthermore, there is a high degree of association at the 5% significance level between the stock price during the 30 days before the dividend announcement date and seven days after the announcement date (i.e., $r = 0.993$), as well as the stock price during seven days before the record date (i.e., $r = 0.985$). This correlation output supports our evidence that the announcement of dividends significantly impacts the stock price movements of the 30 selected companies in the CSE-30 index in Bangladesh.

Conclusions

This study examined the impact of dividend announcements on the stock prices of companies listed in the CSE-30 index of Bangladesh. This study employs a modified event study approach using market-adjusted returns to analyze the stock price movements surrounding dividend announcements in the Bangladeshi context. This research aims to contribute to the existing literature on dividend policy and market reactions by focusing on this specific market and methodology. The analysis used an event study approach to investigate stock price movements surrounding dividend announcements. The results revealed a significant positive reaction of stock prices to these announcements. While several previous studies implied that insider trading and speculation might overshadow the effects of dividend announcements in the Bangladeshi stock market, our study reflects shifts in market dynamics following the 2010 crash. Regulatory bodies such as the Securities and Exchange Commission (SEC) and Bangladesh Bank have since implemented stricter monitoring measures, improving market efficiency. Moreover, investors have become more adept at analyzing market trends and enhancing market transparency and efficiency. Despite ongoing recovery efforts post-crash, these developments indicate a positive trajectory for the Bangladeshi stock market.

However, it is important to acknowledge several limitations in our study. Firstly, our focus on only 30 financially strong and stable companies from the Chittagong Stock Exchange, included in the CSE-30 Index, may not comprehensively represent the

entire market. Future research should consider expanding the sample size to ensure greater market inclusivity. Additionally, the diverse business sectors in the CSE-30 Index introduce variability in business cycles and cost structures, potentially affecting the study's accuracy. Conducting similar analyses within specific industries could offer more nuanced insights. Additionally, time constraints limited our data analysis to approximately a year, suggesting the need for longer-term studies to ensure the robustness of our findings. Future research could address these limitations by expanding the sample size to encompass a broader range of companies and utilizing a more extended timeframe for data analysis. Additionally, conducting industry-specific analyses could provide further insights. Investigating the role of investor sentiment and regulatory changes in influencing market reactions to dividend announcements in Bangladesh would also be valuable.

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[3] Data sharing is not applicable to this article as no new data were created or analyzed in this study. Stock price data were collected from the open access publicly available domain of Chittagong Stock Exchange website.

Appendices

Descriptive Statistics

#	Trade Code of the Organization	N	Minimum	Maximum	Mean	Std. Dev.
1.	ABBANK	30	19.50	21.30	20.3633	.58279
2.	ACI	30	462.00	589.00	492.3967	42.06121
3.	AMANFEED	30	63.40	75.10	67.3100	3.46354
4.	BEXIMCO	30	26.20	28.30	27.2267	.59708
5.	BXPHARMA	30	102.60	108.90	105.0567	1.81311
6.	BSRMSTEEL	30	82.80	88.90	86.3267	1.41151
7.	CONFIDCEM	30	150.30	177.60	163.3600	6.90140
8.	DBH	10	131.90	135.00	132.4100	.94569
9.	EBL	30	29.80	35.00	32.1700	1.86920
10.	EHL	30	44.20	52.50	47.3933	2.40487
11.	FAREASTLIF	30	63.10	83.70	71.4300	7.94434
12.	HEIDELBCEM	30	470.50	520.00	499.5933	17.44036
13.	AFTABAUTO	30	63.60	68.20	65.1433	1.40582
14.	IDLC	30	66.70	78.80	71.0600	3.02946
15.	JAMUNAOIL	30	185.40	199.90	191.9967	3.30167
16.	MPETROLEUM	30	183.50	192.00	188.5733	2.34432
17.	MJL	30	106.90	117.20	111.3633	3.07554
18.	OLYMPIC	30	264.60	287.00	274.9467	6.56315
19.	ORIONPHARM	30	47.80	50.20	48.8100	.75171
20.	PADMAOIL	30	232.30	246.30	236.9900	3.52012
21.	RSRMSTEEL	30	59.30	79.90	70.6200	8.09033
22.	SHASHADNIM	30	63.00	73.10	66.8133	2.67694
23.	SOUTHEASTB	30	17.10	21.50	19.0100	1.57400
24.	SQURPHARMA	30	276.40	309.90	297.0433	8.32423
25.	CITYBANK	30	30.70	36.00	33.4100	1.62870
26.	IBNSINA	30	232.00	260.50	245.6567	9.36559
27.	TITASGAS	30	43.60	47.00	44.6800	.88294
28.	KPCL	30	58.50	67.80	64.1233	3.52662
29.	UTTARABANK	30	22.40	26.00	24.1233	1.18603
30.	UTTARAFIN	30	56.00	65.20	58.8067	2.27398

Table 3. Mean and Standard Deviation of Stock Price in Pre-Event Wind

Descriptive Statistics

#	Trade Code of the Organization	N	Minimum	Maximum	Mean	Std. Dev.
1.	ABBANK	7	17.70	18.70	18.0714	.36384
2.	ACI	7	478.60	500.00	486.3571	8.62242
3.	AMANFEED	7	67.00	68.90	68.1286	.64217
4.	BEXIMCO	7	26.60	28.30	27.4714	.61567
5.	BXPHARMA	7	106.30	108.40	107.4143	.84148
6.	BSRMSTEEL	7	85.80	86.60	86.0857	.27343
7.	CONFIDCEM	7	150.30	167.30	159.5714	7.70967
8.	DBH	7	.00	.00	.0000	.00000
9.	EBL	7	29.80	30.20	30.0143	.14639
10.	EHL	7	44.80	48.40	45.4857	1.36067
11.	FAREASTLIF	7	67.20	69.90	68.1143	.98561
12.	HEIDELBCEM	7	510.10	520.00	514.5000	4.05463
13.	AFTABAUTO	7	63.80	65.50	64.5286	.60474
14.	IDLC	7	66.70	70.00	68.1000	1.01980
15.	JAMUNAOIL	7	185.40	191.00	187.5143	1.90738
16.	MPETROLEUM	7	187.40	189.70	188.2000	.83066
17.	MJL	7	109.50	113.30	110.9143	1.39694
18.	OLYMPIC	7	269.10	287.00	280.0571	6.25643
19.	ORIONPHARM	7	48.10	49.00	48.5429	.41173
20.	PADMAOIL	7	235.00	239.50	237.6000	1.88237
21.	RSRMSTEEL	7	61.40	66.90	63.9429	1.78219
22.	SHASHADNIM	7	64.00	66.50	65.4143	.96855
23.	SOUTHEASTB	7	17.20	18.20	17.9286	.34983
24.	SQURPHARMA	7	276.40	300.50	286.5571	9.91781
25.	CITYBANK	7	32.30	34.60	33.4429	.91078
26.	IBNSINA	7	232.00	241.00	235.9143	2.73827
27.	TITASGAS	7	44.20	45.10	44.6714	.34503
28.	KPCL	7	59.90	61.90	60.7571	.76345
29.	UTTARABANK	7	22.60	23.50	23.0857	.35790
30.	UTTARAFIN	7	58.00	60.10	58.8286	1.01442

Table 4. Mean and Standard Deviation of Stock Price in Price Adjustment Period

Descriptive Statistics

#	Trade Code of the Organization	N	Minimum	Maximum	Mean	Std. Dev.
1.	ABBANK	7	19.70	22.00	20.7571	.92531
2.	ACI	7	529.00	551.30	539.9857	7.56471
3.	AMANFEED	7	205.70	215.10	210.5000	3.84404
4.	BEXIMCO	7	14.30	16.10	15.0714	.77183
5.	BXPHARMA	7	49.60	54.00	52.0286	1.53700
6.	BSRMSTEEL	7	74.00	90.90	84.9286	5.82229
7.	CONFIDCEM	7	109.70	118.00	113.6143	2.73766
8.	DBH	7	28.60	28.90	28.7000	.12910
9.	EBL	7	39.30	41.50	40.3429	.83837
10.	EHL	7	76.00	80.00	78.1714	1.55104
11.	FAREASTLIF	7	64.40	78.90	74.7857	5.33774
12.	HEIDELBCEM	7	501.80	516.50	512.2429	5.44177
13.	AFTABAUTO	7	68.30	75.10	70.5000	2.28035
14.	IDLC	7	21.40	22.70	21.9571	.56821
15.	JAMUNAOIL	7	247.20	256.60	252.6143	3.25240
16.	MPETROLEUM	7	39.90	42.20	41.2000	1.01489
17.	MJL	7	250.70	264.10	256.3143	5.15992
18.	OLYMPIC	7	280.30	291.30	285.1143	4.08470
19.	ORIONPHARM	7	37.40	40.60	39.5000	1.17473
20.	PADMAOIL	7	264.40	272.50	269.1714	3.18052
21.	RSRMSTEEL	7	24.30	25.00	24.6286	.29277
22.	SHASHADNIM	7	216.90	221.30	218.8286	1.38048
23.	SOUTHEASTB	7	17.90	19.40	18.7857	.58146
24.	SQURPHARMA	7	265.20	269.30	267.9286	1.45340
25.	CITYBANK	7	80.00	84.60	81.6857	1.61702
26.	IBNSINA	7	16.60	17.30	16.9429	.25728
27.	TITASGAS	7	92.20	98.50	96.2000	2.60384
28.	KPCL	7	87.10	91.60	88.7714	1.64288
29.	UTTARABANK	7	29.70	31.10	30.4143	.54903
30.	UTTARAFIN	7	21.90	23.70	22.7429	.64771

Table 5. Mean and Standard Deviation of Stock Price in Market Response to the Period of Availing Dividend Benefit

	Trade Code	Pre-Event Window		Market Price Adjustment Window	
		Mean Price	Std. Dev.	Mean Price	Std. Dev.
1.	ABBANK	20.36	0.58279	18.07	0.36384
2.	ACI	492.4	42.06121	486.36	8.62242
3.	AMANFEED	67.31	3.46354	68.13	0.64217
4.	BEXIMCO	27.23	0.59708	27.47	0.61567
5.	BXPHARMA	105.06	1.81311	107.41	0.84148
6.	BSRMSTEEL	86.33	1.41151	86.09	0.27343
7.	CONFIDCEM	163.36	6.9014	159.57	7.70967
8.	DBH	132.41	0.94569	0	0
9.	EBL	32.08	1.83907	30.01	0.14639
10	EHL	47.39	2.40487	45.49	1.36067
11	FAREASTLIF	71.43	7.94434	68.11	0.98561
12	HEIDELBCEM	499.59	17.44036	514.5	4.05463
13	AFTABAUTO	65.14	1.40582	64.53	0.60474
14	IDLC	71.06	3.02946	68.1	1.0198
15	JAMUNAOIL	192	3.30167	187.51	1.90738
16	MPETROLEUM	188.57	2.34432	188.2	0.83066
17	MJL	111.36	3.07554	110.91	1.39694
18	OLYMPIC	274.95	6.56315	280.06	6.25643
19	ORIONPHARM	48.81	0.75171	48.54	0.41173
20	PADMAOIL	236.99	3.52012	237.6	1.88237
21	RSRMSTEEL	70.62	8.09033	63.94	1.78219
22	SHASHADNIM	66.81	2.67694	65.41	0.96855
23	SOUTHEASTB	19.01	1.574	17.93	0.34983
24	SQURPHARMA	297.04	8.32423	286.56	9.91781
25	CITYBANK	33.41	1.6287	33.44	0.91078
26	IBNSINA	245.66	9.36559	235.91	2.73827
27	TITASGAS	44.68	0.88294	44.67	0.34503
28	KPCL	64.12	3.52662	60.76	0.76345
29	UTTARABANK	24.12	1.18603	23.09	0.3579
30	UTTARAFIN	58.81	2.27398	58.83	1.01442
	Mean	128.6	5.03087	122.91	1.96914
	Standard Deviation	127.38385	7.87923	130.25188	2.63777

Table 6. Mean and Standard Deviation of Pre-Event and Market Price Adjustment Window

	Trade Code	Pre-Event Window		Market Price Adjustment Window	
		Mean Price	Std. Dev.	Mean Price	Std. Dev.
1.	ABBANK	20.36	0.58279	19.47	0.30938
2.	ACI	492.4	42.06121	579.67	4.91824
3.	AMANFEED	67.31	3.46354	73.47	3.07718
4.	BEXIMCO	27.23	0.59708	28.2	0.31091
5.	BXPHARMA	105.06	1.81311	104.79	4.2251
6.	BSRMSTEEL	86.33	1.41151	86.74	0.3994
7.	CONFIDCEM	163.36	6.9014	168.67	6.97082
8.	DBH	132.41	0.94569	132.17	0.29277
9.	EBL	32.08	1.83907	33.19	0.51455
10.	EHL	47.39	2.40487	48.61	0.79042
11.	FAREASTLIF	71.43	7.94434	82.24	0.86575
12.	HEIDELBCEM	499.59	17.44036	535.74	7.03346
13.	AFTABAUTO	65.14	1.40582	67.3	0.97639
14.	IDLC	71.06	3.02946	73.1	1.24766
15.	JAMUNAOIL	192	3.30167	201.16	0.79762
16.	MPETROLEUM	188.57	2.34432	198.5	1.87439
17.	MJL	111.36	3.07554	115.1	1.14601
18.	OLYMPIC	274.95	6.56315	271.27	3.53398
19.	ORIONPHARM	48.81	0.75171	49.31	0.70102
20.	PADMAOIL	236.99	3.52012	238.4	4.29496
21.	RSRMSTEEL	70.62	8.09033	78.7	0.54467
22.	SHASHADNIM	66.81	2.67694	70.33	2.25958
23.	SOUTHEASTB	19.01	1.574	19.94	0.48941
24.	SQURPHARMA	297.04	8.32423	296.96	0.7871
25.	CITYBANK	33.41	1.6287	38.04	1.46499
26.	IBNSINA	245.66	9.36559	257.11	2.92542
27.	TITASGAS	44.68	0.88294	47	0.73937
28.	KPCL	64.12	3.52662	67.13	0.54685
29.	UTTARABANK	24.12	1.18603	25.04	0.58838
30.	UTTARAFIN	58.81	2.27398	64.89	1.00071
	Mean	128.6	5.03087	135.74	1.85422
	Standard Deviation	127.38385	7.87923	139.72353	1.92142

Table 7: Mean and Standard Deviation of Pre-Event and Market Response to the Period of Availing Dividend Benefit