

Empirical Study of S&P BSE 100 Index on the Role of Dividend and Earnings Announcements: A Signalling Effect

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Abstract

Background/Objectives: The study focusses on the presence of signalling effect on the stock prices when the dividend announcements are made for a select group of companies. **Methods/Statistical analysis:** The event study methodology used in this case, studies the share price behaviour alongside the dividend announcement date. This methodology tries to determine if dividend announcements correspond with a change in the stock price of the company. For this purpose, it checks the abnormal returns on the stock are calculated as the difference between Expected returns and the actual returns on the stock price. The data under consideration is of S&P BSE 100 companies for the time period 2007-2014. **Findings:** This study shows that signalling theory works to some extent in case of dividend announcements. Positive dividend announcements are seen to have a positive effect on the share prices and also make the returns more volatile. At the same time negative dividend announcements are seen to have negative impact on the stock returns but not to the same extent. Constant dividend announcements have a positive effect on the stock returns. This validates the existence of signalling effect theory regarding the dividend and earning announcement in Indian markets. **Application/Improvements:** The existence of signalling effect can be further explored through analysing effects of earnings guidance news on the stock prices.

Keywords: Earnings Announcement, Dividend Announcement, Signalling Theory, JEL: G02, G10, G14

1. Introduction

Traditional financial theory states that financial markets and its participants are mainly rational decision makers and look at wealth maximization as their main goal. But at the same time, in real world many instances are observed where emotions are seen as influencing the decision making process, causing people to behave in unpredictable ways. The field of finance that utilizes psychology-based theories to explain stock market anomalies and movements is called Behavioral Finance.

Behavioral finance combines behavioral and cognitive psychological theory with conventional financial theory to give explanations regarding why people make irrational financial decisions.

Signalling theory is an important theory in the field of Behavioral Finance. It is based on the assumption that there is information asymmetry in the market and information is not equally available to all the participants in the market at the same time, and that. Signalling theory says that corporate financial decisions such as dividend and earnings announcements are like signals sent by the company's managers to market participants. It states that an event either external or internal to the company can give a signal to the market regarding the future movement in the price.

Classical finance theories state that dividend announcement acts as a signal to the stockholders regarding the expected future movement of the share prices. All kinds of dividend announcements, regarding

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increase in dividend, decrease in dividend or retained at same level are seen as signalling events, which are expected to govern the future movement in the stock prices of the company. On the other hand, dividend irrelevance theory as propounded¹ states that the dividend announcements have no direct effect on the share price of the respective firms.

The relationship between dividend and stock prices has been investigated for long both in theoretical context as well as in an empirical context. Empirically, the dividend signalling theory has been proven to some extent. These studies work under the premise that dividend changes most of the time contain valuable information which may not have been available previously to the market participants. It is also believed that managers use dividend announcements and dividend payments as dissemination of signals to the market. The information thus delivered to the market may carry both positive and negative signals.

In this paper, it is attempted to see if the dividend payments act as signal to the stock price movement. It is expected that the stock price of the company shows an upward movement when dividends go up and downward movement when dividends go down.

In² examines the long-run financial and return performance of United Kingdom companies which he groups according to the changes reported in their dividends and earnings. The author tries to resolve this conflict using data for a large sample of United Kingdom companies which disclosed changes in dividends and earnings. In³ focused on whether voluntary disclosures and dividend announcements signal future earnings for firms. They seek to inform both the regulator as well as the manager about the benefits of increased disclosure and increased dividends. In studied the effect of monetary policy restrictions on the dividend payout patterns of the firms in India⁴. In developed a theoretical dividend model which combines the signalling and free cash-flow motives of the firm⁵. This study tries to shed light on the relationship between dividend pay-out policy, managerial incentives and the effect of this on the firm value. In used VAR framework to examine the dynamic behaviour of share prices, dividends and earnings for United Kingdom manufacturing and service companies over a large time period⁶. Try to investigate the effects of investment opportunities and corporate finance on dividend pay-out policy⁷. They are able to establish a significant negative relationship between investment opportunity set and dividend policy.

Examines the effect of investor sentiment (ISENT) on the market reaction to dividend change announcements⁸. Empirically investigate stock price and trading volume actions to simultaneous interim dividend and earnings announcements by the Greek firms listed on the Athens Stock Exchange (ASE)⁹. In their paper study the perception of dividends by the professional investor¹⁰. The mutual fund managers are used as a proxy for professional investor in this study. In their paper look at capital market reactions to a number of combinations of dividend and earnings announcements by companies¹¹. These announcements are treated as signals which are emitted by the managers of companies in an uncertain economic environment.

In their study use the event study methods to estimate the preannouncement effect of innovative new iPhone on the telecom industry¹². Their study finds that iPhone preannouncements have negative effects on the telecom companies selling iPhone under market model.

2. Objective

The objective of the present study is to check if there is a signalling effect of dividend announcements on the share prices. There have been several similar studies done before both in India and abroad in stock markets, debt markets and derivatives markets.

The hypothesis to be tested in this case is:

H_0 : Positive Dividend Announcements have a growth effect on the share prices of the company and vice versa

H_1 : Dividend Announcements have no effect on the share prices of the company.

3. Methodology

Event study methodology has been used in this case. This methodology studies the share price behaviour alongside the event date which in this case is the dividend announcement date. A time window of 21 days into account -10 to +10 days is taken with day 0 being the dividend announcement date.

This methodology tries to find if dividend announcements correspond with a change in the stock price of the company. To check this, abnormal returns on the stock prices are calculated. The abnormal returns on a stock are calculated as the difference between Expected returns and the actual returns on the stock price.

$E(R) = \alpha + \beta R(m)$ where expected return is calculated on the basis of OLS regression run on the past 250 day stock return and market return.

$AR = R - E(R)$ Abnormal return is the difference between the actual return calculated on the stock and the expected return on a stock.

CAR (Cumulative Abnormal Return) of the distribution is the sum of the abnormal returns over the time period considered which in this study, is a 21 day time window.

4. Data

The data used for the study is the S&P BSE 100 data. Data regarding dividend announcements (date of announcement, dividend yield and the amount of dividend) is collected from 1st April 2007 to 31st March 2014 for all the S&P BSE 100 companies. Daily closing price data of the S&P BSE 100 is also collected for the same period. The study is fully based on secondary sources of data which is collected through CMIE-Prowess Database and data available from the official BSE website.

Criteria for selecting the sample set of companies:

- Companies should be part of S&P BSE 100 companies as on 31st March 2014.
- Company should have listed and started trading on BSE before 1st April 2007.
- Company should have paid dividend at least five times in the total time period taken.

Based on these criteria, 64 companies out of the 100 companies in the S&P BSE 100 companies list fulfilled the requirements. As event study methodology is being used in this study, each dividend announcement is considered an event. There are 746 dividend announcement events belonging to the 64 companies recorded in this study. The stock price data corresponding to the event dates is taken. We are considering a small time frame of 30 days in this study. The stock price data collected is from 15 days (-15) prior to the announcement vis a vis 15 (15) days post announcement. The dividend announcement date is considered to be Day 0.

5. Limitations

- The study only includes 100 companies which exist

in S&P BSE 100.

- The study is not able to ascertain the extraneous factors which may have affected the stock prices during the given time frames.
- Limitations of the statistical analysis used.

6. Analysis

In Table 1, the dividend announcements have been divided into three categories as positive announcement, negative announcement and no change.

Table 1. Dividend Announcements

Kind of Dividend Announcement	Number of Announcements
Positive (Increase in Dividend from previous announcement)	240
Negative (Decrease in Dividend from previous announcement)	202
No change (Dividend announcement remains same as last announcement)	304

Table 1 indicates that there are more instances of no changes in the dividend announcement than either positive announcements or negative announcements. This also pertains to the study period, 2007-2014 which saw an economic meltdown.

As per the hypothesis formed, positive dividend announcements should lead to positive changes in the stock price and negative dividend announcements should lead to negative changes in the stock price. The instances where there is no change in the amount of dividend announced as compared to last announcement can be taken along with positive announcement as it means that dividend is being maintained.

Cumulative Abnormal Returns (CAR) is calculated for all the dividend announcements over a 21 day period, from -10 day to +10 days with day 0 being the dividend announcement day.

In Table 2, the study looks at CARs for positive dividend announcements, negative dividend announcements and constant dividend announcements. The significance is measured using t-test. The volatility of CAR values is and their significance is also given.

Table 2. Cumulative Abnormal Returns and their volatility and t- test

Dividend announcement	CAR	t- values	Volatility
Positive (240)	3.03%	-3.8836*	1.58%
Negative (202)	-2.08%	-1.1139	0.65%
Constant (304)	1.08%	1.65	1.04%

The values of CAR in Table 2 confirms that markets react favourably to positive dividend announcement, unfavourably to negative dividend announcement and relatively favourably to constant dividend announcement. The favourable reaction to the positive dividend announcement is statistically significant and others are not. Also, volatility in returns is higher for positive dividend announcements.

The study accepts the null hypothesis.

The results of Table 2 are in agreement with the literature that positive dividend announcements or dividend increases are associated with positive abnormal returns while negative dividend announcements or dividend decreases are associated with negative abnormal returns. The positive dividend announcement companies earned statistically significant large positive abnormal returns. On the other hand, negative dividend announcements do indicate negative abnormal returns but they are not statistically significant. Similarly no changes in dividend announcement, indicate slight increase in abnormal returns which is again not statistically significant.

The implications of these findings are that the market reacts positively when dividends and earnings are increased. These findings corroborate the evidence provided in many previous studies and hence support the dividend announcement effect argument.

7. Conclusion

This study shows that signalling theory does work to some extent in the S&P BSE 100 data. Positive dividend announcements have a positive effect on the share prices and also make the returns more volatile. At the same

time negative dividend announcements do have negative impact on the stock returns but not to the same extent. Constant dividend announcements have a positive effect on the stock returns.

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