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Changes in the Share Price Post Payment of Dividend

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ABSTRACT: *This paper is a study on the impact of dividend announcements on stock price and returns. The focus of the study is fluctuations caused in the returns post dividend announcements using Event Study Methodology for the financial year 2017-2018 and attempts to understand the reasons behind said fluctuations. The study also involves an analysis of the movements in abnormal returns and return of stock of sample companies through graphical illustrations.*

KEYWORDS : *Dividend announcements, stock price, stock returns, event study methodology*

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I. INTRODUCTION:

Dividend Policy has been one of the most debated topics in the corporate financial history. A lot of models have been propounded which talk about the dividend pay-out policies adopted by the corporate. Income generated or revenue earned by the company, can be retained with the company to invest it in capital assets/ projects, paying back the debt, expansion and diversification etc. or can be used to distribute dividends to the shareholders. Dividend is nothing but the amount of money paid to the shareholders out of company's profits. The decision that every company has to take is how much of the profits to retain and how much to distribute as dividends and how this would affect other factors such as the stock prices. This paper focuses on the relationship between the dividend payout and the stock prices of the company. 10 companies have been chosen on the basis of market capitalization from the NSE index for the purpose of our research

II. REVIEW OF LITERATURE:

1. According to (Erasmus, 2013) it is important to consider the dividend yield of the company along with the stability of its dividend payments when the value effect of its dividend decision is investigated. This could be interpreted as a sign t was suggested that investors may not merely be satisfied with a current high dividend yield on their investment and also place importance on increases in this dividend level over time as it was seen that in the case of high-dividend-yield firms, the positive abnormal returns that are often reported in dividend studies could be predominantly ascribed to those firms who implement medium- and low-stability dividend payments.

2. As per (Pradhan, 2014) who carried out a study on the effect of dividend announcement on share price, there was a noted rise in the price of shares post the announcement of dividend but this rise in price was stated to be mainly due to market conditions rather than the dividend itself. The increase or decrease in share price was not noted to reflect the amount of dividend. The abnormal return analysis indicated that the shareholders are getting abnormal return in the long run, but these abnormal returns are influenced by the heavy price stocks rather than dividend announcements.
3. The study conducted by (Joshi & Mayur, 2017) shows that the announcement of stock dividends induces an increase in the wealth of the shareholders in India. The change from a positive reaction as noted before the announcement day to a negative reaction post the announcement is stated to be indicative of an overreaction initially on the part of the investors concerning the announcements although this reaction quickly seems to be followed by a correction in the behaviour of the investors. The justification for such results as per the study seems to be that the information regarding the announcement of the dividends reaches the investors before the decision date considering it is compulsory for the company wishing to issue dividends to inform the investors about the board meeting and the date of the board meeting. It has been observed that the companies usually inform the exchange around five to seven days prior to the day of the meeting along with the agenda for it. It was concluded that investors perceive the announcement of stock dividends to be beneficial for them.

4. (Legenzova, Jurakovaitė, &Galinskaitė, 2017) in their study "the analysis of dividend announcement impact on stock prices of Baltic companies" aimed to analyze and evaluate the impact of announcement of dividend on stock prices listed on NASDAQ OMX Baltic market during 2010-2015. This study was done by calculating the AARs based on strategies which have some assumptions. According to their study, 40 out of 72 companies paid dividends that were listed on the NASDAQ OMX Baltic. The number of dividend announcements made to analyze this paper were 168 and the results made it evident that even thought the AARs that exist in the given period were positive but they were not statistically significant. The AARs which were positive imply that the stock prices do not significantly drop right after the dividend announcement, which would only indicate that the NASDAQ OMX BALTIC Market efficiency is weak.
5. (Al-Hassan, Asaduzzaman, & Al- Karim, 2013) say that one of the most debated issue in the field of finance is the effect of dividend policy on market price per share. They took this study to evaluate the same in Bangladesh. They used models such as descriptive statistics, correlation and multiple regressions to do their analysis with the help of secondary data and tested the hypothesis using the F test. They in their study, studied the relationship between dividend policy and the market price per share. . The regression model showed that there is a positive relationship between the MPPS and DPS, and MPPS and REPS. This result has also indicated that industries which highly payout dividend have more MPPS than industries with lower payouts. The study hence proved that there is a significance effect of dividend policy on the MPPS which supports the relevance theory (Walter and Gordon) of the dividend policy.

III. RESEARCH DESIGN:

Statement of Problem:

The research gap we aim to fill through the study is the lack of conclusiveness in the results of past studies. Also, considering the dynamic nature of business environment and fluctuations in the economy, the results of previous studies conducted in the area could be outdated and irrelevant as well. 2017-2018 which is the financial year chosen to base the study on has also seen two major events that have hugely impacted both the Indian economy and the stock markets - the introduction of GST and the after-effects of demonetisation, both of which could also have affected the relevance of past theories.

Sources of Data:

Secondary data sources have been used for this research study and the research design is descriptive in nature. The data of dividend announcements has been obtained from the official website of NSE as well as Money Control (www.nseindia.com ; www.moneycontrol.com).

Hypothesis

The following hypotheses have been formulated for the research study:

H0 – There is no significant difference between the pre and post announcement periods of dividend onstock price returns

H1: There is significant difference between the pre and post announcement periods of dividend on stock price returns.

Data Analysis Tools:

Since the aim of the study is to gain a deeper understanding of the impact dividend announcements have on the prices of shares, Event Study Methodology has been used to investigate the returns from the chosen companies on and around the date of declaration or announcement of the dividends.

An Event Study methodology is used in order to separate the event window which in our study is 3 days before and after the dividend announcement date, from the remaining period and assess the impact of the event specifically for the chosen period. A wider event window is generally used when the market is expected to be more inefficient. The event study methodology helps in quantifying the impact of the dividend announcement. Under this method, the Abnormal Return, which is the difference of the realized return and the expected return given the absence of the event, is calculated and the stock behaviour in the period prior to the announcement and post the announcement are analysed.

Expected Outcome:

Through this study, we aim to gain a better understanding of whether the stock prices fluctuate evidently following dividend announcements, whether the fluctuation is decidedly due to dividend announcements only or whether there could be other reasons for the dividend announcements.

Limitations:

Factors such as the time of dividend announcement, tax systems of various markets, the size of companies and complexities of the stock market could all play a huge role in the reaction of shareholders and thereby the stock prices to dividend announcements but these could not be factored in either due to lack of accurate information or the vastness of data.

This study is limited to only 10 companies which were chosen based on the market capitalisation, there might be other factors which could've been taken into consideration while choosing the companies.

Only the fluctuations during the event window has been analysed which could result in tunnel vision.

IV. DATA ANALYSIS AND INTERPRETATION:

The market index used in the calculation of market returns has been chosen based on the industry in which the chosen company operates.

The companies for this research have been selected based on the ten highest ranking companies listed in the NSE index using the market capitalization as the determinant.

The workings

The event study methodology was used to conduct this study. Abnormal returns and return on individual stock were calculated. The following steps were undertaken -

1. Identification of event(dividend announcement) duration:

There are two components involved in the determination of this duration:

- Event Date - the date on which the dividend was announced
- Event period - we took the data for the financial year 2017-18 and analysed the data for 3 days pre and 3 days post the dividend announcement date

2. Calculate of daily return generated by individual stock:

Return generated by the individual stock has been computed using the below given formula:

$$\mathbf{R_{i,t} = \frac{P_1 - P_0}{P_0}}$$

Where,

$R_{i,t}$ is the return generated by share of the company for point of time t

P1 is today's closing price of the share

3. Calculation of the market return generated:

Nifty50 is taken as the index for calculation of the market return on a daily basis

$$\mathbf{R_{m,t} = \frac{M_1 - M_0}{M_0}}$$

Where,

$R_{m,t}$ is the market return for time t

M1 is today's closing price of Nifty

M0 is previous day's closing price of Nifty

4. Calculation of the Expected Returns (ER) of the stock:

The formula used for the calculation is as follows:

$$\mathbf{E(R)_{i,t} = \alpha_i + \beta_i R_{m,t} + \varepsilon_{i,t}}$$

Where,

$E(R)_{i,t}$ is the expected return of stock i at time t

α_i and β_i is the intercept and slope of stock I respectively as it shows the linear regression between return of stock I and market return.

$R_{m,t}$ is the market return at time t

$\varepsilon_{i,t}$ is the unsystematic risk component

5 Computation of the Abnormal Return (AR) generated:

AR has been calculated using the below given formula:

$$\mathbf{AR_{i,t} = R_{i,t} - E(R)_{i,t}}$$

Where,

$AR_{i,t}$ is Abnormal return of stock i, at time t

$R_{i,t}$ is the daily return of stock I, at time t
$E(R)_{i,t}$ is the expected return of stock I, at time t
6. Calculate Cumulative Abnormal Return (CAR):

CAR is the cumulation of the abnormal returns generated by stock iduring time which is calculated using the formula:

$$CAR_{I,t} = \sum_{i=T_1}^{T_n} AR_{i,t}$$

Where,

$CAR_{i,t}$ is cumulative average of stock i at point of time t
$AR_{i,t}$ is the abnormal returns generated by stock i at point of time t
T is the time period chosen for calculation

List of companies chosen as samples with individual analysis:

Sl. No	Name of Company	Analysis
1	Tata Consultancy Services	TCS announced its dividend on 18 April 2017. It is evident from fig 1 in the annexure that there is a drop in the abnormal loss as well the returns of the stock both right before and right after the dividend announcements post which the returns increased and an abnormal gain was realised.
2	HDFC Bank	The final dividend announcement of HDFC Bank took place on 24 April 2017. It can be analysed from the graph(fig. 2) that both the returns as well as the abnormal gains were stable for 4 days around the period of dividend announcement. Post the dividend announcement, there was a significant drop in abnormal gains and while Ri also reduced, it was less significant than the fall in abnormal gains although both AR and Ri increased immediately.
3	Reliance	The dividend announcement at Reliance took place on 25 April 2017. Fig 3 evidently depicts a major fall in the abnormal gains turning into an abnormal loss following the dividend announcement post remaining stable for a day while the returns of the stock also follow a similar pattern.
4	Hindustan Unilever Limited	18 May 2017 was the date of final dividend announcement at HUL. The graph(fig. 4) depicting HUL's AR and Ri shows that HUL's returns fluctuate frequently. There was a huge drop in the abnormal returns and the Ri. HUL was earning an abnormal gain prior to the dividend announcement but incurred an abnormal loss on the day of dividend announcement which again gain majorly to turn into an abnormal gain the next day and abnormal loss the day after.
5	ITC	The dividend announcement at ITC took place on 30 May 2017. Fig 10 is the graph depicting the AR and Ri of ITC. Like in previous cases, the company incurred an abnormal loss and a reduction in the Ri right after the dividend announcement following which there is an evidently increasing trend in the abnormal gains and the Ri of the company.
6	HDFC	4 May 2017 was the date of dividend announcement here. Fig 8 most notably shows that there is a very slight difference between the abnormal returns and Ri of HDFC. Once again, there is a drop in both the abnormal returns and Ri of the company immediately following the dividend announcement following which it gains and then remain stable for a period of time.
7	Infosys	The dividend announcement at Infosys took place on 13 April 2017. It can be analysed from fig 7 that the difference between the AR and Ri is dismissible. There is once again a major drop in the figures post dividend announcement and while the stock recovers, it does not seem to reach the level of performance it had prior to the dividend announcement.
8	State Bank of India	19 May 2017 was the date at which SBI announced its dividends. What sets this apart from the previous companies(as evident from fig. 9) is that the drop in the abnormal returns and Ri took place 2 days post the dividend announcement which eventually gained but remained an abnormal loss unlike the abnormal gain earned by the company before the announcement of dividends.
9	ICICI Bank	ICICI Bank announced its dividends on 4 May 2017. The graph of ICICI Bank in fig 6 shows that there was a huge spike in the abnormal gains and Ri on the

		day of dividend announcement which could have been due to prior information received by the shareholders. However, post the dividend announcement, the abnormal gains and Ri both fell, recovered slightly and then fell again.
10	Kotak Mahindra	The dividend announcement at Kotak Mahindra took place on 2 May 2017. Prior to the dividend announcement, there was a rising trend noticeable in the figures of both AR and Ri resulting in the company's abnormal gains reducing and turning on the day of announcement into an abnormal gain. However, post the announcement of dividends, the company once again seems to incur abnormal losses with the Ri figures turning negative as well with a slight recovery towards the end of the event window.

Graphs showing movement in AR and Ri pre and post announcement of dividend

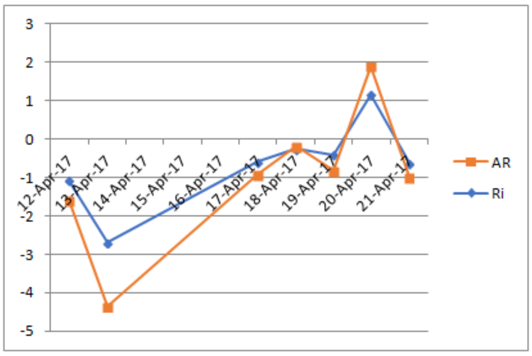

Figure 1: TCS

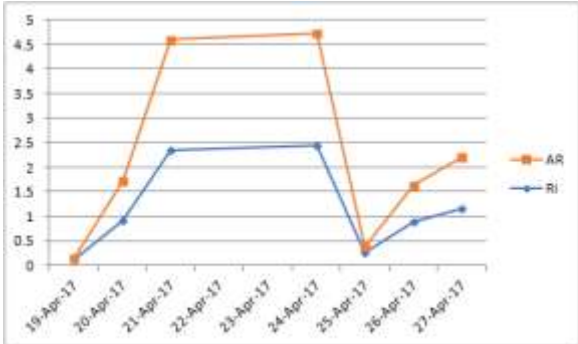

Figure 2 : HDFC Bank

Figure 3 : Reliance

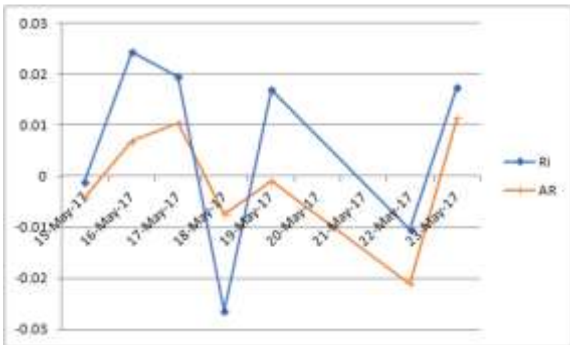

Figure 4 : HUL

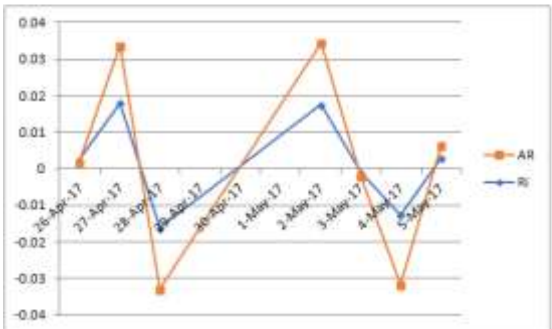

Figure 5 :Kotak Mahindra

Figure 6 : ICICI Bank

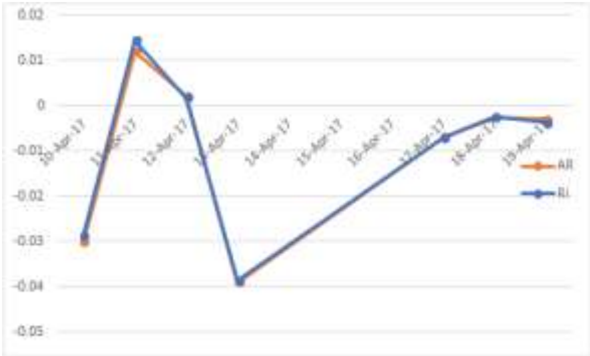

Figure 7 : Infosys

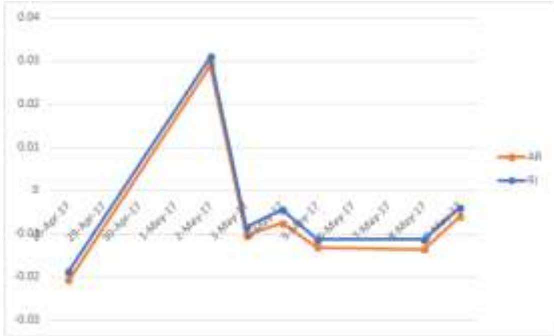

Figure 8 : HDFC

Figure 9 : SBI

Figure 10 : ITC

V. FINDINGS AND CONCLUSION:

This study is an effort at solving one of the major puzzles in finance, the impact of dividend on stock prices. This has identified that there are fluctuations in stock prices during the event window of a dividend announcement but the exact factors causing it have not been determined. In most cases studied, the change from a positive to a negative reaction after the announcement of dividend could be an indication that the shareholders reacted overzealously initially, but then they corrected this reaction swiftly as evident in the rapid fluctuations depicted in the graphs. The fluctuations could be owing to the fact that investors perceive the announcement of stock dividends to be beneficial for them and hence consider it as a positive signal.

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