



# Dividend Announcements - Impact on Cumulative Average Abnormal Returns on Announcement Day

ANJALI GUPTA

Assistant Professor, A.R.S.D College, University of Delhi-110021

## Abstract:

*Dividends are defined as the distribution of earnings (past or present) in real assets among the shareholders of the firm in proportion to their ownership. Theoretically dividend announcements should not be a decision which has any impact on share prices and stock returns. Announcement day is the day on which the news of dividend announcement first comes into the market. The present study focuses on the cash dividend announcements in India. From the analysis it is inferred that the pre-announcement window has positive CAARs in the pre and post announcement window. The results also imply that market responds positively to dividend announcements.*

**Keywords:** Dividend, Impact, Annual return, Day of announcement

## 1. Introduction

In India, earlier dividends were taxed in the hands of the shareholders. But after the introduction of corporate dividend tax in The Finance Act 1997, Indian firms are required to pay a dividend tax (effective rate of 19.994% from the year 2014-15) to the Government as and when they distribute cash dividend to the shareholders and such dividend is a tax-free income to the shareholders.

We need to find how would the investors judge whether managers are fulfilling their interests or they are looking at the interest of the stockholders? Moreover, it is a pertinent question as to whether investors want cash dividend or they are more concerned about the price appreciation? There exist three schools of thought on dividend policy. The first is that dividends are neutral and they do not increase or decrease the value. Hence the stockholders are indifferent between cash dividend and price appreciation. The second one is that dividends destroy value for shareholders as they are often taxed at a higher rate than capital gains. The third one believes that dividend creates value, at least for the firms that have stockholders who prefer dividends over capital gains. Moreover, changes in dividends allow companies to signal to financial markets how confident they feel about future cash flows (Damodaran, 2009).

The 'clientele theory' suggests that effect of dividend distribution depends on the type of the clients (i.e., investors). Companies get the investors they deserve since the dividend policy of a company attracts investors who like it (Damodaran, 2009). Pettit (1977) finds that safer companies, with older and poorer investors, intend to pay more in dividends than companies with wealthier and younger investors.

From another perspective, 'signaling theory.' Suggests that firms need to take actions that cannot be easily intimidated by businesses without real projects. Increasing dividends is viewed as one of such action (Damodaran, 2009). This positive signal is expected to lead investors to re-evaluate the cash flows and boost the stock price. In essence, the negotiation between two primary

stakeholders (i.e., managers and stockholders) play a major role in dividend decisions.

McNichols and Dravid (1990) tested whether stock splits and stock dividend signal about future earnings. According to them stock dividends are indicators of projected revenues and profits. Their result indicated that stock dividends excite the market and increase interest in company leading to higher trading in shares.

Grinblatt, Masulis and Titman (1984) established a sample of dividend paying and non-paying companies which showed same share price behaviour. They documented significant increase in share prices around announcement day.

## 2. Research Methodology

The research papers and studies in the past are primarily used as basis to decide appropriate methodology used for analysing the impact of dividend announcements on share prices. The use of event study methods for analysis is well documented and evaluated in previous work.

The sample comprises of dividend announcements announced by companies listed on Bombay Stock Exchange (BSE) which became effective during period starting from 1st January 2009 and till 30th June 2014. The closing share prices data for the sample along with values of BSE Sensitive Index<sup>1</sup> is collected from Prowess 19.1, a database of Centre for Monitoring Indian Economy (CMIE)<sup>2</sup>.

The stock split announcement dates are not directly published in any of the leading business dailies. The dates of announcement day are taken from Prowess database, Capital line and press reports of Economic Times. Additional information is obtained from bseindia.com (official website of BSE). There are 392 dividends announced in period of study. After applying conditions of event study, we obtain a sample appropriate for use of Event Study Methodology. The sample companies used for analysis are reduced to 54.

An event study is used to examine reactions of the market to events of interest. A simple event study involves the following steps:

- Identifying the event of interest and defining an event window
- Selecting a set of cases to include in the analysis
- Predicting a “normal” outcome during the event window in the absence of the event
- Estimating the cumulative abnormal outcome within the event window, where the cumulative abnormal return is defined as the difference between the actual and predicted returns during the event window
- Testing whether the cumulative average abnormal return is statistically different from zero.

## 3. Results of Analysis: Analysis of Cumulative average abnormal returns (CAARs)– announcement day

The study examines the effect of dividend announcements on share prices for period starting from 2009 to June 2014. The discussion begins with mention of hypotheses tested and presents findings relating to impact of stock splits on share prices and Cumulative **average abnormal returns** on and around announcement day. The research hypothesis tested is:

**HYP: 1-** Dividend Announcement have impact on share prices.

We analyse cumulative effect of AARs using Cumulative average abnormal returns (CAARs). CAAR is obtained by aggregating AARs for event day  $t_1$  through  $t_2$  using:

$$= \sum_{t=t_1}^{t_2} AAR_{it} \dots \dots (1)$$

CAAR<sub>it</sub>

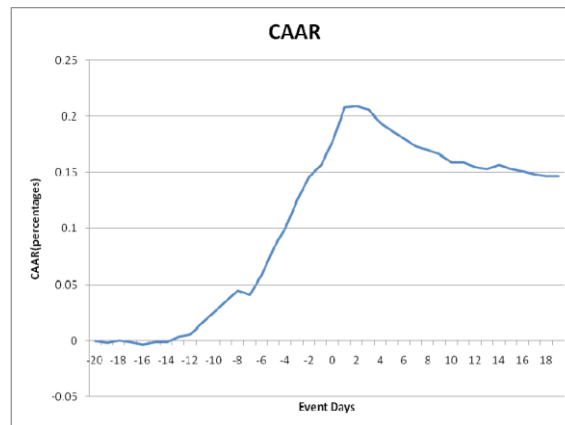
The null hypothesis tested is that CAAR at the end of period over which AARs are aggregated is zero. If CAAR is greater than zero; with significant Z-values it implies that there is significant impact of dividend announcements on ARs.

For testing statistical significance of CAARs for N number of companies over t days (t<sub>1</sub> through t<sub>2</sub>), Z<sub>CS</sub> -statistic is calculated at 5% level of significance using following:

$$\left( \sum_{i=t_1}^{t_2} SAR_{it} \right) \quad (Z)_{CS} = \frac{1}{\sqrt{N \cdot T}}$$

**Figure 1** plots CAARs over 41 day event window and shows that after a rise in CAARs till announcement day decline seems to be incessant till end of event window. It implies that the market gradually learns about forthcoming stock split announcement.

**Figure 1: CAARs (announcement day)**



**Table 1** shows that CAAR of sample companies gradually drifts up in the period starting from t<sub>-20</sub> to t<sub>0</sub>, after which it starts decreasing.

**Table 1: CAARs and Zcs -values (announcement day)**

Event Day	CAAR (%)	Zcs -values*
-20	-0.15%	-0.2888
-19	0.03%	0.0436
-18	-0.11%	-0.1162
-17	-0.33%	-0.3099
-16	-0.14%	-0.1169
-15	-0.13%	-0.0977
-14	0.36%	0.2614
-13	0.60%	0.4059
-12	1.61%	1.0259
-11	2.54%	1.5333
-10	3.55%	<b>2.04</b>
-9	4.49%	<b>2.47</b>
-8	4.14%	<b>2.19</b>
-7	5.88%	<b>2.99</b>
-6	8.29%	<b>4.08</b>
-5	10.02%	<b>4.78</b>

-4	12.54%	<b>5.80</b>
-3	14.61%	<b>6.57</b>
-2	15.68%	<b>6.85</b>
-1	17.81%	<b>7.59</b>
0	20.79%	<b>8.65</b>
+1	20.90%	<b>8.49</b>
+2	20.57%	<b>8.17</b>
+3	19.47%	<b>7.57</b>
+4	18.72%	<b>7.13</b>
+5	17.99%	<b>6.72</b>
+6	17.33%	<b>6.36</b>
+7	16.99%	<b>6.12</b>
+8	16.62%	<b>5.88</b>
+9	15.90%	<b>5.53</b>
+10	15.90%	<b>5.44</b>
+11	15.47%	<b>5.21</b>
+12	15.32%	<b>5.08</b>
+13	15.68%	<b>5.12</b>
+14	15.30%	<b>4.93</b>
+15	15.09%	<b>4.79</b>
+16	14.82%	<b>4.64</b>
+17	14.70%	<b>4.54</b>
+18	14.69%	<b>4.48</b>
+19	14.94%	<b>4.50</b>
+20	15.02%	<b>4.47</b>

\* Values in bold are significant at 5% level of significance.

**Table 1** shows that CAAR has significant  $Z_{CS}$ -values starting from  $t_{-10}$  day. The CAAR is increasing and continues to have significant  $Z_{CS}$ -values till day  $t_{+2}$ . After  $t_{+2}$  day decline in CAARs seems to be incessant. CAAR has significant  $Z_{CS}$  -values at 5% level of significance for 31 days ( $t_{-10}$  day till  $t_{+20}$  day).

During pre-announcement window CAAR increases significantly and after announcement day CAAR shows a declining trend. The CAAR of 8.49 % on  $t_{+1}$ -day declines to 4.47% by  $t_{+20}$ . It implies that market initially responds positively to dividend announcements but corrects prices downward soon after the announcement day. Insider trading can also be a reason for significant CAARs in the event period from  $t_{-10}$  to  $t_{+10}$  days. The result is in line with findings of Liu, Smith and Side (1990); Beneish (1991); and Kiyemez (1999).

CAARs are also obtained by aggregating AARs over event window of 41, 21, 11 and 3 days in order to examine, cumulative impact of splits over various time intervals within period of 41 days.

**Table 2** shows that for event window of 41 days starting from  $t_{-20}$  to  $t_{+20}$  days, CAAR have significant  $Z_{CS}$ -value at 5% level of significance for all event windows which cover any period from  $t_{-20}$  to  $t_{+20}$  days.

**Table 2: CAARs and  $Z_{CS}$ - values (event window of 41 days - announcement day)**

Event days	Number of days	CAAR (%)	$Z_{cs}$ -values*
-20 to +20	41	15.02%	4.47
-10 to +10	21	13.35%	5.55
-5 to +5	11	9.70%	5.57
-2 to 0	3	5.12%	6.90
0 to +2	3	3.09%	4.17
-1 to +1	3	5.23%	5.75

\*Values in bold are significant at 5% level of significance.

#### 4. Conclusion

From the above discussion it can be inferred that there is absence of long-lasting effect of stock split on share prices around announcement day as the period of significant CAARs does not extend beyond event window. Significant CAARs in pre-announcement window imply that there is leakage of information before stock split announcements. This implication is drawn from semi-strong form of efficient market hypothesis. To conclude it is inferred that the pre-announcement window has positive CAARs and CAAR is significant positively for time period t-10 to t+10 implying possibility of insider trading during the short time duration between period prior to and after announcement of dividend announcements. Besides, the returns are cumulated over the event window to assess the net magnitude of the overall returns.

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#### Footnotes

1. BSE Sensitive index is a robust representative of Indian stock market and used as proxy for market portfolio because it is value weighted index which uses free float market capital as value weights and appropriate for such type of analysis same is suggested by Womack et al. (1996) and Fama (1998).
2. CMIE is an independent private sector economic research organization. It has built largest database on Indian economy and companies in form of databases and research reports. It is widely used by academics and industries in India.