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IMPACT OF DIVIDEND ANNOUNCEMENT ON THE STOCK PRICES OF INDIAN COMPANIES: AN EMPIRICAL EVIDENCE

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ABSTRACT

The Specific Purpose of this paper is to find the empirical evidences of stock dividend announcement on selected 20 companies of Indian stock market and try to investigate the existence of abnormal returns. Sample data was drawn from companies listed on the BSE that have announced dividend over the period January 2008 through December 2011. Daily lognormal returns of stock prices understudy were examined for the dividend announcement effect using descriptive statistics and paired sample t-test. No significant Average Abnormal Returns on event day during any period of dividend announcement, whereas Cumulative Average Abnormal Returns has been found significant on event period 57 times positive move, 49 times negative move and 64 times constant or near to zero volatility. The results of paired t-test for means have shown that there are significant differences in average number of transactions before and after announcement during the period 2008 to 2011 for the companies like HUL, ITC, Jaiprakash, L & T, Reliance Industry, SBI, Tata Motor, and Wipro. Further research can be extended using other event studies on Indian Market and Industry wise study can also be carried out. This research will help retail investors to identify the announcement effect and will also help market to avoid mispricing. Emphasis has been given on the collection of prices and dividends data, the authenticity have also been considered meticulously by crosschecking data on different sources.

Key Words Dividend, announcement effect, Abnormal Returns, Cumulative Abnormal Returns, mean return, BSE

Introduction:

The Bombay Stock Exchange is known as the oldest exchange in Asia. It was initiated its operation in 1850s, when stockbrokers gather under banyan trees in front of Mumbai's Town Hall. The location of these meetings frequently changes as number of stock brokers increases. Then this association moved to Dalal Street in 1874 and in 1875, became officially "The Native Share & Stock Brokers Association". The BSE became the first recognized stock exchange by the Indian Government in 1956. More than 5000 companies are listed in BSE. The Bombay Stock Exchange uses the BSE Sensex, an index of 30 large and most liquid companies. The BSE Sensex was developed in 1986; this index is a proxy to measure the overall performance of stock market and an economy. The electronic trading system was introduced in 1995 prior to that the trading was organized in an open cry floor. Investors generate returns in two ways firstly in the form of dividend and secondly by way of capital appreciation. The study focuses the signal of pre and post announcement of dividends. The impact of dividend announcement over stock value has been a belligerent issue in behavioral finance over last few decades. In emerging countries like India, the issue is still nebulous and there are various empirical evidences on the semi strong form of efficiency which encouraged investigating the impact of announcement of dividend on selected sock price in Bombay Stock Exchange (BSE), which will contribute to the information efficiency to the investors, managers and policy makers.

Literature review

The Efficient Market Hypothesis precludes the competitive pricing in the random walk model. The efficient market hypothesis asserts prices are random in nature which means no individual or group of people able to predict the stock or indices movement. The Random Walk Model was observed by various researchers like Kendall (1953),



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Roberts (1959), Osborne (1959), Working, (1960). But more precise version of market efficiency was given by Samuelson (1965) and Fama (1965). Samuelson (1965) has given clear definition of market efficiency; he stated that in competitive market, there would always a buyer for a seller and vice versa. If a buyer anticipates the positive move of stock, in efficient market, it has already increased and vice versa for seller.

Fama (1970) collected an extensive review of the theory and empirical evidence of market efficiency. The theory involved defining an efficient market where no individual or group of people gets an abnormal profit on trading. A market can be promulgated to be efficient only if posit a model for returns. The weak form of the EMH perceives that prices fully reflect past prices information. The semi-strong form avows prices reflect all publically available information, while the strong form affirms information that is known to any particular participant or group of participants is reflected in market prices. He also summarized the early empirical evidences and concluded that the result were strongly in support to weak form market efficiency. He then reviewed various articles on semi-strong and strong form.

The studies of Event can be evaluated before and after the announcement of event. In this study, we focused the effect of dividend announcement on the returns of selected stock prices. The tests were applied on the returns distribution before and after announcement date of selected companies. The tests were applied on how quickly dividend announcement adjust the prices. The cumulative returns were calculated to check the quickness to adjust the new information before and after the announcement. Fama, Lawrence, Michael, & Richard (1969) have undertaken first study toward price effect after and before announcement, however Ball & Brown (1968) was first to publish their work. By applying different statistical tools and calculation of alpha and Beta, one can study the reaction and astuteness of announcement. The stock is said to be efficient, if prices quickly adjust the announcement that means prices rapidly adjust the dividend announcement so that the information will lead to available to everyone within no time.

Based on literature, there is no consensus evidence on the effect of dividend announcement on the stock prices in the world, but it can be observed that there are mixed empirical evidences on the dividend effect. Gordon (1959), Ball & Brown (1968), Ariff & Finn (1986), Stevens & Jose (1992), Ogden (1994), Kato & Loewenstein, (1995), Lee (1995), Koerniadi & Tourani-Rad (2011) found significant positive effect on the dividend announcement. On the contrary, Loughlin (1982) and Easton & Sinclair (1989) found negative effect on the dividend announcement. And some of the researchers found indifferent evidences on the dividend announcement Pichardo & Bacon (2009) and Mahadevan & Saravanakumar (2011). Ball & Brown (1968) has documented Post-earnings announcement drift; it is an indication to show the tendency for the movement of stock prices for several days or several months. Based on their study; they found, investors are earning abnormal profit at the time of annual report announcement. Cheung & Yau (1995) studied the effect of intraday announcement of earnings and dividends. They have examined three different patterns first, the earnings and dividends after closing market, second, dividends announced before and earnings announcement after closing market, third, earnings announced before and dividends announcement after closing market. Based on abnormal returns, they found evidence that support the overall hypothesis and observed that investors pay attention to the relative timing of intraday announcement. Kang & Diltz (2000) examined the stock returns of 175 divestitures and 21 acquisitions taken place between 1990 and 1994 and found abnormal positive returns on and before the announcement date, that indicated, information flow have already entered in the market. Md. Hamid Uddin, (2003), have studied 137 companies who are paying dividend and listed in Dhaka Stock Exchange, he found that investors did not gain returns from dividend announcement and also found that 30 days prior the dividend announcement, shareholders lost about 20 per cent. Baker & Wurgler (2004), based on the theory of dividend, they proposed that dividends are determined based on the investor demand. The decision to pay dividends is based on investor payment of premium. Thirumalvalavan & Sunitha (2005) studied significance of firms' announcement of stock repurchases. The overwhelming reason given for stock repurchase announcements has been reversed a trend of declining stock prices. Gunasekarage & Power (2006) examined the relationship of long run financial and returns performance of UK companies which were segregated based on whether they have changed dividend or earnings. The analysis was based on the five year before and five year after announcement. They have found that the returns were positive where companies have increased dividends and vice versa. Gurgul, Majdosz &



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Mestel (2006) accepted in financial literature on many aspects of dividend announcements mechanism. They have studied German DAX Segment and strongly support the semi-strong form hypothesis of dividend announcement. Dhar & Chhaochharia (2008) studied stock split and bonus announcement effect on stock prices returns. They used event study methodology and calculated abnormal returns by using CAPM model. They found significant positive announcement effect. The abnormal returns were 1.8 per cent and 0.8 per cent for bonus and stock split respectively. Kadioglu (2008) studied the effect of dividend announcement in Istanbul Stock Exchange. He has calculated abnormal returns using market adjusted model with t-5 and t+15 methodologies. He has considered 330 events in 88 companies from the year 2003 to 2007. He found that there were significant negative abnormal returns after the announcement and also found higher cash dividend lead to significant negative abnormal returns and lower cash dividend lead to significant lower negative abnormal return. Jais et al (2009), studied Dividend Announcements and Stock Market Reaction of Kuala Lumpur Stock Exchange using event study approach. They have considered all the companies who have announced increase or decrease in dividend between the period 2001 to 2005. There were 853 and 376 increase and decrease dividend announcements respectively. The estimation period was taken from day – 140 to day –21 prior to the announcement date. Pichardo, Bacon (2009) studied the effect of announcement of Lehman Bankruptcy on 15 stock brokerage firms. They have studied risk adjusted returns before and after announcement and found that the stock prices had already decreased 24 days prior to the announcement and continued to drop for several weeks. Akbar & Baig (2010), have studied the reaction of dividend announcement and market efficiency. They have considered 79 companies which were listed in Karachi Stock Exchange and have paid dividends either in cash, stock or cash and stock between period 2004 to 2007. The statistical significance was calculated based on the Wilcoxon Signed Rank and T-Test and results found negligible evidences for abnormal returns for cash dividends but in case of stock or cash and stock, the results evidences the positive abnormal returns which were also statistically significant. Mehndiratta & Gupta (2010) studied impact of dividend announcement on stock prices. They have taken price reaction of 15 listed companies in sixty days surrounding thirty days before and after the day of announcement. They found that investors did not get significant returns preceding and on the day of announcement, but they have got returns after the announcement day.

Parul Bhatia, (2010), observed the announcements during the financial year 2008-09 based on daily, monthly, quarterly and yearly news about Company and Industry. This empirical study witnessed that the stock price is determined from the positive significant dividend effect. The stock returns were not change drastically but the announcements did affect the stock prices, with the significant t-test values. Aamir & Shah (2011) studied dividend announcement and the abnormal stock returns for the event of the firms. They have studied 26 announcements from the cement, oil and gas sectors of Pakistan for the period from 2004-08. They found positive impact on the stock prices before and after announcement day of dividend and confirmed the semi-strong form of inefficiency. Koerniadi & Tourani-Rad (2011) studied the effect on the announcement of deliberately use accrual to convey information regarding the future profitability. This study was limited to the New Zealand stock market. They found evidences that managers are communicating both accruals and changes in dividend information. Mahadevan & Saravanakumar (2011) studied dividend announcement on Indian Companies in NSE. They found that Investor have not received the significant returns but have earned good returns in post announcement and investors are switching their investment after announcement. They have covered the calendar year from Jan 2009 to Dec 2009 and taken 10 dividend paying companies of NSE by considering the event window from -4 to +4. In general, they found only 3 companies who earn abnormal returns. Mahmood, Fayyaz, & Qayyum (2011), studied dividend announcements and stock returns of 100 corporate dividend announcement of Karachi Stock Exchange during 2005 to 2009 using three different market model i.e. Market, Mean and Risk adjusted model. The results evidenced positive value relevance and rejected dividend irrelevance hypothesis. They have also found strong return evidences before announcement of dividend. Miglani (2011) has studied the impact of right issues on the returns of selected Indian companies. She has selected 32 right issues published during year 2005 to 2010. The study evidences the presence of significant abnormal returns around the announcement date and estimated abnormal returns using OLS. Mohanty & Panda (2011) examines the reaction of market on the announcement of share buyback by the companies. Share buyback is generally used to improve the shareholding of the promoters of the company. Share buybacks were



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introduced in India in 1998. 25 companies were taken to validate semi strong form of EMH. The public announcement dates of buying back of shares are taken and tested to analyze the market reaction. Salameh & AlBahsh (2011) studied Semi-strong level of Palestine Stock Exchange event study on Mandatory disclosure. They have rejected the semi-strong form of efficiency based on significant OLS regression and paired sample t-test. Sujith & Halageri (2011) have studied bonus announcements for a period 1996 to 2011; they have taken stock prices - 30 to + 30 days to test the abnormal returns before and after the announcement date. The results indicate that Indian stock market (NIFTY) is not perfectly efficient and there is significant abnormal return during the announcement period. Sultan Singh & Kumari Sapna (2011) examined the stock return behaviour around dividend announcements in India during the period 2006-07 to 2009-10. Dividend announcements made by BSE A-Group listed companies have been taken for the study and a database of 671 observations has been constructed, which reduced to 427 observations after the implementation of the criteria. The event study methodology has been used for calculating the abnormal returns and two methods i.e. percentile method and the paired t-test for means has been used to see the impact of announcement on liquidity. The results indicate that AARs were not found significant on event day during any period of dividend announcements. The results of paired t-test for means have shown that there are significant differences in average number of transactions before and after announcement from 2006-07 to 2009-10. On the other hand, the results of the paired t-test for means have shown mixed results for turnover and average traded quantity during the period under study.

Methodology and data description

1. Scope of the Study

The present study tests the informational efficiency of the Indian Stock Market in the Semi- Strong Form of EMH. The study covers four calendar years ranging from January 2008 to December 2011. The study is restricted to dividend announcement made by 20 selected companies from BSE Sensex. One major source of information that the investors can make use for valuation securities is corporate event announcement. Corporate event announcement information and stock market efficiency are of greater interest to the investors, fund managers, analysts, planners, policy makers, and market regulators, accounting standard setters, researchers, the government, and the public in general. The present study is an attempt to check the effect of dividend announcement in Indian Stock Market.

2. Statement of the Problem

The information sets in terms of corporate events helps researchers to validate Semi strong form market efficiency as these are publically available information. The specific research question is how quickly dividend announcement adjust to correct security prices. In the developed economies, many researchers have carried the validation of EMH with respect to the adjustment of event like bonus, right, merger, dividends etc. Whereas in India, very few research studies have been conducted to test the efficiency of the stock market with respect to dividend announcements, and very rare study has been conducted between this periods for selected 20 companies. Hence present study is an attempt to test the semi strong efficiency of the Indian stock market by considering information content of dividend announcements of 20 selected companies for period of January 2008 to December 2011.

3. The Sample, Sampling Size and Source of Data

Sample is drawn from companies listed on the Bombay Stock Exchange that have announced dividend over the period January 2008 through December 2011. The sample firms' dividend announcement information and other financial details were obtained from BSE web site, yahoo finance, economic times and money control, and following criteria have been considered for the selection of 20 companies from BSE.

- a) The cash dividend announcements should be annual cash dividend announcements.
- b) The firm with a purely annual cash dividend announcement should also have an annual cash dividend announcement previous year.
- c) The firms should have trading data on the formal cash dividend on declaration day.



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The final data set contains 20 firms with announcements of cash dividend¹. From this database the event windows of -29 days to + 29 days have been selected and further abnormal return and t-test have been applied.

On the basis of above criteria following most traded security are selected from the BSE SENSEX.

Table 1: The Sample companies with date of Announcement (DD/MM/YYYY)

Company	2008	2009	2010	2011
ACC Ltd	31/01/2008	02/05/2009	02/04/2010	02/03/2011
Cipla Ltd	18/07/2008	15/07/2009	15/06/2010	29/06/2011
DLF Ltd	06/04/2008	31/07/2009	29/07/2010	25/05/2011
Hindustan Unilever Ltd	13/02/2008	05/11/2009	25/05/2010	05/09/2011
Infosys Ltd	15/04/2008	15/04/2009	13/04/2010	15/04/2011
ITC Ltd	23/05/2008	22/05/2009	21/05/2010	20/05/2011
Jaiprakash Associates Ltd	05/02/2008	06/08/2009	31/05/2010	13/08/2011
Jindal Steel & Power Ltd	27/05/2008	27/05/2009	04/05/2010	21/04/2011
Larsen & Toubro Ltd	29/05/2008	28/05/2009	17/05/2010	19/05/2011
Mahindra & Mahindra Ltd	16/05/2008	19/05/2009	24/05/2010	30/05/2011
Maruti Suzuki India Ltd	24/04/2008	24/04/2009	26/04/2010	25/04/2011
NTPC Ltd	29/05/2008	22/05/2009	17/05/2010	10/05/2011
Reliance Communications Ltd	30/04/2008	24/07/2009	17/05/2010	31/05/2011
Reliance Industries Ltd	21/04/2008	07/10/2009	26/04/2010	21/04/2011
State Bank of India	02/05/2008	11/05/2009	11/05/2010	11/05/2011
Tata Consultancy Services Ltd	21/04/2008	21/04/2009	19/04/2010	21/04/2011
Tata Motors Ltd	16/05/2008	29/05/2009	27/05/2010	26/05/2011
Tata Power Company Ltd	23/06/2008	28/05/2009	25/05/2010	19/05/2011
Tata Steel Ltd	26/06/2008	25/06/2009	27/05/2010	26/05/2011
Wipro Ltd	21/04/2008	22/04/2009	23/04/2010	27/04/2011

4. Objectives of the Study:

The main objective of the study is to investigate the quickness of dividend information to the 20 selected companies in BSE:

1. To examine the effect of dividend announcements by 20 selected companies on the stock returns.
2. To analyze whether the stock returns moved abnormally in pre and post period of dividend announcement.
3. To study the speed or delay adjustment effect in dividend announcements

5. Tools Used For the Analysis

Daily Returns:

The daily returns are calculated using following formula;

$$R_t = \ln \left(\frac{P_t}{P_{t-1}} \right)$$

¹ www.economictimes.indiatimes.com1/february/2012



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Where r_t is the return for day t , P_t and P_{t-1} are closing value at time t and $(t-1)$ respectively.

Expected Return $E(R)$:

$$E(R_{it}) = \alpha + \beta(R_m)$$

Where,

$E(R_{it})$ = Estimated stock return on day t using market model

α = Alpha value

β = Beta value

R_m = Market Return

Abnormal Stock Returns (ASR)

Under market-adjusted abnormal returns is calculated using following equation;

$$ASR_{it} = AR_{it} - E(R_{it})$$

Where,

ASR_{it} = Abnormal stock return of i on any given day t .

AR_{it} = Actual returns on security i at time t

Average Abnormal Returns

The Average Abnormal Returns is calculated using following equation;

$$AABR_{i,t} = \sum_{t=1}^n \frac{ASR_{i,t}}{n}$$

Where,

$AABR_t$ = Average Abnormal Returns on day t

ASR_{it} = Abnormal Stock Returns on security i at time t

Cumulative Abnormal Returns (CAR)

The CAR is calculated as

$$CAR_t = \sum_{t=1}^{tj} AABR_{it}$$

Where,

• CAR_t = Cumulative Average Abnormal Returns for the t^{th} period.

• $AABR_t$ = Average Abnormal Returns of sample Dividend announcement at time t which is calculated by using the above equation

Mean Cumulative Abnormal Returns (CAR)

The mean CAR is calculated as:

$$\text{Mean CAR} = \sum_{t=1}^n \frac{CAR_t}{n}$$

Where,

Mean CAR = Mean of Cumulative Abnormal Returns,

CAR_i = Cumulative Abnormal Returns,

n = number of days.

**T-Test**

T-Test: Paired Two Sample for Means: This analysis tool helps to understand the significant mean differences before and after the announcement of dividends.

- a) Following formula was used to calculate t-values:

$$t = \overline{CAR} / \left(\frac{\sigma_{\overline{CAR}}}{\sqrt{N}} \right)$$

- b) The significance of the AARt is calculated using following formula and tested in SPSS;

$$t_{stat} = \frac{CART}{\sigma_T \times \sqrt{T}} \quad \text{or} \quad t_{stat} = \sqrt{\sum_{i=1}^T \left(AR_i - \frac{CART}{T} \right)^2 / T}$$

Table - 2 - Descriptive Statistics (In Per Cent)

Name of the Company	2008				2009				2010				2011			
	Mean (B)	Mean (A)	SD (B)	SD (A)	Mean (B)	Mean (A)	SD (B)	SD (A)	Mean (B)	Mean (A)	SD (B)	SD (A)	Mean (B)	Mean (A)	SD (B)	SD (A)
ACC	-12.4	-7.1	5.9	8.2	-10.0	-17.5	26.9	3.7	-3.7	-19.3	4.4	4.6	-0.7	2.4	1.5	2.9
Cipla	2.7	7.6	1.3	3.1	10.8	17.5	6.0	3.0	-2.1	-1.0	2.9	2.2	5.8	2.4	2.3	2.1
DLF	-10.4	-23.5	6.1	4.6	2.4	13.5	7.4	4.0	6.6	11.8	4.9	2.0	-7.5	-5.7	2.6	4.1
HUL	1.1	14.6	4.7	6.5	9.0	13.9	5.3	2.4	10.1	27.0	4.4	6.7	-3.5	-6.5	1.5	3.9
Infosys	-5.6	6.5	3.3	4.4	6.4	6.0	2.0	4.7	-5.8	-11.0	3.6	2.1	-1.2	-10.8	1.5	0.9
ITC	-1.7	-8.6	1.9	5.8	-6.4	-18.3	4.9	2.5	-1.2	6.6	1.1	3.1	5.9	12.1	2.9	1.3
Jaiprakash Asso.	-116	-295	58	46	-18	-52	7	8	-8	-23	7	3	-6	9	4	8
Hindalco	4.6	17.0	4.5	3.8	0.9	2.0	6.0	4.3	3.6	-0.3	3.0	1.9	-2.8	-7.2	2.3	1.5
L&T	0.8	7.7	2.0	3.6	10.1	38.0	8.7	6.2	-1.4	10.0	1.1	2.1	4.0	21.3	2.1	4.6
M&M	-3.2	-2.6	3.1	2.5	3.6	9.2	3.9	4.3	25.5	74.5	17	11	4.5	2.9	1.5	2.2
Maruti	-6.0	-4.0	4.8	5.4	-2.9	-11.3	3.3	3.3	-6.3	-11.2	2.4	2.0	-1.3	6.0	3.0	1.2
NTPC	-9.1	-10.9	4.5	5.8	-0.6	-2.4	2.6	5.1	-2.8	-10.6	1.7	3.8	2.7	3.9	1.0	2.9
RCOM	-3.9	-2.0	2.8	5.0	-10.2	-24.8	7.4	4.9	-4.6	-6.7	5.5	9.2	-4.8	10.0	3.3	4.6



RIL	8.8	11.6	5.0	1.5	6.4	14.3	3.2	3.2	5.8	8.1	2.0	2.8	0.6	-7.1	2.7	1.3
SBI	-0.4	-4.6	1.8	4.5	7.8	20.8	4.3	6.9	7.2	20.9	6.6	2.2	-2.0	-17.8	2.1	5.5
Tata Motor	-0.4	-9.5	2.6	6.7	-20.4	-40.6	6.1	11.4	8.2	4.1	3.5	1.9	3.1	-9.6	2.5	3.3
Tata Power	4.9	-4.2	3.5	3.6	-8.2	-7.9	3.2	4.7	4.1	6.0	2.3	2.8	-1.1	-1.1	1.9	2.0
Tata Steel	-5.0	-28.9	5.8	8.0	11.5	18.8	8.4	5.1	-11.8	-35.7	7.1	4.4	-1.2	-1.2	1.0	1.7
TCS	9.4	15.7	6.1	6.0	6.8	4.9	3.0	4.4	-0.7	-11.4	3.1	3.0	2.2	8.0	3.2	2.5
Wipro	2.9	18.9	5.9	5.5	11.7	33.9	3.7	4.6	-3.1	-11.6	3.0	1.6	-1.6	-5.5	1.8	0.8

It can be observed from table -2 that there are significant variations in pre and post announcement of dividend in prior and post 29 days. In 2011, Jaiprakash Asso., RCOM and Tata Motor have given mixed return from negative to positive returns. In 2010, only L&T have given mixed return. In 2009, no company has been observed for mixed returns. In 2008, Infosys has been witnessed mixed returns.

In 2011, highest variation has been observed in DLF, Infosys, ITC, L&T and RCOM. In 2010, ACC, DLF, HUL, Infosys, Jaiprakash Associates, M&M, Maruti, RIL, SBI, Tata Steel and Wipro witnessed high variation in pre and post period returns. In 2009, ACC, Cipla, DLF, HUL, Infosys, ITC, Jaiprakash Associates, L&T, RCOM, RIL, SBI, Tata Motors, Tata Power, Tata Steel, TCS and Wipro have been witness higher variation; this is because of bounce back of bear rally after 2008. In 2008, ACC, DLF, Infosys, Jaiprakash Associates, NTPC, Tata Steel, TCS have been observed high variation.

Hypothesis Testing and Empirical results

H0: There is no significant difference of pre and post announcement of dividend on stock price returns.

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

Table - 3 - T-Test Statistics

Company		2008	2009	2010	2011
ACC	t-Stat	-2.184	1.555	26.061	-5.45
	p - value	0.0187**	0.0656***	0.000*	0.000*
Cipla	t-Stat	-7.689	-4.917	-1.42	4.547
	p - value	0.000*	0.000*	0.0833***	0.000*
DLF	t-Stat	14.089	-10.436	-5.676	-1.329
	p - value	0.000*	0.000*	0.000*	0.097***
HUL	t-Stat	-7.754	-6.355	-31.047	3.964
	p - value	0.000*	0.000*	0.000*	0.000*
Infosys	t-Stat	-11.254	0.495	11.277	24.616
	p - value	0.000*	0.312	0.000*	0.000*
ITC	t-Stat	5.363	11.882	-11.38	-12.917
	p - value	0.000*	0.000*	0.000*	0.000*
Jaipraka	t-Stat	41.45	39.458	16.33	-7.897
	p - value	0.000*	0.000*	0.000*	0.000*



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Jindal	t-Stat	-17.295	-0.682	4.916	7.713
	p - value	0.000*	0.2504	0.000*	0.000*
L & T	t-Stat	-9.85	-26.592	-32.519	-22.307
	p - value	0.000*	0.000*	0.000*	0.000*
M & M	t-Stat	-0.774	-5.656	-38.42	3.48
	p - value	0.2227	0.000*	0.000*	0.001*
Maruti	t-Stat	-1.102	8.746	7.465	-13.385
	p - value	0.1399	0.000*	0.000*	0.000*
NTPC	t-Stat	0.977	2.147	15.488	-2.02
	p - value	0.1685	0.0202**	0.000*	0.0265**
Rel. Com	t-Stat	-1.5	9.365	0.829	-10.772
	p - value	0.0723***	0.000*	0.2071	0.000*
Rel. Ind	t-Stat	-2.911	-13.259	-6.471	17.138
	p - value	0.003*	0.000*	0.000*	0.000*
SBI	t-Stat	4.092	-10.598	-14.421	17.35
	p - value	0.000*	0.000*	0.000*	0.000*
Tata Motor	t-Stat	6.859	10.619	5.413	12.6
	p - value	0.000*	0.000*	0.000*	0.000*
Tata Power	t-Stat	10.593	-0.201	-4.116	0.164
	p - value	0.000*	0.421	0.000*	0.4353
Tata Steel	t-Stat	1.901	-5.604	38.567	-0.088
	p - value	0.03379**	0.000*	0.000*	0.4653
TCS	t-Stat	-11.432	1.901	20.374	-24.047
	p - value	0.000*	0.03384**	0.000*	0.000*
Wipro	t-Stat	-14.938	-20.219	17.771	12.058
	p - value	0.000*	0.000*	0.000*	0.000*

***, ** and * indicate statistical significance level at 1 per cent, 5 per cent and 10 per cent respectively

It is observed from table - 3 that the t-test is also consistent with descriptive statistics, it can be concluded that the null hypothesis of significant difference of pre and post returns of stock cannot be accepted at 10 per cent in all companies in all years except few of the companies in 2008.

Conclusion

To sum up, there is no occurrence of significant AARs on event day during any period of dividend announcement under study, whereas CAARs has been found significant on event period 57 times positive move, 49 times negative move and 64 times constant or near to zero volatility found. The results of paired t-test for means have shown that there are significant differences in average number of transactions between before and after announcement during the period 2008 to 2011 for the companies HUL, ITC, Jaiprakash, L & T, Reliance Industry, SBI, Tata Motor, and Wipro. Further to examine the impact, industry-wise study may be carried out for the selected event and econometric models and multiple regression models may be used to measure the statistical significance of the abnormal returns.

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