Impact of Dividend Announcements on Stock Prices – An Analysis of Some Select Sectors

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The concept of Efficient Market Hypothesis (EMH) is debated widely across the world by academicians and other professionals, for its validity. Researchers have examined the stock price reaction to various informational disclosures such as Mergers and Acquisitions, changes in credit rating, earnings announcements, stock split and dividend announcements. The EMH asserts that investors cannot outdo the market with any kind of information may it be historical, public or private information. Dividend announcements are an important piece of information to the investors in the stock market. According to the dividend signalling theory, an announcement about the increase in the dividend payout indicates positive future prospects of the organisation. This information is perceived to be good news among the investor community and hence should have a positive impact on the stock prices. However, analysts and investors view this theory sceptically. In this background, this paper analyses the impact of dividend announcement, for three mature industries namely Information Technology (IT), Banking and Pharmaceutical companies, on the stock prices for the period 2014 and 2015. We use event study methodology to estimate the expected return from a security. It was found that the dividend announcements made by IT, Banking and Pharmaceutical companies had minimum impact on their stock prices, which shows that the dividend signalling theory has not been successful during the period of study for the said sectors. Further, it was also observed that the CAARs of Banking companies declined continuously.

Keywords: Dividends, Event Study, Average Abnormal Returns, Cumulative Average Abnormal Returns, Stock Prices, T Test

1. Introduction

The objective of any business entity is to maximise the wealth of the stakeholders. In the long run, the investment, the financing and the dividend decisions do create value and have an impact on the wealth creation. Of the three, dividend decisions have direct impact on the shareholders, apart from being an important determinant of corporate growth and economic development. Dividend refers to a portion of company's earnings that is being distributed to the class of shareholders as decided by the Board of Directors. The most simple and easy way of identifying wealth being created is through market capitalisation. This in turn is influenced by number of factors (growth, innovation etc) that affect share prices. Researchers have examined

the stock price reaction to various informational disclosures such as Mergers and Acquisitions, changes in credit rating, earnings announcements, stock split and dividend announcements. Dividend signaling theory suggests that when a company announcement pertaining to an increase in dividend payouts is made, it is an indication of positive future prospects. This theory is directly tied to game theory; where, managers with good investment potential are more likely to signal. Poterba and Lawrence (1984) developed a "traditional view" of dividends, which highlights that dividends signal some private information about profitability; and stock prices tend to rise when a company announces an increase in dividend payouts and fall when dividends are to be decreased. They also concluded that there is no discernible difference between the hypothesis that an increased dividend conveys good news and the hypothesis that the dividend increase is good news for investors. In this backdrop of diametrically opposing opinion/views, an attempt is made to study the impact of dividend announcements on 22 IT, 40 banking and 30 Pharmaceutical companies' stock prices.

2. Literature Review

There are several works that have analysed the impact of dividend announcements on stock prices, and many of the works concluded that there is a positive/negative association between increase/decrease in dividend announcement information and movement of stock prices (Petit, 1972).

Gordon (1959) tests the impact of dividend and earnings data on the stock prices by obtaining the data for four industries. The results showed that Investors are interested in growth and not rate of growth. The study also showed that increase in the dividend with a corresponding reduction in retained earnings will not increase the value of a share as much as when a low value is placed on growth.

Miller and Modigliani (1961) proposed irrelevant theory based on the premise of the concept of perfect market due to symmetric information available to all interested groups. Based on this assumption, the investors and managers have the same information and expectations about the company's future growth. Later, owing to the asymmetric market conditions, they indicated the information content of dividend decisions.

Woolridge (1983) studies the impact of both increase and decrease in dividend change announcement on stock prices. He observed that the announcement pertaining to increase in dividend yielded positive returns and information pertaining to decrease in dividend resulted in decrease in stock prices. The author thus, attributed the movement of stock prices to dividend signaling theory and wealth transfer hypothesis

Ariff and Finn (1986) study the announcement effects of earnings, dividends and capitalisation changes on Singapore equity market. The results suggest that there are statistically significant abnormal returns during the months up to and including the month of announcement.

Lorder and Mauer (1992) study the firms that are listed on New York Stock Exchange for a period during 1980-84. The main objective of the paper was to test two hypothesis – a) Do managers rely on dividends to obtain higher place in stock offering and b) Does dividend change announcements have an impact on the stock prices. The results did not support either conjecture.

Rao (1994) studies dividend announcements, bonus announcements and right issue announcements for the firms listed on Bombay Stock Exchange for the period 1988-89. He found that stock prices began to increase two days prior the formal announcements of dividend increase are made and continued further. In the case of bonus announcements, the adjustments of stock prices occurred exactly on announcement day itself; where as in case of right issue announcements, the adjustment started one day late and it continued till the next day. He ascribed the reaction of stock prices to signaling theory.

Travlos and Vafeas (2001) examine the effect of increase in cash dividend and bonus issues on stock prices. The study was conducted during 1985-95. The study showed that the stock prices increased with increase in cash and in stock dividends announcements. It was concluded that there exists information asymmetry and the dividend payout policies and dividend signalling theory attempts to bridge this information asymmetry gap.

Adelegan (2003) capture the reactions of the Nigerian stock markets over 61 day event window and found negative excess returns for pre-announcement period and positive excess return after the announcement date. It is also reported in the study that significant excess returns were found 30 days before and until 25 days after dividend announcements.

Akbar and Baig (2004) analyse the impact of cash, stock, and simultaneous cash and stock dividend announcements of 79 companies listed on the Karachi Stock Exchange for the period July 2004 to June 2007. Their findings suggest that the reaction of stock prices to cash dividend announcements is statistically insignificant. They also suggested that the returns are mostly negative for the 41-day window, which they attribute to the tax effect of cash dividends.

Chander, Sharma and Mehta (2007) examine the impact of dividend announcement for blue chip stocks listed on BSE during the period 2004 to 2005. Average abnormal returns were found in and around the dividend announcement date, indicating the optimistic nature of investors regarding dividend announcement in the information leakage phase. This trend however did not continue with new information disclosure. Dividend being marginal portion of return does not inspire over enthused investors in bringing about changes in the stock prices.

Vieira and Raposo (2007) study three different markets namely UK, Portuguese and French. Their results showed that dividend content hypothesis holds good in the UK market and no significant market reaction was observed for Portuguese and French markets.

Uddin (2008) examine the effect of dividend announcement on shareholders' value: evidence from Saudi Arabian stock exchange during 2001 and 2005. Based on a sample of 178 announcement of dividend, it was found that investors do not gain value in Saudi Arabian market from the announcement of dividend. The results showed that dividend payments have no impact on the shareholders' value in the absence of taxes and other market imperfections.

Andres, Betzer, Bongard, Haesner, and Theissen (2011) analyzed the impact of dividend announcements in German markets for the period 1996 to 2006. The study highlights that share prices react to the surprise dividend announcement. Further, it was also noticed that both, when dividend and earnings announcements are made on the same day, the dividend surprise has higher influence on the share price reaction than the earnings surprise.

Salameh and Albahsh (2011) study the Palestine market for semi strong efficiency. Their study shows that there is absolutely no divergence between the average abnormal return and zero; this indicates that market is inefficient at the semi strong level and information is gradually reflected in stock prices.

Gupta et al (2012) study the stock price reaction to 65 dividend announcements (increase) by 28 companies during the period 2006-09 listed on BSE 30 Sensex. The study exposed the fact that stock prices do react to increase in dividend announcements and dividend announcements do possess signaling property. The study also found out that Indian stock market is inefficient.

Pradhan (2014) investigate the effect of dividend announcement on share price during 2009 to 2011. The results show that there is an increase in the stock price after the announcement but that rise in stock price is mainly due to market conditions rather than dividend. The increase or decrease in share price is not reflecting the amount of dividend. The CAR is positive in the long run after dividend announcement.

Joshi and Mayur (2017) study the share price movements of top 20 PSU during the year 2013-2016. The study showed that the announcement of dividends induces an increase in the wealth of the shareholders in Indian context. They suggest that investors should follow dividend decisions in order to make wiser profits and wiser investment decisions. Further, the study concludes that the investors perceive the announcement of stock dividends to be beneficial for them and believe that stock dividends provide positive signal about the future prospects of the company, thus supporting signalling hypothesis.

3. Problem Statement

Owing to the investors and analysts being sceptical about dividend signaling theory, there has been regular testing of the theory. There are two conflicting thoughts about the impact of dividend on stock prices. The first thought is the concept of irrelevance dividend theory, which was propounded by Miller and Modigliani (1961). They believed that dividend policy is irrelevant and hence dividend announcements will have no impact on stock prices, although the idea was changed later. The second school of thought known as dividend relevance theory is led by Gordon (1959). According to this theory, dividend policy of a firm affects its growth, value and share prices. This is also supported by the idea that investors would prefer dividend as compared to capital gains. In this background, we have empirical results showing that dividend announcements carry positive information about the organisation's growth and earnings and thereby bring about surge in the stock prices (Pettit, 1972). Similar results were found in the works of Gordon (1959), Ariff and Finn (1986), Woolridge (1983), Rao (1994), Travlos and Vafeas (2001). On the contrary, the works of Loder and Mauer (1992), Akbar and Baig (2004), Chander, Sharma and Mehta (2007), Uddin (2008), Gupta et al (2012), show that the stock prices do not react to dividend announcements. On the whole, there are studies that indicate that dividend signaling does occur. Increase in company's dividend payout generally forecast positive future performance of the company's stock. Conversely, decrease in dividend payout tends to accurately portend negative future performance by the company. Works on dividend signaling in the context of emerging markets by and large do not show clear evidence of signaling effect. The reason for this has been ascribed to low level of market efficiency. The pragmatic evidences from developed

markets predominately support the positive relationship between dividend change announcements and the subsequent change in share prices while in developing markets the same is not supported either due to imperfections or inefficiencies in the market. The evidence of negative relationship between dividend change announcements and changes in share prices may also be attributed to investors' perceived behaviour for future earnings and growth. In this backdrop, this study attempts to examine the impact of dividend announcements for three mature industries namely IT, Banking and Pharmaceutical companies' stock prices in Indian Markets.

4. Objectives of the Study

1. To examine the impact of dividend announcements on stock prices of IT, Banking and Pharmaceutical Companies.
2. To investigate whether there are any significant abnormal returns (whether positive or negative) related to the dividend announcements of IT, Banking and Pharmaceutical Companies
3. To study the behaviour and fluctuations of IT, Banking and Pharmaceutical Companies stock prices.

5. Hypothesis

1. The investors cannot earn abnormal returns by trading in the stocks using the dividend announcements information
2. The average abnormal return and cumulative average abnormal return are close to zero.
3. The average abnormal returns occur randomly.

6. Research Methodology

6.1 Scope and Period of Study: The Semi Strong form of information efficiency of Indian Stock Market is tested in this paper. This study will examine the impact of dividend announcements on share prices. In the background of the developments of the capital market during 2014 and 2015, the study focuses on three mature/well established sectors namely IT, Banking and Pharmaceutical companies. The period 2014 and 2015 are chosen for the study.

6.2 Data Sources: The data pertaining to dividend announcements are sourced from Bombay Stock Exchange Corporate Actions portal. Daily stock prices are taken from both BSE historical price and Yahoo finance portals for each of the event from day – 280 to + 30. The Benchmark Index considered for the study is BSE SENSEX.

6.3 Sample Size: Our initial sample consisted of 31 IT, 44 banking and 38 Pharmaceutical events. The sample was checked for other major events (such as merger or acquisition, divestment, buyback of shares, stock split etc) during the period, if found, the event is said to be contaminated. Such contaminated events are eliminated, after applying the above criteria, the final sample consisted of 92 events of which, 22 dividend announcement events of IT, 40 of Banking and 30 of Pharmaceutical companies. The list of companies chosen for the study is given in Table 1.

Table 1 List of Companies

Sector	Name of the Company	Dividend Announcement
Banking	Bank Of Baroda	20/01/2014
	Indian Bank	20/01/2014
	Syndicate Bank	20/01/2014
	United Commercial Bank	20/01/2014
	Union Bank	20/01/2014
	Allahabad Bank	21/01/2014
	Oriental Bank	21/01/2014
	Andhra Bank	22/01/2014
	Bank Of India	22/01/2014
	Dena Bank	23/01/2014
	Industrial Development Bank	23/01/2014
	Canara Bank	24/01/2014
	Punjab And Sind Bank	20/01/2014
	Corporation Bank	28/01/2014
	Vijaya Bank	28/01/2014
	Bank	06/02/2014
	Indian Overseas Bank	10/02/2014
	Punjab National Bank	11/02/2014
	State Bank Of India	22/01/2014
	Standard Chartered Bank	22/01/2014
	State Bank Of Bikaner And	22/01/2014
	State Bank Of Travancore	22/01/2014
	Mysore Bank	22/01/2014
	State Bank Of Bikaner And	30/03/2015
	Mysore Bank	09/04/2015
	State Bank Of Travancore	14/05/2015
	Yes Bank	21/05/2015
	Federal Bank	28/05/2015
	State Bank Of India	28/05/2015
	ICICI Bank	04/06/2015
	Oriental Bank	10/06/2015
	Vijaya Bank	12/06/2015
	Bank Of Baroda	16/06/2015
	Allahabad Bank	18/06/2015
	Dena Bank	18/06/2015
	Kotak Bank	18/06/2015
	Syndicate Bank	18/06/2015
	Union Bank	18/06/2015
	Bank Of Maharashtra	19/06/2015
	Punjab And Sind Bank	19/06/2015
Information and Technology	Mind Tree	21/01/2014
	Mphasis	22/01/2014
	Wipro	22/01/2014
	Sasken	23/01/2014
	Tata Consultancy Service	27/01/2014
	Persistent	30/01/2014
	Hexaware	20/02/2014
	Infosys	29/05/2014
	Cyient	10/07/2014

	TechMahindra	17/07/2014
	Wipro	22/01/2015
	MindTree	23/01/2015
	Tata Consultancy Service	27/01/2015
	Persistent	29/01/2015
	HCL Tech	04/02/2015
	Hexaware	18/02/2015
	CMC	22/05/2015
	Infosys	15/06/2015
	Cyient	09/07/2015
	Tech Mahendra	23/07/2015
	KPIT	11/08/2015
	Mphasis	25/08/2015
Pharmaceuticals	Unichem Lab	23/01/2014
	Tornt Pharm	24/01/2014
	Lupins	13/02/2014
	Wock Pharma	17/02/2014
	Glaxo	13/04/2014
	Sanofi	16/04/2014
	Auro Pharma	11/04/2014
	Glenmark	16/04/2014
	Dr Reddy	11/07/2014
	Piramal Enterprises Ltd	15/07/2014
	Novartind	16/07/2014
	Cadilahr	17/07/2014
	Abbot India	23/07/2014
	Sanofi	31/07/2014
	Cipla	06/08/2014
	Jubilantorg	21/08/2014
	Star	01/09/2014
	Tornt Pharma	02/02/2015
	Auro Pharma	16/02/2015
	Uni Chemical Lab	02/07/2015
	Pfizer	03/07/2015
	Dr Reddy	10/07/2015
	Lupins	14/07/2015
	Abbot India	22/07/2015
	Glaxo	23/06/2015
	Cadilahr	30/06/2015
	Divis Lab	06/08/2015
	Cipla	11/08/2015
	Jubilantorg	21/08/2015
	Glenmark	10/09/2015

6.4 Methodology: The methodology used here is event study. The basic idea is to find the abnormal return attributable to the event being studied by adjusting for the return that stems from the price fluctuation of the market as a whole. (Ronald and Bernard 1995).

6.4.1 Event Window

In this study, we have used 61 day event window, 30 days before (-30) and thirty days after (+30) the dividend announcement date (0). The date on which the dividend is announced is termed as 0th day.

1. Calculating Expected Returns and Abnormal Returns

Market adjusted model developed and suggested by Sharpe (1963) is used to calculate the expected return. The prior studies use extensively the market model to determine the expected return on specific asset, given the return on market and the two parameters of the market model (alpha and beta of the security). Market model is based on the fact that the most important factor affecting stock returns is market factor and it is captured in the market model in the form of the parameters.

The market model for calculating expected return is given by the following regression equation

$$E(R_{jt}) = \alpha_j + \beta_j R_m$$

where,

$E(R_{jt})$ is the expected return on security j ,

α_j is intercept. (Mean return over the period not explained by the market).

R_m is the expected market return,

β_j is the slope of the regression

Daily returns/actual returns are calculated as below

$$R_{jt} = \ln(P_{jt}/P_{jt-1})$$

where,

R_{jt} is the daily return on security 'j' on day 't'.

P_{jt} is the daily adjusted price of the security 'j' at the end of period 't'.

P_{jt-1} is the daily adjusted price of the security 'j' at the end of period 't-1'.

$$R_{mt} = \ln(I_t/I_{t-1})$$

where,

R_{mt} is the daily return on market index on day 't'. I_t and I_{t-1} is the closing index value on day 't' and 't-1', respectively.

The abnormal return is the difference between the actual return on day t and the expected return i.e.,

$$AR_{jt} = R_{jt} - E(R_{jt})$$

where,

AR_{jt} is the abnormal return

Abnormal returns represents that part of the return which is not predicted and is, therefore, an estimate of the change in firms share price on that day which is caused by the announcement of credit rating.

Abnormal returns are averaged across firms to produce AAR_t for day 't' using the following formula,

$$AAR_{jt} = \sum_{j=1}^N AR_{jt}/N$$

where, N is the number of firms in the sample.

The cumulative average abnormal return denotes the average total effect of the event in the event window. CAAR is given by,

$$CAAR_{jt} = \sum_{t=-30}^{+30} AAR_{jt}$$

2. Parametric Significance Test

Parametric t-statistic is used to examine the statistical significance of AARs and CAARs. It is tested at 5 percent level of significance and appropriate degree of freedom. It is given by

6.4.2 The t Test Statistic for AARs and CAARs

The statistic is given by

$$t = AAR_t / \sigma AAR_t \text{ (Standard error of AAR)}$$

where

AAR = average abnormal return,

σAAR_t = standard error of average abnormal return.

The standard error is calculated by using following formula.

$$SE = \sigma / \sqrt{n}$$

where

S.E = standard error

σ = standard deviation

n = number of observation

The statistical significance of cumulative average abnormal returns (CAARs) in various event periods is assessed by using the following model:

$$t = CAAR_{jt} / \text{Standard Error}$$

where

Standard Error = Standard Deviation / $\sqrt{\text{Count of events}}$

Therefore, $t = CAAR_{jt} / (\sigma_{AAR_{jt}}) / \sqrt{T}$

Or $t = CAAR_{jt} / (\sigma_{AAR_{jt}} * T^{1/2})$

6.4.3 Non-Parametric Significance test

In addition to t test, non-parametric tests like, Run test is used to test the hypothesis.

6.4.3.1 Run Test

This test is used to analyze the randomness of AARs. We apply run test on AARs before and after the event day for both upgraded and downgraded announcements.

The Runs test is calculated by using the following formula.

$$Z = \frac{r - \mu_r}{\sigma_r}$$

where, μ_r is calculated as below

$$\mu_r = \left(\frac{2n_1n_2}{n_1 + n_2} \right) + 1$$

where, μ_r refers to the number of runs, n_1 =number of positive AARs, n_2 =number of negative AARs

and σ_r is calculated as below

$$\sigma_r = \sqrt{\frac{2n_1n_2(2n_1n_2 - n_1 - n_2)}{(n_1 + n_2)^2(n_1 + n_2 - 1)}}$$

7. Data Analysis and Interpretation

7.1 Information and Technology (IT) Companies

Table 2 AARs, CAARs and T Test of IT Companies Dividend Announcement

DAY	AAR	T TEST	CAAR	T TEST	DAY	AAR	T TEST	CAAR	T TEST
-30	-0.00275	-1.16135	-0.00275	-1.16135	0	-0.01108	-1.11132	0.039176	0.705885
-29	0.005245	0.953742	0.002499	0.321328	1	-0.00685	-0.93481	0.032324	0.779603
-28	0.004947	0.381207	0.007446	0.33126	2	-0.00375	-0.465	0.028572	0.616439
-27	0.000527	0.099703	0.007973	0.754051	3	0.004845	0.862139	0.033417	1.019794
-26	-1.4E-05	-0.00424	0.007959	1.068707	4	0.002762	0.518509	0.036179	1.148014
-25	0.002346	0.269704	0.010305	0.483703	5	-0.00493	-1.07086	0.031249	1.131323
-24	0.009377	2.294192*	0.019682	1.820039	6	-0.00433	-0.71577	0.026922	0.732022
-23	0.004511	1.010622	0.024193	1.916427	7	-0.00016	-0.02004	0.026763	0.548001
-22	0.000496	0.102894	0.024689	1.70619	8	-0.00295	-0.66457	0.023815	0.859598
-21	0.003441	0.276774	0.02813	0.71559	9	0.000758	0.096814	0.024573	0.496344
-20	0.005804	0.831125	0.033934	1.465058	10	-0.00347	-0.81232	0.021099	0.770482
-19	-0.00052	-0.0925	0.033418	1.727467	11	-0.00048	-0.17489	0.02062	1.162174
-18	0.008926	1.054564	0.042344	1.387495	12	-0.00059	-0.13695	0.020029	0.708505
-17	-0.00129	-0.22435	0.041053	1.907612	13	0.007258	1.219529	0.027287	0.691248
-16	0.004173	0.760667	0.045226	2.128721*	14	0.012352	1.644894	0.039639	0.786904
-15	-0.00189	-0.38804	0.04334	2.228716*	15	0.008888	2.261406*	0.048527	1.820395
-14	-0.0047	-1.77007	0.038637	3.527119*	16	-0.0026	-0.62457	0.045932	1.612235
-13	0.000525	0.061898	0.039162	1.088504	17	0.003905	0.601359	0.049836	1.107773
-12	0.005866	0.691903	0.045027	1.218511	18	-0.00074	-0.10466	0.049092	0.985649
-11	0.00726	1.476175	0.052287	2.377281*	19	-0.00448	-1.78647	0.044615	2.517736*

-10	0.007186	0.520758	0.059473	0.94052	20	0.001623	0.303333	0.046238	1.209874
-9	0.003998	0.713574	0.063471	2.415277*	21	0.000978	0.290649	0.047216	1.946369
-8	0.000798	0.216633	0.064269	3.63971*	22	0.006946	1.567443	0.054162	1.678786
-7	0.007296	1.277487	0.071565	2.557903*	23	0.001566	0.419884	0.055728	2.033318
-6	-0.00924	-0.93041	0.062324	1.255007	24	0.000188	0.023808	0.055916	0.956756
-5	0.001735	0.137524	0.064059	0.995868	25	0.004584	0.682348	0.0605	1.203496
-4	-0.0023	-0.26028	0.061761	1.346251	26	-0.00144	-0.38156	0.059059	2.071503
-3	-0.00061	-0.07112	0.061154	1.354157	27	-0.04584	-0.91189	0.013215	0.034514
-2	-0.00484	-0.37013	0.056317	0.800257	28	-0.00617	-2.14798*	0.007041	0.318977
-1	-0.00606	-0.91214	0.050253	1.380197	29	-0.00529	-0.55207	0.001751	0.023597
					30	-0.03072	-0.78565	-0.02897	-0.09486

Critical Value @ 5% is 2.0796, *Indicates Significant at 5 Percent

Table 3 AARs, CAARs and T Test of Banking Companies Dividend Announcement

DAY	AAR	T TEST	CAAR	T TEST	DAY	AAR	T TEST	CAAR	T TEST
-30	0.003668	0.46729	0.003668	0.46729	0	-0.01335	-0.63557	-0.07213	-0.61671
-29	-0.01265	-0.44739	-0.00898	-0.22458	1	0.004256	0.526235	-0.06788	-1.48373
-28	-0.00818	-0.35034	-0.01716	-0.4242	2	-0.00454	-1.06969	-0.07241	-2.97211*
-27	-0.00364	-0.31953	-0.0208	-0.91374	3	0.012751	0.4135	-0.05966	-0.33181
-26	0.00356	0.190245	-0.01724	-0.41192	4	-0.0005	-0.03102	-0.06016	-0.63173
-25	-0.00549	-0.39687	-0.02273	-0.67055	5	-0.01888	-0.84601	-0.07904	-0.59029
-24	0.008921	0.502228	-0.01381	-0.29374	6	0.002198	0.096431	-0.07684	-0.55424
-23	-0.01905	-0.57938	-0.03285	-0.3533	7	-0.00886	-0.90459	-0.0857	-1.41965
-22	0.003875	0.808779	-0.02898	-2.01632	8	-0.01271	-0.57376	-0.09841	-0.71156
-21	-0.00946	-0.47591	-0.03844	-0.61149	9	0.014502	0.978626	-0.08391	-0.89525
-20	-0.00454	-0.37807	-0.04298	-1.07866	10	-0.01126	-0.50722	-0.09517	-0.66947
-19	0.010191	0.800669	-0.03279	-0.74372	11	0.007184	0.365676	-0.08798	-0.691
-18	-0.00652	-0.58741	-0.03931	-0.98274	12	0.003352	0.286569	-0.08463	-1.1033
-17	-0.00724	-0.33875	-0.04654	-0.58236	13	-0.00275	-0.2975	-0.08738	-1.42615
-16	-0.00699	-0.25709	-0.05354	-0.50806	14	0.006075	0.479684	-0.0813	-0.95697
-15	-0.01443	-0.51048	-0.06797	-0.60103	15	0.009195	0.753726	-0.07211	-0.8715
-14	0.00768	0.999628	-0.06029	-1.90327	16	-0.0072	-0.42945	-0.0793	-0.69021
-13	-0.00109	-0.05958	-0.06138	-0.79296	17	-0.00623	-0.69416	-0.08554	-1.37517
-12	0.000512	0.037006	-0.06086	-1.00877	18	-0.01192	-0.63767	-0.09745	-0.74491
-11	0.006176	0.321108	-0.05469	-0.63577	19	0.00989	0.400754	-0.08756	-0.50179
-10	-0.0056	-0.46007	-0.06029	-1.08125	20	-0.00127	-0.11064	-0.08883	-1.08416
-9	-0.0234	-0.45165	-0.08368	-0.34439	21	-0.00096	-0.11781	-0.08979	-1.53346
-8	0.023547	0.526472	-0.06014	-0.28037	22	0.002473	0.207948	-0.08732	-1.00869
-7	-0.00581	-0.89144	-0.06595	-2.06494*	23	-0.00108	-0.41975	-0.08839	-4.69625*
-6	-0.00964	-0.37503	-0.07559	-0.58797	24	-0.00022	-0.02318	-0.08862	-1.23663
-5	-0.00303	-0.11893	-0.07862	-0.60554	25	0.00261	0.25874	-0.08601	-1.13938
-4	0.005649	0.468046	-0.07297	-1.16354	26	-0.00729	-0.22464	-0.0933	-0.38061
-3	0.013165	0.615948	-0.05981	-0.52883	27	-0.00438	-0.61975	-0.09769	-1.81333
-2	0.00164	0.345793	-0.05817	-2.27712*	28	-0.01184	-0.32203	-0.10953	-0.38769
-1	-0.00061	-0.06063	-0.05878	-1.0624	29	-0.06626	-0.49761	-0.17579	-0.17043
					30	0.008457	0.927259	-0.16734	-2.34917*

Critical Value @ 5% is 2.02269, *Indicates Significant at 5 Percent

Chart 1 Movement of AARs and CAARs of IT Companies

7.2 Banking Companies

Chart 2 Movement of AARs and CAARs of Banking Companies

7.3 Pharmaceutical Companies

Table 4 AARs, CAARs and T Test of Pharmaceutical Companies Dividend Announcement

DAY	AAR	T TEST	CAAR	T TEST	DAY	AAR	T TEST	CAAR	T TEST
-30	-0.01151	-0.43419	-0.01151	-0.43419	0	-0.00342	-1.02679	-0.04371	-2.35452*
-29	-0.00088	-0.16877	-0.01239	-1.68008	1	0.001228	0.090546	-0.04249	-0.55396
-28	0.017192	0.37255	0.004802	0.060076	2	-0.00257	-0.81225	-0.04506	-2.47502*
-27	-0.00917	-0.57231	-0.00437	-0.13634	3	0.012406	0.452042	-0.03265	-0.20406
-26	-0.00456	-0.23079	-0.00893	-0.20203	4	-0.00075	-0.16778	-0.03341	-1.25746
-25	-0.00607	-0.34902	-0.015	-0.35222	5	-0.00689	-0.19672	-0.0403	-0.19179
-24	-0.00631	-0.31594	-0.02131	-0.40342	6	0.002649	0.18677	-0.03765	-0.43631
-23	-0.01851	-0.62399	-0.03982	-0.47466	7	-0.00594	-0.49365	-0.04359	-0.58787
-22	0.009329	0.395786	-0.03049	-0.43118	8	0.017641	0.522876	-0.02594	-0.12314
-21	0.011858	0.283087	-0.01863	-0.14065	9	0.015145	0.924851	-0.0108	-0.10428
-20	0.001033	0.207995	-0.0176	-1.06846	10	0.016936	0.719345	0.006136	0.0407
-19	-0.00279	-0.4774	-0.02038	-1.00816	11	-0.00408	-0.22457	0.002051	0.0174
-18	0.000614	0.02511	-0.01977	-0.22423	12	-0.00595	-0.71992	-0.0039	-0.07192
-17	-0.01635	-0.61958	-0.03612	-0.36585	13	-0.01293	-0.38597	-0.01682	-0.07573
-16	-0.00517	-0.4162	-0.04129	-0.8577	14	-0.00086	-0.06972	-0.01769	-0.21277
-15	0.001245	0.278998	-0.04005	-2.24373*	15	0.002166	0.166584	-0.01552	-0.17597
-14	-0.00382	-0.37283	-0.04387	-1.03754	16	0.005909	0.322622	-0.00961	-0.07654
-13	-0.00362	-0.22547	-0.04749	-0.69728	17	0.003665	0.418532	-0.00595	-0.09802
-12	-0.00256	-0.20716	-0.05005	-0.92869	18	-0.00492	-1.20831	-0.01086	-0.3813
-11	0.018892	0.515689	-0.03116	-0.19017	19	-0.00961	-0.34327	-0.02047	-0.10343
-10	0.007922	0.442947	-0.02324	-0.2835	20	-0.03039	-0.43704	-0.05087	-0.10242
-9	-0.0048	-0.42342	-0.02803	-0.52769	21	-0.00631	-0.46541	-0.05717	-0.5852

-8	0.01428	0.440321	-0.01375	-0.0884	22	0.009783	0.648092	-0.04739	-0.43123
-7	-0.02199	-0.58671	-0.03574	-0.19465	23	-0.00688	-0.42829	-0.05427	-0.4595
-6	-0.01497	-0.4299	-0.05071	-0.2913	24	0.01218	0.573705	-0.04209	-0.26734
-5	0.000876	0.147806	-0.04983	-1.64962	25	-0.00033	-0.03551	-0.04242	-0.60727
-4	0.000311	0.079366	-0.04952	-2.43497*	26	-0.00012	-0.03362	-0.04255	-1.53158
-3	0.005365	0.623128	-0.04415	-0.9691	27	0.000252	0.059008	-0.0423	-1.30297
-2	-0.00643	-0.23175	-0.05059	-0.33844	28	-0.00563	-0.34314	-0.04792	-0.38053
-1	0.010296	1.665956	-0.04029	-1.19026	29	-0.00047	-0.05198	-0.04839	-0.6963
					30	-0.00169	-0.20132	-0.05008	-0.76317

Critical Value @ 5% is 2.04523, *Indicates Significant at 5 Percent

Chart 3 Chart Showing the Movement of AARs and CAARs of Pharmaceutical Companies

IT Companies - AARs are negative for 11 days and positive for 19 days before the announcement of the event and negative for 17 days and positive for 13 days after the announcement of the event. AAR is negative on the day of event. During the whole event period, AARs are negative for 28 days and positive for 32 days (Refer Table 2). CAARs are positive for majority of the days in the event period. This shows that the stock movement had a random walk and continued to do so even after the announcement of dividend. The positive CAAR shows that the investors have earned profits. This implies that dividend announcement information of IT companies has not provided any new information to the market and has very minimal impact of the IT stock prices as seen in Chart 1. Further, it was seen that AARs are significant for 3 days (1 day before and two days after the event), while CAARs are significant for 8 days (7 days before and 1 day after the event).

Banking Companies - AARs are negative for 18 days and positive for 12 days before the announcement of the event and negative for 19 days and positive for 11 days after the announcement of the event. AAR is negative on the day of event. During the whole event period, AARs are negative for 37 days and positive for 23 days (Refer Table 3). CAARs are negative for majority of the days in the event period. It is very evident from the movement of AARs and CAARs that the stock prices did not show any surprise to the announcement of dividend information. It is also observed that CAARs are declining continuously during the event period as seen in Chart 2. In addition to it, it was noticed that, AARs are insignificant for all the days during the event period, where as CAARs are significant for 5 days (2 days before and 3 day after the event).

Pharmaceutical Companies - AARs are negative for 17 days and positive for 13 days before the announcement of the event and negative for 19 days and positive for

11 days after the announcement of the event. AAR is negative on the day of event. During the whole event period, AARs are negative for 36 days and positive for 24 days (Refer Table 4). CAARs are negative for majority of the days in the event period. It is apparent from the Chart 3 that the stock prices had a random walk. It is also seen that AARs are insignificant for all the days during the event period, where as CAARs are significant for 4 days (2 days before and 2 day after the event).

Hence, we accept the hypothesis 1 and 2 which states that “The investors cannot earn abnormal returns by trading in the stocks using the dividend announcements information” which implies that dividend announcements have no impact on select IT, Banking and Pharmaceutical companies stock prices and “The average abnormal return and cumulative average abnormal return are close to zero which means that there is no significant abnormal return associated with dividend announcements of IT, Banking and Pharmaceutical companies”.

Run Statistics for Three Sectors

Event/Sector	IT	Banking	Pharmaceutical
Before the announcement of event	0.4279	0.2326	0.10095
After the announcement of event	0.10095	0.4279	0.2326

The Run Statistic of AARs before and after the event for all the three sectors is found to be statistically insignificant as the test statistic is less than the critical value ± 1.96 . Hence, we conclude that abnormal returns occurred but they are statistically insignificant before and after the event. Therefore, we accept the hypothesis that AARs occurred randomly but they are insignificant at 5% level of significance.

The results obtained from the study are consistent with the results of Lord and Mauer (1992), Akbar and Baig (2004), Chander, Sharma and Mehta (2007), Uddin (2008), Gupta et al (2012). However, it was also found that our results contradicted the results of Woolridge (1983), Ariff and Finn (1986), Rao (1994), Travlos and Vafeas (2001), the reason may be attributed to different markets, different time periods and different sectors.

8. Conclusion

The study examines the impact of dividend announcements of IT, Banking and Pharmaceutical companies on stock prices by using event study methodology. Analysis reveals that AARs are negative and statistically insignificant for majority of the days for all the three sectors, where as CAARs are found to have declining trend in case of Banking sector. The study clearly highlights that the dividend announcement information do not carry any new information to the markets and thereby has not provided any surprise movement of stock prices. The information pertaining to dividend announcements is seen to be factored in the stock prices much ahead of the information announcement. It may also be attributed to the leakage of significant information before the dividend announcement. Further, we tested the randomness in the behaviour of AAR values using run test and found that the observed excess return series are random during the event window of 61 days for market model. Thus, we summarise that there are no significant abnormal returns

associated with dividend announcement information of select sectors during the study period.

9. Research Implications, Limitations of the Study and Directions for Further Research

The primary objective of this paper was to ascertain the impact of dividend announcement information, of IT, Banking and Pharmaceutical Sectors, on stock prices. It was evident from the analysis that the stock markets are efficient and the stock prices have factored the dividend information. Thus, there was no astonishing behaviour of stock prices owing to dividend announcements of said sectors during the period of study.

The study employs market model designed by William Sharpe to compute the expected return from the stock, there is a wide scope to extend the study by using other models such as Mean adjusted model and market adjusted model to analyze the impact of dividend announcement on stock prices. In addition to this, other pioneering sectors, saturated sectors and declining sectors can also be included in future studies. The study is conducted for the period of 2014 and 2015. Further studies can be conducted by including different years.

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