

Effect of Dividend Initiation and Omission on Share Prices in Indian Stock Market

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Abstract—This paper applies GARCH Model to perform event analysis of dividend initiation and dividend omission decisions. The period of study spans ten years and covers events of 103 companies listed commonly on BSE as well as NSE screened from Prowess database. The time series data of share prices has been tested for both autocorrelation and heteroskedasticity. Interestingly the findings of the study are not in total conformity with the propositions of signalling theory. Even though insignificant, the dividend initiation shows a negative drift in the share prices while dividend omission has a positive effect on share prices. The efficiency of the market is also tested through daily CAAR values for events during event window. Time lag in adjustment of prices indicates inefficiency in the Indian Stock market and support similar studies on developing countries with a recommendation for regulation to enforce stringent, transparent and continuous disclosure practices.

JEL Classification: G 14

Keywords: Dividend, Initiation, Omission, GARCH model, Signalling.

1. INTRODUCTION

The controversy regarding relationship between dividend decisions and its impact on company valuation remains unresolved. The irrelevance theory (Miller and Modigliani 1961) [22] assumed perfect market while relevance of dividend decisions has been observed in many studies on imperfect nature of markets due to tax, regulation, information asymmetry, agency and clientele effects. Impact of dividend change announcement on the share price movement to give credence to signalling theory found substance in the works of Bhattacharya (1979), John and William (1985), and Miller and Rock (1985) [5, 16, 23] who attribute signalling due to asymmetric information between managers and investors, in which managers use dividend change announcement to convey information to outsiders. Empirical studies Healy and Palepu (1988), Yoon and Starks (1995) [13, 31] found effect of dividend change announcement on share prices provide support to signalling effect.

This study examines the events of dividend initiation and omission announcement on the share prices of the companies

commonly listed in NSE and BSE exchanges in India to see if signalling effect exists. Further, it explores the nature of market efficiency by analyzing the post event changes in share prices.

Section 2 of the paper reviews the relevant literature. The methodology is explained in Section 3 followed by analysis and discussion in Section 4. Conclusion and recommendations appear in the last section.

2. LITERATURE REVIEW

The studies for U.S. market by Asquith and Mullins (1983), Dielman and Oppenheimer (1984), and Benesh et al (1984) [2, 10, 4] found positive abnormal returns for the dividend initiation and a negative abnormal return for dividend omission events. Kosedag and Michayluk (2000), Nguyen (2014) [17, 24] found signalling effect of dividend initiation and by Christie (1994), Liu et. al. (2008) [9, 20] for dividend omission. Rimbey and Officer (1992) [26] observed share price movement in the direction of dividend for category A firms for both dividend initiation and omission events and negatively associated for category B firms. Lie (2005) [19] while examining event dividend decrease and omission announcement found no support for signalling theory. Positive reaction to dividend omission announcement by investors is reported by Liang et. al. (2009) [18]. Jin (2000) [15] found heterogeneous behavior of the share prices for the similar events announced in the U.S. market. Partial support for signalling effect in U.S. market was found by Jensen (2010) [14] in examination of impact of dividend reduction on share prices.

Studies related to other countries such as by Lonie (1996) and Gunasekarage and Power (2006) [21, 12] for U.K. market, Balachandran (2012) [3] for Australian market, Andres et. al. (2013) [1] for German market, found support for the signalling theory. While studies by Capstaff et.al. (2004) [7] for Oslo Stock Exchange, Chen et.al. (2009) [8] for Chinese market,

Forner and Sanabria (2010) [11] for Spanish market, found partial support for signalling theory.

The studies for Indian Stock Market by Sharma (2011) and Singh & Sapana (2011) and Sharma and Pandey (2014) [28-30] which particularly pertain to events of dividend increase or decrease do not indicate supporting evidence in support of signalling theory and at the same time observe inefficient characteristics of the Indian Stock Market. This paper broadens the scope of events studied before to analyze events of dividend initiation /omission announcements and resulting effect on share price movement in the Indian environment. As a departure from previous studies, this paper makes use of normalized data after testing for hetroskedasticity in the historical share prices data in Indian Stock market for obtaining refined results through the use of Garch model for drawing the results.

3. METHODOLOGY AND DATA

This research paper examines the signalling effect of dividend initiation and omission announcement on the market price of companies listed in the Indian Stock Market. The sample is selected such that it constitutes actively traded shares in the stock exchanges whose prices react instantly to any of the publically announced events. Using CMIE- Prowess database, companies listed on both BSE as well as NSE exhibiting the above behavior with minimum 10% change in dividend from the previous dividend announcement have first been screened from total number of 5045 BSE listed and 1686 NSE listed companies constituting the initial data set. 103 companies common to both BSE (S&P Sensex/S&P BSE Mid Cap/ S& P BSE Small Cap) and NSE (CNX Nifty-50/CNX NSE Mid Cap/CNX NSE Small Cap) indices were found to exhibit dividend related events.

Table 1: No. of events selected for events dividend initiation and Omission

S. N o.	Dividend change category	Number of isolated dividend events			
		Large Cap Companies	Mid Cap Companies	Small Cap. Companies	Total
1	Dividend initiation	11	9	44	64
2	Dividend omissions	9	1	33	43
	Total No. of Events	20	10	77	107

These 103 companies included 24 large cap (S&P Sensex/ CNX Nifty-50), 15 mid-cap (S&P BSE Mid Cap/ CNX NSE Mid Cap) and 64 small cap (S& P BSE Small Cap/ CNX NSE

Small Cap) companies. During the ten-year period from FY 2001-02 to FY2010-11, the dividend related events for these companies grouped into dividend increase/decrease along with announcement of financial results were observed to be 522. The dividend increase / decrease events and dividend initiation/omission events were found be 152 and 107 respectively. This paper focusses on study of dividend initiation /omission events for any signalling effect. The break-up of dividend initiation/omission events totalling 107 for respective capitalized category of companies is shown in Table 1.

3.1 Hypothesis

H_0 : There is no relationship between dividend initiations or omissions announcement on the share prices of large cap, mid cap as well as small cap companies in the Indian Stock Market.

3.2 Model for Computation of Abnormal Return

To examine the impact of any dividend related event on share price, abnormal returns have been calculated using GARCH (p, q) model as given by Bollerslev (1987) [6].

The decision to apply GARCH (p, q) model for the estimation of abnormal return over simple OLS model is based on resolution of concerns regarding autocorrelation and heteroskedasticity in residuals as advocated by Serra (May 2002) and Pynnonen (2005) [25, 27]. The expected return using market model (GARCH (p, q)) is given by

$$E(R_{it}) = \alpha_{i,t} + \beta_{i,t} R_{m,t} + \varepsilon_{i,t} \quad (1)$$

Subject to condition of error term $\varepsilon_{i,t} \sim N(0, \sigma_{i,t}^2)$ where variance in the error term is given by

$$\sigma_{i,t}^2 = \gamma_{i,0} + \gamma_1 \varepsilon_{i,t-1}^2 + \dots + \gamma_p \varepsilon_{i,t-p}^2 + \theta_{i,1} \sigma_{i,t-1}^2 + \dots + \theta_{i,p} \sigma_{i,t-p}^2 \quad (2)$$

Equation (1) is simple ordinary least squares (OLS) model which puts the condition for mean of error term as zero and constant variance. Equation (2) includes volatility measured by the term error square lagged and lags of volatility itself to calculate variance of error. The cumulative average abnormal return (CAAR) over the window period for n number of events being considered is given by

$$CAAR = \sum_t AAR_t \quad (3)$$

where average abnormal return

$$AAR_t = \frac{1}{n} \sum_{i=1}^n AR_{it} \quad (4)$$

For the testing of hypothesis that abnormal return realized due to particular event announcement is significant or not, t –test is employed using computation as under.

$$t = \frac{AAR_i}{\frac{\sigma}{\sqrt{n}}}$$

AAR = Average abnormal return for ith security.

σ = standard deviation of abnormal return for security i.

n= number of observations, or time period.

4. ANALYSIS AND DISCUSSION

The trends associated in daily AAR and CAAR for respective event over the event window of -30 to +30 days i.e. 61 days have been analyzed to draw inferences about the signalling effect of the event on share price movement with summaries appearing in the Table 2 below:

Table 2: Test of hypotheses at 5 % significance level for event dividend initiation/omission announcement

S. No.	Hypothesis	Event day statistics			Result
		ARRa	t-stat.a	p-stata	
H:1 .1	There is no relationship between dividend initiation and change in share prices for large cap companies.	-0.0001	0.0170	0.9865	Accepted
H:1 .2	There is no relationship between dividend initiation and change in share prices for mid cap companies.	0.0072	0.5081	0.6133	Accepted
H:1 .3	There is no relationship between dividend initiation and change in share prices for small cap companies.	0.0045	0.7131	0.4785	Accepted
H:1 .4	There is no relationship between dividend omission and change in share prices for large cap companies.	0.0109	1.5282	0.1317	Accepted
H:1 .5	There is no relationship between dividend omission and change in share prices for mid cap companies.	Events are not sufficient in number to be included in final study			
H:1 .6	There is no relationship between dividend omission and change in share prices for small cap companies.	0.0075	0.8154	0.4181	Accepted

^a Calculated values based on Prowess 4.1 database

In case of dividend initiation announcement by large cap companies show a negative reaction in share prices, while mid cap and small cap companies show a positive reaction to dividend initiation on event announcement day. The reaction

in share prices to dividend initiation is insignificant for all companies irrespective of their market capitalization.

Reactions in share prices of large cap as well as small cap companies are observed to be positive and insignificant in response to dividend omission announcement. As only one event related to dividend announcement was found for 15 mid cap companies in the sample, therefore due to insufficient number of observations, the event of dividend omission event could not be analyzed.

To examine the efficiency of the Indian Stock Market, analysis of daily movements in AAR and CAAR has been performed to capture relative pronounced movements in abnormal returns. Table 3 shows the positive and pronounced periods of significant values of CAAR.

Table 3: Pronounced periods of significant CAAR values at 5% level of significance during sixty- one day event period for the event dividend initiation/omission.

Event	Period of Positive CAAR values a			Pronounced period of significant CAAR valuesa		
	Pre event Period	Event Day	Post event Period	Pre event Period	Event day	Post event period
Dividend initiation by large cap companies	-09 to -01	00	+01 to +06, +12 to +24	-03 to -01	00	No
Dividend omission by large cap companies	-26 to -01	00	+01 to +30	No	No	+08 to +30
Dividend initiation by mid cap companies	No	No	No	-05 to -01	00	+01 to +02, +16 to +30
Dividend omission by mid cap companies	Events are not sufficient to be included in final study					
Dividend initiation by small cap companies	-27 to -01	00	+01 to +30	-02 to -01	00	+01 to +30
Dividend omission by small cap companies	-07 to -01	00	+01 to +30	No	No	+23 to +30

a Observed period of calculated values based on Prowess 4.1 database

In case of dividend initiation announcement by large cap companies, the CAAR values during 61 days period are found to be positive for a period of -09 to -01, on the event day, +01 to +06 days and +12 to +24 days. During rest of the period it

remains negative. The positive trend becomes sharper for the period of -03 to -01 and event day only. Analysis of mid cap companies shows that the CAAR values during 61 days period are negative during pre-event period. This negative trend becomes sharper for a very longer duration of -05 to -01, on event day and +01 to +02 days and + 16 to + 30 days. In case of small cap companies, the CAAR values during 61 days period are found to be positive for the period of -27 to -01, event day and +01 to + 30 days. This positive trend becomes pronounced for the period of -02 to -01, event day and +01 to +30 days.

In case of dividend omission announcement by large cap companies, the CAAR values during 61 days period are found to be positive for a period of -26 to -01, event day and +01 to +30 days. During rest of the period it remains negative. The positive trend becomes sharper for the period of +08 to +30 days. In case of small cap companies, the CAAR values during 61 days period are found to be positive for the period of -07 to -01 days, event day, +01 to +30 days and also observed to be pronounced for the period of +23 to + 30 days.

From the analysis of dividend initiation events it can easily be seen that there is no pronounced period of significant cumulative abnormal return in post-event period. In case of mid cap, companies pronounced period is observed only for +01 to +02 and +16 to +30 from event announcement day. The pronounced of CAAR for small cap companies from +01 to +30 covering whole of the post- event period window indicates inefficiency in the market for small cap companies. Similarly, pronounced periods of CAAR being for a longer duration from +8 to +30 days and +23 to +30 days for dividend omission events by large and small cap companies respectively also points out to inefficiencies in the market.

5. CONCLUSION

Dividend initiation and omission events are observed to have no signalling effect in the Indian Stock market. The positive reaction in the share prices for dividend omission may be due to investors' confidence in the emerging Indian market. Our results are consistent with Gunasekarage and Power (2006) [12] for U.K. market and Jensen (2010) [14] for U.S. market. The heterogeneous nature of responses to price reaction to dividend initiation/omission announcements in the market are also supported by Jin (2000) as well as Liang et.al. (2009) [15, 18] who found positive reaction to dividend omission announcement for U.S. market. Chen et.al. (2009) [8] also indicates partial support for signalling theory in Chinese Stock market.

The pronounced period of CAAR in the post- event period does point out to inefficiencies in the market. Reverse movement prices in case of large cap companies in response to dividend initiation/omission can be explained by mixed perception of the investors in the growth prospects of the

companies (Jensen (2010) [14] or asymmetric information due to promoter group actions with respect to shareholding decisions. Prolonged pronounced periods of CAAR in case of small cap companies indicate relatively more inefficiencies in the stock market for small cap companies as compared to large cap and mid companies. Stringent regulatory provisions enforcing adequate continuous disclosure and transparent corporate governance practices are required for improving the efficiency in the market for all listed companies irrespective of their cap size. Our recommendations are consistent with current working paper of SEBI on Clause 36 related to listing agreement by the companies aimed at bringing transparency and efficiency in the Indian Stock Market.

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