Tactful Management Research Journal
Vol. 2 , Issue. 4 , Jan 2014
ISSN :2319-7943
Impact Factor : 0.119 (GIF)
ORIGINAL ARTICLE

DIVIDEND SIGNALING HYPOTHESIS – A CASE STUDY OF BSE SENSEX COMPANIES

SAVITA

Research Scholar, Department of Management Studies
Indian Institute of Technology Roorkee, Roorkee, Uttarakhand (INDIA)

Abstract:

Observing the stock price movement is an area of research that attracted the attention of various academicians and scholars. Perhaps no other area of finance has been subject to so much empirical investigation during the last four decades as the behavior of stock prices. The present study attempts to contribute positively to the understanding of the behavior of Indian share prices in relation to the dividend announcements. Dividend announcements usually are considered as the positive signal to the shareholders and its positive impact on the share prices is also expected. A standard event study methodology is adopted in the paper to examine the price reactions of 30 listed companies surrounding 70 days of the announcement dates.

KEYWORDS:

Event study, dividends, announcements.

INTRODUCTION

What is the information content of dividends? Theoretical models such as those developed by Bhattacharya (1979) and Miller and Rock (1985) suggest that dividend policy changes convey news regarding future cash flows. They developed theoretical models by using an important economic notion of asymmetric information between managers and investors. In general, the dividend-signaling hypothesis, which is the central notion in this paper, implies that (1) a positive relationship between dividend changes and the price reaction to dividend changes; (2) a positive relationship between dividend changes and the future firm earnings; (3) a positive relationship between dividend changes and the analysts' earnings forecasts of the firm. This dividend-signaling hypothesis is one of the key issues of the field of corporate finance; therefore, survey and discussion on this issue by incorporating several new viewpoints are valuable for us.

In recent years the Securities and Exchange Board of India (SEBI) has initiated a number of reforms to make the Indian stock market at par with developed stock markets of the world. One of such reforms is compulsory quarterly earnings announcement and dividend announcements. This reform is based on the experiences of regulatory bodies around the world as well as the compulsions of domestic markets. The compulsory announcements will have an impact on the stock market. Researchers around the world have studied some of these impacts and it is considered as an event study. Event studies focus on the impact of various announcements like bonus issue, right issue, stock splits, earnings, dividends, mergers and acquisitions, buyback of stocks, etc.

Dividend announcements are one of the most important events and the studies on stock market reaction to earnings information are included in the semi-strong form of efficient market hypothesis (EMH). The semi-strong form of efficient market hypothesis states that stock prices reflects all the publicly available information instantaneously and accurately. In this paper an attempt is on the stock market reaction to dividend announcements in India in the light of various previous studies conducted in various developed countries of the world such as the USA, the UK, Australia, etc.

Please cite this Article as : SAVITA , DIVIDEND SIGNALING HYPOTHESIS – A CASE STUDY OF BSE SENSEX COMPANIES : Tactful Management Research Journal (Jan ; 2014)

BACKGROUND OF THE STUDY

Ever since the work of Miller and Modigliani (1961),the first researchers who concluded that dividends do not affect firm value under perfect capital markets with no taxation, transaction costs and information asymmetries, the dividend puzzle has motivated a number of researchers to investigate the impact of dividend distributions on firm value.

The first explanation behind the decision to distribute dividends is based on market imperfections due to the information asymmetry between management and investors. Management is supposed to have better information about the current and future financial position of the firm than investors. Therefore, dividend change announcements convey valuable information to the market since they are considered to reflect management's expectations about current and future cash flows. Subsequently, dividend increases (decreases) convey positive (negative) information to the market about the future prospects of the firms that distribute dividends. Thus, an announcement of dividend increase (decrease) is accompanied with a rise (fall) in stock prices. The above argument is considered the key premise of the so-called information content of dividends hypothesis or the dividend signaling hypothesis that was initially proposed by Lintner (1956) and further developed by Fama et al. (1969), Ross (1977), Bhattacharya (1979 and 1980), Miller and Scholes (1982), John and Williams (1985), Miller and Rock (1985) and Ambarish et al. (1987).

Jensen (1986) put forward a second explanation for the distribution of dividends based on the agency conflict between management and shareholders. Jensen (1986) extended the work of Berle and Means (1932) on the separation of ownership from control arguing that a firm with substantial free cash flows would have a tendency to overinvest by accepting marginal investment projects that had negative net present values. Following the above argument, Lang and Litzenberger (1989) deduced that if firms are overinvesting, an increase in the dividend amount, all else being equal, reduces the extent of the overinvestment and increases the market value of the firm, while a decrease in the dividend brings about the opposite result. This is called the free cash flow hypothesis.

Since then, a number of studies have come to light investigating the stock price reaction to the announcement of changes in regular paid dividends. For example, the study of Conroy et al. (2000) examined the impact of contemporaneous announcement of dividends and earnings to stock prices of firms traded on the Tokyo Stock Exchange. The empirical findings supported the dividend irrelevance hypothesis of Miller and Modigliani (1961) and rejected the information content of dividends hypothesis. In a more recent study, Harada and Nguyen (2005), measuring both the short-term and long-term market reaction to dividend changes announcements for the Japanese firms, found empirical support for the information content of dividends hypothesis.

The study of Gurgul et al. (2003) was the first attempt to quantify the reaction of stock prices and trading volume on changing dividends for the Austrian stock market. McClusky et al. (2006) investigated the manner in which the Irish stock market responds to dividend announcements. Similar to the UK, Australia and Japan, dividend news in Ireland is released concurrently with those of earnings. The results indicated that there was a statistically significant market reaction on the dividend announcement day. However, it appeared that the earnings component dominated with the role of dividends limited to its interaction with earnings news. Dasilas (2007) investigates the market reaction to cash dividend announcements for the period 2000-2004 employing data from the Athens Stock Exchange (ASE). In particular, his study examines both the stock price and trading volume response to dividend distribution announcements. Present study is an attempt to examine the dividend signalling hypothesis in Indian context taking the case study of BSE SENSEX companies.

PROCEDURE AND DESIGN OF THE STUDY

OBJECTIVE AND HYPOTHESIS

Objective

To examine the stock market reaction to dividend information.

Hypothesis

Since this study empirically examines stock market reaction to dividend information, the hypotheses being tested are:

H01: The investors cannot earn abnormal returns by trading in the stocks after the Dividend

announcements.
H02: The average abnormal returns and the cumulative average abnormal returns are Close to zero.

SAMPLE, DATA AND METHODOLOGY

Sample

Sampling is very important to accomplish a reliable result of the subject matter in concern. Therefore, sampling has to be done in a way so that it effectively represents the population of the study. As the topic suggest, the population of the study is the dividend announcements made by all the companies listed in BSE. In order to represent this population, one well accepted index fund has been chosen from the market.

Companies within BSE SENSEX that announced dividend within the examination period i.e. year 2013 have been chosen in order to represent BSE dividend announcements. It is widely accepted that SENSEX have got a proper mix of companies from possibly all industries which really reflect the stock markets in consideration.

Data

The methodology uses data on dates on which the Board of Directors meets and approves and announces the dividend of the company, daily adjusted closing prices of the stocks selected for the study at the Bombay Stock Exchange for the period covered by this study and SENSEX of ordinary share prices compiled and published by the Bombay Stock Exchange on daily basis. Data is collected from Prowess database provided by Centre for Monitoring Indian Economy (CMIE) and BSE website.
Table 1 clearly shows the 30 selected companies along with their date of Dividend announcement.

Table 1: Sample Companies with Dividend Announcement Dates

Sr No. assigned to Co. for announcement analysis purpose	Company Name	Date of Dividend Announcement
1	Axis Bank	25-04-2013
2	Bajaj Auto	16-05-2013
3	Bharti Airtel	02-05-2013
4	BHEL	23-05-2013
5	Cipla	29-05-2013
6	Coal India	20-05-2013
7	Dr Reddys Lab	14-05-2013
8	Gail India	28-05-2013
9	HDFC	08-05-2013
10	HDFC Bank	23-04-2013
11	Hero MotoCorp	26-04-2013
12	Hindalco Inds	28-05-2013
13	Hindustan Unilever	29-04-2013
14	ICICI Bank	26-04-2013
15	Infosys	12-04-2013
16	ITC	17-05-2013
17	L&T	22-05-2013
18	Mahindra & Mahindra	30-05-2013
19	Maruti Suzuki	26-04-2013
20	NTPC	10-05-2013
21	ONGC	29-05-2013
22	RIL	16-04-2013
23	SBI	14-05-2013
24	SSLT	29-04-2013
25	Sun Pharma	28-05-2013
26	Tata Motors	29-05-2013
27	Tata Power	30-05-2013
28	Tata Steel	23-05-2013
29	TCS	17-04-2013
30	Wipro	19-04-2013

Methodology

Event Study Approach

In this paper, the two-stage approach is used to test the stock price responses to dividend announcement. The first stage consists of estimation of parameter like beta based on the ex-post returns on stocks and market index, and expected returns on each of the stocks based on the market model. In the second stage these estimated parameters are used to calculate abnormal returns around the event day. In this study, the date of dividend announcement is defined as day 0 or event day. If event day is a non-trading day then the immediately following trading day is considered as an event day. Pre-announcement period includes 60 trading days prior to the dividend announcement date, i.e., days -60 to -1. Post announcement period includes 10 trading days after the dividend announcement i.e., days +1 to +10. Thus, the event window of 71 trading days (including day 0 as the event day) is taken. The estimated abnormal returns are averaged across securities to calculate average abnormal returns (AARs) and average abnormal returns are then cumulated over time in order to ascertain cumulative average abnormal returns (CAARs).

In this paper, the market model to measure the returns of stock that is related to market movement is used. Market model was developed and suggested by Sharpe.

The following simplified model of regression is used for estimating the returns on each security by taking the actual returns on market, R_m.

$$\textit{Expected Return} = E(R_i) = \alpha_i + \beta_i R_m$$

The abnormal returns are computed using the following model:

$$AR = e_i = R_i - E(R_i)$$

Where,

R_i = Actual Returns

$E(R_i)$ = Expected Returns

The average abnormal returns (AARs) for each day post-event are calculated by:

$$AAR = \frac{\sum_{i=1}^{N} AR_i}{N}$$

Where,

AR_i = abnormal return of individual security for a particular day;

N = total number of securities in the portfolio.

Since the security's overall reaction to the dividend announcement or the event will not be captured instantaneously in the behavior of average abnormal return for one specific day, it is necessary to accumulate the abnormal returns over a long period. It gives an idea about average stock price behavior over time. Generally, if market is efficient, the CAAR should be close to zero. The model used to ascertain CAAR is:

$$CAAR = \sum_{t=1}^{t=10} AAR_t$$

Where t = +1,+2,….+ 10 days.

ANALYSIS & INTERPRETATION

Results reported in this paper are obtained in terms of the event study methodology wherein the abnormal return of every company is computed through Sharpe Model with a view to study the informational efficiency. In order to investigate the incidence of market efficiency, Abnormal Return (AAR) and Cumulative Average Abnormal Returns (CAAR) centric to the dividend announcement date were obtained for portfolio of sample stocks for the study period. The abnormal were condensed for 71 days event window comprising 60 days prior and 10days post to annual dividend announcement. AARs (average abnormal returns) of the portfolio are shown in table 3.

Table2: Average Abnormal Returns and t-values of the portfolio

Days	AAR	t-test (sig value)
1	0.45%	.558
2	-0.30%	.309
3	-0.14%	.636
4	-0.44%	.097
5	0.01%	.983
6	0.09%	.721
7	-0.65%	.048
8	-0.11%	.667
9	0.07%	.825
10	-0.23%	.415

Table2 clearly shows that investors can earn abnormal returns by trading in the stocks after the Dividend announcements. A lesser (close to zero) positive incidence of abnormal return was noticed for first day post announcement for each company having positive dividend announcement and few days post negative returns for those companies having negative dividend announcement. This rejects the first null hypothesis that the investors cannot earn abnormal returns by trading in the stocks after the Dividend announcements.

Table 3 Cumulative Average Abnormal Returns (CAAR) of Portfolio in the post announcement period

Days	CAAR	t-value (sig value)
1	0.45%	
2	0.14%	
3	0.00%	
4	-0.44%	
5	-0.43%	
6	-0.34%	
7	-1.00%	
8	-1.11%	
9	-1.04%	
10	**-1.28%**	**.010**

Sig value for 10 days CAAR is .010 which is significant at α=0.05.

Analysis: The negative value of CAAR in Post- announcement period of 10 days implies that there is negative effect of dividend announcement on stock price of SENSEX 30 companies and market has not been efficient in processing the new information in the market.

Patterns of AAR

The behaviour of abnormal Returns (AAR) around the dividend announcement, as shown in table offers some interesting readings. A lesser positive incidence of average abnormal return was noticed around 2 days post announcement for the portfolio. Though the positive incidence of average Abnormal returns in the post announcement period reflects investor's confidence in the stock performance and this also rejects the first part of second null hypothesis that the average abnormal returns are close to zero, yet these results further reendorsed the informational efficiency of the stock market. This provides an opportunity to beat the market and to earn abnormal returns. However this incidence could not be considered statistically significant enough to validate market efficiency.

Patterns of CAAR

The results reported in table reveals that the cumulative average abnormal returns have a rising tendency in the post event period. A higher negative incidence of cumulative return in the post event phase window for few days reflects over expectation and irrational to the new information disclosure concerning annual dividend. This rejects the second part of second null hypothesis that the Cumulative average abnormal returns are close to zero. However the magnitude of overreaction was not considered significant to invalidate stock market efficiency.

CONCLUSION

Using an event study methodology we find that despite of investors do not gain significant value in the period preceding as well as on the dividend announcement day, yet they can gain value in the post announcement period. Investors do shift their security positions at the time of dividend announcement, which indicate that in post announcement period there is a possibility of information content in dividend announcement in BSE. The evidence nevertheless shows that dividend increases lead more positive abnormal returns, supporting the Efficient Market Hypothesis.

REFERENCES

1.Asquith, P. and D. Mullins. (1983). The impact of initiating dividend payments on shareholders' wealth. Journal of Business, 56, 77-96.
2.Asquith, P. and D. Mullins. (1986). Signalling with dividends, stock repurchases, and equity issues. Financial Management, 15, 27-44.
3.Bhattacharya, S. (1979). Imperfect information, dividend policy, and the 'bird in the hand'. Bell Journal of Economics , 10, 259-270.
4.Bhattacharya, S., (1979). Imperfect information, dividend policy and 'the bird in the hand' fallacy. Bell Journal of Economics, 10, 259–70.
5.Donald E. Fisher, Ronald J.Jordan, Security Analysis and Portfolio Managementt, Prentice Hall of India.
6.Iqbal, T. Mallikarjunappa. Market Reaction to Earning Information: An Empirical Study, AIMS International, 1, No.2 May 2007, pp 153-167.
7.Karim, M. (2010). Announcement Effect of dividend on the stock Price of Enlisted companies in Developed Countries: a Comparative Study between London Stock Exchange & New York Stock Exchange. Available at ssrn: http://ssrn.com/abstract=1624363
8.Mehndiratta, N. & Gupta S. (2010). Impact of Dividend announcement on Stock Prices. International Journal of Information Technology and Knowledge Management, July December 2010, Volume 2, No. 2, pp. 405-410.
9.Miller MH, Rock K. (1985). Dividend policy under asymmetric information. Journal of Finance; 40, 1031- 51
10.Modigliani, M. H. (1961). Dividend Policy, Growth, and the Valuation of Shares. Journal of Business, vol. XXXIV, 235-264.
11.Mohamed Ariff and Frank J. Finn, "Announcement Effects and Market Efficiency in a Thin Market: an

EmpiricalApplication to the Singapore Equity Market", Asia Pacific Journal of Management, 6, No. 2: 243-265.
12.Ramesh Chander & Renuka Sharma & Kiran Mehta, Dividend Announcement & Informational Efficiency: An Empirical Study of Indian Stock Market, ICFAI Journal of Finance, March 2006.
13.Woolridge J. R. (1983). Dividend Changes and Security Prices. The journal of finance, 38 (5), 1607-1615