Stock Market Reaction to Dividend announcements: An Empirical Investigation of Listed Companies in Sri Lanka.

by
KGA Udaya Kumara[1]

Abstract

The dividend policy has been given considerable interest in the field of modern finance. Numerous empirical studies conducted by different researchers have documented evidences that have shown contradictory results. Some researchers indicated that dividend announcements convey specific information to the capital market, while others have argued that it has no effect on the capital market reaction.

This article examined the effect of dividend announcements on share prices traded on Colombo stock Exchange. Particularly this investigated market response to dividend behaviors. The study included an overall sample of 303 events of 43 firms during the period of nine years from 1993 to 2001. Abnormal returns were calculated from daily share prices using well-established market model commonly used by researchers under the Event Study Methodology.

The results of the overall sample provided supportive evidences to some extent for the predictions of dividend-signaling hypothesis. However, large dividend-increasing firms and dividend-decreasing firms revealed significant abnormal returns to confirm the dividend-signaling hypothesis. On the other hand, constant dividend firms showed the insignificant reaction to dividend news.

On the basis of the evidence provided in this study, the validity of the dividend signaling is not likely to be rejected in Sri Lankan context, but it is a challengeable issue.

Key Words: Dividend Policy, Dividend Announcements, Dividend-Signaling Hypothesis, Abnormal Returns, Efficient Market Hypothesis

Introduction

The effect of dividend policy on the share prices of firms has been an issue of modern finance and well documented in both the theoretical and the empirical domains. The existing empirical investigations and findings are based on the data and the situation is only applicable to the western world. Therefore, these findings could not be directly applied to an emerging market like Sri Lanka.

Therefore, this article investigates the impact on dividend announcement on share prices of firm listed in CSE to address the issue relevant to the Sri Lankan context. The objectives of this study are to assess the effects of the dividend announcement on the share prices, to test whether the announcement of changes in dividends, provide any specific information to shareholders and to compare findings of the study with findings of similar studies based on western markets.

Literature Survey

Most of the previous studies have examined for the last five decades whether the dividend policy of a firm affects its share prices in a long-standing controversy in the literature of modern finance. The academics specialized in economics and finance has put forwarded different theoretical arguments on this issue and two main controversial arguments of them are of paramount important.

There are two schools of thought, one is the Dividend Irrelevant School pioneered by Miller and Modigliani (MM) (1961). They made certain assumptions[1] in their theoretical and empirical work and argued that no relationship exists between the firm dividend policy and its shareholders wealth. According to this view a firm can decide to pay out whatever amount it wishes to declare as dividends and turn to capital market for any new funds for its investments. This hypothesis has been validated by the empirical findings of Fried and Puckett (1969) and Black and Scholes (1974).

The second school of thought argues with much criticism about dividend relevancy. In reality, the level of dividend paid by a firm appeared to be of vital importance. The studies conducted by Lintner (1956) all the reports from his survey findings, case study evidence and statistical analysis of dividend data, those firms appear to act as if dividends are important. This school of thought was based on market imperfections and two important basic arguments have been emerged as to why dividends are important in the real world. The first one dividend is taxed at higher rate than capital gains. Therefore, high dividend pay out firms are penalized in the market while low dividend pay out firms are rewarded. Hence, the shape of the dividend policy of a firm affects the share price to a certain degree. The second one is in a world of information asymmetry, the announcement of changes in dividend payments convey news about management's assessment of the future prospects of a firm to outside investors. Their reaction to such news is reflected in share prices and hence dividend payment is an important determinant of the share price of a firm. That is the dividend level has a number of appealing attributes, which makes it well suited to act as a signal to the market.

Many researchers have empirically tested these two main arguments. The dividend tax effect has been examined by Linzenberger and Ramaswamy (1979), Black and Scholes (1974), Miller and Scholes (1978), among others. On the other hand, dividend-signaling hypothesis has been investigated by Pettit (1972), (1976), Watts (1973), Asquith and Mullins (1983), Woolridge and Ghosh (1985), Abeyrathne, Lonie, Power and Sinclair (1993) among others. The emerging conclusion of the majority of these studies is that the dividend policy is relevant and affects the share prices of companies.

In conclusion, a large body of evidence mainly from western markets argues that in an information asymmetry, dividend announcements may convey news to the capital market. This study investigates whether the dividend announcements affect the share prices of firms listed in the CSE.

Data and Methodology

The study employs the conventional event-study methodology for examining the market reaction to the event of a dividend announcement during the period of 01 January 1992 to 31 December 2001. To establish the impact of dividend announcements on stock prices, an overall sample of 43 firms was selected, through exercising reasonable care in order to select a large sample representing the whole market to derive more valid findings. The sample is drawn from firms listed on the Colombo Stock Exchange (CSE). The sample period used in this study was from 01.01.1992 to 31.12.2001. The data were obtained from two sources. From 1993 to 2001 dividend announcement data were collected from the monthly publications of the CSE and from 1992 to 2001 daily share prices and All Share Price Index (ASPI) data were obtained from the magnetic data library released by the CSE.

To remain in the sample, a firm must satisfy the following selection criteria:

- firm must pay dividends at least seven consecutive years through out the study period.
- ensure that the sample does not contain concurrent events, during the study period.
- Sample must have only firms that have daily return data in the share price files for at least 180 days before and 180 days after the last dividend payment date.

As the first steps of the analysis, the study dividends the sample of dividend announcements into four sub samples (Table 01) according to the magnitude of the dividend changes:

- Constant dividend
- Small dividend increases
- Large dividend increases
- Dividend decreases

For this analysis, daily share return data are used to detect the presence or absence of abnormal return in an event window surrounding the dividend announcement day.

In this study the period from day t-1 to day t is designated as the announcement period, where t is the day on which the dividend was published by firms. Day t-1 and day t was jointly defined as the announcement period, since the disclosure may have occurred on the day before the formal reporting of such news in the market.

If the information content hypothesis is correct and the stock market is efficient, the two-day abnormal return should be significantly different from zero. The hypothesis predicts that the shares of those firms which announce dividend increases should, on average, earn positive abnormal returns, and the shares of those firms which announce dividend decreases should, on average, earn negative abnormal returns, while the shares of the firms of the remaining firms which do not alter their dividend should, on average, earn normal returns.

Daily share returns for the sample of firms are estimated according to the following identity:

$$R_{it} = Ln\ (P_{it} - P_{it-1}) / P_{it-1}$$

Where R_{it} is the actual return on share i on day t, $P_{i\,t}$ is the price of share i at the end of day t and $P_{i\,t-1}$ is the price of share i at the end of day t -1.

Since the most popular market model used in estimating market returns, they are calculated according to the following identity:

$$R_{mt} = Ln\ (ASPI_t - ASPI_{t-1}) / ASPI_{t-1}$$

Where R_{mt} is the return on the market portfolio, $ASPI_t$ is the all share price for day t and $ASPI_{t-1}$ all share price index for day before day t.

The Expected Return is derived using the following identity,

$$E(R_{it}) = \alpha + \beta_i\ .\ R_{mt}$$

Where R_{it} is the expected return on share i in day t in the test period, α is a constant (estimated regression intercept of share i) and β_i is the estimated systematic risk of share i.

Here α and β_i parameters are ascertained using the data for the test period through Ordinary Least-Square (OLS) regression. For this purpose 180 observations of previous daily share returns (from day t-11 to day t-190) were used).

The abnormal return is the estimated impact of the event on the share price. It is computed as the Estimated Expected Return E(R_{it}) subtracted from the actual return (R_{it}). In this study well-known market model was used to calculate the Abnormal returns of shares around the test period.. Following formulae was used for this purpose;

$$AR_{it} = R_{it} - E(R_{it}) + e_{it}$$

Where AR_{it} is the abnormal return on share i in test period, $E(R_{it})$ is the expected return on firm i on day t in the test period and e_{it} is standard error term. This model has been probably the most popular benchmark employed in event studies. Then the abnormal return can be derived through the following expanded formulae.

$$AR_{it} = R_{it} - (\alpha + \beta_i\ .\ R_{mt})$$

It is also examines the share market response to dividend announcement by examining the Excess Returns (ER_{it}) earned by the shares during the teat period. The ER_{it} means the different between R_{it} and the R_{mt}. The ER_{it}, which was calculated for the t-10 to t+10, were used to confirm the returns obtained from abnormal return performance of the shares.

The t-values were calculated to examine the statistical significance of the AAR and following formulae is used;

$$\text{T-value} = \frac{AAR_t\ \sqrt{(N-1)}}{\Sigma(AAR_t)}$$

Results

With a view to getting an overall view, stock market reaction to dividend announcements, to total sample of 303 announcements was tested. The Average Abnormal Return (AAR), Average Excess Return (AER), Cumulative Average Abnormal Return (CAAR) and Cumulative Average Excess Return (CAER) were calculated for the test period from day
t_{-5} to day t_{+5} and t-test were also calculated to test the significance in this respect.

According to the results presented in Table 02 of the overall sample, the AAR on the t_0 is 0.69 per cent and it is the highest AAR in the given test period. The CAAR for day t_0 to day t_{+5} is 1.5 per cent. It also shows that the positive AAR for day t_{-1}, $t=0$ and t_{+1} and positive CAAR is continued from day t_{-1} up to day t_{+5}. The t-value of the announcement day also carries highest t-value throughout the test period that is –3.54. It reveals that the announcement day AAR has small positive value with significant at 5% level. The Standard Deviation (SD) of the announcement day is 0.0263. It does not have significant deviations from the SD's of the non-announcement days within the test period. The minimum AAR and maximum AAR also indicate the same picture. These observations indicate that the dividend announcements have been received by the market as surprising news and have an important signaling effect. This supportive evidence can be seen in Figure 01.

When observing the AER of the overall sample in Table 03, it reveals the same picture emerged in the Table 1. The AER on the day t_0 is 0.47 per cent and it is highly significant. The results of Table 2 show that there is a big conformity with the results of abnormal returns in Table1 and this evidence can be seen clearly in Figure 02.

According to the results presented in the Table 04, AAR on the day t_0 of the large dividend-increasing sample is 1.1 per cent, which is statistically significant. It also shows, on average, a positive AAR of 2.84 per cent during the five-day test period. But the shareholders of the small dividend increasing sample and constant dividend sample, on average, earned normal return in during the dividend announcement period.

The AAR reported for the test period of the dividend-decreasing sample in Table 05, it reveals that AAR on day t_{-1}, $t=0$ and t_{+1} were –0.48, -0.13 and 0.04 per cent respectively. The corresponding t-values for the three days were –1.17, 2.38 and 0.10 respectively. That indicates announcement day and day before announcement day AAR were negative and highly significant, while day after the announcement day AAR was slightly positive but not significant. These results are consistent with the information content hypothesis and Figure 03 shows this evidence clearly. As researchers such as Ross (1977) and Bhattacharya (1979, 1980) have suggested, in a world of information asymmetry, an announcement of decreases in dividends may convey a pessimistic message about the future prospects of the company. In response to such a signal the stock market should react negatively and resulting in a fall in the company's share price.

Conclusion

Abnormal returns and excess returns of the sample reported for the five-day announcement period supports the dividend-signaling hypothesis. In general, the abnormal returns over the announcement period for the dividend announcements were in order of magnitude predicted by the dividend-signaling hypothesis. The empirical results for the overall sample confirmed and are consistent with the previous evidence of Pettit (1972), Aharony and Swary (1980), Abeyrathne et,al (1991) and Dissabandara (2001) in this issue.

The results of the more favorable news firms showed highly significant abnormal return surrounding the announcement period and strongly confirmed the dividend-signaling hypothesis. The unfavorable news firms in the sample performed quite poorly on dividend cut. This result is consistent with the dividend-signaling hypothesis and the evidence of Bahattacharya (1979), Abeyrathne et.al. (1991) and Dissabanrada (2001) that have suggested. It is revealed that the magnitude of the negative AAR for dividend decreasing firms is larger than the magnitude of the positive AAR carried out by their dividend decreasing counterparts in the announcement period.

As a final conclusion, on the basis of the evidence provided in this study, the validity of the dividend signaling is not likely to be rejected, but it is a challengeable issue.

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