

## The Impact of Dividend Yield on Cash dividends in Emerging Markets – An Empirical Analysis

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### Abstract

*This research paper attempts to test whether the dividend yield or dividend size has more impact on stock prices and investigate whether the Colombo Stock Exchange (CSE) is semi-strong-form efficient. To achieve the objectives hypothesis were developed for testing. The sample included cash dividend announcements from 42 companies over a period of twelve years from 1995 to 2006. The study has sample size of only 50 announcement dates for dividend announcements. To investigate the standard event study methodology is used. In this study an estimation of 100 days an event window of 21 days are used.*

*The study found that the dividend yield has more impact on stock price than dividend size. The analysis saw that the CSE is informationally inefficient. So, it has important implications for the investors, managers of companies and stock market regulating agencies. The results are not merely due to the impact of cash dividends. The factors other than announcements such as economical political and other market conditions also have impact on the share prices.*

**Keywords:** *Cash Dividends, Dividend size, Dividend Yield, Agency problem, Value maximisation and expected return.*

### Introduction

In these days the investors of a firm are very anxious for maximizing the value of their capital invested. Although this desire conforms the policy of the firm it has come to clash with the interests and expectation of manager engaged various activities of the firm based on Short term and Long term strategy to be carried out within the scheduled time for the survival of the company in the finance market. So the firm has come to face this Agency problem in the areas of dividend yields to meet the anxiety of the investors and to ensure increasing the dividend size of the firm to meet the manager ambition of fulfilling the aim of the firm in the process of decision making, planning and practicing the policy for the future progress.

When the concern of the investors are viewed against the aims of the managers, they seem to be different, but essentially they depend upon the success achieved by the management. By this means a firm secure popularity in the finance market thereby, attracting the investors more and more facilitating the opportunity of the maximizing

the worth of the capital invested in the share market.

To achieve this position of the firm, the second aim of fulfilling the expectation of interests of the managers have to be established, visualized and regularized. Although this is possible, to attract the investors, it can not be realized without ensuring the increase in the size of the dividend value. In other word, the investors take decision on investing the capital, based on the announcement of the dividend yields by a company in the finance market. So their final decision depend on the amount of dividend yield that could be achieved by the investment when priority is given to dividend yield in the process of decision making situation instead of dividend size, it become a problem calling for a critical situation to be carried out.

Generally, when the dividend value is compared with the dividend yield in the share market, it is found that the dividend yield is more and high. At the same without attaining the value maximization the expected return increase is also found possible to be achieved. This does not give an advantageous position

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in any sense, because that particular company lacks the effective management system. On the other hand, when an effective company increases its value of its share, the dividend size seems to be big in size but the dividend yield is low. Because of this variation the investors find it difficult to come to a correct decision as to the investment activity.

Basing this study on the dividend yield, it is proposed to analyze how the share prices are affected by the dividend yield. Also though this study focus on Colombo Stock Exchange, it is decided to consider the previous research studies carried on U.K. and USA Stock Markets for clear understanding and for new information to keep the firm moving forward.

### **Literature Review**

Historically, Writers like Keane (1984), Brigham and Gapenski (1993), Brealey (1993), Ross, Westerfield and Jaffe (1996) are most important contributors to the field of theories of dividends in a logical manner. These theories could be grouped into three types of school of thoughts: The irrelevancy school of thought, high payout school of thought and low payments school of thoughts.

According to Miller and Modigliani (MM1961) and Ojha (1976) are not concerned about the dividend rate to the shareholders. MM pointed out that no connection could be made between shareholder's wealth and the company's policy of dividend. Brigham and Gapenski (1993) argument is concerned with the market imperfection. Investor something prefer policies deferring dividend payout some like to have high level of payout while others wish to have lower rate of dividend payout. Therefore, the value of a company has no connection with the choice of dividend policies. Black and Scholes (1974) and others also support this clientele theory.

The view of Litzenger and Ramaswamy (1979) displayed a positive relationship between expected return and dividend yield of common stock. Their results showed that for every dollar increase in return in the way

of dividends. Aharony and Swary (1980) found a strong interaction between quarterly cash dividends and shareholders returns beyond the information provided by the return collectively earnings number based in quarterly dividends and earnings announcements and shareholders returns.

In fundamental analysis, financial analyst studied the company's business and try to uncover information about it profitability that will shed new light on the value of the stock Brealey and Myers (1984). The fundamental approach to share valuations is based on the assumption that the price investors are prepared to pay for the share of a firm is equal to the present value of the future benefits which they expect the security to yield in the form of dividends.

The predictability of stock returns from dividend yields ( $D/P$ ) is not in itself evidence for or against market efficiency. In an efficient market the forecast power of  $D/P$  says that prices are high relative to dividends when discount rates and expected returns are low and vice versa. On the other hand, in a world of irrational bubbles low  $D/P$  signals irrationally high stock prices that will more predictably back towards fundamental values to judge whether the forecast power of dividend yields is the results of rational variation in expected returns or irrational bubbles, other information must be used.

Fama and French (1986) saw that low dividend yields imply low expected return, but their regressions rarely forecast negative returns for the value and equally weighted portfolios of NYSE stocks. There is no evidence that low  $D/P$  signals bursting bubbles that is negative expected stock returns. According to Nadana and Samanthi (2001) the companies are highly concerned about investors, preference for high dividend yields and the information content of dividend announcement when dividend policies are formulated.

## Methodology

The literature of finance has developed three differing hypotheses to predict the price effects of new additional information on outstanding shares Asquith and Mullins (1986). These three can be classified into three groups as no price effect, negative price effect and positive price effect. In this research the researcher will test the hypothesis that dividend yield has more effect on stock prices than the dividend size.

To investigate the impact of dividend yield to cash dividend announcements the well known event study methodology is employed. In carrying out this methodology on has to first select an estimation period of 100 days and event window of 21 days (test period) are used. In previous studies, researchers have used several benchmarks to calculate abnormal returns (AR), average abnormal return (AAR) and cumulative average abnormal return (CAAR). In this study the well known market model is used as follows.

$$1. AR_{it} = R_{it} - (\alpha_i + \beta_i R_{mt})$$

$AR_{it}$  = abnormal return for company i for day t

$R_{it}$  = return for share i for day t

$\alpha_i$  = intercept of the model the company i

$\beta_i$  = slope coefficient of the model for company i

$$2. AAR_t = \frac{\sum AR_{it}}{n}, t = \frac{AAR_t}{\sigma AAR}$$

$AAR_t$  = average abnormal return for day t,  
 $n$  = number of shares in the portfolio,  
 $\sigma AAR$  = is the standard deviation of portfolio returns during the estimation period

$$3. t = \frac{CAAR}{\sigma AR \sqrt{n}}$$

$CAAR_t$  = cumulative average abnormal returns

$$4. \text{Dividend Yield (D/Y)} = \frac{\text{dividend}}{\text{Market price}}$$

## Empirical Results

With a view to study the impact of cash dividend announcements on share price at dividend yield level the study analysed at different yield level such as above 12%, between 8% – 12%, between 3% - 8% and below 3%.

The dividend yield is calculated based on the company's dividend and share price of the past ten years.

Table 1 presents on four dividend yield levels. Yield level one presents the study results for the companies which have the dividend yields 12% and at above portfolio level. This sub sample (Ss) portfolio included 11 companies. The results show positive price effect of cash dividend announcement is statistically different from zero on day 0 at 1% significant level, which indicates the stock market is in the semi strong form sense and also higher dividend yield has more impact on share prices which reveals, the investors prefer higher dividend yield than higher dividend rate.

Dividend Yield level two presents the event study results for the companies which have between 8%-12% of dividend yield at the portfolio level. The Ss consists 15 companies. The results show significant positive price impact on event day 0, at 1% level but significant price reaction was observed on Day -10, day -8 and day -7 which indicates there is a leak information in the stock market.

Dividend yield level three presents the event study results for the company, which have dividend yield between 3% - 8% at the portfolio level. This Ss includes 14 companies. The results show no significant price effect is observed either at 1% or 5% level on the event day, but prices are positively impact on announcement day and also price fluctuation is observed before or after the event day during the test period, which reveals that dividend yield is very low compared to the market interest rate.

Last level of dividend yield presents the event study results for the companies, which have

**Table 1: Event Study Results of Cash Dividend Announcement for Dividend Yield Levels**

Day	Ss1; Dividend Yield Level Above 12%				Ss2; Dividend Yield Level Between 8% to 12%				Ss3; Dividend Yield Level Between 3% to 8%				Ss4; Dividend Yield Level Below 3%			
	AAR	T-STAT	CAAR	T-STAT	AAR	T-STAT	CAAR	T-STAT	AAR	T-STAT	CAAR	T-STAT	AAR	T-STAT	CAAR	T-STAT
-10	0.0093	1.14	0.0093	1.14	0.0195	2.42*	0.0195	2.42*	0.0023	0.36	0.0023	0.36	0.0167	3.29*	0.0167	3.29**
-9	0.0093	0.35	0.0122	1.05	0.0043	0.53	0.0238	2.09*	-0.0070	-0.12	0.0015	0.17	-0.0040	-0.79	0.0127	1.77
-8	-0.0073	-0.89	0.0049	0.34	-0.0221	-2.75**	0.0017	0.12	0.0056	0.90	0.0072	0.66	-0.0038	-0.75	0.0089	1.01
-7	0.0087	1.06	0.0136	0.83	-0.0343	-4.26**	-0.0326	-2.03*	0.0010	0.16	0.0082	0.65	0.0010	0.20	0.0099	0.97
-6	-0.0027	-0.32	0.0109	0.60	0.0072	0.90	-0.0254	-1.41	-0.0063	-1.00	0.0019	0.13	0.0010	0.19	0.0109	0.96
-5	0.0039	0.48	0.0149	0.74	0.0042	0.52	-0.0212	-1.08	0.0017	0.28	0.0036	0.24	-0.0103	-2.03*	0.0005	0.04
-4	-0.0005	-0.06	0.0144	0.66	-0.0110	-1.36	-0.0322	-1.51	0.0035	0.56	0.0071	0.43	0.0010	0.19	0.0015	0.11
-3	0.0010	0.12	0.0154	0.66	0.0007	0.09	-0.0315	-1.38	-0.0028	-0.44	0.0044	0.25	0.0025	0.49	0.0040	0.28
-2	0.0044	0.54	0.0198	0.81	0.0104	1.29	-0.0210	-0.87	0.0004	0.06	0.0047	0.25	-0.0019	-0.37	0.0021	0.14
-1	-0.0026	-0.32	0.0172	0.66	0.0041	0.51	-0.0170	-0.67	0.0001	0.02	0.0048	0.24	-0.0051	-1.01	-0.0030	-0.19
0	0.0527	6.43**	0.0699	2.57**	0.0277	3.44**	0.0107	0.40	0.0027	0.42	0.0075	0.36	0.0036	0.72	0.0006	0.03
1	-0.0033	-0.40	0.0666	2.35**	-0.0051	-0.63	0.0057	0.20	-0.0007	-0.11	0.0068	0.32	0.0025	0.49	0.0031	0.18
2	0.0005	0.07	0.0672	2.27*	-0.0008	-0.10	0.0048	0.17	0.0047	0.75	0.0115	0.51	0.0019	0.37	0.0050	0.27
3	0.0006	0.07	0.0678	2.21*	-0.0150	-1.87	-0.0102	-0.34	-0.0008	-0.13	0.0107	0.46	-0.0047	-0.93	0.0002	0.01
4	0.0017	0.21	0.0695	2.19*	0.0103	1.29	0.0002	0.00	-0.0026	-0.41	0.0082	0.34	-0.0041	-0.81	-0.0039	-0.20
5	0.0028	0.34	0.0723	2.21*	-0.0053	0.66	0.0055	0.17	0.0032	0.51	0.0113	0.45	-0.0009	-0.18	-0.0048	-0.24
6	-0.0079	-0.96	0.0644	1.91	0.0020	0.25	0.0075	0.23	-0.0009	-0.14	0.0105	0.41	-0.0105	-2.06*	-0.0153	-0.73
7	0.0255	3.11**	0.0898	2.59**	-0.0006	0.08	0.0081	0.24	-0.0031	-0.50	0.0074	0.28	0.0024	0.47	-0.0129	-0.60
8	-0.0029	-0.35	0.0870	2.44*	-0.0060	-0.74	0.0021	0.06	-0.0005	-0.08	0.0068	0.25	0.0078	1.53	-0.0052	-0.23
9	-0.0016	-0.19	0.0854	2.33*	-0.0035	-0.44	-0.0014	-0.04	-0.0017	-0.27	0.0051	0.18	0.0016	0.31	-0.0036	-0.16
10	-0.0013	-0.16	0.0841	2.24*	0.0011	0.13	-0.0003	-0.01	-0.0006	-0.10	0.0045	0.16	-0.0003	-0.06	-0.0039	-0.17

\*\*Significant at 1% level

\* Significant at 5% level

below 3% of dividend yield at the portfolio level. This Ss includes 10 companies. The results show no significant price reaction is observed on event day. However positive price reaction is observed on event day. But, significant price reaction is observed on Day -10 , Day -5 which indicates that there is a leak in information in the stock market. And

also significant price reaction is observed after the event day, which indicates there is a delay in information regarding the cash dividend announcements in the stock market. Though the companies give higher dividend rate the dividend yield is very low. Therefore the prices show negative impact after the event day.

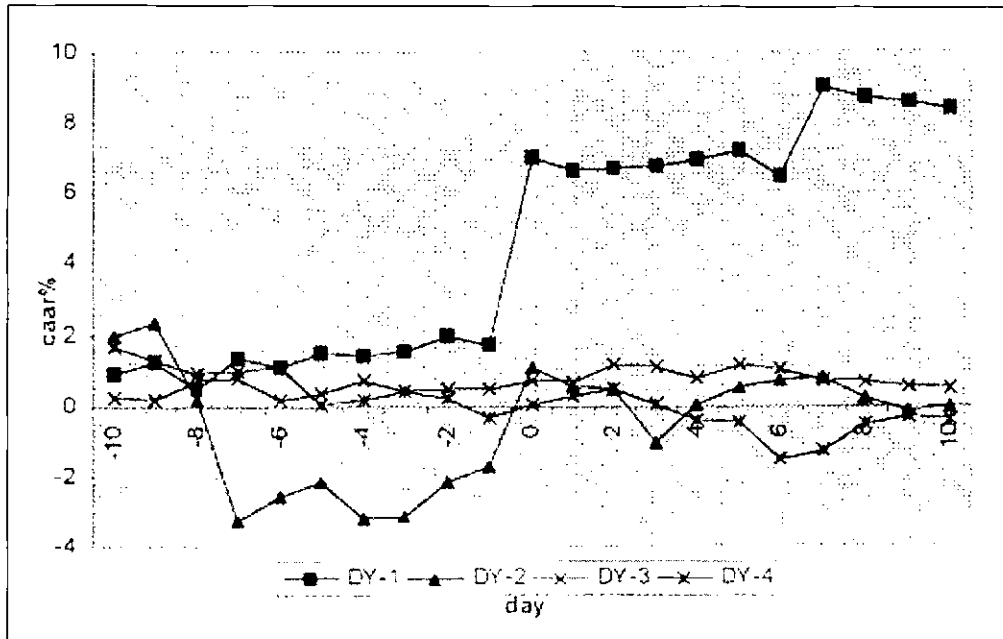


Figure 1 – Composition of Different Yield levels of CAAR’s cash dividend announcement during the test period

Figure 1 presents four levels of dividend yields. first level presents the behaviour of the cumulative abnormal returns for the companies, which have the dividend yield of 12% and above at the portfolio level. The figure shows that there is a positive fluctuation in the share price before the event day. But, share prices positively rose sharply at significant level on Day 0. Thereafter, again share prices show positive reaction at significant level on Day +7. The second level presents the behaviour of the cumulative abnormal returns for the companies which have the dividend yield between 8% - 12% at the portfolio level. Share prices start dropping the Day -8. But, prices rised sharply on Day 0 at significant level which indicates more attention on higher dividend yields than higher dividend rate. And this dividend yield is lower

compared to the market interest rate. Third level presents the behaviour of cumulative abnormal returns for the companies which have the dividend yield between 3%-8% at the portfolio level. According to the Figure, there is a continuous fluctuation during the test period, which reveals that the investors cannot take any strong decisions regarding the cash dividend announcement. Because this dividend yield is lower than market interest rates and some of the companies in the sample performance has impressed the investor’s minds. Last level presents behaviour of cumulative abnormal returns for the companies which below 3% of dividend yield at the portfolio level. According to the Figure share prices have dropped on Day -10 and Day -5 at significant level. However, price improvement is observed on event day.

Thereafter, a little improvement is observed on share price and again dropping and share prices are raised on Day +6 at significant level. Thereafter, a positive improvement is observed on share prices. Although the dividend yield is very low, investors show their reaction to the announcement because some of the companies in the sample have already shown their performance in the stock market.

### **Composition of dividend yield level**

According to the figure, DY1 the line which presents the behaviour of high dividend yield (above 12%) shows that significant price reaction is observed on Day 0. The DY2 second category which carries between 8%-12% has also significant price reaction on event day. This is lower to the categories which have above 12% dividend yield. However, the companies which have between 3%-8% and below 3% (DY3 and DY4) show that there is no any observable changes in the behaviour of stock prices. Stock prices show a stagnation behaviour which reveal investors do not show any responses in the stock market for this category, which indicates that the market interest rates other than the stock returning is higher than this dividend yield. So, the investors compare the dividend yield with the market interest rates from which they can get higher earning than from the shares.

### **Conclusions**

The investors show more impact for the dividend yield than for the dividend rate and more impact on share prices is observed for the higher dividend yield category and lower impact on share prices is observed for the low dividend yield category in the cash dividend announcements. The analysis shows that dividend yield has more effects on stock prices than the dividend size from which can accept the hypothesis of dividend yield has more effect on stock prices than the dividend size.

Since the results of this study indicates the Colombo Stock Exchange is information ally inefficient, so it has important implications for the investors, management of companies and

stock market regulating agencies. The results are not merely due to the impact of cash dividend. The factors other than announcement such as economical, political and other market conditions also have impact on the share prices.

### **References**

- Aharony, J. & Swary, I. (1980), Quarterly Dividends and Earnings announcement and stock holders returns. An Empirical Analysis *Journal of Finance*, No. 35, PP. 01 – 12.
- Asquith, P. & Mullins, D. W. (1986), The Equity Issues and Offering Duration. *Journal of Financial Economics*, Vol. 15, pp. 61-89.
- Brealey, R., & Myers, S. (1984), Principles of Corporate Finance, 2<sup>nd</sup> Edition New York. Mc Graw Hill Book Company, Chapter 13.
- Brigham, E. F. & Gapenski, L. C. (1993), Intermediate Financial Management, 4<sup>th</sup> Ed (USA : Harcourt Brace College Publishers), PP 477-516 .
- Black, F. & Scholes, M. (1974), The effects of dividend yields and dividend policy on common stock prices. *Journal of Financial Economics*, Vol. 1 PP 1-22.
- Central Bank Report (1995-2004)
- Handbook of listed companies (1995-2004) Colombo Stock Exchange
- Fama, E. F. & French, K. R. (1986), Permanent and temporary components of stock prices. *Journal of Political Economy*, Vol. 98, pp 246-274
- Miller, M. H. & Modigliani, F. (1961), Dividend Policy, Growth and the Valuation of shares. *Journal of Business*, Vol. 34, pp. 411-433.
- Nadana, A. & Samanthi, S. (2001), An Empirical study of the factors influencing dividend policies of Sri Lanka. Annual Research session 2000/2001 February, Faculty of Management and Commerce, University of Sri Jayewardenapura.
- Ojha, P. R. (1976), Impact of earning, retained earnings, and dividends on share prices. *Indian Management*, Vol. 15, No. 10, PP 34-39.