

Impact of Dividend Announcement on Share Price Movements: A Study of Milanka Companies in Colombo Stock Exchange

PUWANENTHIREN PRATHEEPKANTH

This paper takes the sample of Dividend announcements from Milanka Companies in Colombo Stock Exchange (CSE) firms in Sri Lanka over the period 2006 to 2010. Empirical results indicate that the announcement of dividend and earning per share changes has a positive influence on share prices, but such results only partly support the hypothesis.

Introduction

Stock exchange of a country is a most important in the country's economic growth. In the stock exchange, one of the most fundamental research issues is the market efficiency. This is an important concept both in terms of an understanding of working capital market, and in their performance and contribution to the development of a country's economy. This study examines the relationship between share prices and dividend announcement.

Literature Review

A number of studies found that stock price has a significant positive relationship with the dividend payment and earning per share (Gordon, 1959, Ogden, 1994, Stevens and Jose, 1989, Kato and Lowenstein, 1995). While others found negative relationship (Laughlin, 1989 and Easton and Sinclair, 1989). The dividend information hypothesis postulates that cash dividend carries information regarding the future cash flows of firm that is to be reflected in the market price of stock after announcement of dividend, particularly when dividend increases [Bhattacharya (1979) Bar-Yosef and Huffman (1986) and Yoon and Starks (1995)]. In previous surveys, there was strong evidence that stock prices followed mean reversion process in several stock markets such as U.S., Spanish, and Singapore stock markets, which have been defined in various ways. The dividend-to-price ratio (Fama and French, 1988) and earnings-to-price ratio (Campbell and Shiller, 1988) are found to contribute significantly to the explanation of long-term stock price variation. Chiang et al (1995) use earnings and dividends as proxies of fundamental values found that stock returns follow a mean-reversion process and their findings are consistent with those of Campbell and Shiller (1988).

Puwanenthiren Pratheepkanth is Faculty member, Department of Accounting, University of Jaffna, Sri Lanka.

Ansotegui and Esteban (2002) established a long-run relationship between the Spanish stock market and its fundamentals, and checked to which extent this relationship helps in forecasting. Singetal (2002) examined the relationship between the stock price and the fundamentals for Singapore and found that the mean-reversion of stock prices towards fundamental value.

The empirical literature regarding the market reaction to dividend announcements is abundant and began with the conflicting studies by Pettit (1972) and Watts (1973). Later studies by Ahorny & Swary (1980), Kane, Lee & Marcus (1984), Chang & Chen (1991), and Leftwich & Zmijewski (1994) attempt to more explicitly control for the confounding effect of contemporaneous earnings announcements. In a similar vein Penman (1983) recognizes the possible impact of management's forecasts of earnings as a confounding event, and attempts to assess whether management's earnings forecasts or dividend announcements have greater information content. The results from the studies are conclusive in that they all find a market reaction to dividend announcements, and therefore conclude that there is information content in dividends. These studies on US data, however, suffer from the possible bias that management has deliberately selected contemporaneous announcement dates in an attempt to influence the impact on returns. Supporting this possibility Penman (1984) and Kalay Loewenstein (1986) find evidence which suggests that management attempts to affect the stock market's reaction to the announcement of earnings and dividends through their choice of announcement dates. To overcome this bias Easton (1991) and Lonie, Abeyratna, Power & Sinclair (1996) utilized the consistent simultaneous announcement of dividends and earnings in Australia and the UK, respectively. Their results are consistent with the above in that both studies find evidence of information content.

Among the earlier studies, Aharony and Swary (1980) document that stock prices drop during the month of an unexpected dividend decrease, while they rise during the month of an unexpected dividend increase. Other studies that obtain similar results are Pettit (1972), Kwan (1981) and Eades (1982). Bajaj and Vijh (1990) present empirical evidence to support a view that the positive market reaction to dividend increases as a signal of higher firm value is mediated by a negative reaction due to a marginal aversion to dividend income. Bajaj and Vijh (1990) allow for a signaling effect; however, they argue that there is a clientele effect in addition to the signaling effect. Prabhala (1993) shows that the results of Bajaj and Vijh (1990) and Lang and Litzenberger (1989) may be spurious, and due to the fact that the martingale dividend change model that they used was misspecified.

A significant stream of prior research in the United States has empirically documented that unexpected increases (decreases) in regular cash dividends generally elicit a significantly positive (negative) stock market reaction (Fama et al., 1969, Pettit, 1972). Moreover, this finding persists even after controlling for contemporaneous earnings announcements (Aharony and Swary 1980). In the same vein, Asquith and Mullins (1983) find that, like dividend increases, dividend initiations have a significant positive impact on share

price. Stock dividends (referred to as bonus issues in Cyprus) effectively award existing shareholders a free share of common stock for every X shares currently owned. Strictly speaking, bonus issues constitute finer slicing of a given firm value and should have no direct wealth effects to shareholders if they have no cash flow implications.

Researchers largely accepted that dividend per-share has no impact on the shareholders' value in an ideal economy. However, in a real world, dividend announcement is important to the shareholders because of its tax effect and information content. Further Miller and Modigliani in 1961 advance a theory that the dividend policy to firm is irrelevant to the value of the firm as it does not affect the wealth of the shareholders what they stress is the company has a duty to maximize the value of the firm and that the company has a duty investing in all positive net present value projects those are the investments of which the present value, hence the value of the firm accounting to them depends on the returns generated by investment in real assets. Thus, when the investment decision of the firms given dividend decision the split of earnings between dividends and retained earnings is of significance in determining the value of the firm.

Objectives

This research is intended to achieve the following objectives:

- To analyse, the impact of dividend announcement on share price of Milanka movements companies.
- To find out, is there any other significant relationship between the dividend announcement and share price.

Hypotheses

Based on the assumed casual relationship given in the conceptual model the following hypotheses were developed for testing.

H₁ There is a significant relationship between share price and dividend announcement on the dividend announcement day.

H₂ There is information effect on the dividend announcement day.

Methodology

The study is based on the secondary data and the samples include:

Banks, Finance & Insurance 08, Beverage, Food & Tobacco 01, Chemical & Pharmaceuticals 01, Diversified 04, Health care 02, Hotels & Travels 01, Land & Property 01, Manufacturing 05, Tele communions 02, Total 25.

This study takes the samples of 25 Milanka companies in the 1st half of 2010 and uses Market-Adjusted Abnormal Return (MAAR) to estimate the stock price reaction to dividend announcement and employs the correlation analysis to observe the stock price reaction to earnings per share. As well as, 5 years details of dividend announcement, earnings per share and price of shares are observed by the researcher for the period starting from 2006 to 2010 for those analyses.

Market Adjusted Abnormal Return (MAAR) Methodology: This study uses the Market-Adjusted Abnormal Return (MAAR) methodology to estimate the stock price reaction to dividend announcements. The MAAR indicates the relative daily percentage price change in the dividend paying stock compared to the change in average market Price.

The MAAR model is specified as follows.

$$MAAR_{it} = R_{it} - R_{mt}$$

Where,

$MAAR_{it}$ = the market adjusted abnormal return for security I over time t.

R_{it} = the time t returns on security i, calculated as $(P_{it} - P_{it-1}) / P_{it-1}$.

Where, P_{it} is the market closing price of stock i on day t. P_{it-1} is the market closing price of stock i on day t - 1

R_{mt} = the time t return on the Milanka Price Index calculated as $(I_t - I_{t-1}) / I_{t-1}$

Where, I is the MPI on day t. I_{t-1} is the MPI on day t-1

The MAAR shows the change in individual stock's price due to the dividend announcement. The percentage change in Milanka Price Index is deducted; the remainder gives us the unsystematic portion of the price change. So the change is due to the dividend announcement for the particular stock. The MAAR is calculated over a period starting ten days before dividend announcement to ten days after ex-dividend date to be at normal price. The event day (day 0) is the calendar date on which the dividends are announced to the market. Information on dividend announcements is conveyed to the market primarily through the stock market daily, which is the official daily publication of the Colombo stock exchange. Therefore, the event date is taken as the date on which a specific dividend announcement appears in the stock market daily.

Cumulative Abnormal Return: The second tool used is the CAR, which measures the investor's total return over a period starting from well before the announcement of the dividend to after ex-dividend date. The CAR is computed the way following way:

$$CAR_{it} = MAR_{it}$$

$$CAR_t = CAR_{it}$$

Where, CAR_{it} is cumulative abnormal return for any security i and CAR_t is cumulative abnormal return for all securities. Similarly $MAAR_{it}$ is market adjusted abnormal returns for security i for window period.

Results

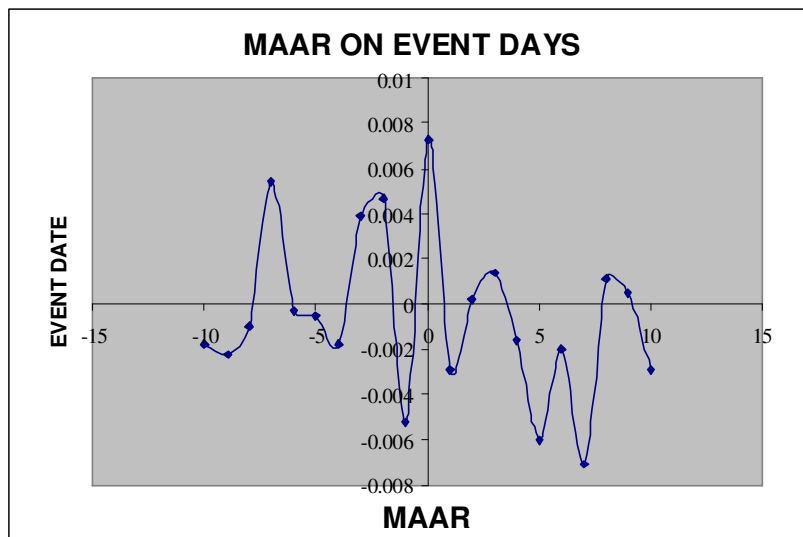
Market - Adjusted Abnormal Return (MAAR): First the researcher moves to analyse the details of the dividend announcement and share price under MAAR methodology to find out the nature of the significance between divided announcement and share price. According to it, the following Table I shows the window period of 21 days and associated MAAR with these days. This table clearly shows the MAAR of each year from 2006 – 2010, total MAAR of the five years and the final average figure of MAAR for five (2006- 2010) years.

Table 1: Market-adjusted abnormal return (MAAR)

Event date	MAAR-2006	MAAR-2006	MAAR-2008	MAAR-2009	MAAR-2010	MAAR (2006 to 2010)	MAAR (average for 5 years)
-10	(0.0051)	(0.0038)	(0.0001)	(0.0008)	0.0010	(0.0088)	(0.0018)
-9	(0.0028)	(0.0052)	(0.0015)	(0.0004)	(0.0012)	(0.0111)	(0.0022)
-8	(0.0042)	0.0021	(0.0067)	(0.0008)	0.0045	(0.0051)	(0.0010)
-7	0.0028	0.0022	0.0108	0.0061	0.0052	0.0271	0.0054
-6	0.0001	0.0015	(0.0012)	0.0044	(0.0062)	(0.0014)	(0.0003)
-5	0.0042	0.0005	(0.0039)	(0.0022)	(0.0011)	(0.0025)	(0.0005)
-4	(0.0063)	(0.0045)	(0.0010)	0.0023	0.0003	(0.0092)	(0.0018)
-3	0.0042	0.0023	0.0089	0.0009	0.0031	0.0194	0.0039
-2	0.0141	0.0026	0.0056	(0.0026)	0.0038	0.0235	0.0047
-1	(0.0030)	(0.0002)	(0.0244)	0.0023	(0.0005)	(0.0258)	(0.0052)
0	0.0112	0.0036	0.0182	(0.0063)	0.0100	0.0367	0.0073
1	(0.0008)	(0.0039)	(0.0065)	(0.0006)	(0.0029)	(0.0147)	(0.0029)
2	0.0022	(0.0036)	0.0014	(0.0014)	0.0022	0.0008	0.0002
3	0.0056	0.0030	(0.0033)	0.0021	(0.0006)	0.0068	0.0014
4	(0.0025)	(0.0021)	(0.0005)	0.0005	(0.0032)	(0.0078)	(0.0016)
5	0.0024	(0.0106)	(0.0040)	(0.0034)	(0.0144)	(0.0300)	(0.0060)
6	(0.0022)	(0.0029)	0.0013	0.0023	(0.0086)	(0.0101)	(0.0020)
7	(0.0171)	(0.0023)	(0.0082)	(0.0012)	(0.0069)	(0.0357)	(0.0071)
8	(0.0013)	(0.0023)	0.0005	0.0049	0.0039	0.0057	0.0011
9	0.0094	(0.0038)	(0.0006)	0.0015	(0.0042)	0.0023	0.0005
10	(0.0051)	0.0013	(0.0110)	(0.0032)	0.0035	(0.0145)	(0.0029)

The following diagram is derived to show the MAAR direction.

Figure 1: Market-adjusted abnormal return (MAAR) on event days



According to the above diagram, it shows the overall Market Average Abnormal Return (MAAR) for the Milanka companies at each and every event day. The MAAR before 10 days was -0.0018, like that MAAR after 10 days also is in negative, i.e. -0.0029. It shows that there is no positive effect on dividend announcement. However, when the event date 0 (announcement date), MAAR is in high proportion i.e., 0.0073 as well as when the event date -2, -3 (before 2, 3 days) and the event date 2, 3 (after 2, 3 days) the MAAR is in positive moderate level as compared with 0 date. It suggests that market react according to the dividend announcement on those dates highly.

The final calculated standard deviation (SD) is as 0.00366. Then, the five years' (from 2006-2010) average MAAR will be divided by this standard deviation (SD) amount of 0.00366 to get the T(MAAR) amount. The following table shows the T(MAAR) amount for each and every event days.

Table 2: T(MAAR)

Event date	MAAR(average for 5 years)	Standard Deviation(SD)	T(MAAR)
-10	(0.0018)	0.00366	(0.48)
-9	(0.0022)	0.00366	(0.61)
-8	(0.0010)	0.00366	(0.28)
-7	0.0054	0.00366	1.48
-6	(0.0003)	0.00366	(0.08)
-5	(0.0005)	0.00366	(0.14)
-4	(0.0018)	0.00366	(0.50)
-3	0.0039	0.00366	1.06
-2	0.0047	0.00366	1.29
-1	(0.0052)	0.00366	(1.41)
0	0.0073	0.00366	2.00*
1	(0.0029)	0.00366	(0.80)
2	0.0002	0.00366	0.04
3	0.0014	0.00366	0.37
4	(0.0016)	0.00366	(0.43)
5	(0.0060)	0.00366	(1.64)
6	(0.0020)	0.00366	(0.55)
7	(0.0071)	0.00366	(1.95)
8	0.0011	0.00366	0.31
9	0.0005	0.00366	0.12
10	(0.0029)	0.00366	(0.79)

* indicates the level of significance (based on the t-values) at respectively the 5% level.

The above table 2 shows the t- value or on the event day zero (i.e. announcement day) significant at 5% level. However, at significant level 5%, there is no any other significant event day within the event window period, which means that the market reacts significantly only in the actual announcement date and there is no information leaks out to the markets a few days before the announcement made by the company.

Table 3: Market-adjusted abnormal return (MAAR)

Window Period	MAAR
(-10,-1)	0.0012
(0,+10)	(0.0121)
(-2,+2)	0.0041
(-1,+1)	(0.0008)
(0,+1)	0.0044

According to the above diagram, it shows the overall Marketed Average Abnormal Return (MAAR) for the Milanka companies at each and every event day. The MAAR before 10 days was -0.0018, like that MAAR after 10 days also is in negative, i.e. -0.0029. It shows that there is no positive effect on dividend announcement. However when the event date 0(announcement date), MAAR is in high proportion i.e. 0.0073 as well as when the event date -2, -3 (before 2, 3 days) and the event date 2, 3 (after 2, 3 days) the MAAR is in positive moderate level as compared with 0 date. It suggests that market react according to the dividend announcement on those dates highly.

According to the result, the MAAR for the period of (0, +10) is - 0.0121%, which shows there is no good market response after the announcement date and the MAAR for the period of (-2, +2) and (0, +1) is nearly to 0.004, which is associated with the good market response.

Table 4: Direction of market-adjusted abnormal return (MAAR) on day 0

Direction	Number	percentage(%)
Positive	92	57.5 %
Negative	68	42.5 %
Total	160	100 %

Above the table represent that 57.5% of events have positive MAARs on the dividend announcement date, which represents 92 events, while, 42.5% of the events have negative MAARs, which represents 68 events.

Cumulative Abnormal Return (CAR): Cumulative Abnormal Return (CAR), which measures the investor's total return over a period starting from well before the announcement of the dividend to after ex- dividend date.

Results in the Table 5 show that investors do not gain value from dividend announcement. Evidence depicts that CAR had risen from 0.0018 percent on day -10 to a level of 0.008 percent on the day of dividend announcement, but the gained value was lost over the next 10 days after dividend announcement, as CAR dropped to -0.0109 percent on the day 10. Although results tends to suggest that investors may have overreacted to the dividend announcement, the evidence generally consistent with the dividend irrelevance. Findings also show that investors lost more value in the ex-dividend period than the value gained in the pre-dividend period. This finding tends to suggest that dividend announcement does not carry information about the future earnings and cash flow of the companies.

Table 5: Cumulative abnormal return (CAR)

Window Period	MAAR(average for 5 years)	AVERAGE-CAR
-10	(0.0018)	(0.0018)
-9	(0.0022)	(0.0040)
-8	(0.0010)	(0.0050)
-7	0.0054	0.0004
-6	(0.0003)	0.0001
-5	(0.0005)	(0.0004)
-4	(0.0018)	(0.0022)
-3	0.0039	0.0017
-2	0.0047	0.0064
-1	(0.0052)	0.0012
0	0.0073	0.0085
1	(0.0029)	0.0056
2	0.0002	0.0058
3	0.0014	0.0071
4	(0.0016)	0.0056
5	(0.0060)	(0.0005)
6	(0.0020)	(0.0025)
7	(0.0071)	(0.0096)
8	0.0011	(0.0085)
9	0.0005	(0.0080)
10	(0.0029)	(0.0109)

In Sri Lanka CSE generally rate the performance of the listed companies based on their regular dividend payments. Hence, companies may like to retain their good standing by paying regular dividends. In the presence of a kind of indirect pressures from the regulatory authorities, the companies may not be able to effectively signal the future earning prospects through their dividend announcement.

However, there is a positive high value of average Cumulative Abnormal Returns (CAR) on the announcement day, which means that there is a high information signaling effect on the dividend announcement day. Further there is a low level of positive Cumulative Abnormal Return (CAR) during the period of -3 to +4, which also represents that there is a low level of information signaling effect from 3 days before the announcement date to after 4 days of the announcement date.

Findings

- 147.83 % of Milanka companies have positive relationship between dividend announcement and share price movements within the overall event window period.
- 52.17 % of Milanka companies have positive relationship between dividend announcement and share price movements within the overall event window period.

- 57.5% companies have high positive relationship between dividend announcement and share price movements in the dividend announcement day.
- 42.5% companies have negative relationship between dividend announcement and share price movements in the dividend announcement day.
- There is a significant relationship between the dividend announcement and share price movements in the dividend announcement day.
- There is no significant relationship between the dividend announcement and share price movements in other days except the dividend announcement day within the window period.

Conclusion

Dividend announcement has significant influence on the stock price of Milanka companies at the time of actual announcement day. However, there are a lot of variables, which may be internal or external to affect the share price of the firms. Present and future investors should consider the dividend announcement, when they invest in the Colombo Stock Exchange. Shareholders identify the dividend announcement in order to make alternative decision about buying and selling of shares.

REFERENCE

- Al-Ajmi J Y. 2008. "Risk tolerance of individual investors in an emerging market, *International Research Journal of Finance and Economics*, 17, 15-26
- Bajtelsmit, V.L. and Bernasek, A. 1996. Why do women invest differently than men? *Financial Counseling and Planning*, 7, 1-10.
- Baker, H.K. and Haslem, J.A. 1974. The impact of investor socio-economic characteristics on risk and return preferences, *Journal of Business Research*, 2, 469-476
- Chang C and Devaney SA. 2001. Determinants of objective and subjective risk tolerance, Proceedings of the Association for Financial Counseling and Planning Education.
- Chia- Chi Chang and Devaney SA. 2001. Determinants of objective and subjective risk tolerance, Proceedings of the Association for Financial Counseling and Planning Education
- DeAngelo, H., DeAngelo, L. and Skinner, D.J. 2000. Special dividends and the evolution of dividend signaling. *Journal of Financial Economics*, 57, 309-354.
- DeAngelo, H., DeAngelo, L. and Stulz, R. 2006. Dividend policy and the earned / contributed capital mix: a test of the life-cycle theory. *Journal of Financial Economics*, 81, 227-254.
- Dimson, E. 1979. Risk measurement when shares are subject to infrequent trading. *Journal of Financial Economics*, 7, 197-226.
- Easton, S. 1991. Earnings and dividends: is there an interaction effect? *Journal of Business Finance and Accounting*, 18, 255-266.

- Fama, E.F., Fisher, L., Jensen, M.C. and Roll, R. 1969. The adjustment of stock prices to new information. *International Economic Review*, 10 (1), 1-21.
- Foster, G. 1977. Quarterly accounting data: time-series properties and predictive-ability results. *Accounting Review*, 52, 1-20.
- Gombola, M.J. and Liu, F.Y. 1999. The signaling power of specially designated dividends. *Journal of Financial and Quantitative Analysis*, 34 (3), 409-424.
- Gombola, M.J. and Liu, F.Y. 1999. The signaling power of specially designated dividends. *Journal of Financial and Quantitative Analysis*, 34 (3), 409-424.
- Healy, P.M. and Palepu, K.G. 1988. Earnings information conveyed by dividend initiations and omissions. *Journal of Financial Economics*, 21, 149-175.
- Jagannathan, M., Stephens, C.P. and Weisbach, M.S. 2000. Financial flexibility and the choice between dividends and stock repurchases. *Journal of Financial Economics*, 57, 355-384.
- Jensen, M. 1986. Agency costs of free cash flow, corporate finance and takeovers. *American Economic Review Papers and Proceedings*, 76, 323-329.
- John, K. and Kalay, A. 1982. Costly contracting and optimal payout constraints. *Journal of Finance*, 37, 457-470.
- John, K. and Lang, H.P. 1991. Insider trading around dividend announcements: theory and evidence. *Journal of Finance*, 46, 1361-1389.
- John, K. and Mishra, B. 1990. Information content of insider trading around corporate announcements: the case of capital expenditures. *Journal of Finance*, 45, 835-855.
- Kane, A., Lee, Y.K. and Marcus, A. 1984. Earnings and dividend announcements: Is there a corroboration effect? *The Journal of Finance*, 39 (4), 1091-1099.
- Kothari, S. and Warner, J. 2007. Econometrics of event studies. In B. Espen Eckbo, *Handbook of corporate finance*. North Holland.
- Lang, L.H. and Litzenberger, R.H. 1989. Dividends announcements cash flow signalling vs free cash flow hypothesis. *Journal of Financial Economics*, 24, 181-191.
- Liljeblom, E. 1989. The informational impact of announcements of stock dividends and stock splits. *Journal of Business Finance and Accounting*, 16, 681-697.
- Lintner, J. 1956. Distribution of income of corporations among dividends, retained earnings, and taxes. *The American Economic Review*, 46 (2), 97-113.