DIVIDEND CHANGES AND FUTURE PROFITABILITY: EVIDENCE FROM MALAYSIA

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ABSTRACT

Most of the previous studies on dividends in Malaysia focus on dividend signalling; there is hardly any published evidence relating dividend changes to firms' profitability. Using a total of 2,396 dividend changes of companies listed on Bursa Malaysia over the period 1998-2007, this study investigates the relationship between dividend changes and future profitability of firms. We find that dividend changes are strongly related with contemporaneous earnings changes, weakly related with one year ahead of earnings changes and largely unrelated with earnings changes beyond one year. Further, we find weak evidence that the size of dividend changes is related to future profitability. We also find that dividend increases in the recovery years of the Asian 1997 financial crisis are related with one year ahead of earnings increases. Our results also suggest that dividend stability may be directly related with information content on future earnings.

Keywords*:* dividend changes, future profitability, information content of dividend, financial crisis, dividend stability

INTRODUCTION

The classic study of Lintner (1956) on dividend policy concludes that a firm's earnings are the key determinant of dividend changes. Lintner notes that dividend changes can convey important information about future prospects of firms. He also finds that managers appear to be reluctant to increase dividends unless they are confident it is sustainable in the foreseeable future. This suggests that dividend changes follow shifts in long-run levels of earnings rather than short-run changes in earnings. Firm managers try to "smooth" dividends from year to year, thus the transitory changes in earnings are unlikely to affect dividend payouts. Miller and Modigliani (1961) state that when a firm practices a stable dividend policy and then change its dividends, investors will interpret the dividend change

as a change in management's views on the firm's future profitability. The empirical implication of this is that management's decision on dividend changes may be related to their expectation on the future profitability of the firm.

Early empirical studies linking dividend changes to market prices were conducted by Asquith and Mullins (1983) and Miller and Rock (1985). These studies show that dividend increases result in positive abnormal returns in the share prices. Studies carried out in non-US markets also seem to indicate strong presence of the dividend signalling hypothesis. See for example, Lonie, Abeyratna, Power and Sinclair (1996) in the U.K. market; How, Teo, and Izan (1992) in Australia; McCluskey, Burton, Power and Sinclair (2006) in Ireland; Ariff and Finn (1986) in Singapore. In the local context, Isa and Subramaniam (1992); Nassir and Mohamad (1993); Sinnakkannnu and Nassir (2007); Hussin, Ahmad and Teoh (2010) and Yip, Isa, Kester and Lee (2010) examine market reaction to dividend announcement. In general, these studies find evidence in support of the signalling hypothesis. None of these studies, however, address the relationship between dividend changes and future profitability of firms. The current study may be considered as an important addition to the existing dividend literature.

Studies on the relationship between dividends and future profitability are usually referred as the information content of dividend studies. The results of previous studies are quite inconsistent; some studies indicate the existence of a relationship between dividend changes and future earnings, while others do not find such a relationship. The most important controversies were the two studies by Nissim and Ziv (2001) and Grullon, Michaely, Benartzi and Thaler (2005) that show contrasting results. Nissim and Ziv (2001) find significant support on the information content hypothesis, while Grullon et al. (2005) find results that dividend changes are unrelated to future profitability. This situation leaves the issue unsettled. Hence more studies are needed to provide additional evidence on this topic, including studies in a developing market such as Malaysia.

This study examines the relationship between current dividend changes and future earning of firms listed on the Malaysian stock exchange over the period 1998–2007. OLS regressions are used to assess whether current dividend changes are related to future earnings changes. The results show that current dividend changes are significantly related with contemporaneous earnings changes. As for current dividends and future earnings, there is a weak relationship with first year earnings changes but mostly unrelated with earnings in the second and third year. We also find weak evidence that future earnings are related to the size of dividend changes and dividend stability. Overall our results show weak and limited support on the information content of dividend hypothesis. The contributions of this study can be summarised into three aspects.

First, it may be worthwhile to examine this hypothesis in a developing market to provide an out of sample evidence to the issue. Second, this study adds to the local dividend literature by providing evidence on the information content of dividend that has not been studied before. Third, this study also has important implications to the local managers in making their dividend decisions, and to investors, especially those making investment decisions based on dividends.

The rest of the paper is structured as follows: the next section presents a discussion on previous studies on dividends and future earnings relationship. This is followed by a description of data and methodology used in this study. We then present and discuss our findings. The last section concludes the paper.

LITERATURE REVIEW

The information content of dividends is attributed to investors who interpret a change in the dividend as reflecting the management's view of future profitability of the firm. This position can be rationalized by the situation in the real world where investors have little verifiable information on the performance of firms or its growth prospects. Audited financial statements are records of firms' past performances and not expectations of their future performances. Further, arising from the flexibility of accounting principles, a firm's financial reports can become a management's tool in its efforts to portray good picture of the firm. Investors, in their efforts in finding clues to the management's beliefs on firms' future, are always on the lookout for "signals" from the management regarding its expectation of future earnings. One such signal is dividend changes.

Based on the premises laid by Lintner (1956), Miller and Modigliani (1961) develop the idea on the information content of dividend hypothesis – that dividend changes convey information about the firm's future earnings. This has been extensively studied in the developed markets, particularly in the U.S. Watts (1973) was among the first to test the hypothesis in the U.S. market. Watts regresses the next year's earnings on this year's dividends. He finds that on average the relationship between dividend changes and future earnings is positive, and is consistent with the hypothesis. Subsequently, Brickley (1983) finds that both specially designated dividends and increases of regular dividends are associated with higher dividends and earnings in the following year. Healy and Palepu (1988) studying dividend initiations and omissions over the years 1969 to 1980 conclude that dividend initiations and omissions may be regarded as managements' forecast of future earnings changes. The role of dividend changes in signaling the direction of future earnings changes is also shown by

Aharony and Dotan (1994) who find that firms that increased (decreased) dividends experienced greater (smaller) unexpected changes in earnings in the subsequent years as compared with firms that did not change their dividends.

While early studies as discussed above seem to be providing empirical support to the information content of dividend hypothesis, subsequent studies seem to be taking an about turn. For example, DeAngelo, DeAngelo and Skinner (1996) study the signalling content of managers' dividend decisions for 145 NYSE firms over the years 1980 to 1987, find virtually no support for the notion that dividend decisions help identify firms with superior future earnings. In a subsequent study, using a more comprehensive data over the years 1979 to 1991, Benartzi, Michaely and Thaler (1997) examine the predictive content of dividends with respect to earnings and find that dividend increases are not associated with earnings increases in subsequent years; but surprisingly, dividend decreases are associated with subsequent increases in earnings. They conclude that dividend changes do not signal future earnings.

Nissim and Ziv (2001) argue that the lack of support to the information content of dividend hypothesis in some of the previous studies is due to omitted variables in their regression models. In their study, Nissim and Ziv assume that earnings follow a uniform mean reversion process with linear autocorrelation. Their regression models include variables on return on equity and past changes in earnings to control for the mean reversion and autocorrelation in earnings. With these changes in model specifications, they find evidence of highly positive relationships between changes in current dividend and changes in earnings in the years following the dividend changes. Nissim and Ziv find that dividend increases are related to future profit increases for at least four years, while dividend decreases are not related to future profits.

However, in a subsequent study, Grullon et al. (2005) criticize Nissim and Ziv's (2001) study, saying that the assumption of linear mean reversion in earnings is inappropriate. Grullon et al. argue that studies by Elgers and Lo (1994) and Fama and French (2000) have shown that the mean reversion process and the level of autocorrelation in earnings are nonlinear. Using the nonlinearity assumption Grullon et al. find that dividend increase does not signal better future earnings. They conclude that dividend changes contain no information about future earning changes; they even suggest that investor may be better off not using dividend changes when they forecast earnings changes.

The information content of dividend hypothesis has been empirically tested in non-U.S. markets as well, and the findings are quite mixed. In U.K., Goddard, McMillan and Wilson (2006) find a contemporaneous relationship between earnings and dividends but not on the predictive quality of dividend on

earnings. Similar findings are found in India by Lukose and Rao (2010); the authors find strong positive relationship between dividend changes and profitability during the year of dividend change, but dividend changes contain no information about future earnings in the subsequent years. In the Korean market, Choi, Ju and Park (2011) adopt the respective methodologies of Nissim and Ziv (2001) and Grullon et al. (2005) and find results that are consistent with both of the previous studies. They find that dividend changes can predict future earnings changes for the following one year in simple and cross-sectional regression analyses, which supports Nissim and Ziv (2001). However, using Grullon et al.'s (2005) nonlinear cross-sectional regression method, they find that dividend changes are not predictive of future changes in earnings. With these evidences, a general statement may be made that the controversy on the information content of dividend is far from over. This situation creates an opportunity for researchers to continue to investigate this topic.

DATA AND METHODOLOGY

Data Selection

The data used in this study is composed of firms that were continuously listed on Bursa Malaysia for the years between 1998 and 2007. Data on dividend and earnings changes were collected from the Stock Performance Guide of Malaysia for the year 2008 and 2009. This publication contains historical financial and stock performance data of listed companies, and published yearly by Dynaquest, a private investment and financial research firm. To be included in the sample we require that the firm must have at least two consecutive years of dividend payments to enable calculation of dividend changes. The firm must also have earnings information for the current and the following five years after the year of dividend change. We excluded firms that had capital changes such as rights issue, bonus issue, stock dividends and stock splits. We also excluded financial companies and financially distressed companies as classified by the exchange.

Table 1 shows the distribution of our sample over the years of our study, with additional information on dividend per share and dividend yield, earnings per share and payout ratio. The earlier years of the study, from 1998 to 2001, may be considered as recovery years from the 1997 financial crisis; hence it is not surprising that for these years, the number of dividend decreases were greater than dividend increases. However things began to change from year 2002 to 2007, during which time the local economy picked up, and more firms begin to pay or to increase dividends. During these years, incidence of dividend increases

was on average more than triple that of dividend decreases. Over the entire study period, total number of dividend increases at 1,666 outnumbered dividend decreases at 730 by 2.28 times, giving a total of dividend changes of 2,396 used in our analysis.

Table 1 also shows that dividend per share ranges from a low of RM0.060 on 2003 to a high of RM0.088 in 2007, with an overall average of RM0.073. The dividend yield, as shown in the last column, ranges from a low of 1.87% to a high of 3.70% in 2006, with an overall annual average of 2.74%. The earnings per share seem to be quite stable over the study period fluctuating tightly between a low of RM0.184 to RM0.218, with an overall average of RM0.200. The dividend payout ratio ranges from a low of 30.3% in 1999 to a high of 45.1% in 2006. These numbers are quite consistent with those found in Isa (2008).

Table 1
Distribution of dividend changes sample by year of study, 1998–2007

Year	Dividend decrease	Dividend increase	Total for year	DPS (cent)	EPS (cent)	Dividend payout ratio	Dividend yield (%)
1998	90	51	141	6.701	21.800	0.310	2.636
1999	61	50	111	6.204	19.804	0.303	2.101
2000	37	71	108	7.024	21.171	0.329	1.871
2001	65	59	124	6.971	18.774	0.376	2.820
2002	64	175	239	6.492	18.407	0.340	2.609
2003	66	219	285	6.014	17.836	0.335	2.653
2004	72	234	306	8.237	20.357	0.392	2.614
2005	83	259	342	7.776	18.691	0.417	3.434
2006	120	220	340	8.463	18.410	0.451	3.697
2007	72	328	400	8.847	21.430	0.415	2.976
Total/ Ave	730	1666	2396	7.273	19.668	0.367	2.741

Notes: Figures in columns 2 to 4 represent sums whereas other columns are averages. The dividend per share (DPS) and earnings per share (EPS) are in cents of Malaysian Ringgit.
Source: KLSE and Stock Performance Guide

Methodology

The objective of this paper is to test the information content of dividend, that is, whether current dividend changes contain information on future earnings. We define a dividend changes as the difference between year t annual dividend and year $t – 1$ annual dividend. The changes in dividends are calculated as follows:

$$\Delta Div_{i,0} = \frac{(D_{i,0} - D_{i,-1})}{D_{i,-1}} \qquad (1)$$

where,

$\Delta Div_{i,0}$ = Changes in dividend per share of firm *i* in year *0*;
$D_{i,0}$ = Dividend per share of firm *i* in year *0*; and
$D_{i,-1}$ = Dividend per share of firm *i* in the previous year

The earnings before extraordinary items are used to calculate the earnings changes. In this study we use changes in earning per share changes (ΔEPS) instead of changes in total earnings. Following the method used by Bernatzi et al. (1997), the change in EPS is divided by the stock price at the beginning of the year of dividend change. We use the following formula to calculate earnings changes:

$$\Delta EPS_{i,t} = \frac{(EPS_{i,t} - EPS_{i,t-1})}{P_{i,t}} \qquad (2)$$

where,

$\Delta EPS_{i,t}$ = Changes in earnings per share of firm *i* in year *t*;
$EPS_{i,t}$ = Earnings per share of firm *i* in year *t*;
$EPS_{i,t-1}$ = Earnings per share of firm *i* in year *t-1*; and
$P_{i,t}$ = Share price of firm at the beginning of year *t*.

We then run OLS regression to test the relationship between current dividend changes as defined in Equation (1) and changes in current and future earnings as defined in Equation (2). The dependent variable of the regression is the changes in earnings per share ($\Delta EPS_{i,t}$) in year 0, 1, 2 or 3 relative to the year of the dividend announcement, respectively. Dividend changes are used as explanatory variable. The regression model in our study follows that of Benartzi et al. (1997). The equation is as follows:

$$\Delta EPS_{i,t} = \alpha_0 + \alpha_1 \Delta Div_{i,0} + \alpha_2 DIdum_{i,0} + e_i \qquad (3)$$

where,

$\Delta EPS_{i,t}$ = earnings per share change for firm *i* in year *t* as defined in Equation (2), *t* = 0, 1, 2 and 3;
$\Delta Div_{i,0}$ = year 0 dividend change for firm *i* as defined in Equation (1); and

99

$DIdum_{i,0}$ = dividend increase dummy that takes the value of 1 if firm increase dividend and zero otherwise in year 0.

Hypothesis for the Study

Based on the discussion of previous studies, it can be concluded that there is no general consensus on the empirical evidence on the information content of dividend hypothesis. This study investigates the general hypothesis of whether or not current dividend changes are related to future profitability of firms that is represented by changes in firms' earnings. Our hypothesis statement in the alternative form may be stated as follows:

> H1: Current dividend changes are positively related with future earnings changes.

In addition to investigating the above hypothesis, we also analyse whether or not the dividend-earnings relationships are influenced by other related factors. Specifically we focus the three factors: (i) size of dividend changes, (ii) economic condition; and (iii) dividend stability.

Size of dividend changes

We divide the dividend changes into large and small changes. We hypothesise that large dividend changes (increase/decrease) would have a greater impact on the information content hypothesis and would show a stronger dividend-earnings relationship than would small dividend changes.

> H2: The size of dividend changes is directly related to future earnings changes.

Economic condition

Our period of study, running from 1998–2007 may be divided into two sub-periods: (i) 1998–2001 and (ii) 2002–2007. The first sub-period, 1998–2001 are considered as recovery years from the 1997 financial crisis, while the second sub-period, 2002–2007 may be considered a period of economic expansion. We expect dividend increases that take place during the recovery years to have a stronger impact on the hypothesis compared to those taking place during the expansionary years.

> H3: Dividend changes during recovery years have a larger impact than dividend changes in expansionary years on future earnings changes.

Dividend stability

In this analysis we hypothesise that firms practicing a stable dividend policy and then make dividend changes, would impart a stronger impact on the dividend-earnings relationship compared to firms that do not demonstrate a stable dividend policy. Dividend stability is defined as number of years of stable dividend before a dividend change is made.

> H4: Dividend stability has a direct influence on the relationship between dividend changes and changes in firms' future earnings.

RESULTS

Results for the Whole Sample

To begin our investigation on the information content of dividend, we first run an OLS regression (Equation 3) on the whole sample with earnings changes as the dependent variable and current dividend changes as independent variable. To analyse if the current and future earnings respond differently to the direction of dividend changes, we include a dividend increase dummy as an additional explanatory variable that takes a value of 1 for positive dividend changes and 0 otherwise. A dividend increase is expected to impart positive information whereas a dividend decrease would do the opposite. We run separate regression for current earnings changes and for each subsequent year earnings changes, up to year 3, giving us a total of four sets of regressions results. These are presented in Table 2.

Table 2 shows a strong positive relation between current dividend changes and current earnings changes. For year 0, the coefficients for dividend changes and dividend increase dummy variable are both positive and significant. For earnings changes in Year 1, our results show a weaker relationship; the dividend change coefficient is significant only at the 10% level, with a much smaller magnitude compared to the contemporaneous relation; and the coefficient for dividend increase dummy is insignificant. The results for Years 2 and 3 show that there is no significant relationship between changes in earnings and in current dividend, regardless of direction of the changes. It should also be noted that the adjusted R-squared for all regressions are very small, except for the contemporaneous regression. Similarly, the F-statistic shows that only the contemporaneous regression seems to be significant.

Table 2
Regression of current and future earnings changes on the current dividend changes, 1998–2007

Year (t)	α_0	α_1	α_2	R^2	F-value	N
0	0.018*** (6.692)	0.012*** (5.521)	0.018*** (4.676)	0.057	58.999***	2396
1	0.008** (1.967)	0.004* (1.654)	0.007 (1.591)	0.010	1.671*	2275
2	0.011*** (3.241)	-0.001 (-0.318)	0.001 (0.062)	0.000	0.063	2079
3	0.008** (2.446)	-0.002 (-0.706)	0.000 (0.024)	0.001	0.381	1907

Notes: The regression equation is: $\Delta EPS_{i,t} = \alpha_0 + \alpha_1 \Delta Div_{i,0} + \alpha_2 DIdum_{i,0} + e_i$. The numbers in parentheses are *t*-statistics. *, ** and *** denote significant at the 10%, 5% and 1% level, respectively.

Table 2 highlight the strong relationship between current earnings and current dividend changes. Our result is consistent with the previous findings by Grullon et al. (2005) and Benartzi et al. (1997) that current dividend changes contain no information about firm future earnings.

Hypothesis 1 expects current dividend changes to be positively related with future earnings changes and this does not seem to be consistent by our results. Our evidence in Table 2 shows little support, if any, to the dividend information content hypothesis. This implies that firms do not use dividend to signal about their future earnings. One possible implication of this result is that Malaysian managers may not be thinking about future earnings in determining their current dividend policy. Other factors may be more relevant in their dividend policy decision as documented by Isa (2008), who finds that Malaysian managers rank the factors of availability of cash, current year's earnings and shareholders' expectation factors as very important considerations in their dividend decisions.

Size of Dividend Change

It is logical to assume that management decision involving a large dividend change would require a more serious consideration on firms' ability to maintain the new level, compared to decision on a small change. A large dividend increase would therefore more likely to reflect management's confidence on future profitability of the firm. Accordingly in this analysis we conjecture that a large

dividend change would have a greater impact of informational content than would a small dividend. To investigate this issue, we run the following regression:

$$\Delta EPS_{i,t} = \alpha_0 + \alpha_1 \Delta Div_{i,0} + \alpha_2 SDIdum_{i,0} + \alpha_3 LDIdum_{i,0} + \alpha_4 LDDdum_{i,0} + e_i \qquad (4)$$

where,

LDIdum = large dividend increase dummy that carries a value of 1 for large increase and 0 otherwise;

SDIdum = small dividend increase dummy that carries a value of 1 for small increase and 0 otherwise; and

LDDdum = large dividend decrease dummy that carries a value of 1 for large decrease and 0 otherwise.

For this analysis, we define a large dividend increase as an increase of 50% or more compared to the previous year dividend, while a small increase is less than 50% of the previous year's dividend. Similarly a large decrease means a decrease of 50% or more of the previous year dividend. If large dividend changes impart a greater signaling effect, its coefficient should be greater than the coefficient for small dividend changes.

Table 3 shows the results of estimating equation (4). The regression results for year 0 earnings changes show that the coefficients α_1, α_2, α_3 and α_4 are all significant at the 1% level. The coefficient for large dividend increase is 0.021 which is greater than the small increase coefficient of 0.019, which means the size of the coefficients is going in the direction we predicted. As for large dividend decrease, its coefficient is negative and significant. Therefore, as far as the contemporary relationships are concern, they are as predicted. However, for information content effect, we need to look at the subsequent years' earnings changes. Table 3 shows that for year 1 earnings changes, the regression coefficients deteriorate very quickly. Only the coefficients for the large dividend increase and large dividend decrease are significant. This means there are elements of information content effects with respect to large dividend changes. However, the *R*-squared is rather small and the *F*-statistic is barely significant. For years 2 and 3, none of the coefficients is significant; the *R*-squares are almost zero and the F-statistics are insignificant.

Table 3
Regression of current and future earnings changes on the current dividend changes and size of dividend changes, 1998–2007

Year(t)	α_0	α_1	α_2	α_3	α_4	R^2	F-value
0	0.017*** (5.278)	0.009*** (4.098)	0.019*** (3.733)	0.021*** (4.928)	-0.018*** (-3.172)	0.073	38.272***
1	0.016*** (4.628)	0.004* (1.729)	0.008 (1.294)	0.011** (2.117)	-0.010* (-1.670)	0.006	3.445
2	0.010** (2.472)	-0.001 (-0.509)	0.004 (0.675)	0.001 (0.050)	-0.003 (0.401)	0.002	0.302
3	0.001*** (2.779)	-0.002 (-0.849)	-0.002 (-0.503)	0.003 (0.503)	-0.008 (-1.305)	0.002	0.632

Notes: The regression equation is: $\Delta EPS_{i,t} = \alpha_t + \alpha_1 \Delta Div_{i,0} + \alpha_2 SDIdum_{i,0} + \alpha_3 LDIdum_{i,0} + \alpha_4 LDDdum_{i,0} + e_i$. The numbers in parentheses are *t*-statistics. *, ** and *** denote significant at the 10%, 5% and 1% level, respectively.

The results in this section suggest that dividend increases/decreases have to be of substantial size in order to have some effect on the information content, but this is limited just to the first year earnings changes. Hence, there is a weak support for H_2 hypothesis that the size of dividend changes is directly related to future earnings changes. Our results is consistent with Brickley (1983) who finds that firms that increase their dividends by more than 20% experience a significant earnings increase in both year zero and year one. The significant coefficients for large dividend changes may be also resulting from the fact that dividend yields in the local market are rather small, as shown in Table 1, ranging between 2% to 3% over the study period.

Economic Condition

Our period of study may be divided into two sub-periods that have different economic conditions: first is the economic recovery period, running for four years from 1998 to 2001, and economic expansion years, from 2002 to 2007. During the recovery years, firms were still reeling from the 1997 financial crisis, and our data also show that more firms are reducing dividends than increasing dividends. We may conjecture that firms that increased their dividends during these difficult years are more confident of their future than those that did not. Therefore we expect the dividend increase to have a greater information content effect compared to a similar increase during the expansionary years. Since dividend decreases are to be expected during this period, it may not impart a

significant impact on future earnings. To test this proposition, we run the following regression:

$$\Delta EPS_{i,t} = \alpha_0 + \alpha_1 \Delta Div_{i,0} + \alpha_2 RDIdum_{i,0} + \alpha_3 RDDdum_{i,0} + \alpha_4 EDIdum_{i,0} + e_i \qquad (5)$$

where,

$RDIdum$ = dummy variable that takes the value 1 for dividend increase during recovery years (1998 to 2001) and 0 otherwise;

$RDDdum$ = dummy variable that takes the value 1 for dividend decrease during recovery years (1998 to 2001) and 0 otherwise; and

$EDIdum$ = dummy variable that takes the value 1 for dividend increase during expansionary years (2002 to 2007) and 0 otherwise.

The results are shown in Table 4. Our results for contemporaneous relationships, that is, for year 0 earnings changes are as expected; that is all coefficients are significant with the expected signs. However, for year 1 earnings changes, only α_1 and α_2 are significant. This means that there exists a positive relationship between dividend increase during the recovery years and earnings changes one year ahead. This is what we expected; there is an information content effect of a dividend increase during the recovery years, which means managers will only increase dividend if they strongly believed future earnings will increase. Unfortunately, it is limited to only year 1 earnings; for years 2 and 3, none of the coefficients is significant. Our results also show that dividend decreases are not significantly associated with future earnings decreases, although the signs of the coefficients are negative. The results do not support the proposition that dividend decreases during recovery years reflect management's pessimism on the future of the firm. Rather, our results suggest that dividend decreases are made due to declines in current earnings and not because of managements' expectation of future earnings declines. On the whole we may conclude that Hypothesis H3 is weakly supported by our data.

We expect a weaker dividend signalling effect after the financial crisis period because most companies would have recovered from the financial crisis and therefore both dividend and earnings would be on an increasing trend. However, our result shows that there is no hint of a positive relation between dividend increase dummy and future earnings during the expansionary years.

Table 4

Regression of current and future earnings changes on the current dividend changes and sub periods, 1998–2007

Year (*t*)	α_0	α_1	α_2	α_3	α_4	R^2	*F*-value
0	0.014*** (4.294)	0.008*** (3.761)	0.011** (2.040)	-0.027*** (-5.319)	0.022*** (5.083)	0.092	49.141***
1	0.015*** (3.712)	0.004* (1.701)	0.011* (1.692)	-0.003 (-0.439)	0.006 (1.167)	0.007	3.196**
2	0.010** (2.144)	-0.001 (-0.102)	0.007 (0.992)	-0.005 (-0.799)	0.003 (0.505)	0.003	1.219
3	0.005 (1.076)	-0.002 (-0.723)	0.003 (0.427)	-0.004 (-0.570)	0.007 (1.164)	0.005	1.448

Notes: The regression equation is: $\Delta EPS_{i,t} = \alpha_0 + \alpha_1 \Delta Div_{i,0} + \alpha_2 RDIdum_{i,0} + \alpha_3 RDDdum_{i,0} + \alpha_4 EDIdum_{i,0} + e_i$. The numbers in parentheses are *t*-statistics. *, ** and *** denote significant at the 10%, 5% and 1% level, respectively.

Dividend Stability

One of the conclusions of Linter (1956) was that managers prefer a stable dividend policy in the long-run and they are reluctant to make dividend changes that might have to be reversed within a short time. We take this to mean that managers will only increase dividend that can be sustained in the long-run based on their confidence of a positive shift in firm's profitability. We therefore proposed that for a firm that pays a constant dividend over a period of years, to increase dividend is an important decision and reflect their confidence of the future. Therefore, dividend stability is an important variable that determines the "ability" of dividend changes to carry the information on future earnings. We expect firms that change dividend after a long period of dividend stability, the dividend changes would have a greater impact in signalling future earnings. To test this proposition, we run the following regression:

$$\Delta EPS_{i,t} = \alpha_0 + \alpha_1 \Delta Div_{i,0} + \alpha_2 SD2dum_{i,0} + \alpha_3 SD3dum_{i,0} + \alpha_4 SD4dum_{i,0} + e_i \qquad (6)$$

where,

SD2dum = dummy variable that takes the value of 1 in the case the firm has a 2-year stable dividend before the dividend change and 0 otherwise;

SD3dum = dummy variable that takes the value of 1 in the case the firm has a 3-year stable dividend before the dividend change and 0 otherwise; and

SD4dum = dummy variable that takes the value of 1 in the case the firm has a 4-year stable dividend before the dividend change and 0 otherwise.

Table 5 shows the results of this regression. The results show that for contemporaneous variables, all coefficients are significant, showing strong relationships between current earnings changes and dividend changes and dividend stability variables. The size of the stability coefficients shows that it is highest for the longer stability period compared to that for a shorter stability period. We also find that the coefficient for the 4-year stable dividend coefficient is significant for year 1 and year 2 earnings changes. These results are quite encouraging as it is consistent with our proposition on dividend stability as a determining factor for information content of dividend, supporting our H_4 hypothesis. One implication of our results is that a firm with a stable dividend policy is more likely to carry information on future earnings in their dividend changes decisions. In the case of dividend increase, it reflects a shift in dividend policy due to management's confidence of its ability to sustain the new level.

Table 5

Regression of current and future earnings changes on the current dividend changes and dividend stability, 1998–2007

Year (t)	α_0	α_1	α_2	α_3	α_4	R^2	F-value
0	0.010*** (5.867)	0.007*** (9.562)	0.010** (2.158)	0.017** (2.038)	0.031*** (2.625)	0.054	27.741***
1	0.009*** (4.578)	0.006* (1.949)	0.001 (0.233)	0.004 (0.425)	0.028** (2.054)	0.008	3.186***
2	0.010*** (4.522)	-0.001 (-0.607)	0.003 (0.617)	0.001 (0.022)	0.049*** (3.287)	0.008	2.809***
3	0.009*** (4.051)	-0.002 (-0.814)	-0.003 (-0.563)	0.001 (0.041)	0.019 (1.287)	0.002	0.684

Notes: The regression equation is: $\Delta EPS_{i,t} = \alpha_0 + \alpha_1 \Delta Div_{i,0} + \alpha_2 SD2dum_{i,0} + \alpha_3 SD3dum_{i,0} + \alpha_4 SD4dum_{i,0} + e$. The numbers in parentheses are *t*-statistics. *, ** and *** denote significant at the 10%, 5% and 1% level, respectively.

CONCLUSION

This study tests the validity of the information contents of dividend hypothesis in the Malaysian market over the years 1998–2007. OLS regressions are used to examine whether there exist a meaningful relationship between current dividend changes and future earnings changes of firms. Our results indicate that current dividend changes are strongly related to current earnings changes. This relationship is robust, regardless of different dividend changes attributes being tested. We also find limited support for the information content of dividend hypothesis. When subsequent years' earnings changes are regressed against current dividend changes, only first year earnings show signs of significant relationship. The relationships are weakly significant for the dividend changes, direction of dividend changes, size of dividend changers, economic situation and dividend stability. For years 2 and 3 earnings changes, almost all coefficients are insignificant. Our results are consistent with the findings of Benartzi et al. (1997) and Grullon et al. (2005), but inconsistent with the findings of Nissim and Ziv (2001).

Our findings have at least three important implications. First, our results may be reflecting dividend policy practices among the local companies. As alluded to by earlier studies, local managers do not place great importance in using dividend as a signaling device of future earnings. In other words, expectation of future earnings is not a factor determining current dividend policy of firms. Rather, given the contemporaneous relationships between earnings and dividends, the most logical conclusion is that firms' dividend policies are based on affordability rather than earnings expectations. Secondly, our results have important implication to investors, especially those who depend on dividend information as a basis of investment decisions. Although previous studies in the local market find support for dividend signaling hypothesis, this study indicates that the market reaction is not due to expectations of future earnings. Long-term local investors are therefore well advised to look for other signaling devices to obtain clues on management perception on the future of the firms.

Thirdly, this study adds to the much needed evidence on this topic in the local market. Since our results in general are not in support of the information content hypothesis, more studies are clearly needed. Future studies in this topic should take note of two main limitations in this study: first, is regarding possible use of a more sophisticated earnings expectation model as addressed by Nissim and Ziv (2001) and Grullon et al. (2005); second, our results may be influenced by the study period, which is immediately after the financial crisis, hence extending the data to a longer period may lead to a more reliable and stable findings.

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