CORPORATE DIVIDEND POLICY AND BEHAVIOUR:
THE MALAYSIAN EXPERIENCE

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ABSTRACT

This study examines corporate dividend behaviour of the Kuala Lumpur Stock Exchange (KLSE) companies. Our results show the influence of industry on payout ratios. Payout ratios also vary significantly across time. The results of multinomial logit analysis reveal that the dividend behaviour of the Malaysian companies is sensitive to the changes in earnings. Further, using Lintner's framework and panel regression methodology, we find evidence of less stable dividend policies being pursued by the Malaysian companies. The results of the two-way fixed effects model reveal that there are strong individual firm and time effects in our data.

Key Words: target payout; dividend stability; speed of adjustment.

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INTRODUCTION

The study of corporate dividend behaviour has been a key research area in finance. Yet we still do not have an acceptable explanation for the observed dividend behaviour of companies and the 'dividend puzzle' still remains unsolved (Black, 1976). It is a long-standing position of well-known finance researchers that dividends are irrelevant, and they have no influence on the share price, given that the capital markets are perfect (Miller and Modigliani, 1961). Some researchers have held a contrary position that considers that capital markets are not perfect and therefore, dividends do matter. Several empirical surveys indicate that both managers and investors favour payment of dividends. Lintner (1956) found that US companies in sixties distributed a large part of their earnings as dividends, and they also attempted to maintain stability of dividend. These findings have been vindicated in different countries and in different time periods.

The focus of this research is to study how companies trading in the KLSE (Kuala Lumpur Stock Exchange), an emerging market in Southeast Asia, decide their dividend payments and to examine empirically whether they follow stable dividend policies, as is generally the case in developed markets. This study provides evidence that the KLSE-listed firms follow less stable dividend policies and their dividend payments are closely related to changes in earnings but they do not immediately omit dividends when earnings decrease.

The organisation of the article is as follows. The next section reviews some important previous studies abroad and in Malaysia. The third section describes data and methodology. In the fourth section, we present results and the last section contains the main conclusions of the study.

REVIEW OF PREVIOUS STUDIES

Lintner (1956) uncovered for the first time that firms maintain a target dividend payout ratio and adjust their dividend policy to this target. The long-term sustainable investment and growth objectives determine the firms' target payout ratios. Further, Lintner finds that firms pursue a stable dividend policy and gradually increase dividends given the target payout ratio. This implies that firms set speed to move towards the full achievement of payout. These findings suggest that firms establish their dividends in accordance with the level of current earnings as well as dividend of the previous year. Lintner also points out that managers believe that investors prefer firms with stable dividend policies.

A number of survey and empirical studies have been conducted in USA and other countries using Lintner's framework. In USA, Darling (1957), Fama and Babiak (1968), and Brittain (1964; 1966) use modified and extended Lintner model to confirm his findings. A survey of the NYSE-listed companies by Baker, Farrelly, and Edelman (1985) supports the Lintner findings, and they conclude that the major determinants of dividend payments are future earnings and past dividends. The subsequent survey study of Pruitt and Gitman (1991) also confirms these results.

Lintner's model has been generally found applicable in a number of developed markets. It has been tested by Chateau (1979) in Canada, Shevin (1982) in Australia, McDonald et. al. (1975) in France, Leithner and Zimmermann (1993) in West Germany, UK, France and Switzerland and Lasfer (1996) in UK. Dewenter and Warther (1998) compare dividend policies of firms in USA and Japan for the period from 1982 to 1993. Their results show that U.S.A firms tend to choose stable dividend policies whereas Japanese firms prefer to omit dividend and follow relatively unstable dividend policies.

Researchers have recently started looking at the dividend behaviour of companies in regulated and emerging markets. Glen et. al. (1995) find substantial differences in dividend policies of companies in developed and emerging markets. They show that dividend payments are much lower in emerging markets and companies follow less stable dividend policies, although they do have target payout ratios.

A study by Pandey and Bhat (1994) in India supports the Lintner findings and reveals that Indian managers confirm that companies maintain an uninterrupted record of dividend payments and also try to avoid abrupt changes in their dividend policies. Ariff and Johnson (1994) confirm Lintner's model for firms in Singapore. In Turkey, Adaoglu (2000) finds that earnings are the main determinant of dividend payments. Until 1994, companies in Turkey were required to distribute 50% of the distributable profits as cash dividends. His results show that because of regulation of compulsory distribution of profits, the ISE (Istanbul Stock Exchange) companies followed stable dividend policies until 1994, but once the companies were given the flexibility of choosing their own dividend policy, they followed unstable dividend policies.

A number of studies of dividend behaviour of companies in Malaysia support Lintner's model. In a survey study, Isa (1992) finds that firms in Malaysia follow stable dividend policies and a number of internal and external factors govern these policies. Kester and Isa (1996) also confirm these results. Other studies confirming the applicability of the Lintner model in Malaysia include Annuar and Shamsher (1993) and Gupta and Lok (1995). Consistent with the tax imputation hypothesis, Isa (1993), in a study of Malaysian companies for the period 1981 to 1992, finds a positive relationship between P/E ratio and payout ratio. The relation between dividend yield and P/E ratio is negative, which contradicts the tax imputation hypothesis. Isa finds a positive relation between dividend yield and payout.

DATA AND METHODOLGY

We use financial data of 248 companies listed on the KLSE (Kuala Lumpur Stock Exchange) Main Board as at 31 December 2000. Criteria for sample selection are as follows: First, financial, trusts and closed-end funds companies are excluded. These companies have very high leverage and they are generally governed by different rules and practices with regard to earnings management. Second, we use a balanced sample of companies for eight years, i.e., from 1993 to 2000. Thus the sample companies should be continuously listed on the KLSE and should have financial data for eight years. Third, we exclude companies with negative shareholders' equity. Fourth, industries with fewer observations are excluded. The sample companies, as per the KLSE classification, are grouped into six industries (sectors): construction (15), consumer products (36), industrial products (60), plantation (32), property (46) and trading/services (59). We use earnings per share (EPS) and dividend per share (DPS) data from the database of Dynaquest Sdn Bhd[1]. Both EPS and DPS are adjusted for bonus and rights issues. DPS is on gross basis (before deduction of tax payable by shareholders). Gross DPS is the actual cash disbursement by companies.

In the first stage of our analysis, we examine if dividend payout ratios of the KLSE-listed companies differ across industrial sectors. We use non-parametric, Kruskal-Wallis (K-W) one-way analysis of variance of ranks (Michel, 1979; Scott and Martin, 1975) because tests of normality show that the underlying distributions are non-normal. The K-W technique tests the null hypothesis that the unrelated-k samples belong to the identical population. This test helps to assess whether the differences among samples characterize significant population dissimilarities. The null hypothesis is rejected if calculated H statistics is greater than $\chi^2_{(k-1, \alpha)}$, α signifying the level of significance. We also use Friedman's test to examine the differences in payout ratios within each sector across time. This method tests the null hypothesis that the locations of all k populations are same. As in the case of K-W test, we reject the null hypothesis when the test statistic (F_r) is larger; viz. $F_r > \chi^2_{(k-1, \alpha)}$.

We next examine how firms' decisions to change dividend payments are affected by change in earnings. We use multinomial logit analysis for this purpose. Three categories of earnings changes are identified: increases, decreases and negative earnings. Under each category of earnings change, four possible dividend actions are recognized. 'Increases' show cases where DPS increases for a given change in EPS; 'no changes' show cases where DPS was maintained at the previous level; 'decreases' show cases where DPS decreases; 'omissions' show cases where positive DPS moves to zero. When DPS

[1] I am thankful to Dr. Neoh Soon Kean, Chairman, Dynaquest Sdn. Bhd. for allowing access to database maintained by his company. I appreciate the help of Mr. Hong Kok Chee, lecturer, School of Management, USM in this regard.

moves from zero to positive (initiations), it is included under increases. Similarly, if omissions continue, it is included under omissions. The change in DPS is our response variable and change in EPS is explanatory variable. Both variables are treated as categorical variables. We define the change in dividend falling in four categories: increase (1), no change (2), decrease (3) and omission (4). Similarly, change in earnings has three categories: increase (1), decrease (2) and negative (3). We aim at estimating the probability for a particular dividend action of each firm based on its earnings change. We fit the following logit model[2]:

$$\ln\left(\frac{m_{i,j}}{m_{1,j}}\right) = \delta_i + \gamma_j \tag{1}$$

where i is the index for dividend change and j for earnings change. The equivalent log-linear model is:

$$\ln(m_{i,j}) = d_i + (de)_{i,j} \tag{2}$$

where d_i is the main-effects term for change in DPS and $(de)_{i,j}$ is the corresponding term to change in DPS (d) by change in EPS (e). From Eqs. (1) and (2), we obtain:

$$\delta_i = d_i - d_1 \tag{3}$$

$$\gamma_{i,j} = (de)_{i,j} - (de)_{1,j} \tag{4}$$

In the third stage of our analysis, we use Lintner's model to study the stability of dividend. If p_i is the target payout ratio for firm i and $E_{i,t}$ are ith firm's earnings in period t, then the Lintner model for dividends ($D_{i,t}$) in the current year is as follows:

$$D_{i,t} = p_i E_{i,t} \tag{5}$$

and the dividend change would be:

$$D_{i,t} - D_{i,t-1} = p_i E_{i,t} - D_{i,t-1} \tag{6}$$

In practice, firms do not change dividends immediately with changes in earnings. They adjust dividends gradually towards the achievement of target payout. If this factor is s_i, then Eq. (6) becomes:

$$D_{i,t} - D_{i,t-1} = s_i\left(p_i E_{i,t} - D_{i,t-1}\right) \tag{7}$$

It is shown in Eq. (7) that the change in dividends results from the difference between the targeted dividends ($D_{i,t}$) and the

[2] SPSS Advanced Models™ 10.0, SPSS, Inc., 1999.

(8)

actual dividends of the previous period ($D_{i,t-1}$). The term s_i shows the dividend stability; it depicts the speed of adjustment towards the target payout ratio (p_i). The value s_i reflects dividend smoothing behaviour of firms to changes in the level of earnings ($E_{i,t}$). A higher value implies less dividend smoothing and vice versa. We can use the following empirical model to test the Lintner model:

$$D_{i,t} = a_{i,t} + bE_{i,t} + cD_{i,t-1} + u_{i,t}$$

where b = sp and c = (1-s).

Following Fama and Babiak (1968), we use earnings per share (EPS) and dividends per share (DPS) rather than total earnings and dividends for testing the dividend stability of the KLSE firms. We employ panel (pooled time-series cross-section) analysis to estimate Eq. (8). The basic regression model using panel data is (Gre (8)
2000, 560) as follows:

$$y_{i,t} = \alpha_i + \boldsymbol{\beta}'\mathbf{x}_{i,t} + \varepsilon_{i,t}$$

The panel data have NxT observations, where t = 1…T (time period) of each i=1… N cross-sectional observation unit in the sample. $\boldsymbol{\beta}'$ are parameters that will be estimated. There are **k** regressors in $\mathbf{x}_{i,t}$ (explanatory variables), not including the constant term. α_i is the individual effect, which is assumed as constant over time and specific to the individual cross-sectional unit in the fixed-effects model. $\varepsilon_{i,t}$ is a stochastic error term assumed to have mean zero and constant variance. In random effect model, α_i is disturbance specific to cross-sectional unit.

Pooling of time-series cross-sectional data provides more observations, more variability, less collinearity among variables, more degree of freedom and more efficiency (Baltagi, 1995, 3-6). More importantly, pooled data are more proficient to identify and measure effects that are undetectable in pure cross-sections or pure time-series data. Moreover, the measurement biases resulting from aggregation over firms or individuals and biases arising from omitted-variables are reduced (Pindyck and Rubinfeld, 1998, p.250). The merit of a panel data over cross-section data is the ease of modeling the differences in behaviour across individuals (Greene 2000).

RESULTS

Industry Influence on Dividend Payouts

We examine the differences in payout ratios of industries. Payout ratio is calculated as gross DPS divided by EPS. Payout ratio is limited to 1 when dividends are paid in spite of negative current earnings, or when earnings are less than dividends paid. Table 1 shows the means and standard deviations of payout ratios by industrial sectors from 1993 to 2000. We observe that plantation companies pay the higher dividends and consumer product sector pays the lower dividends. For instance, during six years of the eight-year period, plantation sector companies had the highest payout ratios, while in the six of the eight-year period consumer product companies had the lowest dividend payout. The significant variations in payout ratios of industries are verified by K-W test. The computed K-W χ^2 is significant at 1 percent level for each year in the analysis. Thus, the null hypothesis is rejected and we conclude that dividend payout ratios differ across industrial sectors. From Table 1, we also observe that payout ratios within each sector vary across time. As a case in point, payout ratios for plantation sector range between 35% (1998) to 70% (1993). The computed Friedman χ^2 is significant at 1 percent level for all sectors except for consumer products. Thus, with the exception of consumer products sector, payout ratios show variations over time.

Table 1 here

Earnings Changes and Dividend Behaviour

In Table 2 we present the aggregate frequencies of dividend and earnings changes for 248 sample companies for eight years (1993-2000). From the cross-tabulation of earnings and dividend changes, it may be observed that when earnings increase, there are about 50 % cases of dividend increases. When earnings decrease, only about one-third of firms reduce dividends and about 7% omit dividend. In more than 50% cases firms either increase or maintain dividends when their earnings fall. It may be noted that a large number of firms resort to dividend omission when they experience losses. We find about 63% cases of dividend omissions when firms have negative earnings. Can we conclude whether the earnings change affects a firm's choice of a dividend action? Our null hypothesis is that earnings change and dividend actions are independent. If the null hypothesis were accepted, this would imply that earnings change (increase or decrease or losses) does not affect a firm's dividend policy. The computed Pearson chi-square (615.223) and the likelihood statistics (556.384) reject the null hypothesis that earnings change and dividend change are independent.

Table 2 here

What dividend action does a company take, given the change in earnings? We use multinomial logit model to estimate the odds of a particular dividend action (increase, no change, decrease, or omission) of each firm based on its earnings change (increase, decrease, negative). The parameter estimates of multinomial logit model are shown in Table 3. The estimates of all parameters and constant terms are statistically significant.

Table 3 here

We presuppose that there are very high chances for firms to increase DPS when EPS increases. Similarly, chances are very high that firms would reduce DPS when EPS falls. Further, we hypothesize that dividend payments would be omitted if firms suffer losses. We use multinomial logit analysis to test these hypotheses. Tables 4 and 5 show, respectively, generalized log-odds ratio and generalized odds ratio. We find that computed generalized log-odds ratios and generalized odds ratios are significant.

Table 4 here

We first consider how increase in EPS affects the odds of taking a dividend action other than of increasing DPS. The estimated odds for dividend maintenance (no change), dividend decreases or dividend omissions are, respectively, 0.52, 0.30 or 0.21 times lower against the estimated odds for dividend increase (Table 5). The relative probability of DPS increase is much higher when EPS increases. Given decreases in EPS, the estimated odds for dividend increases, dividend maintenance, or dividend omissions are, respectively, 0.81, 0.64 or 0.13 times lower against the estimated odds for dividend decreases. It may be noted that there are very low chances for dividend omissions. Firms may even increase or maintain dividends when earnings drop. When EPS is negative, the estimated odds for dividend increases, dividend maintenance, or dividend decreases are, respectively, 0.14, 0.15 or 0.35 times lower against the estimated odds for dividend omissions. The probability of Malaysian firms avoiding dividend payments is very high when they experience negative earnings. Overall, we find that the KLSE firms would normally increase DPS when EPS increases. It is interesting to note that when earnings decrease, the chances of dividend omissions are much lower than the odds of decreasing the dividend. Malaysian firms would, however, resort to dividend omissions when their earnings are negative. The general applicability of the multinomial logit model is satisfactory as indicated by both the likelihood ratio and Pearson chi-square. The measure of association are R_H = 0.1181 for entropy and R_C = 0.1126 for concentration.

Table 5 here

Stability of Dividend Policy

We use Lintner's model to test the stability and regularity of dividend policies of the KLSE companies in different industrial sectors. First, we estimate OLS regressions on pooled data (Table 6). The intercept terms, except in the case of consumer products sector, are significantly positive. This indicates the reluctance of the Malaysian companies to avoid payment of dividends. The regression coefficients of current earnings (EPS_t) and past dividends (DPS_{t-1}) are highly significant for all industries. But the generally higher coefficients and the associated t-statistics of DPS_{t-1} imply the greater importance of past dividend in deciding the dividend payment. The R^2 ranges from 0.45 for construction to 0.75 for property. The computed target payout ratios are low except for the consumer sector. It is 76% for the consumer sector and for other sectors; it varies from 12% to 27%. The adjustment factors also vary considerably across the industrial sectors; it is highest (0.63) for construction sector and lowest (0.20) for plantation.

Table 6 here

The pooled OLS regression does not control for the individual firm effects and may introduce bias in parameter estimates and overstate the t-statistics. Therefore, we utilize the panel data and employ fixed firm effects regressions in order to control for the underlying time-variant heterogeneity among firms in our data. Table 7 gives results of the fixed firm effects model. Comparison of these results with OLS pooled regression without firm effects (Table 6) reveals differences in parameter estimates and considerably enhanced explanatory power of regressions. The R^2 is higher for each industry, and it ranges between 0.55 for consumer sector to 0.84 for plantation. The F-tests signify the model fit. We also provide heteroscedasticity consistent estimation of t-statistics. The White (1) t-statistics are the usual White heteroscedasticity corrected estimates and the White (2) t-statistics are based on groupwise heteroscedasticity. It may be noted that the heteroscedastcity corrected t-statistics are smaller than the least square estimates. But the coefficients of EPS_t and DPS_{t-1} are mostly significant. The fixed firm effect model regression results show that both current earnings (EPS_t) and past dividends (DPS_{t-1}) are statistically significant variables. The statistical significance of DPS_{t-1} is an indication of regularity of dividend payments.

Table 7 here

The long-term (target payout) and short-term effects (adjustment factor) of the fixed firm effect model differ as compared to the pooled OLS regressions. The long-term effects show relative decline while the short-term effects increase. The Lintner adjustment factors (short-term effects) are quite high, and they differ across sectors. The range is between 0.55 for plantation to 0.94 for consumer. The Lintner target payout ratios are quite low for all industrial sectors. For example, it may be noted that the highest payout ratio of 0.76 for consumer sector under OLS regression has changed to 0.27 under the fixed firm effect regression. This implies extensive firm specific effect in dividend policy. Overall, there is strong evidence that managements of Malaysian companies always consider past dividend a more important benchmark for deciding the current dividend payment. Further, the high adjustment factors together with low payout ratios indicate that the KLSE-listed firms frequently change their dividend payments with changes in earnings, and dividend smoothing is of a lower order. This causes more variability in dividend payments of the KLSE-listed companies.

The fixed firm effect model assumes that errors are uncorrelated over time. Therefore, we subject the model to the test of autocorrelation. The estimated autocorrelations for all industrial sectors, respectively, -0.0009, -0.1628, 0.1805, 0.1032, 0.1541 and 0.0732, are quite small. They do have impact the parameter estimates (results not reported), but overall implications of results do not change materially.

The F-tests for fixed effect model versus pooled OLS favour the fixed firm effect model. This provides strong evidence in support of the firm specific effect in our data. The Hausman statistics also reject random effects model (REM) in favour of the fixed firm effects model (results of REM not reported)[3]. The fixed firm effects model controls for time-variant factors that distinguish one firm from another, but we may also like to find out the time effect. We can do this by using the two-way fixed firm and period effects model. The results of these estimates are given in Table 8. It may be seen that the estimates of parameter coefficients do not change very significantly. But the F-values of the fixed firm effect (FFE) versus the fixed firm and time effect (FFTE) models favour the later in the case of industrial product, property and trading/service sectors. This model is also favoured for consumer product and plantation sectors at 10% level of significance. Thus, given the individual firm effect, there is evidence of the time effect except in the case construction sector. Once again Hausman statistics reject the two-way random effect model in favour of the two-way fixed effect model.

Table 8 here

[3] The general form of random effects model is as follows:

$$y_{i,t} = \alpha + \beta' x_{i,t} + u_i + \varepsilon_{i,t}$$

u_i is the random disturbance of *i*th observation and is constant throughout time (Greene, 2000, 567-568).

CONCLUSION

In this study we examine the dividend behaviour of Malaysian companies. Specifically, we attempt to find answers to the following questions. (1) Do payout ratios differ across industries? (2) What dividend actions are probable when earnings change? (3) Do Malaysian firms follow stable dividend policies? Our results show that there are significant industrial differences in payout ratios in Malaysia. Plantation and consumer products industries pay highest dividends as they have fewer growth opportunities and higher surplus cash. Construction industry has the lowest payout ratio, as its cash needs are higher for financing growth opportunities. Trading and service sector also pays low dividend perhaps due to relatively low profitability. We also witness that payout ratios in Malaysia differ across time periods. In the recent years, perhaps due to the financial crisis and general economic slow down, payout ratios of all sectors have declined.

Our results show that a large number of Malaysian firms increase payment of dividends when their earnings increase. Malaysian firms are also very prompt in omitting dividends when they suffer losses. However, a number of firms try to maintain dividends when earnings fall. A formal analysis employing multinomial logit technique reveals that the dividend actions of Malaysian firms are very sensitive to earnings changes. There is a very high probability of dividend increase when earnings increase. Similarly, the chances are high that dividend will be reduced if earnings fall. There is very high probability of dividend omission when Malaysian firms face negative earnings.

We use Lintner's model to test for dividend stability of firms in Malaysia. Pooled OLS regressions results support the Lintner model. Such analysis does not control for the time-invariant firm effects. Therefore, we use fixed firm effects model. The results of the model are robust, and thus we establish the validity of the Lintner model in the emerging Malaysian market. In order to control for the time-variant factors that affect firms generally, we test two-way firm and time fixed effects model. This allows us to establish the underlying dynamic relationship between current dividend as dependent variable and current earnings and past dividend as independent variables. Our results show that Malaysian firms rely both on past dividend and current earnings in deciding the current period's payment of dividends. Further, our results uncover that the Malaysian firms have lower target ratios and higher adjustment factors. This points to the low smoothing and instability of dividend policy in Malaysia.

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Table 1: Mean and Standard Deviation of Payout by Sectors, 1993-2000

		1993	1994	1995	1996	1997	1998	1999	2000	1993-2000	Friedman χ^2	Sig.
Construction (15)												
	Mean	0.328	0.309	0.238	0.264	0.295	0.260	0.262	0.351	0.288	8.380	0.300
	Stdev.	0.228	0.212	0.129	0.174	0.220	0.332	0.309	0.373	0.039		
Consumer (36)												
	Mean	0.628	0.592	0.521	0.506	0.501	0.634	0.470	0.514	0.546	17.625	0.014
	Stdev.	0.298	0.310	0.324	0.323	0.338	0.384	0.384	0.387	0.063		
Industrial (60)	Mean	0.603	0.515	0.501	0.492	0.450	0.548	0.515	0.403	0.503	19.384	0.007
	Stdev.	0.348	0.347	0.318	0.320	0.300	0.428	0.436	0.426	0.060		
Plantation (32)												
	Mean	0.702	0.655	0.445	0.525	0.532	0.350	0.408	0.562	0.522	58.693	0.000
	Stdev.	0.332	0.361	0.323	0.333	0.361	0.339	0.342	0.410	0.120		
Property (46)												
	Mean	0.520	0.422	0.383	0.314	0.361	0.337	0.251	0.306	0.362	27.729	0.000
	Stdev.	0.366	0.347	0.341	0.331	0.320	0.371	0.345	0.388	0.082		
Trading/service (59)												
	Mean	0.493	0.459	0.444	0.473	0.507	0.467	0.350	0.338	0.441	17.582	0.014
	Stdev.	0.325	0.280	0.280	0.311	0.354	0.416	0.394	0.384	0.063		
K-W χ^2		17.79	18.23	12.91	20.24	10.62	19.1	15.18	12.51			
Significance		0.003	0.003	0.024	0.001	0.06	0.002	0.01	0.028			

Note: Numbers within parentheses show number of firms.

Table 2: Cross-tabulation of Earnings and Dividend Changes

Earnings Change		**Dividend Change**				
		Increase	No change	Decrease	Omission	Total
Increases	Count	433.0	223.0	130.0	92.0	878.0
	Expected Count	313.1	191.2	201.3	172.5	878.0
	% Within Earnings Change	49.3	25.4	14.8	10.5	100.0
	% Within Dividend Change	70.0	59.0	32.7	27.0	50.6
	% of Total	24.9	12.8	7.5	5.3	50.6
Decreases	Count	157.0	124.0	193.0	36.0	510.0
	Expected Count	181.8	111.0	116.9	100.2	510.0
	% Within Earnings Change	30.8	24.3	37.8	7.1	100.0
	% Within Dividend Change	25.4	32.8	48.5	10.6	29.4
	% of Total	9.0	7.1	11.1	2.1	29.4
	Count	29.0	31.0	75.0	213.0	348.0
Negative	Expected Count	124.1	75.8	79.8	68.4	348.0
	% Within Earnings Change	8.3	8.9	21.6	61.2	100.0
	% Within Dividend Change	4.7	8.2	18.8	62.5	20.0
	% of Total	1.7	1.8	4.3	12.3	20.0
Total	Count	619.0	378.0	398.0	341.0	1736.0
	Expected Count	619.0	378.0	398.0	341.0	1736.0
	% Within Earnings Change	35.7	21.8	22.9	19.6	100.0
	% Within Dividend Change	100.0	100.0	100.0	100.0	100.0
	% of Total	35.7	21.8	22.9	19.6	100.0

Table 3: Earnings and Dividend Changes: Multinomial Logit Results

				Asymptotic 95% CI	
Parameter	**Estimate**	**SE**	**Z-value**	**Lower**	**Upper**
d_1	-1.9792	0.1964	-10.08	-2.36	-1.59
d_2	-1.9136	0.1909	-10.03	-2.29	-1.54
d_3	-1.0395	0.1339	-7.76	-1.30	-.78
d_4	0.000^x	-	-	-	-
d_1*e_1	3.5239	0.2274	15.50	3.08	3.97
d_1*e_2	3.4414	0.2689	12.80	2.91	3.97
d_1*e_3	0.000^x	-	-	-	-
d_2e_1	2.7959	0.2274	12.29	2.35	3.24
d_2*e_2	3.1406	0.2681	11.72	2.62	3.67
d_2*e_3	0.000^x	-	-	-	-
d_3*e_1	1.3837	0.1908	7.25	1.01	1.76
d_3*e_2	2.7075	0.2247	12.05	2.27	3.15
d_3*e_3	0.000^x	-	-	-	-
d_4*e_1	0.000^x	-	-	-	-
d_4*e_2	0.000^x	-	-	-	-
d_4*e_4	0.000^x	-	-	-	-

Note: *'x' indicates an aliased (or a redundant) parameter. These parameters are set to zero.*

Table 4: Generalized Log-odds Ratio

					95% CI	
Parameter	**Estimate**	**SE**	**Wald**	**Sig.**	**Lower**	**Upper**
G1:$\ln(m_{21}/m_{11})$	-0.6625	0.0823	64.7213	0.0000	-0.8239	-0.5011
G2:$\ln(m_{31}/m_{11})$	-1.2005	0.0998	144.5634	0.0000	-1.3962	-1.0048
G3:$\ln(m_{41}/m_{11})$	1.5447	0.1145	181.8963	0.0000	-1.7692	-1.3202
G4:$\ln(m_{12}/m_{32})$	-0.2059	0.1073	3.6793	0.0551	-0.4162	0.0045
G5:$\ln(m_{22}/m_{32})$	-0.4410	0.1149	14.7314	0.0001	-0.6662	-0.2158
G6:$\ln(m_{42}/m_{32})$	-1.6680	0.1805	85.4319	0.0000	-2.0217	-1.3143
G7:$\ln(m_{13}/m_{43}$	-1.9792	0.1964	101.5345	0.0000	-2.3642	-1.5943
G8:$\ln(m_{23}/m_{43})$	-1.9136	0.1909	100.5234	0.0000	-2.2877	-1.5396
G9:$\ln(m_{33}/m_{43})$	-1.0395	0.1339	60.2698	0.0000	-1.3019	-0.7771

Table 5: Generalized Odds Ratio

		95% CI	
	Value	**Lower**	**Upper**
G1:m_{21}/m_{11}	0.5156	0.4387	0.6059
G2:m_{31}/m_{11}	0.3010	0.2475	0.3661
G3:m_{41}/m_{11}	0.2134	0.1705	0.2671
G4:m_{12}/m_{32}	0.8140	0.6596	1.0045
G5:m_{22}/m_{32}	0.6434	0.5137	0.8059
G6:m_{42}/m_{32}	0.1886	0.1324	0.2687
G7:m_{13}/m_{43}	0.1382	0.0940	0.2031
G8:m_{23}/m_{43}	0.1475	0.1015	0.2145
G9:m_{33}/m_{43}	0.3536	0.2720	0.4598

Table 6: Pooled OLS Model (No Group Effects)

		Const.	EPS_t	DPS_{t-1}	R^2	F-value (Model Test)	Target Payout	Adj. Factor
Construction	Coefficients	0.0124	0.0890	0.3735	0.45	47.82*	0.142	0.627
	t-statistics	3.0480*	6.0970*	5.1530*				
Consumer	Coefficients	-0.0079	0.4131	0.4575	0.57	186.50&	0.761	0.543
	t-statistics	(0.397)	8.6130*	9.8660*				
Industrial	Coefficient	0.0276	0.0468	0.6023	0.47	211.46*	0.118	0.398
	t-statistics	6.6330*	5.5850*	17.2640*				
Plantation	Coefficient	0.0285	0.0531	0.8045	0.75	372.11*	0.272	0.196
	t-statistics.	2.5270*	4.7290*	24.2830*				
Property	Coefficient	0.0120	0.0753	0.6031	0.54	210.28*	0.190	0.397
	t-statistics	4.1830*	7.0350*	16.0400*				
Trading/service	Coefficient	0.0180	0.0773	0.6174	0.68	504.32*	0.202	0.383
	t-statistics	5.8120*	11.4300*	21.0890*				

*** Significant at 1%, ** significant at5%, *** significant at 10%**

Table 7: Fixed Firm Effects Model

		EPS_t	DPS_{t-1}	R^2	F-value	F-value Vs. Pooled OLS	Hausman Statistic Vs. REM	Target Payout	Adj. Factor
Construction	Coefficient	0.0890	0.2075	0.5496	7.86*	1.63***	10.920*	0.1123	0.7925
	t-statistics	5.0720*	2.5050*						
	White (1)	3.1669*	2.1058**						
	White (2)	4.2962*	2.0556**						
Consumer	Coefficient	0.2529	0.0621	0.7567	21.01*	5.57*	77.200*	0.2696	0.9379
	t-statistics	3.5290*	1.301*						
	White (1)	2.2509**	0.3696						
	White (2)	2.3898**	0.3851						
Industrial	Coefficient	0.0468	0.2326	0.6557	13.05*	3.82*	102.070*	0.0609	0.7674
	t-statistics	5.4770*	5.7050*						
	White (1)	2.1358**	2.7908*						
	White (2)	2.2518**	3.1663*						
Plantation	Coefficient	0.0370	0.4476	0.8404	35.43*	4.22*	77.490*	0.0670	0.5524
	t-statistics	3.3520*	10.1490*						
	White (1)	1.2074	3.4795*						
	White (2)	1.2614	4.2349*						
Property	Coefficient	0.0613	0.1575	0.7194	17.46*	4.67*	119.530*	0.0727	0.8425
	t-statistics	6.0340*	3.5240*						
	White (1)	3.3270*	1.3768						
	White (2)	5.3002*	1.2996						
Trading	Coefficient	0.0551	0.2571	0.8340	34.40*	6.46*	229.580*	0.0742	0.7429
	t-statistics	8.4430*	8.2780*						
	White (1)	3.1446*	3.8413*						
	White (2)	5.7371*	5.1171*						

** Significant at 1%, ** significant at5%, *** significant at 10%*

Table 8: Fixed Firm and Time Effects

		Constant	EPS_1	DPS_{t-1}	R^2	F-value	F-value Vs. FFE	Hausman Stat.
Construction	Coefficient	0.0216	0.0743	0.2013	0.5741	5.35*	0.788	4.300
	t-statistics	4.1640*	3.7370*	2.2380*				
Consumer	Coefficient	0.1168	0.2774	0.0620	0.7689	17.90*	1.844***	71.460*
	t-statistics	4.3860*	3.6660*	1.2910				
Industrial	Coefficient	0.0582	0.0332	0.2309	0.6726	12.21*	3.029**	100.470*
	t-statistics	13.7400*	3.6860*	5.5610*				
Plantation	Coefficient	0.0998	0.0345	0.4409	0.8540	30.53*	2.861*	77.970*
	t-statistics	8.6480*	3.1010*	9.9780*				
Property	Coefficient	0.0330	0.0498	0.1626	0.7308	15.40*	1.889***	113.900*
	t-statistics	11.6060*	4.6220*	3.5680*				
Trading	Coefficient	0.0497	0.0472	0.2619	0.8490	33.32*	5.752*	229.440*
	t-statistics	16.5730*	7.2170*	8.4810*				

** Significant at 1%, ** significant at 5%, *** significant at 10%*