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THE RELATIONSHIP BETWEEN TRANSACTION COSTS OF EXTERNAL FINANCING AND DIVIDEND POLICY: EVIDENCE FROM MALAYSIA

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ABSTRACT

The presence of transaction costs calls for the emphasis to be given to residual dividend policy, a policy that attempts to minimise transaction costs of external financing by accommodating capital expenditure financing requirement in companies' dividend policy. In Malaysia, dividend increases are often perceived positively, regardless of the company's requirement for funding future capital expenditure, and hence the extent of the influence of transaction costs on dividend policy is questionable. This study, therefore, was undertaken to examine this issue by investigating the relationship between dividend payout ratio and various proxies for transaction costs. The study found that standard deviation of return is negatively and statistically significant in influencing DPR, which indicates that consideration has been given to transaction costs since riskier companies tend to face higher transaction costs. The insignificance of other variables, however, implies that either these variables have little influence on transaction costs or that less emphasis is given by Malaysian companies in general to transaction costs relative to other factors in dividend decision-making.

ABSTRAK

Kehadiran kos transaksi dalam pasaran modal membawa kepada penekanan Polisi Dividen Residual, iaitu satu polisi yang bertujuan menggurangkan kos transaksi berhubung dengan pembiayaan luaran. Polisi ini mengambil kira keperluan pembiayaan modal dalam menentukan amaun pembayaran dividen. Di Malaysia, peningkatan dividen sering dikaitkan dengan kedudukan kewangan firma yang positif, tanpa mengambil kira keperluan terhadap pembiayaan modal masa depan. Oleh itu, setakat mana kos

transaksi mempengaruhi polisi dividen menjadi persoalan. Kajian ini dijalankan untuk meneliti isu ini dengan mengkaji hubungan di antara Nisbah Pembayaran Dividen (DPR) dengan beberapa proksi kepada kos transaksi. Kajian mendapati sisihan piawai pulangan mempengaruhi DPR secara siknifikan dan negatif. Ini menunjukkan pertimbangan diberikan kepada kos transaksi dalam polisi dividen, memandangkan firma yang lebih berisiko kebiasaannya menghadapi kos transaksi yang lebih tinggi. Walau bagaimanapun, ketidaksiknifikan pemboleh ubah-pemboleh ubah yang lain menunjukkan sama ada mereka mempunyai perkaitan yang lemah dengan kos transaksi atau firma Malaysia kurang memberi penekanan kepada kos transaksi berbanding dengan faktor-faktor lain dalam pembuatan keputusan dividen.

INTRODUCTION

An important assumption underpinning the well known M&M Dividend Irrelevance Theory (Miller & Modigliani, 1961) is perfect capital markets, characterised among others by the non-existence of transaction costs in raising external financing. Transaction costs, also referred to as flotation costs or issuance costs, encompass among others the application fee, the underwriting fee, the underwriting spread, the rating fee, the prospectus cost, the legal fee, and the advisory fee. Fama (1974) theorised that in a world with transaction costs, firms recognise the cost effectiveness of retained earnings and therefore prefer to finance investment through retention of earnings. According to the so called residual dividend theory, firms would only distribute dividend when their internally generated funds are not completely used up for investment purposes.

In the presence of other capital market imperfections, such as tax, information asymmetry, and agency cost, little emphasis might be given to transaction costs and financing requirements in corporate dividend decision-making. Studies in the western capital markets (Alli, Khan, & Ramirez 1993; Holder, Langrehr, & Hexter, 1998) nevertheless found strong support for the transaction costs/residual dividend theory.

In Bursa Malaysia, one of the fastest growing stock market in South East Asia with more than 1000 companies listed in the domestic stock exchange, announcements of dividend increase are more often than not accompanied by positive remarks while announcements of dividend reduction are infrequently positively commented as an

action to reduce transaction costs in financing new investments. This observation is consistent with the expectation that the signaling role of dividend is more crucial than the transaction cost saving, given the possibility that the information asymmetry problem in the Malaysian stock market is relatively more severe than that in the developed countries. Moreover, Malaysia's high ranking in terms of Capital Access Index (Barth, Li, Malaiyandi, McCarthy, Phumiwasana, & Yago, 2005)[1] can be used to indicate that the transaction costs in raising external funds in Malaysia is relatively low, and this could be another reason for expecting Malaysian companies to pay less attention to transaction costs. All these interrelated arguments suggest the triviality of transaction costs of external financing in determining corporate dividend payment in Malaysia.

The existing evidence from the limited amount of studies undertaken in Malaysia on this issue is inconclusive. A survey undertaken in the early nineties showed that majority of companies in Malaysia utilised dividend stability policy while residual dividend policy is the least utilised policy (Mansor & Subramaniam, 1992). A more recent study by Abdullah, Abdul Rashid and Ibrahim (2002) that centered on Lintner's dividend stability model, however, showed that past dividends explain only 11% of current dividend payments, suggesting that other types of dividend policy might be more dominant in Malaysia. Many other studies focused on the information content of dividend policy of Malaysian companies. Thus far, none of the Malaysian studies have yet been devoted to study residual dividend theory adoption. This study was thus undertaken to provide some evidence on residual dividend theory adoption in Malaysia by investigating the significance of proxies for transaction costs in explaining Malaysian listed companies' dividend policy.

Evidences regarding the importance placed by companies on transaction costs in corporate dividend policy is vital not only for the contribution to the body of knowledge on dividend decision-making in emerging markets, but also for their practical implications. They can be viewed as representing the norm in corporate dividend decision-making which provides guidance to companies operating in Malaysia and in other emerging markets alike. Such a norm is crucial considering the complexity of dividend decision with no single quantitative technique prescribed by the literature. The study is also important in helping policy-makers and companies to appropriately address the issue of transaction costs, the rarely discussed market imperfection.

The remainder of the paper is organised as follows: related theoretical and empirical literature is discussed in the following section, followed by the discussion on the research methodology adopted in the study. The next section reports the finding. The conclusion of the study is presented in the final section.

THEORY AND EVIDENCE

Studies by Higgins (1972) and Fama (1974) were among the earliest to articulate theoretical rationale for the effect of transaction costs on dividend policy. According to Higgins, two factors which seem to influence dividend payout ratio are the firm's requirements for investment purposes and firm's debt financing. Fama then posited that the attempt to reduce transaction costs would result in dividends having to compete with investment for internally generated funds.

Building on Higgins's and Fama's arguments, and Jensen and Meckling's (1976) idea of agency cost, Rozeff (1982) elaborated that an increase in dividend can raise the amount of transaction costs of external financing but at the same time can reduce agency costs. Firms are therefore anticipated to adopt an optimum dividend policy that minimises the sum of the two costs. Using a multiple regression model, several variables which proxy agency costs and transaction costs of external financing were tested against company's target dividend payout ratio (DPR). DPR was hypothesised to be negatively related to sales growth and company's beta; both served as proxies for transaction costs. In addition, DPR was predicted to be negatively related to the percentage of stock held by insiders, and positively related to the number of shareholders in the company–both functioned as proxies for agency costs. The study concluded that the model explained 48% of the cross-sectional variation in the DPR. Higher growth rates in the past and forecasts for the future were associated with lower dividend payouts. Higher beta coefficients were associated with lower dividend payouts and greater numbers of shareholders were associated with larger dividend payouts.

Alli *et al.* (1993) investigated the determinants of dividend policy and concentrated on the following categories in dividend payout theories: (1) tax clientele, (2) transaction costs and the residual theory of dividends, (3) signalling, (4) agency theory, and (5) managerial considerations. Drawing the arguments by Fama and Higgins, a negative relationship was expected between dividend payout ratio (DPR) and external financing costs. Three-year average of DPR was

used while equity beta was used to measure external financing costs, similar to Rozeff's study. For the cost of external debt financing, the authors used size as measured by the natural log of total assets (LNTA) as the proxy. A positive relationship was expected between LNTA and DPR because larger firms normally face lower issuing costs.

Based on the residual dividend theory and pecking order theory of Myers and Majluf (1984), Alli *et al.* argued that companies experiencing high growth rates should be characterised by low dividend payout ratios since they generally have large investment requirements. They examined this relationship by including expected capital expenditure (EXCAP) and growth (GROWTH) as two more variables in their study. EXCAP was estimated using average realised capital expenditures during 1985 to 1987 scaled by the average total assets in the same period, while growth was measured using the annual average growth rate in operating income during 1981 to 1985. High growth rate sales create a need for additional financing, since they indicate higher financial needs for asset investments. An inverse relationship was expected between DPR and both EXCAP and GROWTH.

Another variable employed by Alli *et al.* is the variability in the capital structure. It was used as a proxy for a company's access to the capital market and is measured by the standard deviation of annual capital structure (STDCS) changes for the period 1976 to 1985. The authors argued that companies that have greater access to capital markets are easily able to switch between debt and equity, and take advantage of lower transaction costs, which allows for more stable and possibly higher dividend payments. This flexibility is reflected in a greater variability of the capital structure of the firm. Therefore, a positive relationship was anticipated between STDCS and DPR.

The results of the study were consistent with residual dividend theory. Companies experiencing high issuing costs, high growth, and expecting a high level of capital expenditures were found to pay low dividends, while companies with greater capital structure flexibility were shown to pay higher dividends.

Holder *et al.* (1998) undertook a study that examined the interaction between investment and financing decision in order to investigate the influence of non-investor stakeholders on company's dividend policy. Dividend payout ratio (DPR), the dependent variable, was measured on an annual basis and mathematically smoothed. Sales growth and the standard deviation of returns of the stock were included in their model to control for transaction costs. They drew on Rozeff's (1982)

argument that higher dividend payouts would reduce agency costs, but increase in transaction costs is associated with external financing. Firms that are either experiencing or expecting higher growth rates will need to keep dividend payouts lower to avoid the costs of external financing.

The second measure of transaction costs, the standard deviation of monthly company returns, was chosen based on Crutchley (1987). Crutchley argued that since underwriters charge more for underwriting the issues of riskier companies, the standard deviation of monthly firm returns is also a proxy for transaction costs. Holder *et al*. therefore hypothesised a negative relationship for both growth and standard deviation variables with DPR.

The results of the study supported residual dividend policy whereby the coefficient of the standard deviation of monthly returns was negative and statistically significant, and the sales growth variable was also negatively and significantly related to the DPR.

METHODOLOGY

This study utilised income statement and balance sheet data for all the companies listed on the main board of the Bursa Malaysia (previously KLSE) from 1997 to 2001. Omitted from the original population list are companies which:

1) were listed under the finance sector/industry,
2) did not have a complete data for the period of study, and
3) were disposed off or taken over during the period of study.

Companies in the finance industry were omitted because they are highly regulated and have a different financial statement presentation. As a result, a total of 210 companies were included in the sample.

The cross sectional nature of our data calls for the use of a regression model to analyse the data with dividend payout ratio (DPR) as the dependent variable. A total of five independent variables were selected and the variables are as follows:

$$DPR = \alpha + \beta_1 SIZE + \beta_2 GROW + \beta_3 BETA + {}_4 STDRET + \beta_5 STDCS + \varepsilon$$

DPR = the three-year arithmetic average of dividend payout ratio over a period of 1999 to 2001

SIZE = the five-year arithmetic average of the natural log of company's total asset over a period of 1997 to 2001

GROW = the five-year arithmetic average of company's sales growth ending in 2001

BETA = the five-year company's equity beta over a period of 1997 to 2001

STDRET = the standard deviation of company's weekly stock prices return over a period of 1997 to 2001

STDCS = the standard deviation of changes in company's debt to equity ratio (capital structure) over a period of 1997 to 2001

The calculation of three-year arithmetic average of DPR is similar to that by Alli *et al.* (1993) and D'Souza and Saxena (1999).

The use of SIZE as the proxy for external financing cost and how it was measured were based on Alli *et al.* (1993) and Sutrisno (2001). They argued that larger companies face lower issuing costs and hence can afford to pay higher dividend. A positive relationship was therefore expected between DPR and SIZE.

The selection of sales growth rate, GROW, as a proxy for transaction costs of external financing follows Rozeff (1982), Alli *et al.* (1993), Collins, Saxena, and Wansley (1996); Holder *et al.* (1998); D'Souza and Saxena (1999); and Sutrisno (2001). Rozeff and Alli *et al.* stressed that under residual dividend policy, companies experiencing high growth rates generally have large investment requirements, and therefore these companies should be characterised by low payout ratios. Hence, it was hypothesised that both DPR is inversely related to GROW.

The inclusion of BETA as one of the determining variables is as suggested by Rozeff (1982); Alli *et al.* (1993); Collins *et al.* (1996); and D'Souza and Saxena (1999). The use of BETA as a surrogate for transaction costs of external financing was pioneered by Rozeff who argued that if a company has relatively high operating and financial leverage, its dependence on external finance is increased. Alli *et al.* later added that the use of beta implicitly assumes that the trade-off between external and internal funds is one of retained earnings and dividends. Therefore, a negative relationship was expected between DPR and BETA.

The inclusion of STDRET as another proxy of transaction costs was based on the justification by Crutchley (1987) and Holder *et al.* (1998). The authors pointed out that underwriters generally charge more for underwriting the issues of riskier firms and that the type of risk pertinent to the underwriters is the total risk. Since riskier companies face higher issuance costs, they are more susceptible to paying lower dividend. Under those circumstances, DPR was hypothesised to be negatively related with STDRET.

STDCS measures the variability in the capital structure which, according to Alli *et al.*, signals the company's access to the capital market. It was argued that companies that have greater access to capital markets are easily able to switch between debt and equity, and take advantage of lower transaction costs. Hence, a positive relationship was expected between DPR and STDCS.

The first regression analysis performed identified five observations as outliers and these observations were dropped from the sample resulting in the total number of 205 usable observations. A descriptive analysis and the next regression were performed on the final sample.

FINDINGS

The discussion is segmented into two sections. The first section lays down the descriptive analysis of the variables for the study. The second section discusses the outcomes of the regression analysis, which constitute the main findings of the study.

Descriptive Analysis

Results of the descriptive analysis are provided in Table 1. The average dividend payout ratio (DPR) for the companies in the sample was 16%. The highest DPR was 146.7%, while the lowest DPR recorded was –50.7%. The negative payout ratio is possible in Malaysia since dividend can be paid even during the year when losses are recorded. The standard deviation of DPR was about 29.5%, showing that the degree of variation in the level of DPR among companies in the sample is quite substantial.

The result of Pearson Correlation analysis is shown in Table 2. The high positive significant correlation between DPR and STDRET, DPR and STDCS, and DPR and BETA provided early indication that STDRET, STDCS, and BETA could be found by the regression analysis to explain the DPR.

Table 1
Descriptive Statistics of the Variables

	Mean	Minimum	Maximum	Std. Dev.	Skewness	Kurtosis
DPR	0.160	-0.507	1.467	0.295	1.660	3.752
DPS	0.011	0.000	1.014	0.144	3.591	15.659
SIZE	13.629	8.435	17.104	1.339	-0.332	1.043
BETA	0.949	-0.087	2.662	0.457	0.275	0.061
GROW	0.146	-0.559	6.585	0.651	6.233	50.923
STDCS	0.072	0.035	0.503	0.037	8.124	89.770
STDRET	0.084	0.008	0.245	0.032	0.666	1.729

Among all the independent variables, BETA has a significant positive correlation with STDCS and STDRET, and STDCS has a significant positive correlation with STDRET. The positive and significant correlations between BETA and STDCS, and also between BETA and STDRET were anticipated, because all three variables measure risks, albeit in different forms. The somewhat strong correlation called for the need to place particular attention to circumventing potential multicollinearity problems during the regression analysis.

Table 2
Pearson Correlation Coefficient among the Tested Variables

	SIZE	BETA	GROW	STDCS	STDRET
DPR: Coef.	0.113	-0.256*	-0.045	-0.196*	-0.346*
Sig	(0.106)	(0.000)	(0.518)	(0.005)	(0.000)
SIZE: Coef.		0.112	-0.051	-0.032	-0.118
Sig		(0.109)	(0.470)	(0.654)	(0.111)
BETA: Coef.			-0.006	0.402*	0.706*
Sig			(0.934)	(0.000)	(0.000)
GROW: Coef.				0.002	0.013
Sig				(0.978)	(0.857)
STDCS: Coef.					0.533*
Sig					(0.000)

*Correlation is significant at the 0.01 level (2-tailed)

Regression Analysis

The multicollinearity diagnostic indicated that VIF for all the independent variables were less than 10, hence no treatment for multicollinearity was required. Lagrange multiplier (LM) test of residual serial correlation showed the non-existence of a serial correlation problem, but the diagnostic test for heteroscedasticity showed that treatment for the problem is required.

A multiple regression analysis was executed, correcting for heteroscedasticity using White test. The results of this analysis are shown in Table 3.

Table 3
Regression Analysis of DPR Against the Dependent Variables

Variable	Coefficient	T-ratio	p-value
Constant	0.172	0.876	0.382
SIZE	0.019	1.477	0.141
GROW	-0.049	-1.162	0.246
BETA	-0.049	-0.948	0.344
STDRET	-0.252	-3.237	0.001*
STDCS	-0.132	-0.544	0.587

R^2	0.1295	F-statistic	5.923*
Adjusted R^2	0.108	Prob. (F-stat)	0.000

* Significant at the 0.01 level (2-tailed);

The t-tests concluded that only STDRET is significant in influencing DPR (p-value = 0.000). This finding was consistent with the results presented in Crutchley (1987) and Holder *et al.* (1998), in which riskier companies are found to be more susceptible to paying lower dividend and they argued that this is due to riskier firms having to face higher transaction costs of external financing.

GROW, although produced the expected negative sign, does not significantly influence DPR. Inconsistent with the findings by Rozeff (1982); Alli *et al.* (1993); Collins *et al.* (1996); and D'Souza and Saxena (1999), this study showed that dividend payout ratios in Malaysia are not significantly affected by companies' sales growth.

SIZE was found to be positively and significantly related to DPR in Alli *et al.* (1993) and Sutrisno (2001). In our study, although the results produced the expected sign (0.197) for SIZE, it was shown to be insignificant (p-value = 0.14) in influencing DPR.

For STDCS, its coefficient did not only produced an unexpected sign (-0.130), but was also insignificant (p-value =0.593). This result contrasts that by Alli *et al.* (1993).

As can be inferred from the value of adjusted R^2, the explanatory variables in the model could explain 11% of the variation in DPR.

CONCLUSION

In our attempt to investigate the significance of transaction costs of external financing in influencing dividend payment in Malaysia, we have regressed dividend payout ratio (DPR) against five proxies for transaction costs, namely sales growth (GROW), size (SIZE), standard deviation of company's stock return (STDRET), standard deviation of capital structure (STSCS), and beta (BETA). The regression model was found to be significant, with STDRET being negatively and significantly related to dividend payout ratio. Riskier firms were found to pay less dividends and one possible explanation for this is that risker firms face higher transaction costs of external financing, hence more money would be retained for reinvestment to avoid paying the high transaction costs. This finding therefore implies that companies in Malaysia do pay attention to transaction costs of external financing in making the dividend decision. However, the insignificance of other tested variables associated with transactions cost and the low explanatory power of all these variables in explaining DPR indicates that in general, less attention is given by Malaysian companies to transaction costs relative to other factors. This might be due to the positive connotation and hence positive reactions associated with high dividend payments, as explained by other dividend theories such as signalling theory and agency theory.

In addition to the above conclusion, the significance of firms' riskiness and the insignificance of sales growth, size, systematic risk, and standard deviation of capital structure in explaining DPR provide an inconclusive finding with regard to the importance of transaction costs in dividend decision in Malaysia, unless it can be shown that transaction costs in Malaysia are not a function of growth, size, systematic risk, and financial flexibility.

Given that an enormous amount of money may be involved in raising new capital as found by the authors through case studies on selected major PDS issuances in Malaysia, where the cost can go as high as 6% of total proceeds, it is suggested that investors and directors should be alerted to the importance of considering transaction costs in companies' financial decision-making in their attempt to maximise shareholders' wealth. Lower dividend payments should be positively accepted by investors if it is justified by the need to retain earnings to finance high future investment requirements. In such cases, comments by investment analysts on lower dividend payments should be centred on the benefit of transaction costs saving resulting from the lower dividend payments.

The low explanatory power of the variables selected calls for the need to investigate other variables that could better explain dividend payment in Malaysia, including other proxies for transaction costs such as capital expenditure and investment opportunity. The limited amount of literature and the lack of insight on transaction costs also call for more work to be done on it, especially in investigating factors that influence the transaction cost in issuing different types of securities.

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END NOTE

The Capital Access Index (CAI) is designed to evaluate the ability of businesses to access capital in countries around the world. The index is formed based on seven dimensions, namely the macroeconomic environment, the institutional environment, the financial and banking institution, the equity market development, the bond market development, the alternative sources of capital and the international access. In 2005, Malaysia ranks 16 among 121 countries. The average size of transaction costs as a percentage of proceeds incurred by companies in Malaysia has not been documented.

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