

## Determinants of Dividend Payout in Thailand

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### Abstract

This paper examines the effects of risk (variability of profit), cash flow, investment opportunities (market to book value), firm size (market capitalisation), percentage of majority shareholders and financial leverage (debt ratio) on Thailand SET100 firm's dividend policy. The results indicated that the stability of earnings (proxy risk) and financial leverage are significantly inversely related to the firm's payout ratio. It also implied that dividend policy is regardless of the firm's cash flow, investment opportunities, firm size and agency cost. The implication of this study was that dividend policy matters and that management cannot make dividend decisions without considering the integration of business strategies including financial and investment decisions.

**Keywords:** Dividend Policy, Dividend Payout, Thailand

### 1. Introduction

Dividend policy question has been a controversial issue since the introduction irrelevance of dividend policy theory by Miller and Modigliani (M&M) in the 1960's when they believed in the world of efficient market, dividend policy does not affect the shareholder's wealth. Basically, the principal hypotheses of dividend policy can be classified into signalling models, clientele effects, agency models, tax effects and free cash flow hypothesis (Frankfurter *et al*, 2004; Brav *et al*, 2005). There is an emerging consensus that there is no single explanation of dividend decision making (Abrutyn and Turner, 1990, Lease *et al*, 2000). Recent studies showed that the patterns of corporate dividend payout policies do not only differ across time periods (Pandey, 1995; Sarig, 2004) but also across countries (La Porta *et al*, 2000; Frankfurter, 2002) as well as between emerging and developed countries (Adaoglu, 2000; Aivazian and Booth, 2003).

An examination of corporate dividend policy practices in emerging countries is currently not well established in the literatures (Lease *et al*, 2000). Emerging markets differ from those in developed countries in terms of corporate governance (Mitton, 2004), taxation on dividends and capital gains (La Porta *et al*, 2000), and ownership structure (Lin, 2002). In addition, firms in emerging markets are subjected to more financial constraints than their counterparts in developed markets (Glen and Singh, 2004); they often have less information efficiency, more volatility, and are smaller market capitalization (Fuss, 2000; Bekaert and Harvey, 2003) which may have difference influence on their dividend policy.

As an example, in Adaoglu (2000) study, it showed that the emerging market firms followed unstable cash dividend policies and the main factor that determines the amount of cash dividends was the earnings of the corporation in that year. Aivazian and Booth (2003) also found out that companies in developing countries were shown to be less reluctant

to change its dividends than their United States counterparts. These differences of the particular markets themselves raised the question about the extent to which the competing dividend policy theories could apply to such markets, in particular to Thailand.

This paper tries to address the determinants of dividend policy from a developing country perspective by focusing on SET100 firms in Thailand. We define dividend policy as dividend per share divided by earning per share before extraordinary item (Gul, 1998; Zeng, 2003; Amidu and Abor, 2006). We use variability of profit, cash flow, market to book value, market capitalisation, ownership of majority shareholders, and debt ratio as proxies for risk, residual theory, investment opportunities, firm size, agency cost or clientele theory and financial leverage respectively. We adapted and modified the dividend policy model by D'Souza & Saxena (1999) in testing the dividend policy in international perspective. Their study findings indicated that the dividend payout ratio is significantly negatively related to institutional ownership of a firm's shares and its risk but independent of investment decisions. However, they also suggested there were other factors determine dividend policy which we included in our study in order to find out to what extent the predictors which are mostly tested in developed countries applicable in developing countries.

The rest of the paper is organised as follows. Section two discusses the literature review on determinants of dividend policy. Section three discusses the empirical methods employed in this study. Section four describes the empirical analysis and Section five concludes the discussion.

## 2. Literature Review

Since Miller and Modigliani (1961) introduced the dividend irrelevance hypothesis and Black (1976) addressed "Dividend Puzzle" in their respective papers, there are numbers of researchers trying to solve the puzzle resulting development of theories in dividend

policy. Lease *et al* (2000) argued by relaxing several of the assumptions of irrelevance dividend theory (taxes, agency costs and asymmetric information), the dividend policy may have impact on the share price.

### *Stability of Earning (Risk)*

A firm that has relatively stable earnings is often able to predict its future earnings. Therefore, the firms with stable earnings are more likely to pay out dividends than the firms with fluctuated earnings. In Brav *et al* (2005), one of the main factors to determine dividend decision is stability of future earnings and a sustainable change in earnings. Aivazian and Booth (2003) and Amidu and Abor (2006) study results show that dividend payout has negative relationship with risk. Their study results also suggest that profitable firms with less variability in profit increase the ability of the firm to pay dividends. Meanwhile, in Nissim and Ziv (2002) study, they argued that under the signaling theory, dividend changes are related to firm's future earnings changes not the past information leading to insignificant in relation.

### *Cash Flows*

Residual dividend policy theory is an approach that suggests that a firm pay dividends if all the acceptable investment opportunities for those funds are currently unavailable (Lease *et al*, 2000). Therefore, it implies that firms with higher cash flow tend to have higher dividend payout. Zeng (2003), Deshmukh (2005), and Amidu & Abor (2006) study results showed that, firms with high cash flow have the probability to pay high dividend dividends to their shareholders. However, Baker and Smith (2006) argued that most firms nowadays practice "modified" residual policy where the firms carefully managed their payout ratio and dividend stream after investment decision was made. While the firms may consistently experienced low free cash flows, the dividend policy was not necessarily a corporate goal.

### *Investment Opportunities*

Both residual theory and agency cost theory have different explanation towards growth opportunities. Under residual theory, companies with

high growth opportunities tend to pay lower dividends because they may use the available funds to finance the investments with positive net present value. This implies implies that, given investment opportunities, a firm with higher cash flow or earnings tends to pay higher dividends (Deshmukh, 2005). Collins *et al* (1996), Gul (1999), Zeng (2003) and Amidu and Abor (2006) study results indicate that significant negative relationship between firm growth and dividend payout. Gul (1999) and Deshmukh (2005) study findings also show significant negative relationship between growth opportunities and dividend yields meaning that high growth firms have low dividend yields compared to low growth firms.

Under signalling perspective, high investment opportunities may be associated with high dividends as high quality firms basically may pay dividend to signal their quality to the market (Easterbrook, 1984; Zeng, 2003). Meanwhile, under agency cost theory, high growth firms may pay dividends to restrict managerial discretion (Zeng, 2003). However, D'Souza and Saxena (1999) study results that in the context of international firms, it seems that dividend are paid irrespective of the firm's investment opportunities. They indicated that this findings support the Miller and Modigliani (1961) argument that investment decisions are independent of dividend policy.

#### *Ownership Concentration*

Ownership concentration has mixed explanation. Under agency cost theory, insider ownership and institutional ownership are inversely related to agency costs as the shareholders can monitor the management more effectively (Alli *et al*, 1993; Collins *et al* 1996; Han *et al*, 1999; Ang *et al*, 2000). However, under tax-based theory, institutional ownership is positively related to dividend payout because of tax differential and clientele effect (Short *et al*, 2002) because institutions prefer dividends than capital gains.

#### *Firm Size*

Collins *et al* (1996), Lee S.R (1997), Zeng (2003), Mitton (2004) and Deshmukh (2005) study findings also indicate that firm size has relationship with the dividend payout. Collins *et al* (1996) argued that larger firms have more generous payout resulting positive relationship with dividend payout. Lee S. R (1997) study results show that large companies are indeed the ones that are more likely to pay dividends explaining the decision of whether to pay dividends or not. Zeng (2003) argued that if the firm size is positively related to diversification and decentralisation, the large the firm size, the less observable the actions of management and the higher agency costs may be incurred. Therefore, paying high dividends may reduce the agency cost. Mitton (2004) and Deshmukh (2005) indicated that the firm size proxies for symmetric information where the larger firms have less asymmetric information therefore pay higher dividends.

#### *Financial Leverage*

Zeng (2003) indicated that if financial leverage is used as one indicator of the future default and positively related to the cost of financial costs, paying dividends may increase the financial distress for firm with high leverage ratio is high. His study results show that the firm leverage (short term plus long term debt/total assets) is inversely related to dividend payout. Fenn and Liang (2001) results study also indicate that firm financial leverage (debt to assets ratio) is inversely related to firm's payout ratio. Nash *et al* (2003) study also support the argument due to the inclusion of debt covenants to minimize dividend payments by the bondholders.

### **3. Data and Empirical Methods**

The aim of this study is to find out the determinants of dividend payout for public companies in Thailand Stock Exchange by taking SET100 listed companies as benchmark. The dividend policy of the firm is indicated as firm's dividend payout (dividend per share divided by earning per share before extraordinary

item) as used in some studies (Gul, 1998; Zeng, 2003; Amidu and Abor, 2006). We chose earning per share before extraordinary because diversion of resources may occur before earnings are reported, in which case this ratio overestimate the share of true earnings that is paid out as dividends (La Prota *et al*, 2000) and also to measure the true earnings of the company ordinary business.

In our model, we presented six explanatory variables that may influence the probability of paying dividends namely risk (RISK), cash flows (CASH), investment opportunity (MTBV), percentage of majority shareholders (OWN), firm size (SIZE) and financial leverage (FIN). Our objective of choosing the proxies is to capture the management view as they are the one who made the dividend policy decision.

The dividend payout and the predictor variables used in this study are a five year average for the period 2001 to 2005 from SET100 firms. As the companies under SET100 index will be revised every six months, we selected the listed companies for January to June 2006 SET100 index calculation. The company financial data was collected through online database at SETSMART maintained by Thailand

Stock Exchange. The data was annualised as calendar year.

Multiple regression analyses are run to explain the relationship between firm's dividend policy and the predictors. The study used the regression model used in D' Souza (1999) study to explain the determinants of dividend policy. Any non-available data will be considered as missing value. Before running the multiple regressions testing, we deleted any extreme outliers and test for normality to make sure the variables are normal distribution to ensure our model is applicable. Table 1 shows the detail of predictor variables.

Our dividend payout model would be as follows:

$$\text{PAYOUT} = \beta_0 + \beta_1\text{RISK} + \beta_2\text{CASH} + \beta_3\text{MTBV} + \beta_4\text{OWN} + \beta_5\text{SIZE} + \beta_6\text{FIN} + \varepsilon$$

The following hypothesized relationships are predicted for each variable with respect to the dividend payout ratio:

H1a : MTBV, CASH, OWN and SIZE are expected to be positively related to PAYOUT;

H2a : RISK, OWN, FIN, MTBV are expected to inversely related to PAYOUT.

**Table 1** Description of the Predictor Variables

Variables	Proxies	Calculations	Expected Observed
Risk	Variability in profit for firm	Standard deviation [Earnings before extraordinary items/ Total assets] for the past 5 years	Negative
Cash flow	Cash flow to the company	Average [Cash flow from operation/Total assets] for the past 5 years	Positive
Market-to-book value	Investment opportunities	Average [(Shares outstanding x Share closing price) + Book value of total liabilities/Total book value of assets] for the past 5 years	Negative/ Positive
Firm size	Market capitalization	Natural log of average market capitalization for the past 5 years	Positive
Ownership Concentration	Ownership	Average [Percentage of majority shareholders' holdings of equity stock] for the past 5 years	Negative/ Positive
Financial leverage	Financial Policy	Average [Total Liabilities/Total assets] for the past 5 years	Negative

#### 4. Empirical Results

##### *Summary Statistics*

Table 2 presents the descriptive statistics for all the regression variables. It shows the average indicators of variables computed from the SET100 company financial statements. The average (median) dividend payout ratio (measured as dividend per share/ earnings per share before extra ordinary item) is 37.42 percent<sup>1</sup> (36.39 percent). This means, on the average, SET100 firms pay about 37 percent of their profits as dividends and the average return on assets stands at 9 percent.

Average (median) risk (standard deviation of ROA) is 3.5 percent (3 percent) that can be considered lower. Cash flow, determined as the EBIT/ total assets has a mean (median) of 0.07 (0.11). This shows that in average EBIT represents 7 percent of the total assets for SET100 companies. Market-to-book value of the firms on average (median) is 1.36 (1.25). Average (median) percentage of majority shareholders is 56.29 percent (56.72 percent), suggesting that 56.29 percent of the companies shares are own by majority shareholders. Firm size determined as the natural logarithm of market capitalization has a mean (median) of 7.04 (7.04). The average (median) debt to total assets is 58 percent (57 percent) implying that in average SET100 firm's total assets are financed through debt.

##### *Correlation Matrix amongst Variables*

Table 3 shows the correlation amongst predictors is between -0.416 (MTBV and FIN) to 0.404 (CASH and MTBV). Only two correlations have absolute value larger than 0.4 suggesting that multicollinearity is not a major problem.

##### *Regression Results*

Table 4 shows that F-statistic is significant (F=3.834, p<0.05) at 95 percent confidence interval suggesting the model is useful to determine the variation in the criterion dividend payout.

As predicted, the results of this study show that risk and financial leverage are statistically significant negative relationship with dividend payout ratios, suggesting that, high-risk and highly financial leveraged firms pay lower dividends to their shareholders. Firms that are experiencing earning volatility find it difficult to pay dividend, therefore that such firms will have high probability to pay less or no dividend. On the other hand, firms with relatively stable earnings are often able to predict approximately what its future earnings will be and therefore are more likely to pay out a higher percentage of its earnings as dividend. This result is consistent with Collins *et al* (1996), D'Souza & Saxena (1999), Aivazian and Booth (2003) and Amidu & Abor (2006) results study in relation to dividend payout and risk of the company.

Meanwhile, highly levered firms usually have obligation to pay interest to the bondholders at the first place. The bondholders may include bad covenants to the firms restricting the firms to pay dividend at certain level only. Paying dividends also may increase the financial distress for firm with high leverage ratio leading to highly levered firms tend to have lower payout ratio. This result consistent with Fenn and Liang (2001), Zeng (2003) and Nash *et al* (2003) study findings.

The results also indicate cash flow is statistically positive relationship as predicted but insignificant with dividend payout. Here, the results are only partially reflected what we would have hoped where cash flow is significantly positive relationship to dividend payout (Deshmukh, 2005 and Amidu & Abor, 2006). If our model is correct, it implies that firms maintain its historical dividend payment without too much depends on its current cash as indicated in Baker and Smith (2006) study. It might also consistent to the signaling theory in Nissim and Ziv, (2001) study where dividend changes are related to firm's future earnings changes. As the information for the cash is based on historical data, it might not reflect the future earnings resulting insignificant in relationship.

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<sup>1</sup> Mitton (2004) indicates public companies in Thailand have average dividend payout about 30 percent

**Table 2** Descriptive Statistics of Dependent and Independent Variables

Variable	Mean	Median	Std. Dev.	Min.	Max.
PAYOUT	0.37	0.36	0.28	0.00	1.01
Risk	0.04	0.03	0.26	0.00	0.10
Cash flow	0.07	0.07	0.11	-0.09	0.32
Market-to-book value	1.36	1.25	0.40	0.71	2.44
Firm size	7.04	7.04	0.55	5.87	8.57
Ownership Concentration	0.56	0.57	0.15	0.18	0.85
Financial leverage	0.58	0.57	0.20	0.13	0.97

**Table 3** Correlation Matrix of the Variables

Variables	Payout	Risk	Cash	MTBV	Own	Size	Fin
Payout	1	-0.15	0.21	0.27	0.14	0.00	-0.41
Risk		1	0.12	0.15	-0.11	-0.13	-0.18
Cash			1	0.40	0.23	0.16	-0.34
MTBV				1	0.18	0.08	-0.42
Own					1	0.08	-0.15
Size						1	0.22
Fin							1

**Table 4** Regression Result

Variable	Predicted sign	Coefficient	t-statistic	P-value
Intercept		0.54	1.32	0.190
RISK	-	-2.61	-2.23	0.029*
CASH	+	0.15	0.38	0.703
MTBV	+/-	0.08	0.97	0.335
OWN	+/-	0.03	0.14	0.886
SIZE	+	0.02	0.37	0.710
FIN	-	-0.57	-3.23	0.002*

R-squared : 0.245; Adjusted R-squared : 0.181; SE of regression : 0.246; F-statistic : 3.834; Prob. (F-statistic) : 0.002\*  
(dependent=Dividend payout)

\* significant at 0.05 level

Market-to-book values are used as proxies for the firm's future prospects and investment opportunities was found to have statistically positive associations but insignificant with dividend payout ratios. The results are inconsistent with the findings of previous studies (see Collins et al., 1996; Gul, 1999; Zeng, 2003 and Amidu & Abor, 2006) implies that emerging market has different characteristics that lead

to difference findings in the developed markets. This may support the Miller and Modigliani (1961) theory as well as study of De'Souza and Saxena (1999) that investment decisions are independent of dividend policy. It implies that the SET100 companies may have stable dividends for the past 5 years.

Dividend payout also has positive relationship but insignificant with firm size and ownership

concentration. The positive relationship between firm and dividend payout is consistent with Collins *et al* (1996), Lee, S.R (1997) and Zeng (2003) results study that reflects agency costs. However, in our model, it seems that firm size is not significant indicating that dividend-paying company is regardless to its size. It implies that regardless the firm size is, the firms will carefully managed their dividend payout in order to maintain the stability of dividend payout. However, we must carefully interpret this findings due to the fact that SET100 firm is maybe relatively low in size variation as they are top 100 public firms in Thailand.

If we considered institutional investors as the majority shareholders, tax-based theory has better argument to explain the positive sign between dividend payout and ownership concentration because of dividend preference (Short *et al*, 2002). However, based on the insignificant regression results, the percentage of majority shareholders is not the main concern of the firms to pay dividends.

Based on these results, we can conclude that our Hypothesis H1a is not supported due to insignificant relationship to dividend policy with 95 percent confidence interval. Hypothesis H2a is partially supported by which risk and financial leverage were negatively related to dividend payout with 95 percent confidence interval.

## 5. Conclusion and Recommendations

### *Conclusion*

From the study, we may conclude that stability of earnings and financial policy of the firms are important variables that may influence companies to pay low or high dividend. Their positive relationship with the dividend policy shows the willingness of the firms to pay higher dividend when they have stable profit and less obligation to the lenders. It implies that the probability of the firms to pay dividends is low if the company has tight obligation to pay interest to the bondholders due to financial distress or inclusion of debt covenants. Unstable earnings for longer period

also may affect the ability of the company to predict its future earning resulting low in dividend payout.

It also suggested that, cash flows, investment opportunities, ownership concentration and firm size are regardless to dividend policy wherever the companies are due to their insignificant related to dividend policy. Besides, it seems that none of the main dividend theories (signalling, agency cost, clientele effect and cash flows) can really explain the behaviour of dividend payout in Thailand. However, the study suggested that the firm financial performance (earning) and financial policy (capital structure) may signal the information about the ability of the firms to pay dividend.

In overall, the results suggest that dividend does matter. If this is correct, the firms cannot decide dividend policy without taking consideration the integral part of business strategies including both financial and investment decision. Dynamic and characteristic change in firm may require the firm to change its dividend policy if the firms want to maximize value for shareholders. An implication of this finding is that managers generally perceive that firms today set dividend payment in a manner consistent with that described by Lintner more than four decades back and may be different across the country because of the characteristics of the different market, objectives and strategies. Besides, investors who want to select the paying dividend firms might have to look into the two mentioned factors before selecting the companies.

### *Limitation*

Caution should be taken into consideration to the limitation of this study. As our study concentrate on SET100 companies, there is possibility of non-response bias in our model for the remaining companies. The low  $R^2$  values for the regressions indicate other additional or appropriate explanatory variables are responsible, but the search for this problem is left for future research. However, it does not mean that our model is not applicable but getting more information may confirm our analysis as the low

correlation amongst the predictors indicates that multicollinearity is not a major problem.

#### *Recommendations*

Based on these findings, the following directions for future research should be considered: What determines dividend payout ratios of unquoted firms in Thailand? Why firms pay no dividends in Thailand? What determines the decision to pay or not to pay dividends in overall listed firms in Thailand?

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