

Determinants of Dividend Policy in Emerging Markets: New Evidence from Asian Countries

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Abstract: *One of the most discussed topics of corporate finance may be the determinants of the dividend distribution ratio, and some scholars consider it as an unsolved mystery. Understanding dividend policy improves the dividend payment prediction and the collection of suitable valuation models that improve the confidence of investors and promote business activities and economic development. Thus, by analyzing the behavior of 9,717 non-financial firms, this study explores the drivers of dividend payment policy across 17 economies in the ASIAN region from 2009 to 2017. By using fixed effects method, the paper finds profitability, firm size, liquidity, and growth, have negative impact on dividend payment while, on the other hand, leverage is favorably linked to dividend payment. Unlike other research, we have no clue to prove free cash flow is a significant determinant of dividend payment in Asia. However, these findings are slightly different for middle-income and upper-income countries.*

Keywords: Dividend payout, Asian countries, lower-middle income, upper-middle income, fixed effects

1. Introduction

Since Lintner (1956) and Miller and Modigliani's (1961), dividend payout strategy has been one of the most contentious issues, but it can be summarized by three main different points of view. The first is that a significant change in dividend distribution will increase the valuation of the company, supported by agency proposition and bird-in-hand hypothesis. The second idea is an improvement in dividend payment would reduce the performance of the company supported by tax preference and transaction-cost principle. The last one is dividend policy slightly affects firm's market value, supported by dividend irrelevance hypothesis. In addition, signaling and residual principle also raise a sophistication for the dividend puzzle. According to these ideas, a large number of researches have explored which determinants affect dividend payment decisions explicitly or implicitly. Firm size, financial leverage, liquidity, free cash flow, growth opportunity, capital expenditure and profitability are the most widely studied determinants.

Previous reports have proven that the dividend payment strategy patterns vary not merely across time spans (Sarik, 2004), but also throughout nations (La Porta et al., 2000), as well as between emerging and advanced countries (Adaoglu, 2000; Aivazian et al., 2003). Nevertheless, the literature does not offer a consistent framework for the study of dividend policy practices in the developing countries. Glen and Singh (2004) concluded that the dividend strategies of companies in developing markets are different in structure and characteristics due to multiple factors in contrast with companies in advanced economies. Adaoglu (2000) states that the developing market enterprises have pursued unstable cash dividend strategies and the company's earnings in that year were the principal criterion determining cash dividends. Aivazian et al. (2003) emphasize that businesses in emerging countries have been proved to be less reluctant than their American peers to adjust their dividends. Such variations in the individual markets themselves raised the

question of the extent to which the principles of competitive dividend strategy could use to such markets.

Previous studies tested determinants of dividend policy on developing economies in Africa such as countries in the Middle East and North Africa (Jabbouri, 2016) or Ghana (Amidu & Abor, 2006). However, few reports on developing Asian economies, such as Sawicki (2009) and Fairchild et al. (2014), are conducted. Therefore, this research continues to fulfill this gap by focusing on lower and upper middle-income countries in Asia. The analysis identifies seven standard determinants based on previous hypotheses and studies to examine their impact on dividend payout policy. These are cash flow, growth opportunities, firm scale, financial leverage, profitability, liquidity, and capital expenditure (investment). Probit regression for panel data across countries with fixed FEM is used as our study's main technique. Throughout the period 2009-2017, the sample data was gathered from 577 non-financial companies within four chosen countries to identify which factors are significant in dividend payout ratio. The structure of our paper as follow: The first part is Introduction which briefly explains the motivation, aim and scope of our research. The second part of this paper reviews current literature related to dividend decision determinants and develop the main hypothesis. The third section is statistic summary of our data and the model specification. And throughout section four, a detailed review of the findings and discussion is presented, accompanied by a conclusion and suggestion for further in section five.

2. Literature review and Hypothesis development

It can be shown from the recent literature analysis and new academic works on emerging markets that the dividend payment strategy determinants are complicated and diverse. Thus, the dividend decisions of companies are likely to be influenced in various ways complied by nation and area. Based on related reviews, we propose our hypotheses

on the relationship between the dividend policy and the eight determinants are categorized into both negative and positive sign.

2.1 Variables support for negative relationship

Firm size:

Jensen and Meckling (1976) declared that executives have significant impact over larger corporations where ownership is more dispersed, and investors get less chances and controlling capability. Therefore, the extent of issues with agencies and information asymmetry intensifies. Firm will try to send investor positive signal regarding to firm's growth success, good confidence in operation, and low level of agency debates by following a high dividend payment ratio strategy (Lloyd et al., 1983; Sawicki, 2009). However, it is claimed that the bigger the company's size the greater is the company's publicly approachable particulars, and the smaller the information dissymmetry (Eddy & Seifert, 1988). The degree of information dissymmetry between insiders and outsiders would determine the value of the dividend-embedded information content. This line of literature, thus, recommends that the signaling effect of the reduction of dividends via an expansion in company scale and will depress big corporations from dividend payments. According to these findings, we propose the following hypothesis: *The consociation between dividend policy and firm size is negative.*

Financial leverage

Myers (1977) argued that debt is a tool applied to minimize agency expenses. The study argues that liabilities enables lenders to exercise greater impact and supervision on administrators that are enforced to fulfill financial obligations by enhancing organizational efficiency and avoiding projects that decrease profit. Firm's manager is responsible to pay back lending principles and interest periodically, therefore less free cashflow available for them to use which turns to a decrease the conflicts by separation between ownership and management. Debt can replace dividends to reduce information asymmetry and agency problem (Jensen, 1986; Williams, 1987). Therefore, the reduction of agency problem can be covered by the debt as a substitute for dividend. From that, we conduct our second hypothesis as follow: *Dividend policy and financial leverage pose a negative correlation.*

Growth opportunity

The "Residual Theory" of DeAngelo et al. (2004) indicates that firms commonly pay either small or no dividend when they are at early development stage or when they have several successful business projects with high development opportunities. A reason for this act is the tradeoff between the cost of funding and the development opportunities. High-growth business managers would have a motivation to save more funds or maintain earnings if the past growth of the company is projected to be strong and quick while the capacity to raise external capital is low and costly (Rozeff, 1982). Therefore, firms refuse to pay dividend if they are within the period of a high growth opportunities. We assume that **there is a negative correlation between the revenues' growth prospects and the dividend payout ratio.**

Capital expenditure

The principle of residual dividends proposes that a company can only pay dividends if its internally created assets are not used up fully for investment purposes. Moreover, firms with high growth rates generally have large investment needs which lead to shortage of cash. According to pecking order theory by Myers and Majluf (1984), those companies would be characterized by low dividend payout ratios because firms prefer to use internal resources first while debt just comes second. Therefore, the extent to which the company decides to finance capital expenditure from internal resources lead to the competition between dividend and capital expenditure. We propose that a **negative relationship is formed for dividend policy and capital expenditure.**

2.2 Variables support for positive relationship

Liquidity

The liquidity is considered as another significant factor affecting dividend strategy. No dividend would be charged with a deficiency in cash unless the firm borrows new capital to pay dividend and serves for the own target. The studies in the past recommended that corporate dividend payout ratio depends strongly on the cash status of the corporation rather than on earnings (Anil, 2008; Khang & King, 2006). Based on the agency principle, companies will pay dividends as they produce a greater volume of cash to reduce the expense of service. Strong liquidity may show that the business has healthy cash flows and firm with high liquidity level is likely to pay large dividends. Therefore, we assume *Dividend policy is connected positively to firm's liquidity.*

Profitability

Through the signaling theory, profitable firms tend to commit a higher dividend payment ratio to imply that they have good financial results to boost attendance of the market (Fama & Babiak, 1986). Furthermore, Kowalewski et al. (2007) reveals that firms with high profitability and low investment opportunities paid higher dividends to prevent managers from over-investing free cash flow, thus controlling the overinvestment problems and reducing the conflicts between management and shareholders. Therefore, we assume **profitability promotes dividend payment.**

Free cash flow

Agency problem between minority shareholders and insiders increases due to the rising in level of free cash flow (Jensen, 1986). The agents (managers) invest the extra cash on risky ventures, which might reduce the income of shareholders value, to serve for their own benefits (Allen & Rachim, 1996). The diversification of the research suggests that charging large dividends can be taken advantage of reducing agency costs and minimizing asymmetry of information issues by reducing the surplus funds to managers (Fairchild, 2010; Faccio et al., 2001). For example, Sawicki (2009) illustrated that a strong dividend payment strategy in developing markets is a vital channel to improve firm's credibility for sustainable development. Companies pay large dividends are thus considered to be attractive with low agency costs. And of course, free cash flow is necessary for cash dividend payment. Therefore, a **positive relationship**

between the dividend payout and free cash flows proposed in our paper.

2.3 Data collection and Methodology

Data collection

This paper aims to study dividend payment and its determinants of developing ASIA nations from 2009-2017. Sample data is collected from 9,717 non-financial listed firms with 29,835 observations in 17 ASIA countries, namely Vietnam, China, Singapore, Japan, Korea, Hongkong, India, Turkey, Jordan, Qatar, Israel, Kazakhstan, Pakistan, Malaysia, Indonesia, the Philippines and Thailand. We focus only on high-income and middle-income countries ranked by the World Bank. We decide to start our data from 2009 because most companies had been recovered and became stabilized from 2009. All data is gathered annually in US dollars and collected from Compustat global.

Regression model

There is no common rule regarding the time to pay dividends. Firms usually hold a general meeting of shareholders at the end of the second quarter and pay dividends in the third or fourth quarter. If the annual general meeting at the end of the year, the data will be taken in the current year, but if the general meeting of shareholders held in the middle of the year, the data taken for the whole year will not be accurate. After a careful consideration, so as to examine the impact of elements on dividend strategy of firms listed on emerging ASIA stock market, we decided to take the data from the previous year to evaluate the dividend payout ratio for the current year, especially as follows:

$$DPR_{i,t} = \beta_0 + \beta_1 LIQUIDITY_{i,t-1} + \beta_2 FCF_{i,t-1} + \beta_3 SIZE_{i,t-1} + \beta_4 PROFIT_{i,t-1} + \beta_5 LEVERAGE_{i,t-1} + \beta_6 GROWTH_{i,t-1} + \beta_7 EXCAP_{i,t-1} + \epsilon_{i,t}(1)$$

In which

- DPR: dividend payout ratio
- LIQUIDITY: liquidity
- FCF: free cash flow
- SIZE: firm size
- PROFIT: profitability
- LEVERAGE: financial leverage
- EXCAP: capital expenditure.
- i: firm specific – t: time-period by year.

The description of how dependent and independent variables are calculated is presented as Table 1 in Appendix. We run both random effect and fixed effect for panel data when running empirical test. Hausman data reports fixed effect model should be chosen. Therefore, we present our analysis based on fixed effect model afterward.

3. Results and Discussion

1) Empirical Results

So as to investigate the determinants influencing dividend payout policy in ASIA countries in the period of 2009 - 2017, multiple regression is established between the dividend payout ratio and independent variables. In accordance with the result of the Hausman test (Hausman, 1978) for identify which model is suitable to use in panel

data (the FE model or the RE model), the FEM model is used to applied to the regression. Table 2 reports the empirical results of model regarding fixed effects.

Table 2: Fixed effects Model of the Panel Regression 2009 – 2017 (insert table here)

DPR	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
SIZE	-2.559	0.031	-82.29	0.000	-2.620	-2.498	***
LEVERAGE	1.825	0.390	4.68	0.000	1.060	2.590	***
LIQUIDITY	-0.120	0.031	-3.83	0.000	-0.181	-0.058	***
FCF	0.186	0.251	0.74	0.458	-0.305	0.677	
PROFIT	-32.406	1.209	-26.81	0.000	-34.775	-30.037	***
GROWTH	-0.002	0.000	-14.44	0.000	-0.002	-0.002	***
EXCAP	-4.251	1.042	-4.08	0.000	-6.294	-2.208	***
Constant	27.729	0.340	81.55	0.000	27.062	28.395	***

Mean dependent var	1.395	SD dependent var	6.905
R-squared	0.285	Number of obs	29835.000
F-test	1144.193	Prob > F	0.000
Akaike crit. (AIC)	175397.235	Bayesian crit. (BIC)	175463.662

*** p<0.01, ** p<0.05, * p<0.1

The research received heteroskedasticity-robust standard errors also known as Huber / White estimator to resolve the heteroskedasticity problem (Hoechle, 2007). Table 5 shows the result of a regression with robust standard errors.

Table 3: Fixed effects Model of the Panel Regression 2009 – 2017 (robust standard errors) (insert table here)

DPR	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
SIZE	-2.559	0.107	-23.88	0.000	-2.769	-2.349	***
LEVERAGE	1.825	0.586	3.11	0.002	0.676	2.974	***
LIQUIDITY	-0.120	0.050	-2.41	0.016	-0.217	-0.022	**
FCF	0.186	0.456	0.41	0.684	-0.708	1.080	
PROFIT	-32.406	2.141	-15.14	0.000	-36.602	-28.210	***
GROWTH	-0.002	0.000	-8.29	0.000	-0.002	-0.001	***
EXCAP	-4.251	1.242	-3.42	0.001	-6.686	-1.816	***
Constant	27.729	1.106	25.07	0.000	25.560	29.897	***

Mean dependent var	1.395	SD dependent var	6.905
R-squared	0.285	Number of obs	29835.000
F-test	86.254	Prob > F	0.000
Akaike crit. (AIC)	175395.235	Bayesian crit. (BIC)	175453.359

*** p<0.01, ** p<0.05, * p<0.1

Our results show R-square relatively reliable with 28.5%. We find in both tests that the dividend payout ratio (DPR) is negatively related to firm size (SIZE), profitability (PROFIT), growth opportunity (GROWTH), liquidity (LIQUIDITY), and capital expenditure (EXCAP) while financial leverage (LEVERAGE) plays as positive driver of the magnitude of dividend changes at the 1% level of statistical significance. Free cash flow (FCF) does not seem to affect dividend payout policy. Particularly, the coefficient of firm size's influence on dividend policy is negative and significant at 1%. The firm size reported from this study has a negative effect on dividend policy, indicating that increase in the size of the company would result in the dividend payout ratio decrease. Our result is contrary to the positive sign found by D'Souza & Saxena, 1999 but complies with Naser et al. (2013). In fact, our result indicates that, in Asian countries with high asymmetric

problem, small firms would need to send a good sign in performances to public by paying high dividend while it is not necessary for large firms. Therefore, the larger firm, the lower dividend payout ratio.

For financial leverage, our study also finds a positive relationship between the financial leverage and dividend strategy which is contrary to previous studies (Kania & Bacon, 2005; Faccio et al., 2001). In fact, leverage can have both-side effect on dividend payment strategy. With a negative side, it is said that companies tend to slash dividends to serve for liability requirements (Afza & Hammad, 2011). In addition, debt will mitigate asymmetric information and agency cost problem (Grossman & Hart, 1980). However, on the other hand, it is also said that by having high leverage level, firm is capable to use external source to finance for their business activities and pay dividend to attract investors.

For liquidity, we find that the coefficient correlation is -0.120, and the model does not validate the expected positive relationship between the liquidity and dividend policies of the company. It is likely that firms facing a liquidity's shortage will issue cash dividends, which contrasts to prior literatures (Anil & Kapoor, 2010; Baker & Powell, 1999). However, this finding complies with the positive relationship between leverage and dividend payment because the liquidity we used in this research present the quick ability to fulfill short-term financial obligation. Unfortunately, we find no evidence between firm's free cashflow and dividend payment. The fact is that we calculate the cash flow which is available to firms at the end of the previous while the actual time to pay dividend is normally at least 6 months later. Therefore, no significant correlation between free cash flow and dividend payment in our study is reasonable. Further research using quarterly data might provide another view on this relationship.

Contrary to Adaoğlu's (2000), we find a negative coefficient between profitability and dividend payment. Our result confirms the idea that businesses with high profitability tend to pay high dividend to transmit positive signals about firm's prospects (Battacharya, 1979; Chang & Rhee, 2001). We also reveal that growth opportunities and dividend policies are negatively linked. Sales/Revenues growth would drain the cash available for firm to pay dividend. Firms with high revenue growth tend to utilize the opportunities for scale expansion. This relationship is also confirmed in previous papers (Grossman & Hart, 1980; Rozeff, 1982). The dividend cut off is a way to maintain revenues-growth prospects and reduce dependence for enterprises on external financing (Manos, 2003; Dempsey & Laber, 1992). Complying with firm sale growth, our study finds that capital expenditure and expenditure are detrimentally related. Firms would have intention to reduce or even postpone dividend payment so that corporation's potential expansion could be implemented.

2) Robustness of result

Our study works on a large sample of 19 Asian countries with different level of development. Some countries were already among the world top in terms of GDP, banking system or else like Japan, Singapore while other were just

crossover the low income threshold determined by World Bank. Therefore, firms from these countries might behave differently in management generally and dividend payment particularly. In this section, we divide our sample into two sub-samples which include high-income level and middle-income level countries to see whether the determinants of dividend payment change over each subsample or not. After testing for heteroskedasticity and running robust fixed effect regression test on two subsamples, we find some remarkable points in Table 4 as follows.

Table 4: Robustness test by Subsample (insert table)

	ASIAN countries	High-income countries	Middle-income countries
SIZE	-2.559***	-3.799***	-1.256***
	-0.107	-0.156	-0.115
LEVERAGE	1.825***	2.776***	-0.175
	-0.586	-0.996	-0.645
LIQUIDITY	-0.120**	-0.232*	-0.034
	-0.0496	-0.119	-0.0461
FCF	0.186	-0.356	1.145*
	-0.456	-0.566	-0.639
PROFIT	-32.41***	-39.23***	-27.75***
	-2.141	-3.325	-2.894
GROWTH	-0.00187***	-0.00164***	-0.000679*
	-0.000226	-0.000206	-0.000378
EXCAP	-4.251***	1.89	-4.258***
	-1.242	-2.523	-1.326
Constant	27.73***	44.85***	13.30***
	-1.106	-1.802	-1.103
Observations	29,835	14,428	15,407
R-squared	0.285	0.421	0.146
Number of firms	9,717	4,148	5,569

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

From table 4, after running the robustness check by subsample, we find that the coefficient and significant level are consistent in all three models for profitability, firm size, and revenues' growth. These variables confirm their negative relationship with dividend payout ratio at high significant level for the whole Asia and for both middle-income and high-income countries. However, we find that financial leverage is only positive and significantly related to dividend payment within high-income countries while it does not seem to be a significant driver affecting dividend policy in middle-income countries. The same finding for liquidity when we robust our results. The result indicates that liquidity can not prove itself as a significant driver in identifying dividend payment strategy for middle-income countries. In contrary, capital expenditure lost its significantly positive connection with dividend payout ratio in high-income region while it keeps the sign and significant level in middle-income region and whole ASIA. Lastly, we find that free cash flow is revealed as a positive factor influencing toward dividend payout ratio within middle-income countries, although it was recorded not to have any impact to dividend strategy in high-income countries as well as whole ASIA before. This means companies belong to middle-income region with higher free cash flow prefer to offer greater dividends. The finding is related to the free cash flow principle (Jensen, 1986) that dividends place a significant responsibility in corporate governance and reducing costs of agency.

As a last robustness check, we change the way of calculating dividend payout ratio by taking cash dividend payment to total revenue following Brockman and Unlu (2009) to avoid the bias of earning management problem. We find the same results as our initial test. Due to the limitation of content, we do not report it in this paper.

4. Conclusion and Recommendation

The key purpose of this study is examining the determinants of dividend policy in Asian region. A quantitative research is carried out on the sample of 9,717 non-financial firms from 2009 to 2017. From Fixed Effects Model, our results show that profitability, firm size, financial leverage, liquidity, sales growth, and capital expenditure have a significant relationship whilst free cash flow reveal no significant relationship with dividend payout ratio. Our paper suggests that traditional theory such as signaling theory might not applicable well in Asia. It is reasonable because the Asia is a fast-growing market. As a result, firms might prefer to use the earning for reinvestment to seize a huge profit in near future. In addition, firms are often young and small in Asia countries, hence, firms with high revenue growth do not guarantee a high ratio of dividend payment. Our paper shows that the determinants of dividend are still controversial when we consider Asian market. Investors should pick businesses that suit their interests. For example, it is advised that if investors favor dividends over capital profits, they should not invest in profitable firms since such firms are expected to offer smaller dividends compared to others or a high liquidity business does not mean large payment of dividend. The emphasis of this report is on company fundamentals, improvements may be made in future studies by considering other company non-fundamental traits or market features that impact dividend payout ratio, including the corporate governance's quality, incentive compensation plans or structure of ownership.

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Appendix

Table 1: Dependent and independent variables in dividend policy

Variable	Calculation	Source	Source of Data
Dividend Policy (Payout Ratio)	Total common dividend (cash) / Operating profits (profits before interests and taxes)	Chen and Steiner (1999)	Thomson Reuters Datastream
Size of the Firm (Size)	The natural logarithm of the total assets.	Eddy and Seifert (1988); Redding (1997)	Thomson Reuters Datastream
Financial Leverage (Leverage)	The total book value of debt / Total assets.	Jensen et al. (1992)	Thomson Reuters Datastream
Revenue’s Growth Rate (Growth)	The ratio of change in the firm’s revenue between two consecutive years	Rozeff (1982); Lloyd et al. (1983); Jensen et al. (1992); Alli et al. (1993)	Thomson Reuters Datastream
Liquidity (Liquidity)	(Current Assets - Inventories) / Short-term Liabilities	Manneh et al. (2015)	Thomson Reuters Datastream
Free Cash Flow (FCF)	(Net income + interest expenses + depreciation + amortization – capital expenditure) / Book value of assets	Holder, Langrehr, and Lawrence (1998)	Thomson Reuters Datastream
Profitability (Profit)	Return on Asset (ROA) = Net profits / Total assets	Abor et al. (2010)	Thomson Reuters Datastream
Capital Expenditure (EXCAP)	Capital expenditures / Total assets	Kapoor et al. (2010); Labhane and Mahakud (2016); Alli et al. (1993)	Thomson Reuters Datastream