Dividend Policy Behavior in Emerging Stock Markets: Evidence from Vietnamese Stock Market

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Abstract

Several prior studies find that firms pursue a long-term dividend target payout ratio with a fairly standardized speed of adjustment in developed markets. However, some studies conducted in emerging markets show strange findings that firms have target dividend payout ratios but they fail to follow stable dividend polices. This study examines dividend policy behavior in Vietnamese stock market, an emerging stock market without mandatory dividend payment using fixed effects regression for panel data. The research results support the partial adjustment model that firms in Vietnamese stock market have stable dividend policy behavior.

Keywords: dividend, behavior, emerging markets, Vietnam

1. Introduction

Dividend policy behavior is a debatable topic in corporate finance literature and considered as "dividend puzzle" with several theories which are developed to explain it. Miller and Modigliani (1961) posit that dividend is irrelevant; however, later literature shows that there are many determinants of dividend policy including information asymmetry, taxes, agency cost and institutional constraints. Besides, there is a line of hypothesis stating that firms follow stable dividend behavior initially developed by Lintner (1956). In his pioneering study, Lintner (1956) find that firms listed in U.S. stock market tend to pursue a long-term dividend target payout ratio with a fairly standardized speed of adjustment. Then, there are many supporting evidence for his partial adjustment model in the U.S. (Baker, Farrelly, & Edelman, 1985; Pruitt & Gitman, 1991), the U.K. (Lasfer, 1996) and Japan (Dewenter & Warther, 1998). Moreover, this model is developed further by Fama and Babiak (1968) with the addition of the first lagged earnings.

Although there are several studies supporting Lintner's hypothesis in developed markets, some studies conducted in emerging markets shows different findings. Glen (1995) concludes that firms in emerging markets also have target dividend payout ratios but they do not pursue stable dividend polices. This is confirmed by the research of Adaoglu (2000) in Istanbul Stock Exchange where dividend payment is mandatory.

This study investigates dividend smoothing in an emerging stock market, namely Vietnamese stock market which is established in 2000. Unlike in Istanbul Stock Exchange, in Vietnamese stock market firms listed are not obliged to pay dividend each year, they can pay dividend in forms of stocks, cash, shares repurchases or retain 100% their earnings. The remaining of this paper includes Section 2 reviewing the extant literature, Section 3 present research models, Section 4 indicating the sample section method, Section 5 presenting research findings and Section 6 on conclusion.

2. Literature Review

The pioneering field study on dividend behavior is conducted by Lintner (1956) in the U.S. stock market. With a review of literature on determinants of dividend policy, the research identifies 15 variables; however, his empirical study finds that managers change dividends when changes in earnings are considered unanticipated and sustainable. About two thirds of interviewed firms have well-defined dividend policy with a fairly standardized speed of adjustment towards a long-term target payout ratio. Moreover, he also finds that managers believe that outside investors prefer firms with stable dividend payment mechanism. Firms tend to maintain their dividend levels and even if their income is lower, they try to distribute the same amount of dividends which are paid in previous years. As a result, he proposes a theoretical model of dividend behavior which states that current dividend payment is a

function of current earnings and prior dividend payment.

Baker et al. (1985) conduct a survey on 562 listed firms in New York Stock Exchange to compare drivers of dividend payment at their time to Lintner's classic behavioral model. Their findings show that statements supporting Lintner's research results dominate the highest level of agreement. Particularly, respondents highly appreciate continuous dividend payments. Similarly, Pruitt and Gitman (1991) analyze 114 responses collected in a survey on financial managers of the 1,000 largest corporations in U.S. by mail questionnaire and conclude that Lintner's model is supported. Lasfer (1996) examines Lintner's model with a panel data of commercial and industrial firms in the U.K. stock market and find a consistent result.

Brittain (1964, 1966) argue that cash flow has higher explanatory power for the capacity to pay dividends than net income. They suggest a modified model in which current dividend is a function of a function of current cash flow and preceding dividend and find empirical evidence supporting Lintner's original results. Moreover, starting from the dividend partial adjustment model of Lintner (1956), Fama and Babiak (1968) investigate dividend behavior of 392 industrial U.S. firms from 1946 to 1964 and find that the performance of Lintner's model is better than others. However, the predictive ability of the model is improved slightly when they remove the constant and add the first lagged earnings to the model. In addition, Fama and Babiak (1968) conclude that when dividend models are applied to the data of most firms, net earnings have more explanatory power than cash flows and net earnings including depreciation as a measure of profits. Conducting a similar research with a larger sample, Fama (1974) find consistent evidence on dividend smoothing effects.

Dewenter and Warther (1998) apply the Lintner's model to examine dividend behavior of a sample including both U.S. and Japanese firms during the period from 1982 to 1993 and find that U.S. firms tend to smooth dividends more compared to the Fama and Babiak's research period. However, Japanese firms are more willing to omit dividend payment and have less stable dividend policy than U.S. firms.

Andres, Betzer, Goergen, and Renneboog (2009) investigate dividend behavior of German firms and find that they fail to make dividend decisions on long-term target dividend payout ratios with public earnings. However, the Lintner partial adjustment model is estimated more realistically with cash flows. German firms tend to reduce dividend with higher speed than U.K and U.S. firms when there is a decrease in profitablity. Recently, Jeong (2013) examine dividend smoothing behavior in Korean stock market with the Lintner model and find that Korean firms smooth dividend less than the U.S. firms. Moreover, firm size, risk, firm growth and large shareholder ownership have significant impact on the extent of dividend smoothing.

Although there are several studies supporting Lintner's hypothesis that firms have target payout ratios and pursue steady dividend policies in developed markets, some studies conducted in emerging markets shows strange findings. Investigating dividend policy in emerging markets, Glen (1995) argues that dividend policy behavior is significantly different between emerging and developed markets. The former's dividend payout ratio is about two-thirds that of the latter. In addition, Glen's research shows that firms in emerging markets have target dividend payout ratios; however, they fail to follow stable dividend polices. The limitation of Glen's research is that it relies on a small sample of firms in emerging markets. Moreover, Adaoglu (2000) examines dividend smoothing in Istanbul Stock Exchange, an emerging stock market in Europe with mandatory dividend policies during two time periods, namely 1985 - 1994 and 1995 - 1997. The research results indicate that firms listed in Istanbul Stock Exchange do not pursue steady cash dividend policies and dividend levels are determined mainly by firms' current earnings. Any change in the earnings is directly reflected in dividend payment.

3. Research Models

3.1 Lintner's Model

Based on findings of a field study on dividend decisions of U.S. firms, Lintner (1956) develops a partial adjustment model to describe corporate dividend behavior. The target level of dividends $TDV_{i,t}$ of firm i for year t is measured by current earnings $EPS_{i,t}$ and the target payout ratio TPR as follows:

$$TDV_{i,t} = TPR*EPS_{i,t} \tag{1}$$

In any year, firms partially adjust dividends towards target dividend levels.

$$DIV_{i,t} - DIV_{i,t-1} = a + b*(TDV_{i,t} - DIV_{i,t-1}) + u_{i,t} \tag{2}$$

Where a is a constant, b is the speed of dividend adjustment coefficient with $0 \leq b \leq 1$, $DIV_{i,t}$ is dividend of firm i in year t, $DIV_{i,t-1}$ is dividend of firm in year t-1.

Equation (2) can be written as follows:

$$DIV_{i,t} = a + b*TDV_{i,t} + (1 - b)*DIV_{i,t-1} + u_{i,t} \tag{3}$$

Substitution of Equation (1) into Equation (3) gives:

$$DIV_{i,t} = a + (b*TPR)*EPS_{i,t} + (1 - b)*DIV_{i,t-1} + u_{i,t} \tag{4}$$

We obtain a testable Lintner's model:

$$DIV_{i,t} = a + p*EPS_{i,t} + q*DIV_{i,t-1} + u_{i,t} \tag{5}$$

Where: $p = b*TPR$ and $q = 1 - b$. DIV is dividend amount and EPS is earning per share. Both of them are measured in Vietnamese Dong (VND).

3.2 Fama and Babiak's Model

Fama and Babiak (1968) argue that modifying Lintner's classic model by including the first lagged earning can improve slightly its predictive power. They assume that annual earnings of firm i are generated with the following process:

$$EPS_{i,t} = (1 + c)*EPS_{i,t-1} + e_{i,t} \tag{6}$$

Where $e_{i,t}$ is serially uncorrelated error term. They continue to assume that full adjustment of dividends is applied to the expected earnings change $c*EPS_{i,t-1}$.

With the assumption presented in Equation (6), Equation (2) can be rewritten as follows:

$$DIV_{i,t} - DIV_{i,t-1} = a + b*[TPR*(EPS_{i,t} - c*EPS_{i,t-1}) - DIV_{i,t-1}] + TPR* c*EPS_{i,t-1} + u_{i,t} \tag{7}$$

Rearranged, gives:

$$DIV_{i,t} = a + b*TPR*EPS_{i,t} + c*TPR*(1 - b)*EPS_{i,t-1} + (1 - b)*DIV_{i,t-1} + u_{i,t} \tag{8}$$

This yields the following testable equation:

$$DIV_{i,t} = a + p*EPS_{i,t} + g*EPS_{i,t-1} + q*DIV_{i,t-1} + u_{i,t} \tag{9}$$

Where: $p = b*TPR$, $g = c*TPR*(1 - b)$ and $q = 1 - b$. DIV is dividend amount and EPS is earning per share. Both of them are measured in Vietnamese Dong (VND).

4. Sample Selection

The research sample is selected from non-financial firms listed in both stock exchanges in Ho Chi Minh City (HSX) and Ha Noi City (HNX) which were established in 2000 and 2003 respectively. To enhance the quality of research findings, the selection criteria are as follows:

• Observations belongs to the period from 2005 to 2011 since before 2005 there is a small number of stocks listed in the two stock exchanges and the information of dividends is not available;

• Firms should have at least 5 years of non-zero dividends over the period from 2005 to 2011. This sampling method is in consistent with Dewenter and Warther (1998). Firms with less than 5 years of non-zero dividends do not have trends of dividend payments for investigating dividend stability.

• Observations without missing or incomplete information.

The research sample includes 118 non-financial firms with 589 firm-year observations in the period between 2006 and 2011. Since the research sample has different number of firms and observations with various years, this type of data is defined as unbalanced panel data. There are two common regression techniques for the unbalanced panel data including fixed effects model and random effects model. Therefore, Hausman tests with the null hypothesis that random effects model is appropriate than fixed effects model are used to choose the best model.

Relevant information to calculate variables is collected from financial statements and annual reports provided by Tan Viet Securities Company (www.tvsi.com.vn) and cross-checked with the database of Stockbiz Investment Ltd. (www.stockbiz.vn). Both of them are leading database suppliers in Vietnam.

5. Research Findings

Table 1 shows fixed effects regression results of both partial adjustment models proposed by Lintner (1956) and Fama and Babiak (1968). The Hausman tests indicate that fixed effects regression is more appropriate than random effects regression in the two cases. For space reason, we only present the former's results. The intercepts are 1055.5 and 1090.4 in both Lintner's model and Fama and Babiak's model respectively and significant at 1%. This implies

that firms tend to pay a constant amount dividend regardless of their earnings per share and dividend payment in the last year.

Table 1. Estimation results of partial adjustment models

Explanatory variables	Lintner's model		Fama and Babiak's model	
	Coefficients	t-statistics	Coefficients	t-statistics
Intercept	1055.499***	8.36	1090.381***	13.51
EPS_t	0.109***	2.84	0.112***	8.46
EPS_{t-1}	-	-	-0.018	-1.27
DIV_{t-1}	0.114***	13.89	0.130***	3.1
Rho	0.4215		0.4247	
F-test	2.38***		2.32***	
Number of observations	589		589	
Number of groups	118		118	
Hausman test	416.28***		325.08***	
Target payout ratio	0.886		0.870	
Speed of adjustment	0.123		0.129	

*** Significant at the 1% level, ** Significant at the 5 % level, * Significant at 10% level. DIV is dividend amount and EPS is earning per share. Both of them are measured in Vietnamese Dong (VND).

Moreover, although the coefficients of EPS_t and DIV_{t-1} in Fama and Babiak's model are slightly higher those in Lintner's model, they are statistically significant at 1% in both models. This can be interpreted that firms follow a target payout ratio and standardized speed of adjustment. These findings are inconsistent with studies conducted by Adaoglu (2000) and Glen (1995) and indicate that firms in an emerging market can have stable dividend policy behavior.

6. Conclusion

Although there are several studies find that to firms pursue a long-term dividend target payout ratio with a fairly standardized speed of adjustment in developed markets, some studies conducted in emerging markets shows different findings. This study examines dividend policy behavior in Vietnamese stock market, an emerging stock market without mandatory dividend payment using fixed effects regression for panel data. The research findings indicate that firms in Vietnamese stock market have stable dividend policy behavior which is in line with Lintner (1956) and Fama and Babiak (1968) and inconsistent with by Adaoglu (2000) and Glen (1995).

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