FACTORS AFFECTING FIRM'S PROPENSITY TO PAY DIVIDENDS: EVIDENCE FROM VIETNAMESE LISTED COMPANIES

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Abstract:

Focusing on non-financial listed firms on Ho Chi Minh Stock Exchange of Vietnam, we examine factors that affects firms' propensity to pay dividends during 2009-2015. Our results suggest that small firms incline towards dividends as a signal of good performance to investors to raise more equity. In addition, dividend policies are not stable over time and the smoothing effect dividend policies are less apparent. Moreover, foreign investors have little power in monitoring managers so they use dividend as a tool to control for the agency problems and mitigate free cash flow problem. Overall, the agency theory, signaling theory and life cycle hypothesis are found to help explain main factors affecting firms' dividend policies

Keywords: Dividend policies, the agency theory, signaling theory, life cycle hypothesis

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1. Introduction

Dividend policy refers to the payout policy that a firm distributes cash to its shareholders overtime (Baker, Singleton & Veit 2011). With the existence of a perfect market, Miller and Modigliani (1961) proposed that dividends are irrelevant to firm value. Put differently, the decisions of whether firms pay dividends have no effect on the stock price. Thus, dividend policy does not affect the investment decisions of investors. However, if dividends are irrelevant, why some firms still pay dividends to their shareholders? Apart from capital gain, dividend is another important source of income to shareholders. It can be said that if risk-loving investors prefer capital gain, risk-averse investors are keen on dividends. Therefore, the importance of dividend varies upon different types of risk-taking investors. Despite the irrelevance propositions by Miller and Modigliani (1961), researchers have attempted to find the reasons behind firms' paying dividends. In other words, factors affecting corporate dividend policy have been investigated from different perspectives for many decades. Nevertheless, no consensus conclusion has been reached.

Since the existing research on dividend policy is mostly conducted in the US and developed market (Richard, Guney & Thanatawee 2014), researchers have recently started looking at corporate dividend policy in emerging market and have increasingly recognized that dividend policy may be affected by the international context in which it is applied. Black (1976) found out substantial differences in dividend policy between developed and emerging capital market. For instance, in developing countries, it is argued that banks dominate financial systems and control the financing channels of firms. In this context, with direct communication and regular visiting, creditors and shareholders are

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able to access the confidential information of firms which limits the signaling power of dividend payment. To overcome this challenge, it is suggested that researchers should consider the specificities of emerging countries before developing an adequate model.

In a recent study by Jian & Khoa (2014), they pointed out that the efficiency of Vietnam stock market is in the weak-form which is a relatively popular form of emerging stock markets all over the world. They also highlighted that herding is quite popular in the Vietnamese stock market when investors tend to make investment decisions based on others' suggestions rather than their own analysis. In addition, Tran (2011) stated that the asymmetric information problem in Vietnamese stock market was the result of weak information disclosure system, unhealthy competition among securities companies and inside information leaking. Obviously, with the imperfect stock market as Vietnamese stock market, Modigliani and Miller's dividend irrelevance propositions do not hold.

The objective of this research is to examine factors affecting the propensity of Vietnamese firms' paying dividends. In other words, this study analyses the determinants of firm's dividend payout ratio. These determinants are supported by relevant theories by testing four dividend theories including: the agency theory, the bird-in-the-hand theory, the signaling hypothesis and the life-cycle theory. We focus on Ho Chi Minh stock exchange HOSE – one of the two largest stock exchanges in Vietnam. Our research findings are expected to bring more evidence on firms' propensity to pay dividends as well as factors that affect the dividend policy of Vietnamese firms.

The data used in this research is collected from Stoxplus database including non-financial listed companies on Ho Chi Minh Stock Exchange (HOSE) of Vietnam. The research period covers 7 years from 2009 to 2015. The final sample consists of 2009 firm-year observations of 287 listed firms on HOSE (excluding financial firms).

Using panel data and fixed effect model, our study shows evidence firm size has negative partial impact on that dividend payout ratio. This result indicates that small firms have more difficulty in raising equity than large firms; therefore, they tend to use dividends as a signal about their performance and pay more dividends to their investors than large firms. Furthermore, our study documents a significant positive relationship between foreign ownership and dividend payout. Consistent with the prior studies of Baba (2009) and Ly and Bay (2015), this finding indicates that foreign investors did not have enough power and information to monitor the managers. As a result, they incline to dividend policy as the way to reduce the free cash flow problem. In addition, we find that some other firms also pay out more than 100% of their net income although net income falls significantly during the fiscal year; companies still maintain the same payout ratios. The result implies that dividends are important to Vietnamese investors and that companies want to keep a stable dividend policy to avoid sending out negative signal to investors and to avoid negative clientele effect.

The rest of the paper is organized as follows. Section 2 presents the literature review about dividend theories and summarises the previous studies about the determinants of the dividend. Section 3 describes the data collection and model specification. Section 4 discusses the research findings and presents the robustness tests and results. Finally, Section 5 presents conclusions, recommendations and the limitation of this study.

2. Literature review and hypotheses development

The literature on determinants of dividend policy began with paper of Lintner (1956) in which he found the changes in earnings and existing dividends rates are the

most important determinants of a company's dividend decision. Since then, hypotheses about dividend policy are divided into two main schools of thoughts. While the Modigliani and Miller theorem stated that dividend policy has no effect on the decision making of investor, the bird-in-the-hand theory stated that dividends are relevant to determine the value of the firm as risk-averse investors prefer dividends. Other theories also attempt to explain firms' propensity of paying dividends including: the tax-preference theory, the agency cost hypothesis, the signaling hypothesis and the life-cycle theory. In this study, we focus on some main factors that have been widely used in previous research such as firm size, financial leverage, growth opportunities, profitability, liquidity, past dividend, free cash flow and ownership structure to examine the factors affecting Vietnamese's listed firms' propensity to pay dividends. Table 1 in the Appendix summarises the formulas used to calculate independent variables, supported theories and the expected relationship signs between dependent and independent variables.

2.1. Firm size

Firm size is documented as one of the important factors affecting dividend policy despite contradicting findings of the nature of this impact. In the life-cycle theory, it implied that large and mature firms which have high free cash flow tend to pay dividends more often than the small ones. A large number of studies investigated the relationship between distributed cash dividends and the size of the firm but no consensus was achieved (Baker et al., 2007; Jakob & Johannes, 2008). Jensen and Meckling (1976) argued that managers have greater control over larger firms where ownership is more dispersed and shareholders have low incentive and ability to monitor. Thus, the level of agency problems and information asymmetry rise. As an alternative solution, a high dividend payout ratio would help these firms send positive signals about the future prospects of the firm, the good faith of management, and share the firm's profit to their shareholders (Lloyd, Jahera & Page 1985; Sawicki, 2005). External finance from financial markets provides investors with a chance to closely examine the businesses and dividend payout can help monitor indirectly the performance of managers in the large firm.

Al-Kuwari studied nearly 200 firms in the Gulf Co-operation Council countries from 1999 to 2003 and found that firm size was a statistically significant determinant of dividend policy. In fact, firm size was positively related dividend payout ratio. The study discussed that the alternative explanation of this positive impact might be related to the fact that large firms were easier to access capital markets, and had the ability to raise funds with lower issuance costs for external financing (Al-Kuwari, 2009). This positive relationship between dividend payout policy and firm size is also supported by a growing number of other studies (Eddy & Seifert, 1988; Jensen, Solberg & Zorn, 1992; Redding, 1997; Holder, Langrehr & Hexter, 1998; Al-Malkawi, 2007; Manos, 2002; Mollah, Keasey & Short, 2002).

On the contrary, other studies show that the low dividend payment of small firms is due to the high transaction cost they have to bear if they need to raise fund externally (Holder, Langrehr & Hexter 1998). Because of the lack of diversification of production and distribution, small firms face more financing restrictions in comparison with large firms (Behr & Guttler, 2007). This inaccessibility and high cost of external financing limit small firms' ability to pay dividends and make them more inclined to retain these funds to finance their future growth.

However, several studies confirm a negative relationship between dividend payout ratio and firm size. For example, while investigating 320 non-financial firms listed on

Karachi Stock Exchange in Pakistan, Hafeez Admed (2012) found that large-sized firms prefer investing in their assets to paying dividends to their shareholders. Talat (2010), found similar results to Hafeez's research, suggested that large companies try to save more cash for reinvesting in assets, whereas, small companies, having little access to external debt market, try to improve their ability to raise funds by paying dividends to accumulate required sum of money from issuance of equity shares at better price (Talat 2010). Moreover, it is argued that the bigger the size of the firm, the greater the publicly available information about the firm is, which leads to the lower of the information asymmetry (Eddy & Seifert, 1988). Hence, the signaling power of dividend decreases with the increase in firm size, which would discourage firms from paying dividends. This discussion allows us to formulate the first hypothesis as follows:

H1: The positive relationship between dividend payout ratio and firm size is supported by the life-cycle theory/the agency theory. Meanwhile, the negative relationship between dividend payout ratio and firm size is supported by the signaling theory.

2.2. Financial leverage

A survey on CEOs and managers about the determinants of their dividend decision making show that capital structure has influence on dividend policy (Baker, Veit & Powell, 2001). Since firms with high debt are more likely to be financially constrained and should be less able to pay dividends, a negative relationship between financial leverage and dividend payout policy is expected. It is explained that firms with a high level of debt prefer to cut dividends, voluntarily or under creditors' pressure, to maintain cash needed to fulfill their obligations toward corporate debt-holders (Afza & Hammad 2011; Agrawal & Jayaraman 1994; Faccio, Lang & Young 2001). In addition, the increase in firms' riskiness due to the use of more debt raises their external financing costs (i.e. interest rate) and makes them more dependent on retained earnings. Therefore, financial leverage is negatively related to dividend payouts (Al-Twaijry, 2007; Crutchley & Hansen, 1989).

Another strand of literature argue that debt is another mechanism used to reduce the agency costs of free cash flow because debt allows creditors to have more control and monitoring power over the managers who are under pressure to meet debt obligations by improving organizational efficiency and eliminating negative NPV projects (Agrawal & Knoeber, 1996; Fleming, Heaney & McCosker, 2005; Jensen & Meckling, 1986). In fact, debt can substitute for dividends in reducing information asymmetry and agency problems. Therefore, if the signaling power of dividends is limited in firms with a high level of debts, these firms will have less incentive to pay dividends in comparison to less levered firms (Imad, 2016).

In the study of Al-Kuwari (2009), he also found the strong negative relationship between leverage ratio and dividend payout ratio. The reason for this negative relationship is that highly levered firms carry a large burden of transaction costs from external financing, hence, firm need to maintain their internal sources of fund to meet their obligations. However, Ayub (2005) reasoned that there is a probability that debt has no effect on the dividend policy in the countries that the public debt market is not well organized. Based on above arguments, the following hypothesis is formulated for further investigation as follows:

H2: There is a negative relationship between financial leverage and dividend payout ratio (supported by the agency theory/free cash flow hypothesis).

2.3. Growth opportunities

The signaling theory predicts a positive relationship between dividend increases and subsequent investment growth as dividend payout is the reflection of firm's future prospect. In practice, the survey conducted on Canadian managers about how they set dividend policy also found evidence that investing, financing and dividends decision should be consistent and dependent on each other (Baker, Dutta & Saadi, 2008). Partington (1983) showed that a firm's motivation to pay dividends and the amount of the dividend payouts highly depended on its investment and growth opportunities. However, based on the life-cycle theory, slow or non-growth firms tend to pay high dividends at the mature stage, while small and medium firms with huge growth opportunities keep a high level of retained earnings to reinvest. As a result, growth opportunities have negative impacts on the dividend payout policy. This hypothesis is supported by various studies (see Alli, Qayyum & Ramirez, 1993; Kanie & Bacon, 2005; Baker & Powell, 2012 and Imad, 2016).

On the other hand, it is argued that the negative relationship is only valid in countries with strong legal protection of shareholders. In fact, if the shareholders feel insecure and doubtful about their rights to share the firm's future profits, they will prefer to receive current earnings rather than receive capital gain in the future (La Porta et al., 2000). Hence, they will put pressure on the firm to pay dividends, regardless of the growth opportunities available. The level of investor protection and adequacy of governance mechanisms differ among the investigated countries, which complicated the nature of the relationship between dividend payout and growth opportunities. Therefore, our next hypothesis is presented as follows:

H3: Growth opportunities have a positive impact on dividend payout ratio (supported by the signaling theory) and a negative impact on dividend payout ratio (supported by the life-cycle theory).

2.4. Profitability

The free cash flow hypothesis indicated that the profitability has a positive relationship with the dividend payout ratio of the firms. Empirical studies also document a consistent positive link between profitability and dividend payouts (Jensen, Solberg & Zorn, 1992; Fama & French, 2000; Baker & Jabbouri, 2016). Nevertheless, Glen et al. (1995) pointed out that dividend policies vary between developed and developing countries. Dividend payout rates in developing countries are approximately two-thirds of those in developed countries (Glen et al., 1995). Moreover, companies in emerging countries do not follow a stable dividend policy but base their decision on the profitability in the current years. For instance, research on the Indian market reveals the importance of current earnings on setting dividend policy (Bhat & Pandey, 1994). With the same profitability, there are also differences between dividend payout in countries with strong legal protection for shareholders and those in countries without. In the research conducted by Wang et al (2002), there were significant differences between the United Kingdom which had strong legal protection for shareholder and China, which did not have. The results showed that United Kingdom companies had stable dividend policies while Chinese companies had unstable dividend policies as the investors in China put pressure to the managers to share profit of the firms by dividend rather than by capital gain. In the developing countries, any changes in profitability were directly reflected on the cash dividend. A similar result was reported by Pandey (2001) for Malaysian firms.

However, the research about the determinants of dividend policy of Polish listed companies showed evidence that there is a significant negative relationship between the profitability of the firm (ROE) and dividend payout ratio (DPO). This can be explained from the angel that Polish companies use their profits as capital sources and therefore, are less likely to pay dividend. This difference may stem from the characteristic of the country itself as Poland is a developed country which has a well-organized stock market and a strong legal protection for shareholders.

In Vietnam, there are many studies show that firms' profitability has positive relationship with dividend payout ratio. In the study of 95 companies from 2008 to 2013, Ngoc and Cuong (2014) revealed that profitability (measured as return-over-asset ratio) has positive impact on the dividend decision with 1% level of significance. Profitability can be measured as return on assets (ROA) or return on equity (ROE). This study will use ROE as a proxy for profitability as it reveals the lucrativeness of companies by comparing its net income to its average shareholders' equity. The higher the ratio, the more efficient management is in running the business and the better return is to investors. Therefore, our hypothesis is:

H4: There is a positive relationship between profitability and dividend payout ratio.

2.5. Liquidity

Liquidity measures the ease at which an individual or company can meet their financial obligations with the liquid assets available to them. There are several ratios that express accounting liquidity, but in this research, we use the current ratio as a proxy for the liquidity of the companies.

Liquidity is also perceived as an important factor that affects firms' propensity to pay dividends. With a shortage of cash, dividend will not be paid even if the income statement, based on the accrual basis of accounting, reflects a decent profitability. Prior studies reported that corporate dividend policy is highly dependent on the firm's cash position rather than earnings (Anil & Kapoor, 2008; DeAngelo, DeAngelo & Skinner, 2004). Using a sample of industrial firms in New York Stock Exchange and American Stock Exchange, Deshmukh (2003) documents a positive relationship between dividend payout ratio and cash position. Moreover, in a recent research of Japanese firms, Kato et al. (2002) conclude that changes in dividend policy are mainly due to alternations in firms' liquidity. Based on these above-mentioned arguments, it can be hypothesized that:

H6. Liquidity is positively related to dividend payout ratio of the firm.

2.6. Past dividend

Since the early stage of the studies on dividend policy, researchers have addressed the role of past dividend in setting the current dividend policy. Lintner (1956) surveyed 28 managers in the United States and concluded that past dividend is a key factor that influences dividend policy. He pointed out that United States firms largely pursued a stable dividend payout ratio. Managers are reluctant to cut cash dividend as it will have negative impacts on the trust of investors and only raise the dividend payout ratio if there are positive and potential prospects. Recently, research has provided substantial evidence that a stable dividend policy, consistent with smoothed dividends per share, is more common in developed countries (Chateau, 1979; Leithner & Zimmermann, 1993). Various studies that tested Lintner's findings in different markets and over many periods endorse

this finding and conclude that past payment affected current dividends. For instance, in the USA, a survey of 562 firms listed in New York Stock Exchange (Farrelly, Baker & Edelman, 1986) and 318 firms listed in NASDAQ (Baker, Veit & Powell, 2001) confirmed the importance of past dividend pattern and reported managers' inclination to smooth dividend growth.

However, several studies show that in developing markets current dividend payment is independent from its historical pattern and the smoothing effect is less apparent. Since current dividend is based mostly on current profitability, the dividend payment is unstable over the years (Glen et al., 1995). In China, Wang et al. (2002) contend that firms do not follow a stable dividend policy. These firms focus on same year's profitability to determine current dividends with no regard to its variability from past payments. In the same line of research, Adaoglu (2000) conducted a study to investigate dividend policy in Istanbul Stock Exchange (ISE) and asserted that dividend policy is independent of its historical pattern and do not follow a stable dividend policy.

In Vietnam, although the stock market is still developing, the research in firms listed in Ho Chi Minh Stock Exchange showed that past dividend has a positive relationship with dividend payout policy (Ngoc & Cuong, 2014; Ly & Bay, 2015). These results are consistent with Lintner (1956) which indicated that managers tend to have a stable dividend policy over years. Thus, following the main stream of research results, our hypothesis is as follows:

H5. There is a positive link between past dividend and dividend payout ratio.

2.7. Free cash flow

Free cash flow is a measure of financial performance of the company. It represents the cash which is available for firms to generate after laying out the required money to maintain or expand their asset bases. Free cash flow is important because it allows a company to pursue the opportunities that enhance shareholder value. Without cash, it is tough to develop new products, make acquisitions, pay dividends and reduce debt.

In the early stage, free cash flow was considered as an important factor influencing the reason why firm had to pay dividends. Jensen & Meckling (1986) suggested that dividend was used to mitigate agency cost of free cash flow. Moreover, in their seminal work on the free cash flow hypothesis, the agency problem between insiders and minority shareholders increases as the level of free cash flow increases (Jensen & Meckling, 1986). In an attempt to serve their goals, managers spend excessive cash on projects with negative present values, which decreases shareholders' wealth. A number of studies demonstrate that paying high dividends can be used to lessen agency costs and mitigate information asymmetry problems through the reduction of discretion funds that could be expensed on value-destroying projects (Imad 2016). For instance, using a sample of large and medium corporations in Sweden, Gustav and Gairatjon (2008) found that free cash flow has a positive relationship with dividend policy. Sawicki (2008) showed that using free cash flow to pay dividends was an efficient tool to build or improve the firm's reputation in the emerging countries since the firms paying dividend was considered to be less risky and could lower agency problems.

However, using the sample of firms listed in MENA countries, Imad (2016) showed that free cash flow had a surprisingly negative relationship with dividend payout policy. He argued that in the context of emerging countries, where markets are characterized by the absence of corporate governance mechanisms, high information asymmetry, weak

legal institutions, and managerial expropriation of shareholders, dividend payments are expected to increase with the decrease of free cash flow. Since Vietnam has similar features as compared with MENA countries in the study by Imad (2016), thus, our hypothesis is formulated as follows:

H7. There is a negative relationship between free cash flow and dividend payout ratio

2.8. Ownership structure

The agency theory implies that ownership structure can affect the dividend payout policy because dividend can be used as a tool to reduce the agency problem and information asymmetry. Many empirical studies pointed out there were various trends in dividend policy among companies with different ownership structure. For example, Kevin et al. (2012) found that the portion of shares held by foreign investor in China had an inverse relationship with cash dividend. They imply that foreign investors are capable of monitoring the managers, thus, they do not need a tool as dividend payout for monitoring purpose. On the contrary, Baba (2009) indicated that the portion of shares held by foreign investors had a positive relationship with the dividend payout policy. The author argued that when foreign investors did not possess enough power and ability to monitor the managers, they tend to use dividend policy as the way to reduce the free cash flow problem. In addition, Kevin et al. (2012) highlighted that there is a positive relationship between the portion shares held by government and the dividend payout ratio. They also added that those firms that have major shares held by the government tend to have a stable dividend policy and a high payout ratio.

It would be interesting to examine the ownership structure as a determinant of firms' propensity to pay dividend policy in Vietnam as the government outweighs foreign investors in firms' ownership structure. In the research about the relationship between ownership structure and dividend policy in Vietnam, Ly and Bay (2015) found a positive relationship among the portion of shares held by foreign investors and government and dividend payout policy. Based on prior studies, our hypotheses are presented as follows:

H8. There is a positive relationship between portion of shares held by foreign investors and dividend payout ratio

H9. There is a positive relationship between portion of shares held by government and dividend payout ratio

3. Data collection and model specification

3.1. Data collection

The data used in this study was extracted from StoxPlus database including non-financial listed firms on Ho Chi Minh Stock Exchange of Vietnam. Banks and financial institutions were excluded from this analysis due to their special financial structures, accounting methods and governance. The research period covers from 2009 to 2015. The sample includes both dividend and non-dividend paying firms since the exclusion of the non-dividend paying firms from the analysis may lead to a selection bias. The final sample consists of 2009 firm-year observations from 287 listed firms during the period of 2009 to 2015.

3.2. Variable construction

The dependent variable is dividend payout policy measured as dividend payout ratio. The choosing of the dependent variable is based on prior analyses (Hafeez & Attiya, 2012 and Imad, 2016). Using dividend payout ratio as the dependent variable has many advantages in conducting this research, especially in the comparison process with previous research's result. The variable is measured as follow:

$$Dividend\ payout\ ratio = \frac{Dividends}{Net\ Income}$$

Independent variables are constructed based on the formulas as listed in Table 1.

Table 1: The formulation of variables

Variables	Formula	Supported theories	Expected sign
Firm Size (Size)	$\ln(Total\ Assets)$	The life-cycle hypothesis	(+) / (-)
Financial Leverage (Leverage)	$\frac{\text{Total book value of debt}}{\text{Total value of assets}}$	The life-cycle hypothesis	(-)
Growth Opportunities (Growth_rate)	$\frac{Total\ asset_t - Total\ asset_{t-1}}{Total\ asset_{t-1}}$	The Signaling Theory	(+) / (-)
Profitability (ROE)	$\frac{\text{Net profits}}{\text{Shareholders equity}}$	The Signaling Theory	(+)
Past Dividend (Past_div)	$\frac{Div.pay.ratio_t + Div.pay.ratio_{t-1}}{2}$	The Signaling Theory	(+) / (-)
Liquidity (Liquidity)	$\frac{\text{Curent asset}}{\text{Current liabilities}}$	The life-cycle hypothesis	(+)
Free Cash Flow (FCF)	ln(Profits + Depreciation & Amortization – ΔWorking Capital – Capital Expenditure)	The agency theory	(-)
Foreign Investors (Foreign_own)	$\frac{\text{Number of foreign shares}}{\text{Total outstanding shares}}$	The Agency Theory	(+)
Government (State_own)	$\frac{\text{Number of government shares}}{\text{Total outstanding shares}}$	The Agency Theory	(+)

3.3. Model specification

Many studies have pointed out that the disadvantage of using the OLS model in panel data structure. For detail, the OLS model ignores the systematic differences between cross-section units (firm-specific effects) and over time. Consequently, the regression results may be biased and inaccurate. On the other hand, fixed effect (FE) model is a standard approach to account for unit-specific effects. The idea is that each entity has a specific feature that may affect independent variable, the fixed effect model investigates this feature to control and separate this, and therefore, the regression result reflects the net effects of the independent variable on the dependent variable. Moreover, the fixed effect model can solve the problem omitted variable bias. Therefore, fixed effect model is used as the main model in this study in order to examine the impacts of size, leverage, growth opportunities, and profitability, past dividend, liquidity, free cash flow and the ownership structure on dividend payout ratio. The FE model is presented as follows:

$$\text{Div\_payout}_{it} = \alpha_1 \text{Size}_{it} + \alpha_2 \text{Leverage}_{it} + \alpha_3 \text{Growth\_rate}_{it} + \alpha_4 \text{ROE}_{it} + \alpha_5 \text{Liquidity}_{it} + \alpha_6 \text{Past\_div}_{it} + \alpha_7 \text{FCF}_{it} + \alpha_8 \text{ State\_own}_{it} + \alpha_9 \text{Foreign\_own}_{it} + \sum_i \beta_i F_i + \sum_t \delta_t T_t + u_{it}$$

Where:

the index i denotes a firm, t denote a year; Size is the firm size and is calculated as ln(total assets); Leverage is calculated as total debt/total assets; Growth rate is measured as (total asset at time t – total assets at time t-1)/total assets at time t; ROE denotes profitability and is calculated as net profit/shareholders' equity; Liquidity is measured as current assets/current liabilities; Past dividend is calculated as (dividend at time t + dividend at time t-1)/dividend at time t; FCF denotes free cash flow and is measured as ln(Operating Profits + Depreciation & Amortization – ΔWorking Capital – Capital Expenditure); Ownership structure is captured by two proxies as state_own and foreign_own in which state_own is measured as number of government shares/total number of outstanding shares and foreign_own is calculated as number of foreign shares/total number of outstanding; Fi and Tt are dummy variables for firm- and time-fixed effects, respectively.

4. Empirical findings

4.1. Data analysis and descriptive statistics

As we can see from Table 2, the number of companies paying dividend increases from 159 firms in 2009 to 205 firms in 2010 and then decreases gradually over 7 years to 102 companies in 2015. This decreasing trend in dividend payout ratio of companies listed on HOSE may stem from the condition of the whole economy. The global financial crises, which started from the U.S in 2008 and widespread all over the world, also affected Vietnamese economy. Vietnamese economy experiences a recession from 2011 to 2014 with a rise of inflation, interest rate, the fluctuation of oil and gold prices. A lot of companies face difficulties in operating their businesses. With a decrease in both revenue and income, it is inevitable that these companies have to cut down the dividend payout and retain their profit for future reinvestment.

Table 2: Number of firms paying dividends and payout ratios from 2009 to 2015

Year	No. of Obs.	No. of firms paying div	Highest	Lowest	Mean	Median	S.D
2009	288	159	4.50	-0.18	0.28	0.16	0.43
2010	288	205	206.27	0.00	1.16	0.44	12.14
2011	288	175	3.59	-1.26	0.39	0.35	0.44
2012	288	166	72.51	0.00	0.63	0.34	4.27
2013	288	171	8.81	-9.95	0.39	0.37	0.90
2014	288	170	7.52	0.00	0.42	0.36	0.67
2015	288	102	113.25	0.00	0.55	0.00	6.67

However, despite the economic recession, dividend payout ratio varies between 28% and 116% during the research period. Many companies maintain paying dividends at a very high rate with the expectation of raising more capital from the stock market. The high dividend payout ratios show the fact that investors consider dividends as their important income. They consider firm paying dividends as a signal of firms' good performance. As a result, despite a decrease in revenue and income, listed firms on HOSE try to maintain a certain dividend payout ratios to satisfy their shareholders. This is consistent with signaling theory and clientele effects.

From Table 2, we can also see some exceptional cases of dividend payout ratios. In 2009, 2011 and 2013, the lowest dividend payout ratios are -0.18, -1.26 and -9.95%, respectively. This finding documents that although some firms made a net loss in these years, they still paid a percentage of dividends to shareholders. These firms are able to pay dividends because they have a large amount of retained earnings and available cash which were accumulated in the previous profitable periods. For example, in 2013, Pan Pacific Limited Company (PAN) paid out to their shareholders VND 17 billion of dividends which were extracted from their retained earnings of VND 77 billion. Having a large retained earnings balance allows company to maintain a constant and consistent dividend policy. The stable dividend policy makes their stocks more attractive to the investors.

On the other hand, it can be seen from the table that in 2010 and 2015, the highest dividend payouts are 206.27% and 113.25%, respectively. The unexpectedly high dividend payout ratio might be the result of mergers and acquisitions. For example, in the beginning of 2015, after selling 80% of shares of Kinh Do Binh Duong to the foreign companies, Kinh Do announced the dividend payment with the rate of 200% - the highest number since the establishment of HOSE. Another reason to explain for more than 100% dividend payout ratios is that although net income falls significantly during the period, companies still maintain the same payout ratios. This is because companies want to keep a stable dividend policy to avoid sending out negative signal to investors and to avoid negative clientele effect.

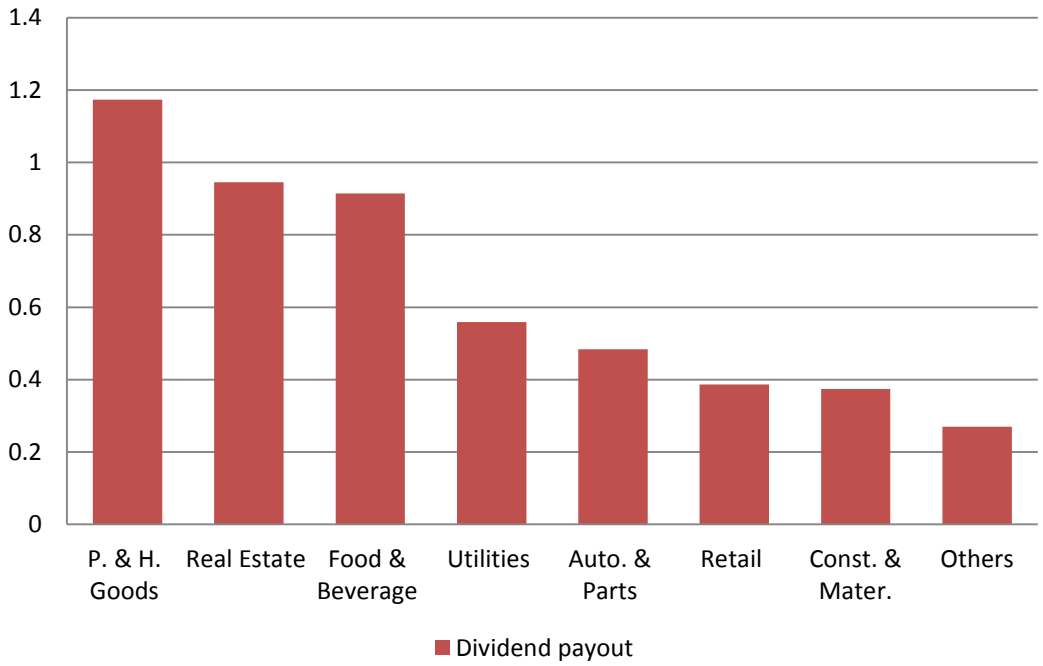

Figure 1: Average dividend payout ratio for each industry from 2009 to 2015

Figure 1 categorises average dividend payout ratios for each industry during the research period. As we can see, the firms in personal & household goods industry pay the highest cash dividend to their shareholders, which accounts for roughly 117%. Real estate and construction and materials industries are the second and the third highest dividend payout industries, which accounts for are 94.53% and 91.42%, respectively. The industries which have lowest average dividend payout rates are travel and leisure, oil and gas and basic resources with the payouts ranging from 19% to 25%.

Table 3: Descriptive statistics of variables

Variable	Obs	Mean	S.D	p25	p50	p75
Div_payout	2009	0.32	0.34	0.00	0.25	0.62
State_own	1701	22.30	25.10	0.00	0.11	0.50
Foreign_own	2009	10.75	14.15	0.26	3.92	16.54
FCF	1522	25.82	1.54	24.99	25.75	26.68
Leverage	1960	0.50	0.22	0.33	0.53	0.67
Liquidity	1534	1.84	0.78	1.21	1.59	2.24
ROE	2009	0.14	0.11	-0.05	0.13	0.20
Size	2009	27.76	1.27	26.78	27.61	28.50
Growth_rate	2009	0.16	0.21	0.00	0.11	0.29
Past_div	2009	0.34	0.32	0.00	0.33	0.58

Note: Div_payout is dividend payout ratio and is measured as dividend/net income; Size is the firm size and is calculated as ln(total assets); Leverage is calculated as total debt/total assets; Growth rate is measured as (total asset at time t – total assets at time t-1)/total assets at time t; ROE denotes profitability and is calculated as net profit/shareholders' equity; Liquidity is measured as current assets/current liabilities; Past dividend is calculated as (dividend at time t + dividend at time t-1)/dividend at time t; FCF denotes free cash flow and is measured as ln(Operating Profits + Depreciation & Amortization – ΔWorking Capital – Capital Expenditure); Ownership structure is captured by two proxies as state_own and foreign_own in which state_own is measured as number of government shares/total number of outstanding shares and foreign_own is calculated as number of foreign shares/total number of outstanding.

Table 3 provides descriptive statistics of the data. From 2009 to 2015, the average dividend payout ratio of listed companies on HOSE is 32.3%. The max dividend payout ratio is 98% while the min ratio is 0% which indicates that some companies do not pay dividends to their shareholders. The mean of ROE is quite similar to the average growth

rate of total assets, which is around 14.5%. Regarding the ownership structure, there is a significant gap between the percentage of shares held by the government and foreign investors. While the average government ownership is around 22.3%, the foreign investors' shares account for nearly 11% of the total capital of listed companies on HOSE. Leverage ratio varies around 50% and the liquidity of companies is around 1.84.

4.2. Research results

4.2.1. FE regression results

Table 4 reports the fixed effect regression results. We document a negative relationship between firm size and dividend payout ratio at 10% level of significance. This negative relationship implies that large companies tend to pay lower dividends while small companies tend to pay higher dividends to their shareholders. This result contradicts most of the studies of which positive relationship between firm size and dividend payout ratio is found (Eddy & Seifert, 1988; Jensen, Solberg & Zorn, 1992; Redding, 1997; Holder, Langrehr & Hexter, 1998; Al-Malkawi, 2007; Manos, 2002; Mollah, Keasey & Short, 2002). However, our result is consistent with studies by Talat (2010), Hafeez Admed (2012). The negative relationship between firm size and dividend payout ratio can be explained from two perspectives: (i) large firms prefer to invest in their assets rather than pay out as dividends. Whilst, small firms pay out dividends with the expectation of raising more funds from capital market; (ii) signaling power of dividend decreases with the increase of firm size, therefore, large firms are discouraged from paying dividends.

Table 4: Regression results

	FE model	RE model	OLS model
Size	-0.018*	-0.007	-0.007
	(0.010)	(0.437)	(0.446)
Leverage	0.001	-0.092**	-0.092**
	(0.881)	(0.047)	(0.034)
Growth_rate	0.118	0.053	0.053
	(0.358)	(0.153)	(0.170)
ROE	0.011	0.194***	0.194***
	(0.650)	(0.004)	(0.067)
Liquidity	-0.008	-0.007	-0.007
	(0.504)	(0.512)	(0.463)
Past_div	-0.012*	0.882***	0.882***
	(0.000)	(0.000)	(0.000)
FCF	-0.002	0.003	0.003

	(0.462)	(0.671)	(0.670)
State_own	-0.069	0.006	0.006
	(0.586)	(0.803)	(0.810)
Foreign_own	0.127***	-0.001*	-0.001
	(0.058)	(0.096)	(0.112)
Constant		0.179	0.179
		(0.285)	(0.295)
R-squared	0.48	0.67	0.67
Firms	254	254	254
Observations	1116	1116	1116

*Note: ***, **, * are significance levels at 1%, 5% and 10% level, respectively. Firm and time fixed effects are omitted in this table*

In Vietnam, small companies have difficulty in raising funds from the public market as the investors are likely to invest in large and long-established companies (blue chip stocks). Thus, in order for small companies to raise capital from equity issuance, they tend to pay more dividends to shareholders to attract more investors. Put differently, high dividend paying small firm tend to target on investors who prefer dividends as the main income. Moreover, it is argued that the bigger the size of the firm the greater the publicly available information about the firm and the lower the information asymmetry (Eddy & Seifert, 1988). Therefore, dividend payout of large firms does not convey much information about firms' performance in comparison with small firms. Nevertheless, the coefficient is quite small (-0.12) which indicates firm size has little partial impact on dividend payout ratio. In other words, the negative relationship between firm size and dividend payout ratio has little economic significance.

We also document the negative relationship between past dividend and dividend payout ratio, which is significant at the 10%. Our finding indicates that past dividend has negative partial impact on current dividend payout. However, the coefficient is quite small (-0.02), which implies that this relationship has no economic meaning. Put differently, current dividend payout does not depend on past payment and dividend policy is not stable over time. Eventually, the smoothing effect of dividend policy is less apparent. This result contradicts our hypothesis and previous international studies (Lintner 1956; Chateau 1979; Leithner & Zimmermann 1993; Baker, Veit & Powell 2001; Farrelly, Baker & Edelman 1986). Our finding also contradicts the previous studies on Vietnam stock market (Ly & Bay 2015; Ngoc & Cuong 2014). However, this finding is consistent with Glen et al., (1995), Adaoglu (2000) and Wang et al. (2002)

Moreover, our study shows evidence on a positive relationship between foreign ownership and dividend payout with significance level at 1%. This result is consistent with not only our hypothesis but also the prior studies (Baba, 2009; Ly and Bay, 2015). Our finding indicates that foreign investors did not possess enough power and ability to monitor the managers. Hence, they tend to use dividend policy as the way to reduce the free cash flow problem. Previous research also suggests that the outsiders, with the

limitation of information, should use dividend policy as a tool for monitoring the business performance of the company (Ly & Bay 2015; Kevin et al, 2012). Our result supports the agency theory in the way that it confirms dividend policy as a tool to reduce the agency problem and asymmetry information. This finding contradicts with the finding of the research by Kevin et al. (2012), in which they found the negative relationship between foreign ownership and dividend payout ratio in China. Although Vietnam and China share the similarity as the emerging markets, the foreign investors in China have more powers and stronger influence in companies' decision making. As a result, foreign investors are not inclined to dividend as a tool to monitor managers and control for agency problem.

With regards to other determinants of firms' propensity to pay dividends, our findings show that only growth rate has a positive partial impact on dividend payout ratio while state ownership, free cash-flow, leverage, liquidity, ROE have negative partial impact on the dividend payout policy. However, these results are statistically insignificant; therefore, we cannot come into any further conclusions about these determinants.

The R squared of the model is 0.48 which indicates the goodness of the model. Put differently, independent variables can explain 48% dependent variable. The results are robust for heteroskedasticity using Huber-White sandwich estimator.

4.2.2. Robustness tests and results

In this study, we use the Modified Wald test to find out whether there is the sign of heteroskedasticity. We test the null hypothesis of homoscedasticity. According to the result of the test, the Prob > chi2 = 0.000 <0.05, so we reject the null hypothesis of homoscedasticity. In other words, there is a presence of heteroskedasticity in our model. To control for heteroskedasticity in our model, we run the robust option for fixed effect model. As a result, our findings are controlled for heteroskedasticity using Huber-White sandwich estimator.

As for multicollinearity, we constructed a correlation matrix of all independent variables used in this research (see Table 5). The result showed that the correlations between independent variables are under 0.85; therefore, we concluded that our model is free from multicollinearity. To further confirm our result, we tested variance inflation factor (VIF) for multicollinearity. The result showed that VIF is lower than 5; thus, we came to the same conclusion.

The Wooldridge test was used to detect autocorrelation in panel data. The Wooldridge's method uses the residuals from a regression in first- to test the null hypothesis that there is no serial correlation in the model differences (Wooldridge, 2002). The test result shows that the Prob>F is 0.799 > 0.05, so we fail to reject the null hypothesis that there is no first-order autocorrelation.

In order to test the suitability of fixed effect model in comparison with random effect model, we conducted the Hausman test. The result showed that the Prob>chi2 is 0.0022 < 0.05, so we can reject the null hypothesis that the difference in coefficients not systematic. Therefore, the fixed effect model is more suitable than random effect model. In addition, the robust option was used in fixed effect model to control for the problem of heteroskedasticity using Huber-White sandwich estimator.

Table 5: Correlation matrix of variables

	State_own	Div_payout	Foreign_own	FCF	Leverage	Liquidity	ROE	Size	Growth_rate	Past_div
State_own	1.000									
Div_payout	0.130	1.000								
Foreign_own	-0.171	-0.055	1.000							
FCF	0.138	0.008	0.345	1.000						
Leverage	-0.031	-0.126	-0.260	0.025	1.000					
Liquidity	0.113	0.088	0.191	-0.012	-0.683	1.000				
ROE	0.164	0.119	0.183	0.239	-0.135	0.124	1.000			
Size	-0.049	-0.123	0.384	0.682	0.282	-0.139	0.060	1.000		
Growth_rate	-0.091	-0.014	0.104	0.002	0.134	-0.104	0.365	0.152	1.000	
Past_div	0.136	0.816	-0.048	0.013	-0.103	0.083	0.061	-0.112	-0.063	1.000

Table 4 also reports regression results using random effect and OLS regression models to compare and contrast with fixed effect regression results for robust results. It can be seen that random effect model shares similar results with OLS regressions in terms of correlation signs and coefficients.

Both leverage and ROE have significant impacts on dividend payouts. These findings are similar to the findings of Ranti (2013). Leverage is negatively related to dividend payout ratio while ROE has positive relationship with dividend payout ratio. Both RE and OLS models report a significant positive relationship between past dividend and dividend payout ratio, which contradicts with the result reported by FE model. These results imply that foreign investors have power to monitor managers and do not need to use dividend as a tool to mitigate the free cash flow problems and the agency problem. Firm size is negatively related to dividend payout ratio, which is consistent with the result reported using FE model. Nevertheless, these results are of no statistical significance.

To summarize, RE and OLS report similar results while FE model document quite different results in terms of both relationship sign and coefficients. However, the robustness test shows that FE is more suitable than RE in estimating the relationships between dependent and independent variables. Additionally, OLS regression results can be biased since a lot of modeling issues remain unresolved. For example, omitted variables problem cannot be controlled in OLS model while this problem is controlled using fixed effect model. Therefore, we use FE regression results as our final conclusions to our study.

5. Conclusions

This research examines the main determinants of firms' propensity to pay dividend in Vietnam stock market during the period between 2009 and 2015. Our research covers 287 non-financial listed companies on HOSE, making 2009 firm-year observations firms. We document a significant negative relationship between firm size and dividend payout ratio, which implies that large companies tend to pay lower dividends while small companies tend to pay higher dividends to their shareholders. Large firms tend to reinvest their net income rather than pay out as dividends. On the contrary, small firms tend to pay out more dividends to investors. Since paying dividend send signal to the investors about firms' performance, thus, in order to raise more equity, small firms tend to pay more dividends in comparison with large firms. Put differently, signaling power from dividend seems to decrease with the increase of firm size.

We also document the negative relationship between past dividend and dividend payout ratio. However, with a quite small coefficient of -0.01, this relationship has no economic meaning. Thus, past dividend payment does not have much partial impact on current dividend payout. Our finding contradicts the previous studies on Vietnam stock market (Ly & Bay 2015; Ngoc & Cuong 2014). However, this finding is consistent with Glen et al., (1995), Adaoglu (2000) and Wang et al. (2002)

Moreover, our study finds evidence on a significant positive relationship between foreign ownership and dividend payout. Consistent with the prior studies of Baba (2009) and Ly and Bay (2015), this finding indicates that foreign investors did not possess enough power and information to monitor the managers. Hence, they tend to use dividend policy as the way to reduce the free cash flow problem. As a result, the agency problem

and asymmetry information is reduced. This finding contradicts with the finding of the research by Kevin et al. (2012), in which they found the negative relationship between foreign ownership and dividend payout ratio in China.

Besides, we document some significant payout ratios up to 200%. The highest dividend payout ratio was resulted from the merger and acquisition deal by Kinh Do Corporation. Some other firms also pay out more than 100% of their net income although net income falls significantly during the fiscal year; companies still maintain the same payout ratios. This shows evidence that companies want to keep a stable dividend policy to avoid sending out negative signal to investors and to avoid negative clientele effect.

All in all, this research highlights an overview of dividend policy and its determinants of listed companies in Vietnam. From the findings of this research, dividend payout ratios are determined by firms' past dividend, size and their foreign ownership. These findings are helpful to investors who love receiving dividends. Understanding which factors affect the firms' propensity to pay dividends helps investors make rational investment decisions. Additionally, the results of this research indicate that most of Vietnamese investors prefer dividends since the managers tend to keep stable dividend payout ratios. In some cases, even when firms make losses, they still keep paying the same dividends to their investors.

Our research can be extended in the way that more determinants might be included such as managerial stock ownership and compensation, etc. The sample size can also be increased by including listed firms from Hanoi Stock Exchange (HNX) to compare and contrast with firms listed on HOSE in this research. Furthermore, dividends payout ratios vary from industry to industry, hence, a comparison between dividend payout ratios of different industries will provide various perspectives about dividend policy of companies in Vietnam.

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