



OWNERSHIP TYPE INFLUENCE ON DIVIDEND PAYMENTS IN CEE COUNTRIES

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Abstract. The present paper provides practical implications for the Central and Eastern European equity investors, who seek dividend income in addition to the capital appreciation. The insight into the dividend puzzle in the CEE companies, provided in the research, gives an overview of the dividend yields and payment stability as well as the relationship between the dividend payments and the type of ownership. Main findings of the study prove that the highest yield and the highest payout ratio are obtained in the case of strategic investor acting as a major shareholder (>10% of ownership capital). Binary logistic regression results provide the possibility to forecast whether the company will pay dividends. The typical dividend payer should not have family/management as a major investor, the ownership still should be concentrated and the investor preferably should be of local origin.

Keywords: type of ownership, location of investor, dividend payment, financial investor, strategic investor, family ownership.

JEL Classification: G11, G32, G35.

Introduction

The famous Black's (1976) quote "The harder we look at the dividend picture, the more it seems like a puzzle, with pieces that just do not fit together" precisely addresses the comprehensive issue of the dividend policies. The problems of the dividend payouts, its determinants, its stability are widely discussed in the financial management resulting in the numerous empirical and theoretical papers. Signaling theory, which gains importance within the modern capital markets, can provide certain hints for the dividend puzzle: the dividend announcements almost always are followed by the firm's price increase, while the announcements about the dividend reduction have a significant negative reaction on the stock price (Koch, Shenoy 1999; Lee, Xiao 2003; Guttman *et al.* 2007; Hussainey, Aal-Eisa 2009; Fairchild 2010). When the dividends are being initiated or raised the management signals about the quality of earnings, about earnings stability and sustainability, which is the main concern of the firm's shareholders. Financial managers deciding on the dividend increase focus on maintaining stable or increasing earnings aiming to sustain smooth

dividend stream (Lintner 1956; Skinner 2004; Brav *et al.* 2005; DeAngelo *et al.* 2006).

However, the research is mainly done on the sample of the listed companies in the developed markets and the topic of dividend seems to be under-researched in the developing countries. While the emerging markets dividend paying companies are becoming good choice for the investment portfolio due to their ability to provide higher capital growth on top of the attractive dividend yields. They also provide certain hedging during the crisis time as the emerging market stock companies to a great extent are exposed to the downturn as indicated by Bareikienė and Sūdžius (2011) in Lithuania.

Besides, according to Manu Vandenbulck (2012), at the moment the dividend yield of the emerging market stocks is 3%, which is higher than in some major developed markets such as the US at 2% dividend yield and Japan at 2.6%. Moreover, emerging market companies become more willing to attract more investors by increasing share of profits paid out – 35% currently vs. 10% in 2000. Therefore, the present research focuses on the emerging CEE countries also

because their offered products are becoming accessible and integrated in the global context (Gudonytė, Tvaronavičienė 2012).

The decision to pay dividends is a part of company's corporate policy and according to the authors' previous study, it was found out that the balance sheet strength, operating profitability, industry factor as well as the firm's size impose a significant influence on the payout ratios (Bistrova, Lace 2012). However, these factors were not able to fully explain the changes in the dividend payments.

Stein and Ginevičius (2010) analyzed the profit sharing problem depending on the business collaboration form and found out that the factors that mostly influence the profit sharing are the input balance of every member, which is expressed as the aggregate of profit (financial benefit) and the technology (intangible benefit).

The authors of the present article believe that a significant impact on the payout ratios might be also exerted by the ownership type and origin, which can be especially vital in the underdeveloped emerging markets.

The aim of the present research is to find out what type and origin of the largest shareholder are associated with the highest dividend payouts.

When speculating about the hypotheses of the study, the authors came to the conclusion that in the emerging markets the highest dividend payments might be stimulated in case of financial investors, which tend to be reluctant to invest in future developments and are eager to receive high dividends now. Moreover, foreign shareholders most probably would consider investments in the emerging market companies more willingly in case of high dividend opportunity as an additional risk hedging option. Therefore, the hypotheses of the research are the following:

H1: CEE listed companies having financial investor as a main shareholder exhibit highest dividend payout ratios.

H2: CEE listed companies having foreign investor as a main shareholder exhibit highest dividend payout ratios.

The authors employ various statistical methods such as graphical analysis, multi-factor regressions, correlation analysis, binary logistic regression analysis, to determine the most beneficial ownership structure, meaning the one which provides highest payout, for the minority shareholders.

1. Ownership Influence on the Dividend Policy

According to the agency theory, large shareholder may either minimize or exacerbate the conflicts between the stockholders and the management. Agency costs are believed to be minimized in case of managerial ownership as the management bears the same risks and rewards as other stockholders, thus, they have to consume also losses arising

from their dividend behavior. On the other hand large shareholder might be interested solely in lifting company's valuation and, therefore, neglect the interests of minority shareholder.

1.1. Managerial ownership

These circumstances lead to the belief that the dividends play a major role as a controlling mechanism to mitigate the potential corporate governance conflicts. Jensen (1986) concluded that dividend payment reduce free cash flow available to managers and, therefore, restrain them from investing in the unprofitable and too risky projects. Several studies stated the evidence of the negative association between the large managerial ownership and the dividend payments (Rozeff 1982; Mahmud, Perry, Rimbey 1995; Short, Zhang, Keasey 2002). The other side of the coin, when dealing with managerial ownership, is positive association between the dividend payouts and the managers acting as a major shareholder (White 1996; Fenn, Liang 2001), which is explained by the researchers as a way to eliminate free cash flow problem.

1.2. Institutional ownership

Substantial number of studies was conducted to discover the association between the institutional ownership and the dividend payments. Institutional investors have better ability to control the management and have greater influence on the dividend policy determination compared to the individual investors due to their size of investments and professional approach to their investments (meaning deeper analysis, constant contact with the management etc.).

Eckbo and Verma (1994) showed that institutional investors prefer free cash flow distribution in form of dividends. Short et al. (2002) showed the same positive relationship, while he observed the negative relationship between the managerial ownership and the dividend policy.

Studies on the emerging markets confirm the findings from the developed markets. Iranian companies provide an evidence of positive relationship between the institutional ownership and the dividend payments (Mehrani et al. 2011). Study on 70 Pakistani companies confirmed the positive relationship between institutional holdings and the dividend payments, while there was a negative association between the management shareholding and dividend payments (Ullah et al. 2012).

1.3. Foreign ownership

Foreign ownership is an important issue for the emerging markets companies. The association of foreign ownership and dividend payment is found to be positive as

foreign investors tend to overweight large and profitable firms, which pay high dividends as observed in Korean stock market (Chai 2010). The confirming findings were also demonstrated by Warrad *et al.* (2012), who research Jordanian companies. However, Ullah *et al.* (2012) and Abdullah *et al.* (2012), researching Pakistani and Malaysian firms, respectively, were not able to find a significant prove of foreign ownership influence on dividend policy.

2. Research Methodology

2.1. Research Design

To determine the influence of the ownership structure on the dividend policy, the authors divided all researched companies into five groups according to their ownership structure pattern. In order to be classified as a certain group the company should have an investor, which holds not less than 10% of the total share capital, and it should be the major holding. The groups were the following:

- Financial: major investor holds the company primarily for financial interest, which is share price appreciation and dividend payments. Usually these are banks, trust accounts, insurance companies, pension funds or investment holdings.
- Strategic: major stake in company’s capital is held by the company, which operates in the same industry, usually headquartered in Western Europe or US. This is very common situation in telecommunication, pharmaceuticals, and financial industry groups.
- Government: state owns significant part of the company. In this case the shares as a rule do not change the hands and the state kept its controlling stake (common in industries of strategic importance).
- Family/management: large stake of the company belongs to the private person, which usually takes active part in the company management, being member of the board or the management team. Sometimes large stakes belong to several members of the family, who exert significant influence on the corporate management.
- Free float: companies with the dispersed ownership. Stake of the largest shareholder does not exceed 10%.

Besides, the majority investors were classified according to their origin into the local and foreign investors.

The authors of the research consider two dependent variables: the dividend payout ratio, which provides with the view on the capital management policy, and the dividend yield ratio, which demonstrates shareholders’ dividend preferences. Historical data quality of the CEE companies ownership structure is relatively weak. So, it lead to using every ownership variable in the regression as the dummy variable. There were two multi-factor regressions studied:

$$DP = \beta_0 + \beta_1Size + \beta_2Fin + \beta_3Strat + \beta_4Gov + \beta_5Fam + \beta_6FF + \beta_7Local + \varepsilon, \quad (1)$$

$$DY = \beta_0 + \beta_1Size + \beta_2Fin + \beta_3Strat + \beta_4Gov + \beta_5Fam + \beta_6FF + \beta_7Local + \varepsilon, \quad (2)$$

where:

DP – dividend payout ratio;

DY – dividend yield;

β – regression coefficient, $i = 0, 1 \dots 6$;

Size – company size taken a natural logarithm of market capitalization; a control variable in the regression;

Fin – 1 in case of financial ownership, 0 – otherwise;

Strat – 1 in case of strategic ownership, 0 – otherwise;

Gov – 1 in case of government ownership, 0 – otherwise;

Fam – 1 in case of family ownership, 0 – otherwise;

FF – 1 in case of free float ownership, 0 – otherwise;

Local – 1 in case of local ownership, 0 – otherwise;

ε – error term.

The authors considered also non-linear regression approach; however it was not possible to obtain the plausible results. Therefore, the authors provide the results of linear regression only.

2.2. Research Sample

The authors studied the sample of 117 largest companies, listed on the stock exchanges of 10 Central and Eastern European countries: Czech Republic, Croatia, Slovakia, Slovenia, Hungary, Poland, Romania, Baltic States (Estonia, Latvia, Lithuania). The companies were selected based on the principle of their inclusion in the exchanges’ main lists. The period examined in the course of the study spanned from January 2005 to June 2012. In total there were 725 firm-observations as number of the companies were excluded from the study due to the unavailability of annual report, ownership information, market capitalization data etc.

The sources for obtaining the ownership and dividend data were the following: corporate annual reports, corporate websites, local stock exchange provided information, newspaper articles available from the Internet.

3. Results of the Research

3.1. General Overview

Average dividend yield in the CEE countries ranges from 2% to 5% (Fig. 1), which appears to be relatively high. It is rather surprising, taking into account the nature of the developing markets, which often means that companies are in the developing phase and, therefore, require large capex. Partly this can be explained by the favourable dividend tax policy. To compare, in 2012 the dividend yield in US was 2.1%, in Japan – 2.5%, while in CEE region it was almost 6%

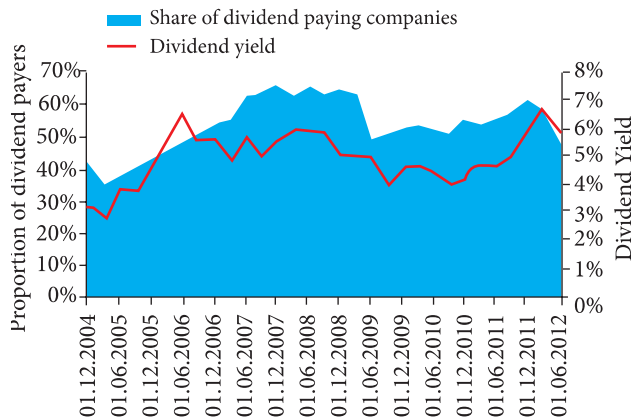


Fig. 1. Dividend Yield and Share of Dividend Paying Companies in CEE

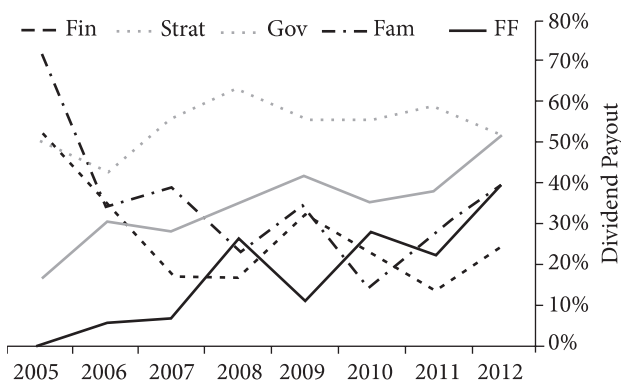


Fig. 2. Dividend Payout Ratio According to the Type of Ownership

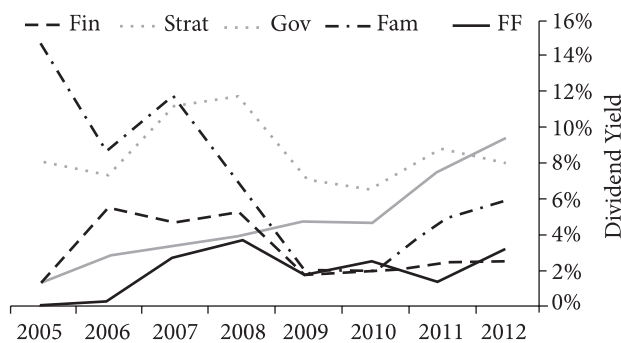


Fig. 3. Dividend Yield Ratio According to the Type of Ownership

Table 1. Proportionate number of paying companies according to the type of ownership

Type of Ownership	2012	2011	2010	2009	2008
Fin	0.58	0.60	0.41	0.38	0.75
Strat	0.62	0.64	0.61	0.68	0.76
Gov	0.65	0.78	0.88	0.75	0.84
Fam	0.32	0.41	0.43	0.42	0.59
FF	0.33	0.43	0.57	0.57	0.60

according Societe Generale's estimates (Chavez-Dreyfuss 2012).

The dividends in the CEE equity market are paid by almost half of the companies in the analyzed sample. The share declined due to the financial crisis, but later managed to recover to the pre-crisis level, the same as the dividend yields.

Current dividend payout ratio in Central and Eastern Europe is around 30%, which is rather modest but is recovering after the dividend cuts due to the financial crisis. Besides, the low level of the ratio is explained by the developing stage of many companies listed in CEE countries. To compare, payout ratio in USA is 27%, while in Europe it is around 40% (Blackrock 2012). Low payout ratio in USA is compensated by the share repurchases, which are common among the US companies.

3.2. Ownership Structure and Dividend Policy

In Central and Eastern Europe strategic ownership is the most important as it is represented by a third of the studied companies. This is a common situation in the financial and energy industries. Other type of ownership structures are less represented on the CEE market: 22% – financial investors, 18% – governmental, 22% – family/management/CEO. Besides, the ownership structures of 75% CEE companies are concentrated when one shareholder owns more than 25% of the company, which is contrasting with the US share market, where the vast majority of the companies has dispersed ownership.

The chart on Fig. 2 provides an overview on the average dividend payouts, according to the ownership type: strategic ownership succeeds highest dividend payments in almost all periods studied. Government in the role of major shareholder obviously also presses for higher payouts. Family ownership does not ensure high dividend payouts, which might be explained by the fact that family/management is determined to invest in long-term project to gain higher return later and is able to give up short-term profit now.

The results reflected in Table 1 confirm the abovementioned results that the companies with the strategic and governmental ownership share their profit more frequently and more generously than the companies of other types of shareholding. With family-owned companies there is the opposite case – less than half of the companies studied pay dividends, which is the lowest proportion among all ownership structures.

It is evident from Fig. 3 that the dividend yield (average yield of paying companies) in all ownership type groups is on a rather high level, especially if compared to the current very low bond yields rates. The highest return is seen in the strategic ownership group, which in 2012 gave up its leader positions to the governmental ownership.

Government-held companies obviously feel pressure from the main shareholder for the dividend payments as both the payout ratio and the dividend yield post an up-trend started in 2005 with a minor setback due to the recent financial crisis. Family/management’s owned companies exhibit rather high average yields as well, which, however, posted a significant decline during the crisis years.

With the help of statistical software SPSS 20.0 the authors run of the regressions and test the possible violations of the regression assumptions. Table 2 shows the correlation matrix of the independent variables used in the regressions. High correlation ($r = -0.771$) between the strategic and local ownership is observed as indicated in the table 2, which could

have been supposed by the authors as the majority of strategic investors in CEE companies are foreign institutions. This high correlation might lead to the multicollinearity problem in the regression, thus, it would be worth to omit one of these variables in the final regression model.

Running the regression models shows that the ownership structure has higher impact on the dividend payout ratio than on the dividend yield: F test (DP – dependent variable) is 38.19 vs. F test (DY – dependent variable) is 18.54. It should be noted that both of the regressions appear to be significant due to the high F test values, despite the fact that adjusted R in the case with the dividend yield regression model is 2.5% and in the case with the dividend payout regression model it is 9.6% (Tables 3, 4).

Table 2. Correlation Matrix of the independent variables

		Correlations					
		Size	Fin	Strat	Gov	Fam	FF
Fin	Pearson Correlation	-.275**					
	Sig. (2-tailed)	.000					
Strat	Pearson Correlation	.181**	-.310**				
	Sig. (2-tailed)	.000	.000				
Gov	Pearson Correlation	.383**	-.215**	-.329**			
	Sig. (2-tailed)	.000	.000	.000			
Fam	Pearson Correlation	-.266**	-.255**	-.390**	-.271**		
	Sig. (2-tailed)	.000	.000	.000	.000		
FF	Pearson Correlation	-.039	-.114**	-.175**	-.122**	-.144**	
	Sig. (2-tailed)	.291	.002	.000	.001	.000	
Local	Pearson Correlation	-.206**	.152**	-.771**	.336**	.371**	.179**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000

** Correlation is significant at the 0.01 level (2-tailed), * Correlation is significant at the 0.05 level (2-tailed)

Table 3. The Results of Multiple Regression Analysis of Dividend Payout Ratio (DP – Dependent variable); variables Fin, Gov, Fam, FF and Local were automatically (stepwise method) excluded from the regression by SPSS due to their insignificance

Regression equation	$DP = -0.087 + 0.044Size + 0.115Strat + \epsilon$			
Independent variables	t-statistic	VIF	Model Parameters	Statistics
(Constant)	-2.157		F test	38.189
Size	6.891	1.034	p-value	0.000
Strat	4.036	1.034	R	0.309
Fin	-.383	1.170	R Square	0.096
Gov	.534	1.452	R Square Adjusted	0.093
Fam	-.267	1.237	Durbin-Watson	1.868
FF	-1.491	1.032	Std. Error of the Estimate	0.3528595
Local	-.731	2.495		

Table 4. The Results of Multiple Regression Analysis of Dividend Yield (DY – Dependent variable)

Regression equation	$DY = 0.032 + 0.025Strat + \varepsilon$			
Independent variables	t-statistic	VIF	Model Parameters	Statistics
(Constant)	9.424		F test	18.536
Strat	4.305	1.000	p-value	0.000
Size	1.751	1.034	R	0.158
Fin	-1.942	1.106	R Square	0.025
Gov	1.532	1.122	R Square Adjusted	0.024
Fam	.364	1.179	Durbin-Watson	1.890
FF	-1.948	1.032	Std. Error of the Estimate	0.074
Local	-.762	2.467		

Dividend Payout Ratio (Table 3): The regression results provide evidence that there is a significant positive relationship between the dividend payout ratio and the strategic investors. Other variables do not seem to exert a significance influence on the amount of dividend payout.

Dividend Yield (Table 4): The same as in the regression with the dividend payout, there is a significant positive association between the dividend yield and the case, when the strategic investor has the majority ownership. The company's size does not have a significant influence on the yield ratio.

The authors decided to run also the binary logistic regression to discover how high the probability to forecast the dividend payments (if the company does or does not pay the dividends at all) depending on the ownership type variables can be. The dependent variable is DY_{-1} , which in case of dividend payments is 1 and in case of dividend absence is 0.

The equation to explain the binary logistic regression was the following:

$$DY_{-1} = \frac{1}{1 + e^{-z}}, \quad (3)$$

where $z = \beta_0 + \beta_1Size + \beta_2Fin + \beta_3Strat + \beta_4Gov + \beta_5Fam + \beta_6FF + \beta_7Local$.

The results of the logistic regression, which are reflected in the Table 5, demonstrate that the dividend payments can be forecasted with the probability of 68.1%. The variables significant to the regression equation were the following: Size, Fam, FF, Local.

Therefore, there is a high probability of dividend payments if the company:

- is relatively large;
- does not have family as a major investor;
- does not have a dispersed ownership;
- has local investor as major owner.

Table 5. Binary logistic regression results obtained with the forward method in SPSS (0.00 – dividends are not paid, 1.00 – dividends are paid)**Panel a.** Overall regression results

Dividend payment cases	0.00	1.00	Percentage correct
0.00	129	152	45.9
1.00	79	365	82.2
Overall Percentage			68.1

Panel b. Independent variables statistics

Independent variable	Coefficients	Std. error	p-value
Size	.314	.043	.000
Fam	-.824	.209	.000
FF	-.852	.344	.013
Local	.550	.199	.006
Constant	-1.505	.314	.000

Conclusions and Recommendations

The main objective of the present paper was to study the relationship between the dividend policy and the type of ownership in the CEE listed companies. All largest investors in the CEE companies were classified according to their type (financial, strategic, government, family/management, free float) and according to their origin (local and foreign). These ownership structures were used as dummy variables in the regression equation to find out the significance of their relation to the firm's dividend policy, which is primarily reflected in the dividend payout ratio. Besides, the authors considered also the dividend yield as a dependent variable to find out if a retail investor can base his

investment decision also on the ownership type to receive the highest return in the form of dividends, which might become very crucial in the current low yield environment.

The research on 117 CEE listed companies shows that the most generous companies in terms of dividend payouts are those, which have strategic investors or government as major owners. Highest dividend yields are also seen in the investment case of the strategic owners, however, government-owned companies are catching up. Evidently for these investors today's cash flows are not sacrificed to get higher cash flows in the future. One of the explanations might be that these companies are in their life cycle 4, when they have very good cash flows, they are leaders in their niches and have limited investment opportunities. It is worth noticing that the companies, where the major owners are the financial investors, whose primary investment goal is financial benefit, exhibit rather low dividend yields and payout ratios.

Graphical analysis results were proved by the both regressions (to forecast dividend payout and the dividend yield), which demonstrated that the only significant variable is strategic ownership. Therefore, the hypotheses about the foreign and financial ownership, having highest influence on the dividend amounts, were refuted.

Binary logistic regression, which the authors used to forecast if the company will or will not pay the dividends, demonstrated 68% chance to correctly predict the payments at the several preconditions. First, the company has to be of the tangible size, which is usually the common case not only for the emerging markets, but also for the developed markets. Second, the company should not have family/management investor in the ownership structure, which can be explained by the family's willingness to invest for the future rather than to distribute the profits now. Third, it should not have a dispersed ownership – there still has to be one major owner (above 10% of ownership capital structure), who will exert certain influence on the profit distribution decisions. Fourth, the major investor should be of local origin.

The results of this study provide an insight into the relationship between the dividend payments and the type of ownership, which have practical implications for the investors in CEE companies, who would like to have an exposure to the emerging markets dividend payers.

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