

# **INFLUENCE OF THE SIZE OF A COMPANY ON THE DIVIDEND LEVEL**

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## **ABSTRACT**

Important reason for dividends still staying an unresolved issue can be found in the complexity of factors that influence dividend policy. The aim of this study is to research the influence of the size on the dividend level. By using the data from 20 countries study shows significant and negative influence of the size of the company on the dividend level. The reasons for that can be found in the signaling theory and the stronger need of smaller companies to pay higher dividends as a compensation for the higher risk of their more volatile and less predictable cash flows.

## **INTRODUCTION**

In spite of numerous theoretical and empirical researches made in last six decades dividend policy still remains one of the most important unsolved puzzle in finance [1]. Namely, although dividends do not matter and are irrelevant both for the investor and the company on the perfect market [2], the same cannot be claimed in the real world marked with taxes, information asymmetry, agency problems, different excess to the financial markets and other imperfections. Observed interest in dividends of both companies and investors clearly speaks against dividend irrelevance argument and recalls dividend policy as one of the key decisions for the management of the company.

Important reason for dividends still staying an unresolved issue can be found in the complexity of factors influencing dividend policy of the companies that operating on the imperfect market. Previously conducted studies have mainly isolated profitability, usage of debt, stability of earnings/profitability and ownership concentration as factors that influence dividend level. There are also some studies of the influence of the company size on the dividend level but their number is limited and their results mixed. Namely, part of them show size of the company has significant positive influence on the dividend level and other present the opposite result. The aim of this study is to further investigate the influence of size on the dividend level by using company data from 20 countries and in that way to add a small piece for solving the famous dividend puzzle.

The article is organized in the following way: introduction is followed by the theoretical background. Third part gives overview of the previous empirical work on the relationship between the dividend level and the size of the company. Following part presents data used in the empirical investigation whose results are presented in the fifth part. Last part summaries and concludes.

## **THEORETICAL BACKGROUND**

As mentioned in the introduction, previous empirical researches focused mostly on the profitability [3]

[4], usage of debt [5] [6], stability of earnings/profitability [5], ownership concentration [7], [8] as important firm-level determinants of the dividend policy. According to some studies, size of the company also significantly influences the dividend level. Still, the number of these researches is limited and shows mixed results regarding the significance and the direction of the influence of the size of the company on the dividend level.

According to many of financial economists the relationship between the dividend level and the size of the company is expected to be positive [9]. Namely, bigger companies should have easier access to the capital markets and therefore lower cost of financing. In that way they are expected to be less financially constrained in comparison with similar smaller companies. Also, the size of the company is negatively correlated with the probability of the bankruptcy [10] [11]. The cash flows of bigger companies are more diversified, easier predictable and less volatile what makes their management less concerned for the possible need to decrease the level of dividends that would have negative effect on the share price.

Next to the above presented reasoning, evidences of inverse influence of the company size on the dividend level can be also found both in theoretical reasoning and empirical investigations. They are grounded on the signaling theory. Namely, smaller companies have more volatile and less predictable cash flows [12] and in that way they expose investors to higher risk. In order to compensate for the higher risk smaller companies payout higher dividends and in that way signal the prosperity of the company.

According to the presented it is reasonable to expect size of the company will significantly influence dividend level. In the same way both explanations for the direction of the relationship between the size of the company and dividend level have solid reasoning and due to that the best to question the strength of its arguments it to conduct the empirical research what will be done in this research.

## **PREVIOUS EMPIRICAL WORK**

Gugler and Yurtoglu [5] have conducted a research using a sample of 266 German companies. The size of the company is measured as the logarithm of company's assets and the dividend level as payout ratio. The regression analysis has shown the company size has negative influence on the dividend level. The same result is showed in the research of the dividend policy of 48 companies from the Tunisian Stock Exchange conducted by Ben Naceura, Goaiada and Belanesa[13]. In their research dividend yield is used as the measure of dividend yield and logarithm of market value of the company as the measure of size.

Aivazian, Booth and Cleary [4] made a research in which they compared the influence of the different factors on the dividend policy in United States of America and 8 developing countries. The size of the company is measured by using the logarithm of sales and dividend level as the ratio of dividends to assets. The results of their analysis in different countries are mixed both regarding the significance of the company's size and the direction of the relationship between the size and the dividend level.

Bebczuk [14] analyzed the significance of the company's size by applying Tobit model on the sample of 55 companies listed on the stock exchange in Argentina. It showed positive relationship of the company's size, measured as the logarithm of sales and dividend level measured as the ratio of dividends to the cash flow of the company.

DeAngelo, DeAngelo i Stulz [14] investigated the life-cycle theory of dividends and among others used size of the company measured using logarithm of sales as one of the control variables. Their research shows that the probability a company pays dividends increases with the size of the company. Same result is showed the research on the exploration of the minority shareholders by using dividend policy in Czech Republic [15] and in the research of factors that influence the dividend policy in USA, Canada, Japan, Germany, France and Great Britain [16].

## DATA

The sample is made up of 1.378 companies from 20 countries (17 European countries, Australia, Japan and United States of America. The companies included are the biggest ones listed on the stock-exchanges in each country included in the research. Utilities and financial firms are excluded because of their specific characteristics such as debt level and others.

The main source of information for this work comes from Bloomberg data base. Whenever needed, various other sources like financial statements available on the Web sites of the companies are also used to collect any missing data. As a consequence some companies had to be excluded from the analysis. The study covers 2010.

Table 1. Number of companies included in the analysis in and their share in the market capitalization.

Contry	Number of companies	Market capitalization (\$)	Share of the market value of the analyzed companies int he market capitalization
Australia	128	1.454.546.975.050	NA
Austria	47	67.682.829.563	58,00%
Belgium	14	269.341.845.093	93,87%
Bulgaria	30	7.275.908.438	30,41%
Croatia	37	24.911.791.785	62,27%
Czech Republic	10	43.055.621.650	88,61%
Estonia	15	2.260.054.049	99,60%
Finland	111	118.159.660.790	NA
France	38	1.926.488.295.470	62,01%
Germany	24	1.429.706.705.313	58,92%
Hungary	7	27.708.444.462	64,12%
Japan	151	4.099.591.000.000	35,02%
Latvia	24	NA	NA
Litvuania	25	5.660.887.443	51,23%
Netherlands	18	661.203.716.196	81,38%
Poland	217	190.234.893.127	39,41%
Spain	23	1.171.614.868.753	30,14%
Switzerland	14	1.229.356.532.561	58,70%
United Kingdom	72	3.107.037.940.785	73,68%
USA	403	17.138.978.000.000	53,91%

Source: Author's calculation using Word Bank data and Bloomberg data base

As a measure of dividend level of a company following widely-used measures are applied: ratio of dividends to total assets and ratio of dividends to sales of each company. Possible alternatives could be dividend payout ratio, dividend yield, ratio of dividends to earnings and ratio of dividends to the book value of equity. Dividend payout ratio is not chosen as a dividend level measure because it is highly unstable and nonnormal as earnings get close to zero, dividend yield because it is dependent on the share price that is beyond the direct management control, ratio of dividends to earnings and dividends to the book value of equity because their high sensitivity to accounting distortions [5, p. 378]

A great number of macroeconomic and financial variables can influence the sought-after relationship between the level of dividend payment and size of the company. In order to isolate their influence following control variables are used: profitability of assets, debt level measured using ratio of debt to total assets, stability measured using standard deviation of the return on the assets and percentage of ownership held by the largest shareholder.

Table 2. Mean values of dividend level, size of the company and other firm-specific factors

Country	Dividend level	Size (LogP)	Size (LogUI)	Profitability of assets	Debt level	Percentage of ownership of the largest shareholder
Australia	4,62%	2,94812	3,2530	6,69%	44,90%	16,98%
Austria	1,17%	2,63865	2,7398	1,28%	59,70%	38,51%
Belgium	93,83%	1,16357	3,8813	32,28%	46,18%	42,32%
Bulgaria	0,07%	1,73018	2,1508	1,80%	38,64%	32,96%
Croatia	0,28%	2,89130	3,1404	0,64%	62,96%	38,49%
Czech R.	14,02%	3,35125	0,0532	6,89%	47,39%	43,33%
Estonia	0,51%	2,18484	2,3318	1,81%	40,98%	45,93%
Finland	3,00%	2,45061	2,4510	-0,27%	67,48%	18,42%
France	1,84%	4,35089	4,5676	5,09%	62,70%	18,15%
Germany	1,75%	4,37584	4,4984	4,95%	63,29%	17,49%
Hungary	1,07%	5,04371	5,2111	3,20%	47,48%	22,51%
Japan	1,59%	5,94770	6,0503	4,04%	52,15%	13,96%
Latvia	2,02%	0,89072	1,0887	-0,73%	47,44%	33,47%
Lithuania	0,98%	2,24000	2,3726	-0,93%	53,78%	45,20%
Netherlands	3,50%	4,12148	4,1157	8,00%	57,30%	18,82%
Poland	1,51%	2,40858	2,5271	3,68%	46,36%	39,49%
Spain	2,06%	3,78183	4,1420	5,09%	69,55%	29,28%
Switzerland	4,19%	4,08635	4,2289	11,23%	47,20%	14,12%
UK	3,05%	3,87245	4,0171	8,88%	56,39%	13,70%
USA	2,25%	3,93917	4,0751	8,22%	56,47%	9,04%

Source: Author's calculation using Bloomberg data base

## RESULTS OF EMPIRICAL RESEARCH

In order to test the influence of the size of the company on dividend level we run ordinary-least squares regressions with ratio of dividends to total assets as the dependent variable, size of the company as explanatory variable and profitability of assets, debt level, standard deviation of the profitability of assets and percentage of ownership of the largest shareholder as control variables. The following two models are used

$$DIV_1 = \alpha_1 + \beta_1 LOGP + \beta_2 ROA + \beta_3 DEBT + \beta_4 OWNERSHIP + \beta_5 STAB + \varepsilon$$
$$DIV_2 = \alpha_2 + \beta_6 LOGUI + \beta_7 ROA + \beta_8 DEBT + \beta_9 OWNERSHIP + \beta_{10} STAB + \varepsilon$$

Regression results of the presented equations are:

$$DIV = 0,013 - 0,003*LOGUI + 0,163*ROA + 0,026*DEBT - 0,009*OWNERSHIP - 0,005*STAB$$

(0,057)    (0,014)            (0,000)            (0,000)            (0,247)            (0,802)

$$DIV = 0,015 - 0,003*LOGUI + 0,163*ROA + 0,026*DEBT - 0,010*OWNERSHIP - 0,004*STAB$$

(0,021)    (0,004)            (0,000)            (0,000)            (0,172)            (0,842)

P-values are represented in parentheses. White heteroskedasticity adjustment is used. P-values for the both models are 0,000.

From the presented results it can be concluded that the size, measured either with the asset or sales, has negative influence on the dividend level at 10% significance level. That conclusion is in line with the argument that smaller companies payout higher dividends as a compensation for the higher risk of their cash flow that is more volatile and less predictable than in the case of bigger companies.

So as any other empirical investigation this research has some limitations and it is important to point them out. Period covered in presented research covers only one year. It would be useful to extend research to longer period and to use panel techniques as addition to regression analysis. Further on, number of companies so as the countries represented in the research could be extended. Regarding variables it is worth to mention some other variables like industry that are not included in analysis presented in this research. Their inclusion could give additional value to the analysis.

## CONCLUSION

Dividend policy is considered as one of the most important unsolved problem in finance. The reason for that can be partly seen in the complexity of factors that influence dividend policy of the companies faced with information asymmetry, taxes, agency problems and other imperfections of the imperfect markets in which they operate. As factors that influence dividend level previous studies have mainly isolated profitability, usage of debt, stability of earnings/profitability and ownership concentration as factors that influence dividend policy. There are some studies of the influence of the company size on the dividend level but their number is limited and their results mixed.

The aim of this research was to further investigate the influence of the size of the company on the dividend level by using company data from 20 countries. We conclude that the size of the company has negative influence on the dividend level at 10% significance level. That conclusion is in line with the argument that smaller companies payout higher dividends as a compensation for the higher risk of their cash flow that is more volatile and less predictable than in the case of bigger companies.

Still, it is important to mention certain limitations of the study such as number of analyzed countries, period covered, better measures of some variables and additional variables. Solving these limitations certainly presents possible field for new empirical work.

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