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SENSITIVITY OF DIVIDENDS TO EARNINGS CHANGES

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Abstract

This paper deals with probabilities of dividend changes for a given change in earnings. This so-called sensitivity of dividends to earnings changes was analyzed on a sample of Advanced economies and Emerging and developing economies, according to International Monetary Fund classification. The main goal of the research is to empirically verify the assumption that companies are generally reluctant to cut or reduce dividends regardless of the stage of economic development of the country. In addition, the probabilities of dividend changes for a given change in earnings in characteristic groups of countries - Baltic countries and former Yugoslavia countries - have been analyzed. Research results show that earnings are significant dividend factor in all sample countries, that companies are generally reluctant to cut or decrease dividends and that dividends are less sensitive to earnings changes in Advanced economies, compared to Emerging and developing economies. Research has also shown that dividends are less responsive to earnings changes in former Yugoslavia countries compared to Baltic countries. These findings are in line with Lintner (1956) who has shown that reduction in earnings is not necessarily followed by reduction in dividends. Such behavior of dividends can be explained even by prospect theory created by Kahneman and Tversky (1979). They have shown that investors are more sensitive to negative events than to positive events and that investors do not make decisions in relation to the overall wealth but in relation to a particular reference point, which is usually the status quo. If this is the case, the previous dividends represent a specific reference point in relation to which investors make decisions. Having in mind asymmetric reaction of the investing public to dividend increases and dividend decreases (or dividend cuts), companies are reluctant to cut or decrease dividends because they are trying to avoid negative market reaction.

Keywords: *dividends, earnings, sensitivity, probability analysis.*

JEL: G11, G31

1. INTRODUCTION

Dividend decision is one of the most important decisions in corporate finance. It aims to establish the dividend payout ratio that will maximize the long-term value of the company. This ratio reflects not just the essence, but also the complexity of the dividend policy. Do dividend paying companies worth more than companies that do not pay dividends? The bird in hand theory established in works of Myron Gordon and John Lintner is based on the hypothesis that cash dividends are more certain than future capital gains. In this way, dividend paying companies would have lower cost of capital and consequently higher value of the company. By contrast, advocates of the tax differentiation theory, Litzenberger and Ramaswamy, argue that there is a negative relationship between the dividends and the value of the company. The authors point out that the capital markets are not perfect places and higher taxation of dividends in relation to capital gains will increase the required rate of return before tax thus reducing the value of the company. Between these two extremes, the neutral position is taken by dividend irrelevance theory by Miller and Modigliani (1961) who have shown that the value of a company in a perfect capital market is function of company investment policy, not the dividends. They argue that, for a given investment budget, the dividend payout would require an additional stock issue, so the effect of the stock price increase caused by the payment of dividends would be canceled through the effect of stock dilution or reduced stock price. Investors or stockholders who would want to make current income can sell the portion of their stocks to create the so-called homemade dividends.

Regardless of which of the aforementioned theories are closest to the real world, it is quite certain that many companies still pay dividends on a regular basis and that dividend policy is perceived as an active variable of corporate governance. Lintner (1956) found that managers in the US are not inclined to reduce dividends. Moreover, they decide to increase dividends only when they believe that future earnings will justify higher level of dividends. In other words, companies tend to smooth dividends toward long-term, targeted payout ratio. These findings were verified by Fama and Babiak (1968), Aivazian, Booth and Cleary (2006), Brav et al. (2005) and by many others. However, most of these studies have been conducted in the United States and other developed countries with an active capital markets neglecting emerging and developing economies, especially transition countries of Central and South-Eastern Europe which are characterized by younger and less liquid capital markets. In contrast, Glen et al. (1995) have documented that companies in transition countries focus on the stability of the payout ratio instead of smoothing the absolute amount of dividends per share, implying a greater sensitivity of dividends to earnings changes. Bearing this in mind, the aim of this

paper is to assess the likelihood of dividend changes for different changes in earnings on a sample of developed and emerging and developing countries to examine whether the reluctance to cut or reduce dividends is global phenomenon.

The paper is organized as follows: The first part presents a systematic literature review ofthe link between profitability and dividends. In the second part, research sample and methodology have been defined. The third section summarizes the research results regarding the link between current earnings and dividend per share in all sample countries. In the fourth section, we compared the sensitivity of dividends to earnings changes in developed and emerging and developing countries, according to IMF classification. In the fifth section, we compared the sensitivity of dividends between former Yugoslavia countries and Baltic countries. In the last part of the paper, general conclusions were made as well as the main limitations of the research.

2. AN OVERVIEW OF EMPIRICAL RESEARCH

Retained earnings together with current earnings are the basic source for dividend payments so it is reasonable to expect that growth in earnings will affect the amount of paid dividends. This is confirmed by numerous empirical researches. Lintner (1956) conducted a survey in 28 major US companies showing that current earnings and last year dividends have a significant impact on current year dividends. Fama and Babiak (1968)came up to the same conclusion on a sample of 392 US industrial companies in the period from 1946 to 1964. They have shown that current earnings are better measure of profitability than a cash flow or net income plus depreciation. More recent research conducted by Fama and French (2001) has also shown that more profitable companies are more likely to pay dividends, where profitability is measured as the ratio of earnings before taxes and total assets. DeAngelo, DeAngelo and Stulz (2006) have also documented that the likelihood of dividend payout increases with raising portion of retained earnings in total stockholder equity. According to these authors, higher portion of retained earnings in total stockholder equity indicates the maturity phase of a company's life cycle in which companies are better candidates for dividend payouts due to higher profitability and less investment opportunities. The link between profitability and dividends is also related with signaling theory of dividends, which emphasize that dividends contain some information about future earnings(Bhattacharya, 1979; John i Williams, 1985; Miller i Rock, 1985).

The important role of earnings for dividend payouts is confirmed by number of surveys. By polling directors in 318 companies from the New York Stock Exchange, Baker, Farrelly and Edelman (1985) as the main determinants of dividend payouts identified the anticipated level of future earnings and the historical pattern of dividend payments. Similar results were also published by Baker and Powell (2000) who, among other things, emphasize the importance of

the level of current and expected earnings for dividend decision. In addition, the authors point out that dividend determinants are industry specific. Baker, Veit and Powell (2001) conducted a survey among NASDAQ's market leaders, citing an anticipated level of future earnings and a pattern of previous dividend payments as important factors of dividend policy. More recent survey was conducted by Brav et al. (2005) on a sample of 384 financial directors in 256 US companies. The authors point to the perceived stability of future earnings as a significant determinant of dividend policy, emphasizing that the link between profitability and dividends has weakened over time, as most directors tend to favor the stock buybacks as a more flexible way of distributing earnings.

Similar conclusions regarding the impact of profitability on dividend payouts were also reached in the studies of dividend policy across European countries (Hedensted and Raaballe,2006; Denis and Osobov, 2007;Kowalewski, Stetsyuk and Talavera, 2007; Statescu 2006, Bancel, Bhattacharyya and Mittoo,2005; etc.) Bebczuk(2004) first explored the dividend determinants in Argentina on a sample of 55 companies during the 1996 to 2002 period. By analyzing the characteristics of dividend paying companies, he also found that larger and more profitable companies, without good investment opportunities, have higher dividend to cash flow ratios. Aivazian, Booth and Cleary (2003) have explored the dividend policy on a sample of companies from eight developing countries (Jordan, Pakistan, Turkey, India, Zimbabwe, Thailand, South Korea and Malaysia). Their results have shown that corporate profitability in these countries measured by return on equity (ROE) is one of the main determinants of dividend payouts measured by the ratio of dividends tototal assets.

2. RESEARCH SAMPLE AND RESEARCH METHODOLOGY

The research sample consists of 33 countries from Europe, Asia, Australia and North America. The sample included all the countries for which research data on research variables were available, namely: Croatia, Slovenia, Macedonia, Bosnia and Herzegovina, Latvia, Lithuania, Estonia, Poland, Czech Republic, Hungary, Bulgaria, Romania, Turkey, Portugal Spain, France, Switzerland, Italy, Netherlands, Belgium, Denmark, Germany, Austria, Sweden, Norway, Finland, Ireland, United Kingdom, United States, Australia, New Zealand, Japan and China. In each sample country, a subsample of public companies that paid dividends at least five times over a period of 10 years (2003: -2012) was created. The number of companies by country is given in Table 2. The sensitivity of dividends to earnings changes was tested by various methods. First, a simple correlation analysis was conducted to investigate the correlation between these two variables and its strength and direction. After correlation analysis, a panel regression analysis was performed to investigate the causal link between profitability and the dividend payout on the secondary panel data. Based on theseregression coefficients, difference between developed and emerging and developing countries was tested

using *t* test. In addition, the probabilities of dividend changes for a given changes in earnings in both groups of countries were examined using the contingency table. Dependent variable in case of the panel regression analysis was represented by dividend per share, while the independent variable was represented by current earnings per share. After testing for differences in the regression coefficients obtained by panel regression analysis, contingency table was used for a descriptive comparison of the sensitivity of dividends to earnings changes between the former Yugoslavia countries and the Baltic countries. Dividends per share and earnings per share data were collected from Thompson Reuter's database and from audited and consolidated financial statements in the case of Croatia and Bosnia and Herzegovina.

3. SENSITIVITY ANALYSIS OF DIVIDENDS TO EARNINGS CHANGES

As mentioned above, the first method used to investigate association between earnings per share and dividends per share in each of the countries from the research sample was a simple correlation analysis. The results obtained by correlation analysis are presented in Table 1.

Table 1. Correlation coefficients

Country	Observations	Correlation coefficient	p-value
United States	5805	0,14	0,00
Australia	2338	0,66	0,00
Austria	300	0,75	0,00
Belgium	240	0,31	0,00
Denmark	489	0,85	0,00
Finland	639	0,68	0,00
France	2400	0,65	0,00
Ireland	160	0,74	0,00
Italy	579	0,68	0,00
Japan	13723	0,44	0,00
China	4154	0,8	0,00
Netherlands	469	0,3	0,00
Norway	340	0,71	0,00
New Zealand	529	0,15	0,00
Germany	920	0,66	0,00
Spain	420	0,86	0,00
Sweden	980	0,6	0,00
Switzerland	710	0,87	0,00
Great Britain	3890	0,15	0,00
Croatia	195	0,47	0,00
Slovenia	100	0,54	0,00
Bosnia and Herzegovina	20	0,97	0,00
Macedonia	40	0,69	0,00
Poland	380	0,82	0,00

Lithuania	50	0,34	0,02
Latvia	40	0,71	0,00
Estonia	30	0,81	0,00
Hungary	70	0,72	0,00
Turkey	570	0,39	0,00
Bulgaria	80	0,52	0,00
Romania	89	0,97	0,00
Czech Republic	30	0,64	0,00
Portugal	169	0,54	0,00

Note: Data for earnings per share and dividend per share from Thompson Reuters and audited financial reports

Looking at the previous table, there is a clear positive correlation between dividends and earnings in all countries of the sample, and it is statistically significant at the significance level of 5 percent. At the same time, the smallest correlation coefficients were recorded across most developed capital markets, such as United States and Great Britain (0.14 and 0.15). Developed countries in Europe recorded much higher correlation coefficients ranging from 0.30 to 0.80. Among the developed countries of Europe, only Spain and Estonia have coefficients greater than 0.80. When it comes to the European transition countries as a segment of the emerging and developing countries, the biggest correlation between dividends and earnings is recorded by Bosnia and Herzegovina and Romania at 0.97. These results are in line with the hypothesis that dividend policy, in terms of dividend smoothing, is more important on the more developed capital markets. After the correlation analysis, a panel regression analysis (pooled OLS) was performed in all sample countries. The panel analysis results are given in Table 2.

Table 2. Panel regression (pooled OLS) results

Country	**Companies**	**Obs.**	**Pooled OLS**	**p-value**	**Classification**
United States	583	5805	0,02	0,00	Advanced economies
Australia	234	2338	0,28	0,00	Advanced economies
Austria	30	300	0,26	0,00	Advanced economies
Belgium	24	240	0,05	0,00	Advanced economies
Denmark	49	489	0,14	0,00	Advanced economies
Finland	64	639	0,32	0,00	Advanced economies
France	240	2400	0,35	0,00	Advanced economies
Ireland	16	160	0,22	0,00	Advanced economies
Italy	58	579	0,27	0,00	Advanced economies
Japan	1253	1259	0,08	0,00	Advanced economies
China	418	415	0,30	0,00	Emerging and develop.

		4			econ.
Netherlands	47	469	0,03	0,00	Advanced economies
Norway	34	340	0,29	0,00	Advanced economies
New Zealand	53	529	0,01	0,00	Advanced economies
Germany	92	920	0,28	0,00	Advanced economies
Spain	92	420	0,20	0,00	Advanced economies
Sweden	98	980	0,26	0,00	Advanced economies
Switzerland	71	710	0,30	0,00	Advanced economies
Great Britain	389	3890	0,01	0,00	Advanced economies
Croatia	20	195	0,06	0,00	Emerging and develop. econ.
Slovenia	10	100	0,16	0,00	Advanced economies
Bosnia & Herzegovina	2	20	0,68	0,00	Emerging and develop.econ.
Macedonia	4	40	0,16	0,00	Emerging and develop.econ.
Poland	38	380	0,71	0,00	Emerging and develop. econ.
Lithuania	5	50	0,21	0,02	Emerging and develop.econ.
Latvia	4	40	0,24	0,00	Emerging and develop.econ.
Estonia	3	30	0,89	0,00	Advanced economies
Hungary	7	70	0,34	0,00	Emerging and develop.econ.
Turkey	57	570	0,41	0,00	Emerging and develop.econ.
Bulgaria	8	80	0,27	0,00	Emerging and develop.econ.
Romania	9	89	0,71	0,00	Emerging and develop.econ.
Czech Republic	3	30	0,61	0,00	Advanced economies
Portugal	17	169	0,12	0,00	Advanced economies

Note: Data for earnings per share and dividend per share from Thompson Reuters and audited financial reports

Pooled OLS panel regression results confirm the findings obtained by correlation analysis. One can see that earnings per share are significant dividend predictor in all sample countries at a significance level of 5 percent. The United States, Great Britain, New Zealand, Japan and some of the most developed European countries recorded the lowest coefficients of dividend changes given changes in earnings, which shows the greater propensity of firms in these countries to smooth dividends. Among emerging and developing countries, only Croatia has slopecoefficient below 0.1.

4. SENSITIVITY OF DIVIDENDS TO EARNINGS CHANGES IN ADVANCED ECONOMIES AND EMERGINGAND DEVELOPING ECONOMIES

Comparison of the level of sensitivity of dividends to earnings changes between Advanced economies and Emerging and Developing economies was made on the basis of the International Monetary Fund classification. For this purpose *t*-test was used to test the difference between mean coefficients obtained by panel regression analysis. The results of the *t*-test are given in Table 3.

Table 3. Testing the differences between the mean coefficients of pooled OLS (*t*-test output)

Advanced economies (Mean)		0,23	**Emerging and developing economies(Mean)**	0,37
	Mean diff.	**Ha: diff < 0**	**Ha: diff != 0**	**Ha: diff > 0**
Advanced vs. Emerging	0,14	Pr(T < t) = 0,9554	Pr(|T| > |t|) = 0,0893	Pr(T > t) = 0,0446

Source: authors

According to Table 3 mean coefficient for current earnings in Advanced economies is 0.23and 0.37 for Emerging and developing economies. *t*-test results show that mean coefficient obtained by panel regression analysis for advanced economies is significantly lower compared to mean coefficient for emerging and developing economies, at significance level of 10 percent. Therefore, it can be concluded that dividends are less sensitive to earnings changes in developed countries.

Based on the results of the panel regression analysis it is quite clear that in most countries current earnings have a significant positive impact on dividends. Likewise, there is a significant difference in the coefficients of the change in dividends in relation to the changes in earnings between these two groups of countries. However, the thesis about the global propensity to smooth dividends is more precisely analyzed by contingency tables. In this respect, earnings trends can be observed through four options: no change, increase, decrease, and loss (negative earnings). Each of these categories is followed by certain behavior of dividends (no change, increase[1], decrease or dividend cut). Therefore, the question arises as to how the probability of a certain direction of dividends is affected by different behavior of earnings per share. It is to be expected that in most cases, growth in earnings will be accompanied by increase in dividends as shown by correlation analysis and panel regression analysis. However, if dividend smoothing practice is widespread phenomena, the results will show the immunity of dividends to

[1] Dividend initiations (first time payers) are included in the increase category.

earnings decline or negative earnings. The results of the probability analysis of dividend behavior given changes in earnings are given in Table 4.

Table 4. Conditional probabilities of dividend changes for a given changes in earnings

CLASSIFICATION BY IMF			DIVIDEND CHANGES			
			No change	Increase	Decrease	Cut
EARNINGS CHANGES	No change	Advanced economies	23,49%	59,04%	16,27%	1,20%
		Emerging economies	32,14%	39,29%	28,57%	0,00%
	Increase	Advanced economies	23,27%	70,00%	5,20%	0,68%
		Emerging economies	19,13%	63,94%	12,11%	4,81%
	Decrease	Advanced economies	38,45%	39,57%	20,46%	1,51%
		Emerging economies	21,03%	29,33%	38,59%	11,05%
	Loss	Advanced economies	37,68%	17,88%	27,56%	16,88%
		Emerging economies	32,16%	18,13%	6,43%	43,27%

Note: Data for earnings per share and dividend per share from Thompson Reuters and audited financial reports

Table 4 shows that in case of earnings growth, majority of companies in both groups of countries increase dividends per share (over 70% of cases). However, in case of earnings decrease, 38.6% of companies in emerging and developing countries reduce dividends, while in developed countries only 20.46% of companies decrease dividends. Dividends are more responsive to earnings changes in emerging and developing countries even in cases of negative earnings. More precisely, 43.27% of companies in emerging and developing countries cut dividends in case of negative earnings, while in developed countries, only 16.88 percent of the companies decide to cut dividends. Looking at the joint probability of not reducing dividends in case of earnings decline, or in case of negative earnings, one can notice that over 50% of companies in both groups of countries do not reduce or cut dividends despite fall in earnings (developed countries - 78.02% in development - 50.36%). This leads to a conclusion that dividends are generally immune to earnings decline (or loss), but also that dividends are more resistant to earnings decline(or loss)in developed countries compared to dividends in emerging and developing countries. These results seem to support the prospect theory argument about investor's asymmetric reaction to gains and losses(Kahneman and Tversky, 1979). Having in mind asymmetric reaction of the investing public to

dividend changes, companies are reluctant to decrease dividends in case of earnings decline because they tend to avoid negative market reaction.

5. SENSITIVITY OF DIVIDENDS TO EARNINGS CHANGES IN FORMER YUGOSLAVIA COUNTRIES AND BALTIC COUNTRIES

From the previous analysis one can conclude that companies are generally reluctant to cutor reduce dividends. It is also clear that dividends in emerging countries are more sensitive to earnings changes compared to dividends in developed countries. However, within these two groups of countries, among other things, there are differences in capital market development, the level of investor protection and the role of the banks in external financing that can be reflected in the dividend policy. Dzidic (2016) has shown that countries with stronger investor protection mechanisms, more developed capital markets and weaker role of the banks have higher portions of dividend smoothing companies, where smoothing follows a strict definition - not reducing dividends per share for five consecutive years. Consequently, the lower sensitivity of dividends to earnings changes is expected in countries with better investor protection and higher level of capital market development. These conclusions will be tested on two distinct groups of countries - the countries of the former Yugoslavia and the Baltic countries. Former Yugoslavia countries, like the Baltic countries, have gone through a similar period of transition into a market economy, whereby some countries have made a faster and better progress than their neighbors in the same group of countries. For example, Slovenia and Estonia according to the IMF classification belong to a group of developed countries while other countries are being classified as emerging and developing countries. Similarly, some of them, like Croatia, Slovenia, Lithuania and Estonia, have achieved a respectable capital market development while some, such as Bosnia and Herzegovina, have completely neglected this segment of the financial market. In case of former Yugoslavia countries, only the countries for which data on dividends and earnings were available entered into analysis: Croatia, Slovenia, Bosnia and Herzegovina and Macedonia. In case of Baltic countries Latvia, Lithuania and Estonia were examined. Table 5 shows the probability of dividend changes for each category of earnings change in both groups of countries.

Table 5 Conditional probabilities of dividend changes for a given changes in earnings

CLASSIFICATION BY AUTHOR			DIVIDEND CHANGES			
			No change	**Increase**	**Decrease**	**Cut**
EARNINGS CHANGES	**No change**	Former Yugoslavia	16,67%	33,33%	50,00%	0,00%
		Baltic countries	33,33%	33,33%	33,33%	0,00%
	Increase	Former Yugoslavia	17,26%	**63,69%**	17,26%	1,79%

		Baltic countries	15,00%	**71,67%**	13,33%	0,00%
		Former Yugoslavia	19,82%	36,94%	**36,94%**	6,31%
	Decrease	Baltic countries	26,47%	23,53%	**44,12%**	5,88%
		Former Yugoslavia	10,00%	0,00%	40,00%	**50,00%**
	Loss	Baltic countries	0,00%	20,00%	20,00%	**60,00%**

Note: Data for earnings per share and dividend per share from Thompson Reuters and audited financial reports

From the previous table, it is clear that public companies in both groups of countries are inclined to increase dividends in case of a earnings growth while they are not prone to reduce dividends in case of earnings decline (even 50 percent of the companies increases or keeps dividend per share at the same level despite fall in earnings). In addition, it is evident that dividends of Baltic companies are slightly more sensitive to changes in earnings compared to public companies in former Yugoslavia countries. Table 6 shows the indicators of capital market development and investor protection for the both groups of countries.

Table 6. Indicators of capital market development and investor protection

Country	**IMFClassification**	**Market cap. (%GDP)**	**Stocks traded (% GDP)**	**Minority investor protection**	**Anti-self – dealing index**
Croatia	Emerging econ.	36,96	1,24	3,6	0,25
Slovenia	Advanced econ.	13,35	0,95	3,4	n /a
Bosnia and Herzegovina	Emerging econ.	n /a	n /a	3,1	n /a
Macedonia	Emerging econ.	5,66	0,41	3,5	n /a
Lithuania	Emerging econ.	9,19	0,47	3,9	0,38
Latvia	Emerging econ.	3,73	0,14	4,1	0,35
Estonia	Advanced econ.	8,47	0,9	4,3	n /a-

Note: Data for market capitalization and stocks traded from Federal Reserve Bank of St. Louis; for minority investor protection from Global Competitiveness Report 2012; for anti-self-dealing index from Djankov et al. (2008).

Comparing a group of countries in the former Yugoslavia region (Croatia, Slovenia, Macedonia and Bosnia and Herzegovina) with a group of Baltic countries (Latvia, Lithuania and Estonia), one can see that the Baltic countries have a somewhat higher level of investor protection but a somewhat less developed capital markets, despite stronger integration through a common trading platform (Nasdaq OMX group, INET trading platform). In the countries of the region, Macedonia and Bosnia and Herzegovina are significantly lagging behind Croatia and Slovenia whose capital markets are larger and more active, measured by the market capitalization as percentage of GDP and the value ofstocks traded as a percentage of GDP. For example, Bosnia and Herzegovina has a highly undeveloped and illiquid capital market measured by the value of stocks traded as a percentage of market capitalization of the listed companies (Dzidic, 2016). Within the group of Baltic countries, Lithuania and Estonia have more developed capital markets than Latvia measured by market capitalization as a percent of GDP or by the ratio of stocks traded to GDP.

These results should be taken with certain degree of caution due to small sample sizes in all Baltic countries and also in Bosnia and Herzegovina and Macedonia. However, despite the fact that none of the Baltic countries has more than 5 companies meeting the criterion of the design of the research sample (dividend payment for at least 5 years in the period 2003-2012) it should be noted that the number of listed companies is generally lower in Baltic countries than in countries of the region, so there is a smaller sample of dividend paying companies that satisfy sample construction criterion. For example, according to data from the Nasdaq Baltic market in 2012, Estonia had 16 listed companies, Latvia 32, and Lithuania 33 listed companies. At the same time, data taken from the local stock exchanges in the countries of the former Yugoslavia show that there were 51 listed companies in Slovenia at the end of 2012, 200 in Croatia, 179 in Bosnia and Herzegovina and 32 listed companies in Macedonia. As a whole, more companies have met the sample construction criterion in the countries of former Yugoslavia over the Baltic countries. The smallest sample of companies was created in Bosnia and Herzegovina, not because of the small number of listed companies, but primarily because of the lack of data on research variables among majority of listed companies.

6. CONCLUSION

The aim of this paper is to examine sensitivity of dividends to earnings changes across different groups of countries. The results of the research show that earnings are significant dividend predictors in all sample countries and that dividends are more sensitive to earnings in developed countries such as the United States, Great Britain, Japan etc. Furthermore, probability analysis suggests that companies are generally reluctant to cut or reduce dividends, regardless of the stage of economic development of the country. This isin line with Lintner (1956) findings that a

reduction in earnings does not necessarily lead to a reduction in dividends, which is best illustrated by the positive constant of his partial adjustment model. Such behavior of dividends follows the conclusions of Brav et al. (2005), who show that managers are aware of the asymmetric reaction of the investing public to dividend changes, whereby the market does not value the increase in dividends to the extent that they "penalize" the reduction of dividends. According to prospect theory of Kahneman and Tversky (1979) investors are more sensitive to negative events than to positive events meaning that a loss will hurt them more than the gain of the same size will please them. In addition, the authors have shown that investors do not make decisions in relation to the overall wealth but in relation to a particular reference point, which is usually the status quo. If this is the case, the previous dividends represent a specific reference point in relation to which sudden drop in dividends is followed by stronger price decrease than unexpected growth in dividends is followed by stock price increase.

When it comes to comparison between the Former Yugoslavia countries and the Baltic countries, one can conclude that dividends are less responsive to earnings changes in former Yugoslavia countries compared to Baltic countries. This may reflect the fact that Croatia and Slovenia are ahead of their Baltic peers in terms of capital market size measured by market capitalization as a percent of GDP and in terms of capital market liquidity measured by the value of stocks traded as a percent of GDP. Among the Baltic countries, Lithuania and Estonia are ahead of Latvia which is the smallest and less liquid capital market in this group of countries.

Like any other empirical research this study has certain limitations. They are primarily related to the quality of data in former Yugoslavia countries. Data inconsistency from different data sources has led to sample size reduction due to exclusion of some dividend paying companies. In addition, the lack of data on dividends and earnings per share from companies in other countries of the region, such as Serbia and Montenegro, to some extent distorts the general conclusion on the dividend policy in this group of countries. A broader sample size over a wider period of time would certainly contribute to the reliability of the conclusions. Hence, addressing these issues presents new research challenge through which one could reach more credible conclusions about the role of dividend policy in different economic environments.

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