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Comparing dividend puzzle solutions by Polish, Canadian, Norwegian and American executives

Agata Sierpińska-Sawicz[1]

ABSTRACT This study compares firms' dividend policy antecedents in four countries. The author surveys managers of 230 companies listed on the Warsaw Stock Exchange that paid dividends over the 2001-12 period and compares the findings to survey reports from the USA, Canada, and Norway. The main antecedents of dividend policy in these countries are the level of current earnings, their stability over time, the level of expected earnings and the pattern of past dividends. The last factor is of little importance for Polish managers, as the history of dividend payouts in Polish-listed companies is brief. The establishment of factors that shape the dividend policy in public companies has crucial importance in global financial markets. Investors make cash transfers to markets that ensure a high return on invested capital. Orders from foreign investors generate almost 50% of the turnover on the Warsaw Stock Exchange. Therefore, in their decisions on the division of earnings, Polish companies should be guided by similar considerations as those displayed by companies in developed economies that seek to attract foreign investors. The study expands on the existing survey research on dividends and provides new evidence from managers of companies in Poland.

KEY WORDS: dividend, survey, dividend policy, dividend antecedents, dividend determinants

JEL Classification: G35

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Introduction

Dividend policy plays a key role in the distribution of listed companies' net profits, but despite the existence of numerous studies, Brealey, Myers, Allen and Mohanty (2011) list dividends as one of the ten unresolved problems in contemporary corporate finance. The problem of decision-making with regard to dividend payments, described in the literature as the "dividend puzzle" (Black, 1976; Baker, Powell, & Veit, 2002), emphasizes the role of three forces that influence dividend policy: managers, shareholders, and potential investors. Baker, Singleton and Veit (2011) assume that a major reason for this ongoing debate is the heavy reliance on economic modeling approaches and the lack of an in-depth understanding of how investors and managers behave and perceive dividends. Dividend policy continues to attract attention due to its linkage with corporate financing and investing decisions and its impact on shareholder wealth (Baker & Jabbouri, 2016).

The Polish capital market is a unique case in the study of corporate dividends. Since the start of the reg-

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ulated stock exchange market, the State Treasury has privatized large factories by placing them on the stock exchange, the proceeds from which served to replenish the state budget. However, the Treasury continues to be the majority shareholder in strategic companies in the fuels, energy and mining sectors. Faced with a budget deficit, the Treasury expects to receive dividends from the companies in which it has a stake. Hence, these companies are the main dividend payers in the Polish market (Sierpińska-Sawicz, 2014).

In studying dividend policy, researchers typically rely on two main approaches: managerial surveys and statistical analyses of published financial data. Survey research complements research based on secondary data and provides additional insights into why firms make certain dividend policy decisions (Baker & Weigand, 2015). Data on Polish companies listed on the regulated market are distorted by high inflation and interest rates, especially in the early years of privatization. Therefore, these data are difficult to apply in comparisons with long-term data from highly developed markets. In addition, compared with exchanges in mature economies, the Warsaw Stock Exchange (WSE) is in its early stages of development. Thus, the study presented in this paper relies on the questionnaire method. To provide further insight into how dividends are perceived from a managerial perspective in Poland, the present study surveys managers of dividend-paying firms listed on the WSE.

This study's analysis of the existing literature justifies the proposal of the following hypotheses. H1: The key antecedents of dividend policy in Poland relate to the level of the company's earnings, similar to the impact of earnings in the USA, Canada, and Norway. H2: The antecedents of dividend policy in Poland do not fundamentally differ from those in the USA, Canada, and Norway. Testing these hypotheses is important for the WSE. Almost 50% of the turnover on the WSE stems from orders by foreign investors. Therefore, in their decisions on the division of earnings, Polish companies should be guided by similar considerations as those displayed by companies in developed economies that seek to attract foreign investors.

This research may be most comprehensive study that analyzes Polish managers' assessment of dividends. Subsequently, the outcomes are compared with survey research conducted in the USA, Canada and Norway. The paper contributes to the dividend literature by expanding on the existing survey research on dividends and by providing new evidence from managers of companies in Poland.

Literature review

Lintner (1956) is the first to initiate manager surveys applied to dividend policy studies. His seminal research on US executives reports that the basic premises for dividend payments are the pattern of past dividends and the current level of earnings. Baker and Powell (2000) conduct surveys of CFOs of listed companies on the New York Stock Exchange (NYSE) from three industrial sectors: manufacturing, wholesale/retail groups and utilities. Their findings show that the most important factors influencing dividend payouts are the expected level of future earnings, the pattern of past dividends, the availability of cash and the desire to maintain or increase the share price. The same factors influence managers' dividend decisions for companies listed on the NASDAQ (Baker, Veit, & Powell, 2001).

Baker, Saadi, Dutta, and Gandhi (2007) analyze managers' perceptions of dividends on the Toronto Stock Exchange (TSX). Their findings show that in Canada, the most important factors are the level of current and future earnings, their stability over time and the pattern of past dividends. This tendency holds among financial versus non-financial managers with reference to the four most important antecedents; however, there is an industry effect if the entire ranking is considered (Baker, Saadi, & Dutta, 2008). Lintner (1956) reports that an industry effect may influence firms' corporate dividend policy and investor perceptions of dividends for firms in different industries. For example, firms operating in saturated and mature industries have a higher propensity to pay dividends than do firms in high-growth industries. Based on research in the USA, Canada, the UK, Germany, France and Japan, Denis and Osobov (2008), conclude that the propensity to pay dividends is connected to firms' size, growth opportunities and profitability and is higher among larger, more profitable firms.

Baker, Mukherjee, and Paskelian (2006) explore the perceptions of dividends among Norwegian managers. On the Oslo Stock Exchange (OSE), the most important antecedents other than those connected to earnings include the current degree of financial

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leverage and liquidity constraints. The pattern of past dividends plays a minor role compared to Anglo-Saxon countries. Kowalewski, Stetsyuk, and Talavera (2007) also do not find support for a persistent pattern of dividend payouts over time for companies listed on the Warsaw Stock Exchange. The authors attribute these outcomes to the underdevelopment of the capital market in Poland. The number of listed companies is relatively small, and most firms have a very short history as a listed public company. Consequently, companies may not care about maintaining stable dividend payout ratios over time and might use other techniques to compete for investors. Nevertheless, consistent with the corporate finance literature, Kowalewski et al. (2007) find that in Poland, larger companies and more profitable firms that do not have good alternative investment opportunities pay more dividends. Also noteworthy is the lower information efficiency and higher volatility of Poland's capital market in comparison to developed markets.

Researchers seem to pay little attention to variables relating to the current state of the economy. In his literature review, Kowerski (2010) states that one of the few exceptions is the study by Marcus and Martin Jacob, which shows the positive global influence of the GDP growth rate on dividend decisions. Kowerski also reports a significant influence of the macroeconomic situation on dividend decisions in Poland. His study shows that in Polish public companies, the personal economic sentiment of managers plays an important role. Management boards' dividend decisions are driven by managers' own appraisal of the current economic situation and not merely by the macroeconomic situation in the previous year.

Research design and methodology

Sample and survey

The research into the antecedents of dividend policy was conducted among a group of companies listed on the regulated market of the WSE that paid out dividends in the period from 2000-2012. The author assumed that companies that had not paid out dividends for over a decade would not be able to earnestly determine the factors that influence dividend policy.

Using the WSE Fact Books for the years 2001-2013, the author generated a list of 271 companies that had paid a dividend at least once during the research time frame. In early 2012, among the selected 271 dividend payers that had declared a dividend during the study period, 39 were no longer listed and 2 had merged with other companies. In the middle of 2012, the survey was therefore sent to 230 companies. The author attached a letter of intent in which the companies received assurances about the confidentiality of the data and a commitment to use the data only for inferences.

The survey was modelled on the questionnaires designed by Baker et al. (2007), with the questions and statements adapted to the Polish reality, and the survey instrument**s were extended** to missing factors that appear in other studies for comparison purposes.

The survey contains 3 sections. The first section asks respondents to indicate the importance of 26 factors (F1-F26) in determining their firm's dividend policy. The author uses a five-point equal-interval importance scale where 0=none, 1=low, 2=moderate, 3=high, and 4=very high. The second section contains 7 questions about the background of the respondents and their firms. The third section of the survey asks the respondents to provide their opinion on 37 closed-end statements within 6 areas involving their firms' dividend policy and their explanations for paying cash dividends. The third section is not included in this study.

The first part of the study was conducted in electronic form. The author sent a link to a website from which the survey could be downloaded. The respondents were asked to select the name of their company from an enclosed list. Thus, the respondents had the opportunity to view the list of companies participating in the study. Foreign companies received an English-language version of the questionnaire in PDF format via e-mail.

Two weeks after the questionnaires were dispatched, the companies were sent a reminder requesting completion. As a result of these repeated attempts to obtain responses, the author received 36 completed surveys from listed companies. Each company returned only one survey, of which four surveys were filled out entirely except for the name of the company, but by using the stored IP addresses, they were able to be accurately identified. The percentage of research sample responses (16%) obtained in the first stage of the research was insufficient to make generalizations and formulate propositions designed to verify the initial hypotheses.

Table 1. Structure of the respondents by position

Category of response	No. of responses	Structure, %
Chairperson	18	21.4
CFO	26	31.0
Another board member	8	9.5
Supervisory Board of Audit Committee member	5	6.0
Investor Relations Department	27	32.1
Total	84	100.0

Notes: Adapted from author's own calculations based on the WSE survey results.

In the second stage of the study, the author sent out a paper version of the survey and contacted the companies by telephone to ask them to complete the survey. In addition, the data collection procedure included an offer to send the companies the aggregate survey results so the companies could compare their own dividend policy with the results for the rest of the industry. As a result, over a three-month span, an additional 48 surveys were received, which resulted in a total of 84 complete questionnaires and a total response rate of 36.6%. In line with the pertinent literature, this sample is deemed sufficient to verify the research hypotheses. For example, some studies feature the following response return rates: 32.9% for the NYSE (Baker, Powell, 2000), 29.8% for the NASDAQ (Baker et al., 2001), 27.3% for the Oslo Stock Exchange (OSE) (Baker et al., 2005) and 35.4% for the TSX (Baker et al., 2007).

Considering the characteristics of the respondents in terms of value, the market capitalization of the domestic respondents (82 out of 84 responses) accounts for 71% of the total capitalization of domestic companies listed on the WSE. With foreign companies included (2 out of 84 responses), respondents' capitalization amounts to nearly 50% of the WSE's total market capitalization at the end of 2012 (WSE data). Hence, nearly all the major dividend payers from the study period returned completed surveys. These are large companies with established market positions. A comparison of the antecedents of the dividend policy pursued by the WSE-listed companies with those of companies listed on the OSE, NYSE, NASDAQ and TSX is justified because, as Denis and Osobov (2008) argue, the propensity to pay dividends is higher among larger, more profitable companies whose retained earnings account for a large part of the value of their property. Similar reasoning appears in earlier comparative studies (Baker et al., 2007).

Table 1 presents the structure of the respondents by their position in the firms. The data analysis indicates that 68% of the respondents are directly involved in dividend policymaking, including 63% representing companies' management. While not directly involved in dividend decision-making, over 32% of the respondents must be knowledgeable about their companies' dividend policy in order to communicate with shareholders.

Statistical tests

To test the first hypothesis, the author calculated the arithmetic mean ($\bar{x}$) and standard deviation (s_d) of each of the 26 factors influencing the companies' dividend policy. The author used a t-test for the null hypothesis that the mean response for each of the 26 factors influencing dividend policy equals 0 (no importance). For each factor, the author verified the null hypothesis by testing for the absence of significant differences between the arithmetic mean and the value of 2.0 (average weight of the 5-point scale). This comparison indicates whether the factor is relatively less or more important than the validity referred to as "average".

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A chi-square test (for a single sample) was used to estimate whether there is a difference between the observed and anticipated numbers of replies included in each category of validity. To avoid problems caused by too few observed numbers, the 5-point validity scale was converted into a 3-point scale covering the "none/low", "medium" and "high/very high" categories. Particularly noteworthy is the fact that, while almost every factor was assigned very high importance by at least one respondent, at least one of the respondents also considered every factor to have no importance. These findings suggest that the weight that the respondents attributed to each factor influencing their firms' dividend policy differed from a company to company. This outcome can be confirmed by the results of the t-test, which show that the majority of the arithmetic mean values are statistically significantly different from the value of 2.0 (at p = 0.05 - 21 factors, at p = 0.01 - 20 factors). Thus, the chi-square test analysis confirms the conclusions from the t-test analysis for almost all of the factors. The results of the chi-square test indicate that the numbers of "high/very high" and "none/low" responses are significantly different from the number of "average" responses.

In order to test the second hypothesis to determine whether the ordering of the factors by Polish, Norwegian, Canadian and American managers differs significantly, Spearman's rank correlation coefficients were computed for each separate pair of rankings. The significance of the correlation coefficient was checked using a t-test to verify the hypothesis of the independence of the orderings.

To facilitate comparison of the results, the Polish ranking is purged of some factors that are not present in other research: F23, F24, F25 and F26 for the WSE-OSE (Norway) comparison, 7 factors (F6, F7, F14, F22, F24, F25 and F26) for the WSE-NYSE (US) comparison, 4 factors (F14, F24, F25 and F26) for the WSE-NASDAQ (US) comparison and 4 factors (F14, F24, F25 and F26) for the WSE-TSX (Canada) comparison. For Polish companies and American firms listed on the NYSE, the author merged the level of current (F3) and expected future (F4) earnings into one factor, similar to the study of NYSE managers. After re-ordering the remaining factors of own study for each pair, the author calculated the correlation coefficients in four stages. The resulting correlation coefficients are as follows: for Polish and Norwegian companies, the correlation coefficient is +0.732 and is statistically significant (t = 4.809, df = 20 and p = 0.000). Next, for companies listed on the WSE and NYSE-listed firms, the correlation coefficient is +0.450 and is statistically significant (p = 2.125 with df = 16, p = 0.049). For Polish companies and firms listed on the NASDAQ, the correlation coefficient is +0.516 and is statistically significant (p = 2.694 with df = 20 and p = 0.016). Finally, the correlation coefficient for the rankings of the factors compiled by the managers of Polish and Canadian companies is +0.707 and is statistically significant (p = 4.475 with df = 20 and p = 0.000). These results refute the hypothesis of the independence of orderings for all pairs. Thus, all the rankings of the factors determining dividend payouts in the compared countries are consistent and move in the same direction, thus implying that comparisons between the rankings can be made directly.

Comparison of the hierarchy of the antecedents of dividend policy in the compared countries – survey results and discussion

Table 2 shows the results of the ranking of the factors affecting firms' dividend policy in Poland and the results of the rankings of the same factors by Canadian, Norwegian and American authors (Baker et al., 2000, 2001, 2006, 2007).

In Poland, the most important factors determining dividend payouts are the level of current earnings (F3), their stability over time (F1) and the level of expected future earnings (F4). The data in Table 2 show that respondents from all of the analyzed markets rank the factors relating to earnings among the top five most important factors influencing firms' dividend policy. Dividends are paid from a company's earnings; therefore, companies' dividend policy must take into account, first and foremost, their financial results. Thus, based on the results of the survey, the first hypothesis (H-1) is confirmed.

The analyses included comparisons of the hierarchy of the antecedents of dividend policy between Poland and the other countries examined in the study. In the Norwegian ranking, the first two factors are the same as in Poland. A difference appears only with regard to the third factor for Poland, namely expected future earnings, which occupies fourth place for Norway.

Table 2. Ranking of factors influencing dividend policy in selected countries

Factor		Mean of the sample ($\bar{x}$)	Rank				
			Poland WSE	Norway OSE	USA NYSE	USA NASDAQ	Canada TSX
F3	Level of current earnings	3.27	1	1	1	3	4
F1	Stability of earnings	3.11	2	2	5	2	2
F4	Level of expected future earnings	2.98	3	4,5	1*	4	1
F21	Availability of effective investment incentives	2.80	4	8,5	6	15	11
F11	Liquidity constraints, such as the availability of cash	2.63	5	4,5	7	14	5
F7	Availability of alternative sources of capital	2.50	6	10	-	17	15
F6	Current degree of financial leverage	2.49	7,5	3	-	10	8
F10	Projections about the future state of the economy	2.49	7,5	15,5	17	18	17
F8	Expected rate of return on the firm's assets	2.46	9	7	12	11	10
F26	Shareholders' preferences with regard to receiving dividends on a regular basis	2.41	10	-	-	-	-
F13	Desire to pay out, in the long run, a given fraction of earnings	2.40	11	15,5	8	7	6
F9	Desire to maintain a target capital structure	2.33	12	8,5	10	6	13
F5	Concerns about affecting the stock price	2.24	13	14	3	5	7
F20	Financing considerations such as cost of raising funds externally (debt and equity financing)	2.23	14	12	11	19	14
F2	Pattern of past dividends	2.20	15	11	2	1	3
F15	Existing shareholders' needs, such as the desire for current income	2.20	16	21	9	9	9
F25	Shareholder structure (State Treasury, investment funds, companies, individual investors)	1.94	17	-	-	-	-
F18	Concerns that a dividend change may provide a false signal to investors	1.74	18	18	4	8	12
F22	Signaling incentives such as using dividend changes to convey information to the financial markets	1.65	19	13	-	16	16
F19	Legal rules and constraints such as paying dividends that would impair the capital structure	1.61	20	6	15	12	19
F17	Preference for paying dividends instead of making risky investments	1.51	21	20	18	20	21
F16	Contractual constraints, such as dividend restrictions in debt contracts	1.46	22	19	14	21	20
F24	Tax rates on dividends and capital gains	1.36	23	-	-	-	-
F12	Desire to conform to the industry's payout ratio	1.30	24	17	13	13	18
F23	Stockholder characteristics, such as marginal tax rates of company's current shareholders	1.23	25	-	16	22	22
F14	Desire to conform to the dividend payout ratio of the market as a whole	1.12	26	22	-	-	-

Notes: Adapted from author's own calculations based on the WSE survey and Determinants of corporate dividend policy: a survey of NYSE firms, Financial Practice and Education, 10(1), 29-40 by Baker, Powell (2000); The perception of dividends by Canadian managers: new survey evidence, International Journal of Managerial Finance, 3(1), 70-91 by Baker et al. (2001); How Norwegian Managers View Dividend Policy, Global Finance Journal, 17(1), 155-175 by Baker et al. (2005); and The perception of dividends by Canadian managers: new survey evidence, International Journal of Managerial Finance, 3(1), 70-91 by Baker et al. (2007).
*- in the NYSE study, F3 and F1 were merged and became the level of current and expected earnings.

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Norwegian managers rank the current level of financial leverage (F6) third, while in Poland, this factor is ranked seventh. Its high ranking in Norway implies that the respondents are aware that their company's dividend policy is affected not only by the amount of funds available for distribution to shareholders but also by the company's capital structure.

In Canada, the three most important factors are the level of expected future earnings (F4), the stability of earnings (F1) and dividend payouts in previous years (F2). In Poland, the last factor was considered to be of average importance (insignificant difference between the arithmetic mean and the value of 2.0) and was ranked fifteenth place, compared to eleventh for the OSE. The weight that managers attach to future earnings is rational because this factor is strongly connected with cash flow, which is the source of dividend payouts. On the other hand, Poland's top-ranked factor, the level of current earnings (F3), ranks fourth in Canada, and the availability of efficient investment projects ranks eleventh. These results suggest, therefore, that Canadian managers attach more weight than their Polish counterparts to what happened and what will happen to the company's earnings beyond the current performance. An equally important role is played by past dividend patterns, thus confirming that, just as in the USA, Canadian managers highly value continuity and stability of dividend payouts. The low ranking of possible investments as a determinant of dividend policy, coupled with the high weighting of past dividend patterns, provides evidence that Canadian companies are more inclined to follow a predetermined payout policy than to apply a residual policy.

The same conclusion holds for the US stock exchanges. Past dividend payouts are in fact the most important determinant for NASDAQ managers and the second most important determinant for NYSE managers. The perception of this particular determinant seems to mark one of the most important differences between the Polish and Norwegian rankings and the Canadian and American rankings. A conclusion can be drawn from the above that TSX, NASDAQ and NYSE managers make decisions based on the Lintner model more than their Polish colleagues. One should also note that companies operating in these mature markets developed dividend models in past periods, which indicates that the maturity of the capital market also affects firms' dividend policy.

The next two factors, the availability of effective investment incentives (F21) and liquidity constraints (F11), are ranked fourth and fifth on the WSE, while on the Oslo and NYSE stock exchanges, these factors are among the top ten antecedents, although they are relegated to rankings between tenth and twentieth on the remaining two stock exchanges. Liquidity constraints such as the availability of cash (F11) is the fifth most frequently quoted determinant of dividend policy for Polish, Norwegian and Canadian companies. Managers from these three markets exhibit notable coherence in their attitudes. They are aware that companies pay dividends out of existing cash rather than from earnings derived through accrual accounting, and, therefore, it is cash availability that affects a company's ability to pay cash dividends. NYSE managers rank liquidity constraints (F11) as the seventh (out of 22) most important determinant of dividend payouts. In contrast, the perception of these factors (F21, F11) by managers of NASDAQ-listed companies indicates considerable differences of opinion. Liquidity is ranked only as the fourteenth most important factor out of the total of twenty-two factors, and the availability of effective investment incentives, which the Polish market sees as the fourth most important factor, is ranked fifteenth. It is also worth noting evidence of differences of opinion with respect to the last issue among managers of TSX-listed companies, where possible investment incentives are ranked only eleventh.

The availability of alternative sources of capital (F7), which ranks sixth in the Polish survey, occupies a lower place in Norway (10th out of 22). F7 is also considered to be a low weight factor in Canada (15th out of 22) and on the NASDAQ, where it is merely seventeenth (out of 22). This result attests to the fact that Polish managers experience greater difficulty in finding sources of financing than their colleagues in the countries used for comparison, as Polish companies have limited access to the debt market. The Catalyst bond market is still underdeveloped. In the debt structure, bonds account for merely 12% of **the total** debt, while 88% of the debt comes from loans, which are difficult to obtain in an economic downturn. In addition, Poland's interest rates have been much higher than those in other EU countries for the last dozen

years. On average, bonds account for 20% of the total corporate debt in the EU, compared to 80% in the US, with loans accounting for only 20% of the total debt (Gałka 2015).

Similarly, predictions of the future health of the economy are treated in Poland as a priority (7th most important out of 26), but less so in Norway (16th out of 22), the USA (NYSE), Canada (17th out of 22) and for NASDAQ-listed firms (18th out of 22). The expected return on assets is of the most importance for Norwegian managers (7th out of 22). In Poland, this determinant ranks ninth, in Canada tenth, eleventh on the NASDAQ and twelfth on the NYSE.

From the point of view of the US markets, the impact of dividends on a company's share price is quite an important factor in firms' dividend policy. Both firms listed on the NYSE and the NASDAQ rank it among the five most important factors. An increase in the company's market value is frequently one of the measures adopted to determine the bonuses of US managers. However, this factor has much less importance for Polish managers, falling outside the top ten factors (13th out of 26), and likewise for Norwegian firms (14th out of 22).

The needs of current shareholders, for example, a desire to acquire current earnings (F15) (9th out of 22), are considered more seriously in the US and Canada than in Poland, where such concerns rank sixteenth. Norwegian managers rank this factor only 21st.

The comparison reveals a difference in managers' approach to the avoidance of false signals to investors by changing the amount of their dividend payouts (F18). NYSE managers rank this factor fourth, that is, as a very important factor in the hierarchy. This result means that the signaling effect, despite affirmation by managers from all four countries of their support for the underlying theory, gains actual recognition only on the New York stock exchange. Respondents from the NASDAQ ranked this factor (F18) eighth and Canadian respondents twelfth. Factor (F18) is afforded the least attention by Polish and Norwegian managers, who rank it eighteenth. In Norway, managers' moderate level of concern about sending a false signal about the condition of the company is probably due to the existence of specific regulations and government control. Norwegian companies experience fewer agency problems than their US counterparts due to a concentrated ownership structure and the large Treasury ownership of listed companies. In Poland, shareholder protections have recently been strengthened with the introduction of class action lawsuits against companies.

Norwegian managers' approach to regulations and legal restrictions on the payment of dividends (e.g., equity depletion) also differs. This factor is ranked sixth in Norway, compared to its much lower ranking by Polish companies (20th out of 26), and its rank of fifteenth on the NYSE, nineteenth on the TSX and twelfth on the NASDAQ. The difference stems from regulatory differences between the countries. As mentioned previously, Norway's centralized government (Baker et al. 2006) has established very strict regulatory standards that exert a strong influence on the business environment in order to afford shareholders broad legal protection.

The least important factors from the perspective of all the surveyed groups are investor characteristics such as marginal tax rates and adjustments to the dividend rate across the market. These factors are ranked at the bottom of all the rankings. Tax issues are therefore not considered significant by the managers.

The calculation of Spearman's rank correlation coefficients (rs) allows a determination of the strength of the links between the Polish hierarchy of antecedents with those identified from research in other countries. The author obtained statistically significant results of rs +0.732 for the comparison between the WSE and the OSE, +0.450 for the comparison between the WSE and the NYSE, +0.516 for the comparison between the WSE and the NASDAQ and +0.707 for the comparison between the WSE and the TSX. These high correlation coefficients generally show that Polish, Norwegian, Canadian and American managers build their rankings of factors affecting firms' dividend policy in much the same way, despite the different characteristics of the companies and the markets in which they operate.

Summary and conclusions

To summarize the discussion of the hierarchy of factors shaping the dividend policy for firms in Poland, the USA, Canada and Norway, one first observes that this hierarchy does not differ significantly. The most important antecedents of dividend policy for compa-

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nies listed on regulated markets of the countries used for the comparison are the level of current earnings, the stability of earnings and the level of expected future earnings. In addition, on the stock markets of the highly developed economies, the level of dividend payouts from past earnings is at a premium. In Poland, this factor is of secondary importance, as companies have yet to develop a target dividend payout model because their history on the WSE is short. The above findings confirm the first research hypothesis: the most important antecedents of dividend policy involve earnings.

In Poland, Norway and Canada, the availability of cash to pay dividends is an important determinant of the distribution of profit, as it is ranked fifth in the hierarchies. In the US, concerns about the impact of dividends on the share price are ranked fifth, which indicates the importance of shareholder value of the company and the informative function of dividends in that market. In Poland, managers attribute a high level of importance to concerns about the company's growth and ensuring access to the resources needed to finance investment. In the US (NASDAQ), a desire to maintain the target capital structure plays an important role, while on the NYSE, it is the availability of effective investment incentives. Canadian managers, in turn, prize the desire to pay a certain portion of earnings over the long term.

Within the first few most important factors influencing firms' dividend policy in the countries used for comparison, there are not major differences in the hierarchy of importance. The greater the number of factors used, the lower the similarity in the hierarchy of factors. Therefore, the second hypothesis is not fully confirmed. The positions of the remaining antecedents differ in the hierarchies of importance and depend on the market situation and economic conditions in each country.

This article analyzes the factors that drive executives in determining their companies' dividend policy. Areas for further research include the determinants that guide investors when purchasing shares of dividend-paying companies, which would allow a comparison of the determinants of dividend policy from both perspectives – the board's incentives when recommending a dividend level and the number of payouts and the investors who expect income. Private investors and their rationale when purchasing stock should receive particular attention, as they were responsible for 12% of the turnover on the Warsaw Stock Market in 2015 (WSE, 2015b).

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