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MARKET REACTIONS TO DIVIDENDS ANNOUNCEMENTS: EVIDENCE FROM THE WARSAW STOCK EXCHANGE

REAKCJA RYNKU NA OGŁOSZENIA O WYPŁACIE DYWIDEND: ANALIZA CEN AKCJI NOTOWANYCH NA GIEŁDZIE PAPIERÓW WARTOŚCIOWYCH W WARSZAWIE

The main goal of article is to investigate the Warsaw Stock Exchange market reaction to announcements in connection with planned dividend payouts. The research sample comprises 45 entities listed on the Warsaw Stock Exchange between 2017 and 2021. The analysis uses the simple rate of return and the buy-and-hold excess return. Regression analysis shows that change in DPR does not fully explain the share price changes. Nonetheless, the weak market reaction to dividend payment announcements may lead to the conclusion that Polish stocks already take into account information about dividend payouts.

Keywords: signalling hypothesis; Warsaw Stock Exchange; dividend policy; JEL Codes: D82, G14, G35

Głównym celem artykułu jest zbadanie reakcji rynku na ogłoszenia w związku z planowanymi wypłatami dywidendy. Próba badawcza obejmuje 45 podmiotów notowanych na Giełdzie Papierów Wartościowych w Warszawie w latach 2017–2021. W analizie wykorzystano prostą stopę zwrotu oraz nadwyżkową stopę zwrotu typu *buy-and-hold*. Analiza regresji wskazuje, że zmiana wskaźnika DPR nie wyjaśnia w pełni zmiany cen akcji podmiotów objętych analizą. Niemniej jednak słaba reakcja rynku na komunikat o wypłacie dywidendy może prowadzić do wniosku, że polskie akcje już uwzględniają informacje o jej wypłacie.

Słowa kluczowe: teoria sygnalizacji; Giełda Papierów Wartościowych w Warszawie; polityka dywidend; JEL codes: D82, G14, G35

I. INTRODUCTION

Dividend payment is one of the most important financial decisions in connection with profit distribution. The investor's preferences for capital gains

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should be taken into account in making this decision. The literature presents pro-dividend and anti-dividend positions. The dividend can be a signal determining the company's financial performance.

The aim of the study is to investigate the Warsaw Stock Exchange market reaction to the dividend announcement. The research is based on 45 entities that never paid dividends prior to 1 January 2017 and characterizes the continuity of dividend policy over the next months, till the end of December 2021.

Like other studies, this research contributes towards a very important aspect of corporate financial management. This study emphasizes the relationship between dividend policy and stock share prices. It differs from previous studies that considered dividend pay-out ratios calculated only for those entities which had never previously applied a dividend policy. The author mainly worked on the assumption that dividend policy application is accompanied by a change of share price, but the hypothesis has not been explicitly confirmed so far. First, the official dividend announcement was taken as the date of the annual shareholder's meeting. The second contribution was removing the earning announcements from the dataset. Third, only the payout ratio was employed to verify whether investors may perform a better and more accurate analysis of entity performance.

The paper is organized as follows: in section II, the foundations of dividend theory are presented. In section III, a literature review is provided. Section IV outlines the empirical assumptions and findings, while in section V the conclusion of the research is discussed.

II. THE FOUNDATIONS OF DIVIDEND THEORY

Views on the impact of dividend policy on company value vary widely. It seems that dividend payments give some information about the company and in consequence confirm the famous words of Black[1]: 'The more closely we look at the picture of the dividend, the more it seems to be a puzzle in which the individual parts do not fit together.'

The situation has not changed to this day, which is why the author's ambition was to look at the problem of the dividend policy of public companies and its impact on market capitalization.

In fact, most of the dividend theories appeared at the turn of the 1950s and 1960s. The main goal of financiers and economists was to learn about the investor's preferences and settle the question of what is more desired by them – profits in the form of dividends or capital gains? Views on dividend politics can be divided into three groups:[2]

1. Pro-dividend group – according to which the payment of dividends has a positive effect on share prices. The main representative is Gordon;

[1] Black (1976).

[2] Sierpińska (1999).

2. Neutral group – they assume that the dividend policy has no impact on the value of the company. Miller and Modigliani were the first to present such views;

3. Anti-dividend group – it proves the negative impact of the dividend on the value of the business entity. Farrar, Selwyn and Brennan represent this position, among others.

The basic research problem was to answer the question of whether the investor buying shares prefers income in the form of dividends and capital gains, only dividends, or capital gains alone.[3]

The hypothesis of the combined impact of dividends and capital gains on the share price assumes that shareholders are interested in both dividends and capital gains. Gordon used the following model:

$$P = \alpha_0 + \alpha_1 D + \alpha_2 Y, \tag{1}$$

where: P – share price at the end of the year, D – dividend each year, Y – the investor's income each year.

In the case of the hypothesis and the impact of dividends on the value of shares, Gordon considered the following: an increase in stock quotations, an increase in the rate of return, and profits from the issue of additional shares. He made a model modification, replacing the rate of growth of capital gains with the sheer size of those gains. The modified model is as follows:

$$P = \alpha_0 + \alpha_1 D + \alpha_2 (Y - D). \tag{2}$$

Coefficient α at the value of capital gains informs about the price that the investor can pay for the increase in shares. In turn, the ratio at the value of the dividend represents the rate of return that the market requires from the shares of the company whose price has not changed.[4]

In 1961, Miller and Modigliani published a paper that challenged Gordon's concept.[5] They concluded that the dividend policy does not affect either the current market price or the total income of shareholders. The justification for this thesis was based on the argument that in the case of a perfect market, investors behave in a rational way, and as a result, the value of the company is influenced only by factors of a real nature, in other words by those that affect the amount of cash flows generated.

In the 1970s, in relation to the theses presented by Modigliani and Miller, attempts were made to adapt their theory of the perfect market to economic

[3] Gordon (1959).

[4] Gordon (1962).

[5] Miller, Modigliani (1961).

realities. The basic factor illustrating the ratio of shareholders to dividends was the tax system. The pioneers of the anti-dividend approach were Farrar and Selwyn, who in 1967 stated that an investor wants to maximize income by choosing shares for his portfolio. Therefore, as the dividend tax rate exceeds the capital gains tax rate, the investor will prefer income from the sale of shares.[6]

In 1970, Brennan published a paper in which he attempted to modify the model presented by Modigliani and Miller. Brennan introduced a tax system with a lower rate for capital gains. The results of his research confirmed the expectations of Farrar and Selwyn: the rate of return on shares increase as the expected dividend size increases. This is due to the higher tax rate imposed on dividends in relation to profits from the sale of shares.[7]

Anti-dividend theory gained empirical proof thanks to the work of Litzenberger and Ramaswamy, who estimated the average tax effects based on data from 1936 to 1977. The results indicated that for one dollar of profit growth in the form of dividends, investors require an additional 23 cents in the form of pre-tax profits.[8]

The dispute among economics experts over the issue of dividends has resulted in the development of new theories. One of the fundamentals is the effect of the signalling theory, consideration of which is the main purpose of this article.

The starting point in signalling theory is the occurrence of information asymmetry between company managers and minority shareholders. Investors are not able to obtain reliable information/data proving about the current financial condition of the company, on the basis of which they could make an informed and rational investment decision. Reliable information should be interpreted as such that is available to the company's management board. According to signalling theory, dividends paid are perceived by shareholders as a positive signal sent to the market. It is a method of providing information about the current financial condition of the company, while a change in the dividend payment policy may suggest in which direction future profits will change.[9]

The beginning of the discussion on the theory of the signalling effect is seen in Lintner's model. In the 1950s, Lintner presented a work in which he stated that an increase in dividends is usually a signal of a permanent change in the level of profits in the future. In his opinion, the dividend policy is based on the assumption of striving for the target amount of the payout ratio in the long term and its adjustment in subsequent periods.[10]

According to the author of the research, investors who determine investment decisions through the prism of the value of paid dividends must first define the dividend policy. Moreover, a common assumption of the signalling

[6] Golec (2004).
[7] Sierpińska (1999).
[8] Litzenberger, Ramaswamy (1979).
[9] Zyguła (2017).
[10] Lintner (1956).

theory is that the announcement of a dividend increase is interpreted as a good sign, since it communicates to the market that a company has good prospects for the future and can afford to increase cash expenditure.

III. LITERATURE REVIEW – THE PRACTICE OF MARKETS

Most of the empirical literature tried to verify the hypothesis that the dividends have a certain informative content which influences the future of stock prices.

Fama, Fisher, Jensen and Roll studied the impact of the announcement of stock splits on stock prices. The distribution dates for total dividends between January 1927 and December 1959 showed that abnormal yields are observed only before dividend distribution date.[11]

Pettit carried out a study over the period 1969–1976 concerning several variants of profits distributions and using the market model. The results obtained by Pettit confirm the idea that dividend change is a good signal, and reduction or omission are rather seen as unfavourable signals.[12]

Aharony and Swary adopted very similar approach to that of Pettit. Their sample concerned firms that changed their dividends by more than 10% between 1963 and 1976. The observed reaction allowed them to confirm that the change of the share prices can only be due to the announcement of the dividends.[13]

Woolridge found that prices react significantly upward (or downward) following the announcement of an increase (or decrease) in dividends. The results led the author to confirm the idea of the informative content of the dividends.[14]

The extreme cases observed by Asquith and Mullins in dividend changes on a sample of 168 firms over the period 1964–1980 allowed them to state there is a positive and statistically significant relationship between observed variation in dividends and the calculated abnormal returns.[15]

In another study, Kane, Lee and Marcus found the reaction of stock prices is positive when the event is an announcement of a dividend increase, even if the declared profits are below those anticipated. These results confirm that the announcement of dividends cannot be without an impact on stock prices.[16]

The study conducted by Michaely, Thaler and Womack covers the observations of 561 cases of dividend initiation and 887 cases of omissions over the period 1964–1988. The results make the market reaction for the case of omission much more intense than that of initiation. This explains the conclusion, which

[11] Fama, Fisher, Jensen, Roll (1969).
[12] Pettit (1972).
[13] Aharony, Swary (1980).
[14] Woolridge (1983).
[15] Asquith, Mullins (1983).
[16] Kane, Lee, Marcus (1984).

asserts that the managers are very reluctant during the decrease or absence of dividend distribution, and they try most of the time to smooth their dividend.[17]

Deliberations on the signalling effect of dividends can also be found in the work of Lotfi.[18] He claimed that empirical evidence does not allow the theoretical models to be fully validated, and that the market reaction of share prices depends on the importance of the changes observed in dividends.

Due to the fact that in the early 1990s and after there were numerous studies which analysed the signalling effect of dividend, the present author decided to present the assumptions and conclusions of example research in Table 1. First and foremost, the authors of the research concentrated on the accuracy of the assumption that dividend payout is accompanied by a change in share price.

The problem of the reaction of share prices related with dividend policy was also examined in the Warsaw Stock Exchange.

Słoński and Zawadzki analysed 263 observations of companies that changed the size of the dividends paid between 2005 and 2009. They concluded that there was no relationship between the direction of changes in the dividend policy and the average abnormal rates of return. They also studied the reaction of stock prices to the change in the value of dividends in groups of entities created according to the criteria of their capitalization (small, medium, large). They noted that the link between dividends and abnormal average rates of return is very weak.[19]

Table 1

Literature review

Year	Author	Objectives	Conclusion
1999	Tsoukalas and Sil[20]	Predictive power of variables such as dividend yield (DY), dividend growth rate, using the information hypothesis of dividends	The ratio causes abnormal stock returns. It implies predictability, which is only inconsistent with the simplest model of market efficiency
2010	Abor and Bokpin[21]	Effects of investment opportunities, corporate finance on the dividend payout policy of the firm	Significantly negative association between the investment opportunity set and dividend payout policy

[17] Michaely, Thaler, Womack (1995).
[18] Lofti (2019).
[19] Słoński, Zawadzki (2012).
[20] Tsoukalas, Sil (1999).
[21] Abor, Bokpin (2010).

2014	Movalia and Vekariya[22]	Impact of profitability, leverage, growth rate, rate of return and dividend payout on dividend policy	There is an impact of profitability, leverage, growth rate and rate of return on dividend payout on dividend per share of the companies listed on Standard & Poor's 500 (S&P), Bombay Stock Exchange Sensitive Index (BSE SENSEX)
2017	Jitmaneeroj[23]	Nonlinear relationship between price-earnings (P/E) ratio and POR (Portland General Electric)	When the return on equity is greater (less) than the required rate of return, the P/E ratio and dividend POR exhibit a negative (positive) relationship and positive (negative) convexity
2018	Felimban, Floros, and Nguyen[24]	Analysis of dividend effect – announcement on share price and trading volume	They report some evidence for the stock price reaction that partially supports the signalling hypothesis
2021	Tinungki, Robiyanto, Hartono[25]	Analysis of the effect of the COVID-19 pandemic on corporate dividend policy	COVID-19 caused different behaviours during crisis. Businesses tend to distribute dividends that are even higher compared to the previous year, to maintain a positive signal to stock market

Source: the author's own study.

Agnieszka Perepeczo conducted research on investors' reactions to dividend payments. The study sample included companies that paid dividends at least once between 1992 and 2011. Two models were used to form the basis for estimating extraordinary rates of return. The study where excess returns were statistically significant (average adjusted model) was based on 113 cases and showed a positive relationship between the dividend and share value.[26]

In turn, Frasyniuk-Pietrzyk and Walczak focused their research on investors' reaction to dividend payments but only considering companies that regularly paid dividends. Between 2005 and 2013, 13 such companies were identified. In the case of an increase in the value of dividend, the surplus rate of returns was positive, in the case of a decrease in the value of dividends it was negative. It should be noted, however, that the excess rate of return was statistically significant only on the date of the general meeting of shareholders (t_0).[27]

[22] Movalia, Vekariya (2014).
[23] Jitmaneeroj (2017).
[24] Felimban, Floros, Nguyen (2018).
[25] Tinungki, Robiyanto, Hartono (2021).
[26] Perepeczo (2013).
[27] Frasyniuk-Pietrzyk, Walczak (2014).

Among prior studies concentrated on the Warsaw stock market, Mrzygłód and Nowak analysed the impact of dividend announcements on stock prices. The analysis of 56 dividend announcements in the year 2013 confirmed the positive reaction of the stock market only on the dividend announcement day and one day after the announcement.[28]

Furthermore, the studies presented above already partly confirm the positive effect of announcements on stock prices, but delving deeper into this issue is fitting because some methodological problems were not revealed. The authors do not clarify whether the influence of dividend announcements also works on the entities which have never paid dividends before.

Although some of the studies described above confirm a correlation between dividend payout announcements and share prices. Investigating the problem for the entities which did not apply a dividend policy before the period covered by the study is justified since there is a lack of research conducted under this condition for the entities listed on the Warsaw Stock Exchange.

IV. DATA AND VARIABLES

The article analyses the announcements of dividend payments in the years 2017–2021, for the 45 companies listed on Warsaw Stock Exchange. The research sample includes entities based on two criteria: (1) the entity never applied a dividend policy before 1 January 2017, and (2) the entity made continuous dividend payments within the years 2017–2021. The data was taken from the Stooq and StockWatch websites at the close of trading sessions. The research was conducted based on company quotations adjusted for operations on securities. To examine the market's reaction to the announcements of dividend payments by selected companies in the given years, the rates of returns obtained from investments in issuers shares were compared.

In addition, the author is aware of at least two problems related to the defined time span of the study. The first concerns the effect of the COVID-19 pandemic on corporate dividend policy. Furthermore, changes in profit potentially affect the level of dividend distribution. However, not all of the entities noted a decrease in cash flows or declining business activities, therefore the decision to verify whether change in share prices was reflected by the stock exchange market is focused on analysing how quickly the Polish market is able to incorporate news into stock prices. The second one is linked to the hour of the dividend announcement. As the research was based on daily rates of return, there could be a significant difference in the market reaction between those which were announced soon after the start of the trading session, and those which were announced just before the close of trading. However, the decision to analyse market responses is in line with the study proposed by

[28] Mrzygłów, Nowak (2015).

Tabak and Dunbar 'there is no reason to believe that the market anticipated the news'.[29]

The ownership structure for all the companies analysed in the research was characterized by the fact that the company's management board did not have a majority at the general meeting of shareholders. Thus, the proposal of dividend payment did not raise the likelihood of its automatic approval by the general meeting of shareholders.

As the date on which the event occurred (*d*), which is the basis for calculating rates of return, the date the management board published the resolution on the payment of dividends was chosen. In other words, the author assumed that the event day and the management resolution day are equal. This fulfils the obligatory condition for event study proposed by Miler and Rock.[30] As a benchmark, the WIG index was applied. For the analysis, the share prices of individual companies and the value of the benchmark was taken as of *d* and 1, 5, 10, 15, 20, 25 days before and after the announcement date. Based on collected data, two types of rate of return were calculated. The first was a simple rate of return, which may reflect a general tendency for price changes in the market. The second was excess rates of return, of the buy-and-hold type, which reflect the reaction of stock market investors of a given company, after adjusting for the price change resulting from the behaviour of the entire market. The buy-and-hold return calculation was performed using the following formula:[31]

$$BHR = \sum(ln\ \frac{P_{t+1}}{P_t} - ln\ \frac{I_{t+1}}{I_t}), \tag{3}$$

where:

– share price in the period t+1;
– share price in the period t;
– benchmark performance in the period t+1;
– benchmark performance in the period t.

$$Simple\ rate\ of\ return = \frac{P_{t+1}}{P_t} - 1, \tag{4}$$

Several methods were used to test the statistical model:

– Pooled regression.

– The least squares dummy variable estimator (LSDV) were associated with the regression model: since a pooled regression ignores the individual effect of residuals, therefore when used in isolation it is inappropriate.

– *F*-test.

[29] Tabak, Dunbar (1999).
[30] Miler, Rock (1985).
[31] Ljungqvist (1999).

In the analysis of the regression, the market share price was taken as the dependent variable, while the dividend payout ratio was taken as the independent variable. The dividend payout ratio (DPR) was calculated as dividends paid divided by net income:

$$Dividend\ Payout\ Ratio = \frac{Dividedns\ Paid}{Net\ Income}. \tag{5}$$

The statistical technique which determines the relationship between market share value and the dividend payout ratio can be expressed in following formula:

$$\begin{gathered} Market\ per\ share = f\ (dividend\ payout\ ratio) \\ Market\ per\ share_{it} = \alpha_i + \beta_1\ dividend\ payout\ ratio + \varepsilon_t \end{gathered} \tag{6}$$

where: α_i (i=1, …, 45) is the unknown intercept for every company, t represents analysed years, β is the coefficient for the independent variable, and Ɛ is the error term.

The null hypothesis states that changes in share value are random and are not influenced by dividend payment announcements, while the alternative hypothesis states that the changes in the value of share price are not random and are influenced by dividend payment announcements. In other words, a random effect implies a random variation across the companies, uncorrelated with explanatory variables.

V. EMPIRICAL FINDINGS

A summary of the results obtained for both types of rate of return are presented in Tables 2 and 3.

Table 2

Simple rate of return

	d-25	**d-20**	**d-15**	**d-10**	**d-5**	**d-1**	**d+1**	**d+5**	**d+10**	**d+15**	**d+20**	**d+25**
Average (%)	3.23	1.86	1.25	1.32	0.95	0.52	(0.36)	0.11	2.25	2.18	3.30	3.15
Median	0.00	0.54	(0.08)	0.36	0.00	0.00	0.00	(0.30)	0.17	0.73	1.32	1.49
Standard deviation	12.89	9.90	9.56	8.00	5.32	3.19	3.55	5.29	8.57	9.36	10.70	13.87

Source: the author's own study.

Table 3

Excess rate of return type buy-and-hold

	d-25	**d-20**	**d-15**	**d-10**	**d-5**	**d-1**	**d+1**	**d+5**	**d+10**	**d+15**	**d+20**	**d+25**
Average (%)	1.46	0.88	0.53	0.70	0.60	0.40	(0.57)	(0.04)	1.67	1.92	2.98	2.89
Median	0.18	0.48	(0.16)	0.40	0.00	0.00	0.00	(0.29)	0.07	0.75	1.19	0.99
Standard deviation	12.77	10.46	10.00	8.37	5.41	3.20	3.88	5.59	7.71	8.58	9.54	12.20

Source: the author's own study.

Based on the size of the average rates of return, it is observed that the values increase with the extension of the analysis period. For the *d* (25) the market reaction was greater after the dividend payment announcement, when a 2.89% return of investment was achieved above the rate of return obtained from WIG, compared to a return of 1.46% for the investment before the event. The average simple rate of return for the period indicates that the examined group of companies generated a 3.15% rate of return *d* (+25), and 3.23 % in the period *d* (–25). It has to be noticed that in the case of a simple rate of return, the market reaction was 0.08% lower after the event – which is opposite to the case of a buy-and-hold rate of return. In shorter time frames, generally higher rates of return were obtained when the investment was made after the announcement of the dividend resolution. The lowest return on investment was obtained one day and five days after the announcement of the dividend payment. The value of simple return was negative 0.36% for the period *d* (+1) and 0.11% for the period *d* (+5). Buy-and-hold represents –0.57% *d* (+1) and –0.04% *d* (+5) below the investment in WIG. The result indicates that in such a short period of time, the resolution of shareholders due to payment of dividends is not a significant source of information for signalling the company situation. Investment risk reflected by the standard deviation is quite similar for both methods of calculating the rate of return. The difference in values increases for the longest period *d* (25).

Next, the calculated rates of return were compared with the change of DPR each year. Tables 4 and 5 present the main result of the regression analysis.

Directional coefficients in all the analysed cases, except for the periods *d* (–5), *d* (+1) for the simple rate of return and *d* (+1) for the excess rate of return of the buy-and-hold type, take a positive value. This means that as the amount of dividend paid increases, the rate of return also increases. This market behaviour is compatible with signalling theory. It is evident from Tables 4 and 5 (except the *d* (–1) period related to the simple rate of return), that the null hypothesis of the random effect model is not rejected in the case of these tests at the 5% level of significance. In other words, the null hypothesis was accepted

since the *p*-value is larger than the level of significance and is not statistically significant.

Table 4

Simple rate of return (regression model)

d	R Square	Standard Error	*p*-value	a	b
d-25	41.85%	0.0070	0.2381	0.0177	0.7304
d-20	62.22%	0.0038	0.1127	0.0066	0.6118
d-15	24.51%	0.0023	0.3964	0.0043	0.1594
d-10	0.01%	0.0046	0.9874	0.0073	0.0056
d-5	41.81%	0.0033	0.2384	–0.0001	0.3487
d–1	83.94%	0.0009	0.0288	0.0020	0.2597
d+1	22.24%	0.0017	0.4226	–0.0023	–0.1123
d+5	1.64%	0.0086	0.8374	0.0034	–0.1377
d+10	0.08%	0.0183	0.9648	0.0207	–0.0626
d+15	1.48%	0.0193	0.8453	0.0294	–0.2934
d+20	0.84%	0.0291	0.8832	0.0311	–0.3328
d+25	1.37%	0.0277	0.8512	0.0339	–0.4048

Source: the author's own study.

Table 5

Excess rate of return type buy-and-hold (regression model)

d	R Square	Standard Error	*p*-value	a	b
d-25	0.00%	0.0178	0.9940	0.0136	0.0104
d-20	54.41%	0.0167	0.1548	0.0120	–2.2546
d-15	59.48%	0.0151	0.1268	0.0088	–2.2693
d-10	58.32%	0.0100	0.1329	0.0093	–1.4584
d-5	22.70%	0.0087	0.4172	0.0065	–0.5827
d-1	16.29%	0.0054	0.5005	0.0043	–0.2948
d+1	39.79%	0.0037	0.2539	–0.0049	–0.3706
d+5	32.97%	0.0086	0.3114	0.0008	–0.7471
d+10	30.68%	0.0122	0.3327	0.0178	–1.0044
d+15	75.86%	0.0076	0.0546	0.0218	–1.6598
d+20	50.81%	0.0151	0.1766	0.0322	–1.8966
d+25	11.49%	0.0133	0.5769	0.0290	–0.5921

Source: the author's own study.

F-statistic was found to be not statistically significant. Table 6 presents the main results.

Generally, if none of the independent variables are statistically significant, the overall *F*-test is also not statistically significant. As we can see in the performed study, *F*-critical value is smaller than *F*-value, which indicates that the null hypothesis should not be rejected – the presented results likely happened by chance.

Table 6

F-test summary

d	**Simple rate of return**	**Buy-and-hold**
	F-statistic	
d-25	1.28	2.70
d-20	1.51	4.50
d-15	1.25	4.23
d-10	1.24	5.96
d-5	0.94	13.38
d-1	2.04	59.75
d+1	0.63	16.49
d+5	1.05	11.27
d+10	1.03	6.14
d+15	1.16	5.69
d+20	1.44	4.66
d+25	1.43	3.30
F-critical value	0.99	

Source: the author's own study.

The change in DPR does not more fully explain the price changes in the period from one day to a month. Thus, the author assumes that shareholders do not look at the absolute amount of dividend paid. The results may also be influenced by the choice of the dividend policy change measure – the study used only changes in the value of payout dividends, regardless of the strength of these changes and without considering the investor's expenditure on the purchase of shares. Therefore, further research is certainly required, in which changes in the dividend policy will be expressed, for example, by means of the dividend rate. We should also be aware that the market reaction to the decision of the general meeting of shareholders may be weakened by the announcements of the management board, which publishes a draft resolution regarding the amount of the dividend before the general meeting of shareholders. Moreover, the investors' reaction may be influenced by the stability of the dividend policy. A different reaction will concern companies which pay divi-

dends every year in a fixed proportion to the generated income, while other companies pay dividends in variable amounts.

The presented results are in line with other studies. The model presented by Zakari, Muhammad and Zulkifli is also not able to explain variation in share price.[32] The average returns for both simple and buy-and-hold rates are positive, and the results are comparable with the Czekaj[33] and Tuzimek[34] study.

VI. CONCLUSION

The analysis of changes in rates of return before and after the announcement of the resolution on dividend payment does not confirm a significant relationship between the dividend payment and the change in share prices. This may result from the relatively small size of companies and their relatively high sensitivity to changes in the environment that do not depend on management boards, therefore they do not consider future results in their dividend policy. The period of research overlapped with a very turbulent and changeable environment caused by the COVID-19 pandemic, which was also not conducive to forecasting future results. The conclusions were also limited by the size of the sample and the relatively short time span of the study. Therefore, further research is certainly needed, in which changes in the dividend policy will be expressed.

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