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DIVIDEND POLICY FROM THE PERSPECTIVE OF AN INDIVIDUAL INVESTOR – RESULTS OF THE RESEARCH

POLITYKA DYWIDEND Z PERSPEKTYWY POSTAW INWESTORA INDYWIDUALNEGO – WYNIKI BADAŃ

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Summary: The article describes the issues of dividend policy from the perspective of the psychology of the individual investor. A questionnaire survey conducted on 115 Polish stock exchange investors of different age, education, investment goals and professional activity aimed primarily at verifying the behaviour of the respondents in relation to the behaviour of the investors acting on the international market. The findings of the research not only confirm the convergence of the behaviour of Polish capital market investors against the behavioural dogmas of finance, but they also present new patterns of behaviour, provided that factors influencing an investment the decision-making process are taken into account.

Keywords: behavioural finance, investment decisions, dividend policy.

Streszczenie: W artykule opisano problematykę polityki dywidend z perspektywy psychologii inwestora indywidualnego. Przeprowadzone badania ankietowe 115 polskich inwestorów giełdowych zróżnicowanych pod kątem wieku, wykształcenia, celu inwestycji oraz aktywności zawodowej miały za zadanie przede wszystkim weryfikację zachowań respondentów w relacji do zachowań inwestorów dokonujących inwestycji na rynku międzynarodowym. Wyniki przeprowadzonych badań nie tylko potwierdzają zbieżne zachowanie polskich inwestorów rynku kapitałowego na tle aksjomatów behawioralnych finansów, ale dodatkowo przedstawiają nowe schematy zachowań, jeśli uwzględni się czynniki mające wpływ na podejmowanie decyzji inwestycyjnych.

Słowa kluczowe: finanse behawioralne, decyzje inwestycyjne, polityka dywidend.

1. Introduction

The aim of the article is to confront the findings of the international research into the psychology of a stock exchange investor with the investment decisions made by the Polish investors of the capital market.

The research refers to the trend of behavioural finance. The article is a continuation of the theme of the psychology of a capital market investor (Mackay, Selden, Burrell, Bauman, Plummer, Zaleśkiewicz, Zielonka), their behaviour and decisions, often irrational from the point of view of dogmas of economics. Among important representatives of this trend there are Y.H.A. Razek, M.J. Pring, D. Kahneman, A. Tversky, T. Plummer, T. Zaleśkiewicz and P. Zielonka.

So far the tendencies in behavioural finance have indicated the existence of repetitive patterns of human behaviour on the market of finance. These include, among others, the certainty effect, the impatience and impulsiveness of investors, and the current consumption of dividends and not of capital (sale of shares). In order for these patterns to be verified a questionnaire survey has been conducted among Polish stock exchange investors.

Additionally, in order to make the determinants of decisions by the stock exchange investors more detailed, further research into such decisions was conducted in relation to age, education, the investment goals of the investor, preferences concerning the volatility of listing and the relation between changes in share prices and dividends paid, as well as the decisions of the investor with regard to reinvestment or consumption of the received dividends.

To achieve this goal, Polish and foreign specialist literature was reviewed, which made it possible to identify repetitive patterns of behaviour among investors on the capital market. During the next stage of work towards the goal of this article, a questionnaire survey was conducted whose results were divided and interpreted in two groups. Firstly, an analysis and interpretation of the general findings of the research was carried out. Then another detailed analysis of the findings was performed in relation to the age and education of the respondents, as well as their preferences as to receiving dividends and their allocation for reinvestment or consumption. The analysis made in this way shows the recent results of the research, including international findings, in a slightly different light, leading to new conclusions.

The following research hypotheses were adopted in the study:

1. For the first stage of the research (general research):

H1: Psychological patterns of behaviour among stock exchange investors, which include the certainty effect, as well as the impatience and impulsiveness of investors, also exhibited by the Polish investors of the capital market.

H2: Investors on the Warsaw Stock Exchange are more willing to consume earnings from dividends rather than from the sale of shares.

H3: Polish stock exchange investors, despite received dividends, have little knowledge of the determinants of the dividend policy adopted by companies listed on the capital market.

H4: Investors prefer companies with a stable stock exchange quotation to those which pay out stable dividends, but are characterised by a greater volatility of quotation.

2. For the second stage of the research (detailed research):

H5: The certainty effect on the decisions of a capital market investor depends on the age and education of the investor.

H6: Financing current consumption from credit and not from the sale of shares of dividend companies is considered to be appropriate by middle-aged persons who are ready to take a risk and suffer the costs of such financing.

H7: The education of the investor does not affect their impatience and impulsiveness in taking investment decisions.

H8: The goal of investment considerably determines the decisions about the use of received dividends for consumption.

H9: The impatience of investors is determined by the purpose to which the earnings from the sale of shares are allocated – the investor's consumer lifestyle affects the sale of shares by a company even when it pays out high dividends.

2. Source data

For the purpose of realising the objective of this article a questionnaire survey of Polish investors of the capital market was conducted.

The survey involved 115 individual investors, among whom were students and graduates of full-time and part-time studies, students and graduates of MBA studies, scientists, board members and junior managers, as well as entrepreneurs. The survey covered the whole Poland and lasted from 12th November 2013 to 12th January 2014. The above facts indicate that the results of the conducted research are representative.

The questionnaire survey was conducted electronically through an Internet website, which could be accessed by all the interested persons. After the survey was finished, relevant research results were produced electronically in the form of aggregate and cross tables. The results of the survey prepared in this way enabled detailed analyses and made it possible to achieve the intended aim of the article.

3. Psychology of the community on the capital market

One of the first researchers of a mass behaviour phenomenon was Gustave Le Bon [Le Bon 1986, as cited in: Plummer 1995, p. 11]. The subsequent research conducted by Sigmund Freud, Carl Jung and Arthur Koestler confirmed Le Bon's conclusions. The psychologist perceived the community as a psychological, not physical phenomenon. Independent and separate individuals can constitute a community, provided that these individuals are united by a common issue or idea. From Le Bon's observations it can be concluded that a community is something more than the sum of individuals. It has specific features, such as its own mind and has an effect on the behaviour of an individual, if only he/she becomes a member of the community.

It is said that a person acts rationally on the market when taking decisions according to the principles (dogmas) of the theory of utility and formulating valid (free of errors) predictions about the future. A rational investor always acts in such a way as to maximise their profits, is not susceptible to emotions or pressure from the community of other traders, and is guided exclusively by information which results from a solid financial analysis, the so-called fundamental data [Zaleśkiewicz 2003, pp. 9-10].

In *Delusions and the Madness of Crowds* published in 1841, C. Mackay shows different kinds and patterns of panic from a historical perspective. This work additionally shows how the group behaviour of individuals affects changes in financial markets. In 1912, G.C. Selden in his book entitled *Psychology of the Stock Market* was one of the first to describe the application of the area of psychology directly in the capital market [Razek 2011, p. 8]. *Possibility of an Experimental Approach of Investment Studies* (1951) by O.K. Burrell and *Scientific Investment Analysis: Science or Fiction?* (1967) by W.S. Bauman are considered to be among the first publications connecting psychology with the financial market. The authors indicate a new area of advantages which can result from the connection of quantitative models of investing with a behavioural approach to finance [Olsen 1998, p. 10].

The influence of the community on an individual is so strong that they can change their previous convictions [Koestler 1978; Talbot 1981 as cited in: Plummer 1995, pp. 16-19]. Moreover, the fact of belonging to a group makes an individual perceive their personal responsibility differently. The community realises its aims in an emotional and often irrational manner. This explains the mechanism of changes in prices of instruments on financial markets. The existence of two communities of different views on the future tendencies on the markets or a future value of an instrument generates different investment decisions, which entail changes in the prices of the financial instruments. Each decision to tender a transaction causes emotional engagement. In the case of a profitable transaction it is satisfaction. Although, in a situation which is unfortunate for a market participant, it is anger or depression. Regardless of whether these decisions are right or not, an individual will be trying to receive confirmation and acceptance of their views from the community. Individuals identify themselves with other investors who belong to a group sharing similar convictions about making investments. That is why science shows a tendency towards adapting methods which come from other domains, for instance psychology is adapted onto the field of finance (see: [Jajuga 2000, pp. 62-63]).

The Efficient Market Hypothesis (EMH) was announced in 1965 by E.F. Fama [Fama 1995, pp. 75-80]. According to this hypothesis, on the capital market there are rational investors, who are able to use public information in order to predict changes in the prices of shares. Therefore, an effective market is a place where there is a great number of rational investors oriented towards maximising profits and the incoming information is unlimited and available for free to every single investor (in the same study the author made a reference to mechanical systems of transactions, especially to a simple “buy and hold” strategy, which should be avoided in a situation when an analyst (investor) is capable of predicting events which have an essential effect on a company's internal value). Later in 1970, P.A. Samuelson also proved the close link between randomness and efficiency of the market (for efficiency of the market see: [Brigham, Hovston 2005; Dembny 2005]). The author proved that the information flowing into capital markets is rapidly and correctly interpreted by the investors [Samuelson, Nordhaus 1995, p. 445]. When confronting a paradigm of traditional economics with its behavioural perspective, differences can be pointed out within four different areas. The assumptions of traditional finance refer to the rationality of investors and the efficiency of markets. Moreover, investors should construct their investment portfolios according to the portfolio theory, and the expected rates of return are a function of risk. The revision of these assumptions from a behavioural perspective gives them a slightly different, alternative meaning. First of all, the investors are "normal" (a normal investor means here that as individuals they do not always take rational decisions and they yield to pressure of the group with which they identify themselves), but are not rational (compare: [Olsen 1998, p. 11]) and the financial markets are not efficient, even if they are difficult to conquer. Investors create their portfolios according to their own behavioural principles and the expected rates of return are connected with the behavioural theory of asset pricing, where the risk is not measured with the beta parameter and the expected rates of return depend on a greater number of factors, rather than on the risk [Razek 2011, p. 13].

The paradox of market efficiency lies in the fact that when a hypothetical situation occurs where all the investors believe in its existence and accept its requirements, it will immediately cause the market to cease to be efficient. In reality however, the markets are neither efficient nor inefficient, which is why efficiency can only adopt various shades [Dembny 2005, pp. 79-80].

The links between efficiency and the predictability of the future behaviour of prices have been the subject of numerous scientific studies, including the work by Zimmermann and Granger [Timmermann, Granger 2004, pp. 15-27]. As the authors claim, the Efficient Market Hypothesis is, despite its simplicity, difficult to be verified empirically. Finding at least one valid prediction is proof against the Efficient Market Hypothesis, apart from uncertainty about the choice of the best prognostic model. Otherwise, such evidence may be accepted only when the methodology of choosing an optimal model allows investors to identify a suitable model ex ante. There is no certainty whatsoever that investors will choose ex ante the same model which turned out to be the best for the ex post data coming from a certain trial period [Gurgul 2006, pp. 21-23].

4. The psychology of a stock exchange investor

When carrying out transactions on the financial market, investors have a feeling of fear which is indispensable for taking decisions in conditions of uncertainty. We can observe some habits of combating fear in the behaviour of an individual. One of them is minimising fear, that is focusing on the potential dangers, regardless of whether the investor makes a profit or a loss. Another habit of fighting fear is protection of the image. In the case of making a loss, an individual with such mental properties will considerably lower their self-esteem. The majority of the investors are afraid of making mistakes, therefore they often give up discovering new possibilities or investment strategies. The third and last habit of fighting fear is the protection of personal space. Such investors are convinced that they can, to a certain extent, control the changes on the financial market. A natural reaction to a potential failure will be anger and frustration. That is why natural habits of fighting fear which result from the psyche of an individual prevent them from taking reasonable decisions on the financial market.

It was also noticed that investors, among others, too rapidly dispose of the shares whose prices are rising and they hold the shares which are losing their value for too long in their portfolios; they show a strong tendency towards submitting to the community and they tend to overestimate or underestimate a financial risk. Most people prefer a smaller but instant profit, instead of a greater profit which is postponed till later. This fact contradicts the principle of investment risk management, according to which losses should be stopped and profits should be allowed to grow. A tool which supports such an approach to investment portfolio risk management is, for example, the so-called *stop loss*.

Consequently, in the longer perspective investors obtain rates of return which are lower than expected. It is by no means easy to delay profits since the emotions of the investor get in the way. Usually investors want to earn the maximum and, what is more, in the quickest possible way. On the other hand, it is obvious that a combination of these generally contradictory expectations is impossible. These and other effects which are incongruent with the traditional financial models prove that in order to explain the behaviour of investors it is indispensable to apply other theories - theories which take into account the importance of psychological factors (see: [Zaleśkiewicz 2003, pp. 13, 126-127]).

Moreover, the research conducted by S. Benartzi, R.H. Thaler shows that investors revise their portfolios too frequently. Thereby they cease to treat investing as a long-term process for the benefit of prompt decisions of short-term importance. In the opinion of the authors, mental bookkeeping and an aversion towards making a loss play a significant role here. However, the authors draw attention to the fact that the rates of return are a result of a combination of an aversion towards making a loss and the frequent evaluation of the results of investment, also including the changes in the content of portfolios [Benartzi, Thaler 1995, pp. 73-92].

It appears that the relations between the rate of return from shares and P/E and dividend values become crucial when we extend the period of time over which these relations are considered (see: [Haugen 1999, pp. 69-94]). Therefore it follows that the behaviour of the market over a short period of time is incompatible with what happens over a longer period. This is especially important in a situation when investors construct their portfolios in a long-time perspective (see: [Zaleśkiewicz 2003, p. 88]).

According to the research conducted by R.H. Thaler, J.R. Nofsinger and S.E.G. Lea, R.M. Tarpy, P. Webley [Thaler 1999; Nofsinger 2001; Lea et al. 1987 as cited in Zaleśkiewicz 2003, p. 123], the majority of investors make their financial choices in an excessively impatient and impulsive manner, since they do not like waiting for profits for too long. The investors act in such way even when it entails earnings smaller than those possible to obtain in the longer perspective. Moreover, it is highlighted that the investors are too impulsive, they lack self-control and they find it difficult to postpone financial gratification. At the same time investing requires patience and, more often than not, prolonged waiting for a convenient moment to purchase or sell shares (see: [Zaleśkiewicz 2003, pp. 123-125]).

The decision-making processes of individual investors are the result of emotional or mental factors. It appears that the decision-making processes of a human being are subject to a few cognitive illusions resulting from the heuristic decision-making process [Singh 2012, p. 117].

As a result of the research conducted by D. Kahneman and A. Tversky [Kahneman, Tversky 1979, pp. 263-291], it appears that people are driven by the certainty of profits. Most of them prefer to collect certain winnings rather than run the risk of losing the prize, even if the risk was small, for example 1%. This is the so-called *certainty effect,* where an investor prefers to be certain of the prize rather than take a risk, even if the risk is small (see: [Zaleśkiewicz 2003, pp. 167-168]).

Investors on the capital market can make a profit from two sources. One of them is the profit made from the sale of shares and the other is – as a transfer of cash – the dividend paid by a company. The company's dividend policy includes two forms of transfer of cash to its shareholders: direct, as a dividend payment, and indirect, as the purchase of shares for the purpose of share redemption. The indirect solution will result in a higher profit for a shareholder in the future if, after the purchase of the shares and their redemption, the entity achieves results of at least the same level as before the share redemption. The profit will then result from a growth in share price performance. Buying shares in order to redeem them makes sense when the company's price performance is far below its fundamental value, that is when it concerns companies with a value potential (see more about companies with a growth and value potential in [Haugen 1999, pp. 69-110]).

It is also indicated that psychology affects investors' behaviour within the dividend policy. According to some authors, a positive relation between changes in a paid dividend and share prices results from the behavioural factors. Those investors who behave rationally prefer a regular income in the form of dividends rather than uncertain capital profits. Most investors exhibit an aversion to risk, which is why they would rather choose the lower but stable payments of dividends than the high but uncertain profits from the difference between the sale price and the buying price of shares. Additionally, an increase in the amount of a dividend payment is a signal that the profits made by companies will be higher in the future. On the other hand, decreasing or withholding payments of the dividend can mean that a company will register lower profits in the future (the so-called *signalling effect*) (see: [Sierpińska 1999, pp. 167-170; Cwynar, Cwynar 2007, pp. 182-184; Kowerski 2011, pp. 85-88]). This is translated into an increase or decrease in share prices after the plans for increasing or decreasing the value of the dividend payments have been implemented. This has been confirmed by the research carried out in the United States and Germany. From the observations of the research findings, the following conclusions can be drawn. The information concerning dividend payments at an unchanged level is not interpreted by investors as good news. Additionally, changes in the planned dividend payments trigger changes in the company's ownership, because investors react to the same information differently [Gurgul 2006, pp. 101-117].

However, this effect does not take into account the problem of investments by companies financed partly or completely from the earned profits. The subjects which realise financially viable investment projects try to reduce the payment of dividends for the benefit of development and growth in the subject's value. The research conducted by E.F. Fama and K.F. French confirm that dividend payments depend, among others, on the financial viability of the company, as well as retained profits [Fama et al. 2001, pp. 3-43].

Literature on the subject also points out the problem of the effectiveness of reinvested profits. If the free profit of the company is not transferred into a dividend, but instead reinvested in investment projects with a return rate lower than the cost of capital, it creates a loss for all the investors allocating means in this company. Therefore in this situation, investors may not only receive lower dividends (or not receive them at all), but also the shares of such a company may be characterised by a depreciation of share price performance.

Some investors prefer to finance consumption from the received dividends, rather than from selling a proportion of their shares. They fear that over a short period of time after selling their shares, the share prices may rise considerably, thereby depriving them of making an additional profit. In order to prevent themselves from feeling of loss, they try to construct their portfolios so that they include shares of the companies which pay dividends. That is why investors are more likely to choose options of financing consumption from the received dividends, rather than from the sale of shares (*Shefrin and Statman's theory*). As a result it causes increased demand for the shares of dividend companies [Jajuga, Słoński 1997, p. 285].

Dividends have no meaning whatsoever on an efficient market. No theory of rational investing is able to explain the paradox in which investors care for the regular receipt of their part of the company's profits [Thaler 1999, pp. 12-17]. The author though, agrees that share prices are at least partially predictable, on the basis of, for instance, simple measures such as P/E, P/BV measures, or changes in the dividends. The principles of the economy suggest that all the received profits, despite their origin, should be considered in total. For an economically rational investor it does not matter whether the profits derive from dividends or from selling and purchasing shares (it also has its justification in the evaluation of the income value of shares, which takes into account the changes in share prices (profit or loss) as well as the received dividends in the holding period). However, the investors divide their income as if the dividend and the profit from selling the shares were two separate incomes and their appropriation is also different. This is caused by the fact that obtaining dividends is connected primarily with a short-term consumption purpose. In contrast, profits from selling shares are associated with a long-term purpose, for example with financing children's education or securing a higher pension. In addition, H.M. Shefrin and M. Statman claim that the rate of portfolio dividend is positively correlated with the investor's age and negatively correlated with the investor's income. That is why investors who are in need of cash for current expenses would rather look for such shares which will ensure systematic dividends. Sticking to the rule which says: "Consume with the money from the dividend, not from the capital" supports self-control and protects an investor from the necessity of making unpleasant observations of how the price of shares sold by him/her is growing and how other investors make a profit out of them [Shefrin, Statman 1984, pp. 253-282; Zaleśkiewicz 2003, pp. 134-136].

5. Findings of the conducted research

The review of specialist literature allowed selecting the repetitive patterns of the behaviour of an individual investor. Among the most important ones are the certainty effect, impatience and impulsiveness in taking investment decisions, as well as preferences for financing current consumption with potentially received dividends, and not with the capital derived from the sale of shares. The findings of the conducted research allow a general interpretation of the research and, additionally, a detailed cross-analysis of the findings from the first stage of analyses.

5.1. Interpretation of the general findings of the research

Out of the 115 respondents, men constituted about 70% of the investors surveyed. Persons aged 31-40 gave the largest number of answers (27.83% of the respondents), persons aged 26-30 (22.61%) and persons aged 18-25 (18.26%). The questionnaire was not completed by underage persons (under 18) and those over 60 constituted 7.83% of the respondents. The biggest number of the investors had higher education (4.61%), a scientific degree (22.61%), a degree of bachelor or engineer (18.26%) and secondary education (14.78%). Two of the respondents had an MBA diploma. The respondents were mainly academics (23.48%), white-collar workers (12.17%), specialists in banking and finance (11.3%), students and specialists in other sectors (9.57% each), managers and entrepreneurs (8.7% and 7.83%, respectively). Board members constituted 5.22% of the respondents, and retirees and pensioners – 1.74%

of the respondents, respectively. As the research suggests, as many as 76.52% of the investors achieved so far an average yearly income from investment smaller than their monthly salary, 13.04% of them – an income equal to their monthly salary, and only 3.48% of the respondents achieved an average income higher than their yearly salary.

The respondents evaluated their level of knowledge as intermediate (33.04%), low (27.83%) and beginner (19.13%). In turn, 17.39% of the respondents indicated an advanced knowledge of the area of investment, and only 2.61% of the respondents (three persons) consider themselves to be experts. The biggest number of the respondents expect a yearly return rate at 6-10% (57.39%), 11-20% (24.35%) and 13.91% of the respondents will be satisfied with a return rate of 5%. Out of 115 respondents, as many as 62 of them indicated security as a precondition for investment, while taking account of the risk of losing a small part of capital, and as the main objective of investment – a long-term increase in the value of their portfolio or financial security of their future (36.52% each).

The results of the survey prove that the respondents search for information about dividend policy to a lesser extent. The investors would rather choose companies of a stable stock exchange quotation (70.43%) than shares of companies characterised by greater volatility, but, in turn, paying out dividends (29.57%). Financial data (52.17%) and new trade contracts (19.14%) are the most crucial information about companies for the investors taking part in the survey. Seven out of the 115 interviewees indicated dividend policy to be crucial information. The greatest number of the persons surveyed expect floating dividends, dependent on the profits of a company (49.57%) and on the investment plans of the issuer (22.61%). In contrast, 19 out of 115 interviewees expect a yearly dividend of a similar value. The investors indicated that high return rates (36.52%) are more important for them than high dividends (28.7%). However, despite a decline in the price of shares in the portfolio, the investors are keen to invest the received dividends (59.13%).

As was mentioned earlier, the authors of the international research indicate that the majority of the persons surveyed prefer a smaller but certain profit rather than run the risk of having no profit. The Polish investors who took part in the survey exhibit similar tendencies. Over 68% of those surveyed admitted to preferring a profit of 1,000 PLN with a probability of 1, rather than an alternative option with a total profit of 2,000 PLN with a probability of 0.33, 1,000 PLN with a probability of 0.66 and no profit with a probability of 0.01 (31.3%).

Polish investors are patient and reasonable in taking decisions. Out of the total number of the respondents, only 40.87% of them are able to sell their shares faster, even if in a year their profit was higher by 10% and, additionally, they could have the chance of receiving a dividend. As many as 68 out of 115 investors surveyed are able to prevent themselves from selling shares. Taking into consideration the responses of the persons surveyed so far, with a certainty of profits higher by 10% and the prospective dividend, at least 94 of the persons surveyed should stop themselves from selling shares, because that number of the respondents indicated an expected profit from investment of 6-10% and 11-20%.

The results of the questionnaire survey also show that the majority of the investors prefer to consume earnings from the received dividends rather than from the sale of shares, unless there is the possibility of financing the consumption with credit. In a situation when the investors invest their means on the capital market with a view to increasing the value of their portfolio and financing the purchase of property in this way, 54.78% of those surveyed prefer to finance consumption, for example the purchase of a new car, with credit of a yearly cost of 15% rather than sell a number of their shares, even if the yearly increase in the value of their portfolio is lower (12.5%) than the cost of the credit. In contrast, in a situation when the respondents can choose between the sale of shares in order to finance renovation of a flat or waiting for two years and financing renovation with the total of the received dividends, the majority (77.39%) choose the latter option.

The analysis of the general research results allows the following conclusions:

1. The majority of the investors surveyed are young or middle-aged persons with at least a higher education.

2. Despite holding a higher education degree (or even a specialist education degree, often in the area of finance), a significant majority of the respondents are not able to achieve yearly profits exceeding their monthly salary on the capital market.

3. The investors incurring a risk of the loss of part of capital expect, in most cases, a yearly return rate at a relative low level, not exceeding 10%.

4. The respondents have low risk tolerance – they make long-term, safe investments and they do not tolerate major changes of rates of quotation, even at the expense of a lack of dividend.

5. The persons surveyed are aware of the fact that dividend policy depends on the financial results of the issuer and his/her plans for investment.

6. When investing on the capital market and accepting the risk of a loss of capital, the investors irrationally choose the former option only if they have the possibility of a certain but small profit at the expense of missing out on a higher profit (with a smaller probability of making a profit).

7. The majority of the persons surveyed is able to postpone current consumption and finance it with the future dividends, unless they can purchase consumer goods with external financing, even when the cost of this financing is relatively high.

The conclusions drawn from the general analysis of the responses will be verified in greater detail on the basis of cross table results.

5.2. Interpretation of the cross results of the research

For the purpose of a detailed interpretation of the results connected with the behavioural perspective of the investor and his/her decisions about dividends and dividend policy, the responses of the persons surveyed have been grouped in connection with the certainty effect, impatience and impulsiveness in making investment decisions, as well as their financial preferences regarding financing current consumption with prospective dividends. For that, the most important questions contained in the questionnaire survey were selected, and these are Questions 18-21 (the content of the questions and the results of the survey are presented in Appendix).

The responses to the selected questions were arranged according to the investor's age, education, investment aims, preferences as to volatility of listing and the relation between the change in share prices and dividends paid, as well as the investor's decision within reinvestment or consumption of received dividends. Tables 1-6 show the cross results of the research.

The analysis of cross research results makes it possible to verify the general results in terms of:

1. The age of the investor (Table 1):

- the younger investors (up to 30 years of age) are not subject to the certainty effect and are able to risk a proportion of capital in order to obtain potentially higher earnings from the sale of an investment. In contrast, the middle-aged persons (over 30) are not willing to run the risk of losing a proportion of capital if they stand a chance of earning a certain profit,
- the age of the respondent does not considerably affect impatience and impulsiveness in taking investment decisions, thus this characteristic is not age-dependent,
- financing of current consumption from credit, and not from the sale of a proportion of shares, is regarded as a good solution by the investors aged 26-50. The persons outside this age range are willing to finance consumption with the means coming from the sale of shares, even if this could mean a further growth in the prices of the shares sold earlier,
- financing an investment such as the renovation of property shows the opposite distribution of responses when compared with the question regarding financing current consumption. The majority of the investors aged 26-50 are willing to sell the shares in order to finance the renovation of property, even if the renovation could be done just one year later.

2. Education of the respondent (Table 2):

- the investors with an MA degree, MBA diploma or an academic degree are unwilling to run the risk of losing a proportion of capital if they can earn a certain profit,
- the education of the respondents does not considerably influence impatience and impulsiveness in taking investment decisions,
- there is no significant influence of the education of the respondents on decisions as regards financing current consumption and investments with the received dividends or with the means from the sale of shares.

3. Investment aims of the persons surveyed (Table 3):

- it is by no means clear whether the aim of an investment determines the choices made by the investors within the certainty effect, as well as impatience and impulsiveness in undertaking investment ventures,

Table 1. Cross results with regard to the age of the respondents

Age of the respondents:	Question 18		Question 19		Question 20		Question 21	
	Response A	Response B	Response A	Response B	Response A	Response B	Response A	Response B
under18 years of age	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
18-25 years of age	57.45%	42.55%	52.04%	47.96%	61.76%	38.24%	44.61%	55.39%
26-30 years of age	61.67%	38.33%	47.49%	52.51%	35.00%	65.00%	50.66%	49.34%
31-40 years of age	49.94%	50.06%	39.67%	60.33%	48.51%	51.49%	57.26%	42.74%
41-50 years of age	40.31%	59.69%	56.26%	43.74%	45.89%	54.11%	51.30%	48.70%
51-60 years of age	35.43%	64.57%	38.27%	61.73%	73.87%	26.13%	46.11%	53.89%
over 60 years of age	21.53%	78.47%	83.51%	16.49%	49.22%	50.78%	29.97%	70.03%

Source: own work.

Table 2. Cross results with regard to the education of the respondents

Please indicate your education:	Question 18		Question 19		Question 20		Question 21	
	Response A	Response B	Response A	Response B	Response A	Response B	Response A	Response B
primary	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
vocational	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
secondary	54.48%	45.52%	50.32%	49.68%	39.79%	60.21%	31.34%	68.66%
higher bachelor/engineer	66.61%	33.39%	52.04%	47.96%	52.41%	47.59%	26.49%	73.51%
higher MA	41.58%	58.42%	49.94%	50.06%	51.73%	48.27%	57.79%	42.21%
MBA diploma	0.00%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%	100.00%
academic degree	49.38%	50.63%	51.48%	48.52%	54.78%	45.22%	60.34%	39.66%

Source: own work.

Table 3. Cross results with regard to the aim of investment

Indicate your purpose of investing in shares:	Question 18		Question 19		Question 20		Question 21	
	Response A	Response B	Response A	Response B	Response A	Response B	Response A	Response B
Long-term increase in the portfolio value	49.59%	50.41%	52.04%	47.96%	47.61%	52.39%	48.28%	51.72%
Receiving high dividends	83.66%	16.34%	49.10%	50.90%	64.51%	35.49%	77.39%	22.61%
Accumulation of means for the purchase of durable goods	31.98%	68.02%	56.26%	43.74%	57.68%	42.32%	51.30%	48.70%
Future financial security	43.78%	56.22%	44.56%	55.44%	45.17%	54.83%	36.33%	63.67%
Financial security of children	68.70%	31.30%	0.00%	100.00%	54.78%	45.22%	77.39%	22.61%
Financial security of grandchildren	68.70%	31.30%	100.00%	0.00%	54.78%	45.22%	77.39%	22.61%

Source: own work.

Table 4. Cross results with regard to the investor's preferences in the choice of company for the portfolio – Part A

What is a preferred company in your portfolio:	Question 18		Question 19		Question 20		Question 21	
	Response A	Response B	Response A	Response B	Response A	Response B	Response A	Response B
of a stable stock exchange quotation	45.00%	55.00%	54.89%	45.11%	50.47%	49.53%	56.07%	43.93%
of a stable yearly dividend, but a greater change in a quotation listing	60.57%	39.43%	37.61%	62.39%	48.89%	51.11%	31.34%	68.66%

Source: own work.

Table 5. Cross results with regard to the investor's preferences in the choice of company for the portfolio – Part B

Question 16 (see Appendix):	Question 18		Question 19		Question 20		Question 21	
	Response A	Response B	Response A	Response B	Response A	Response B	Response A	Response B
Company A	54.94%	45.06%	47.10%	52.90%	35.20%	64.80%	51.68%	48.32%
Company B	51.38%	48.62%	51.68%	48.32%	52.29%	47.71%	56.49%	43.51%
Company C	41.25%	58.75%	51.60%	48.40%	65.08%	34.92%	37.94%	62.06%

Source: own work.

Table 6. Cross results with regard to the investor's decisions in reinvesting a received dividend

Despite a decline in share prices in the portfolio, receiving a dividend causes you:	Question 18		Question 19		Question 20		Question 21	
	Response A	Response B	Response A	Response B	Response A	Response B	Response A	Response B
to plan the next investment financed with the means from dividend	45.97%	54.03%	51.83%	48.17%	53.32%	46.68%	42.31%	57.69%
to eagerly invest the means from the received dividend in the same company which paid out this dividend, hoping for more dividends in the future	65.29%	34.71%	39.14%	60.86%	30.86%	69.14%	64.44%	35.56%
to withdraw the means for consumption purposes	40.68%	59.32%	56.81%	43.19%	61.76%	38.24%	51.68%	48.32%

Source: own work.

- the relations between the aim of an investment and the allocation of the received dividends. The long-term increase in the portfolio value or financial security of the future determine the current consumption of credit, while leaving dividend shares in the portfolio. In contrast, obtaining high dividends, the accumulation of means for the purchase of durable goods or financial security of other persons encourage the investors to finance current consumption with the capital from the sale of shares,
- identical relations appear in a situation when the investor owns shares paying high dividends which are to finance the renovation of property.

4. Preferences as regards receiving dividends (Tables 4 and 5):

- investors who prefer more volatile shares, but receive stable dividend in return:
  - are able to give up certain smaller earnings in favour of the potential higher earnings with a lower probability of losing the whole profit,
  - are not impatient and impulsive,
  - finance current consumption with a credit or delay decisions concerning renovation work by a year, each time leaving the shares of the dividend companies in their portfolios,
- regardless of whether the investors' decisions are subject to the certainty effect, they are impatient and impulsive, regardless of whether or not they finance current consumption with dividends not with the sale of shares, the respondents were more likely to choose companies:
  - with a stable stock exchange quotation, and they were less likely to choose those which pay out a stable dividend, but are characterized by greater volatility of quotation,
  - which have a higher average yearly return rate on a differential of quotation than those which pay out a high dividend, and simultaneously have a lower average yearly return rate.

5. Reinvestment of the received dividend (Table 6):

- the investors who would like to plan the next investment with the financial means from dividend or to finance consumption with such means (a separate group of the persons surveyed), are subject to the certainty effect in their investment decisions. In contrast, the respondents who want to reinvest the received dividend in the same company are able to take the risk of losing their profit in favour of the prospective higher financial gratification – their decisions are not characterised by the certainty effect,
- planning the next investment with the use of the means from the dividend or the need for consuming the dividend is typical of investors who are impatient. Such persons were eager to invest the dividend in a company which paid out such a dividend,
- the investors who are planning to assign the received dividend for current consumption are able to sell the shares of a company paying out a high dividend in order to finance current consumption (the purchase of a car) or to renovate

property without waiting for the possibility of financing such renovation with the received dividend. The respondents who are planning the next investment for the earnings from dividends are eager to sell a proportion of the shares of a dividend company in order to finance consumption, but at the same time they are able to wait for a year if renovation of the property was to be financed with the future dividend.

6. Conclusions

The literature on the subject, as well as the international research, show that the investor as an individual who is subject to the pressure of the community is able to make investment decisions not only incongruous with his/her convictions and beliefs, but quite irrational in an economic sense. The application of psychology in understanding the investors' behaviour on the financial markets, including the capital market, helps in a sense to understand the behaviour of an individual who is reducing the value of his/her portfolio against his/her own will. Apart from the support of behavioural finance, any system tool which makes it possible to take investment decisions free from emotional engagement is helpful.

The analysis of the research results indicates that a statistical investor in the survey is a young or middle-aged person with a higher education degree. However, education does not affect the amount of achieved earnings – the majority of the respondents cannot achieve a yearly profit exceeding their monthly salary. What is more, despite the relatively high risk, the majority of the investors do not expect a yearly rate of return higher than 10%.

On the basis of the questionnaire survey, the preliminary research hypotheses adopted at the beginning were verified:

H1: Decisions made by the Polish stock exchange investors are generally subject to the certainty effect (further details in H5 below). When analysing their impatience and impulsiveness, the majority of the persons surveyed are able to delay current consumption and finance it with the prospective dividends, unless they can purchase consumer goods with the use of external financing, even if its cost is relatively high.

H2: The stock exchange investors who invest their capital on the Warsaw Stock Exchange are more willing to consume the received dividends regardless of whether the aim of the accumulation of capital is a serious life decision, for example the purchase of a flat or the accumulation of shares has no particular aim.

H3: By receiving dividends, the Polish stock exchange investors have adequate knowledge of the determinants of dividend policy of the companies listed on the capital market, and they also know where to search for such information.

H4: The research confirmed the fact that the investors prefer companies with a stable stock exchange quotation rather than those paying out a stable dividend but characterised by greater volatility of quotation. Such a description of the investor corresponds with the respondents' preconditions which they are guided by – the majority indicated the security of investment, allowing for the risk of losing a proportion of capital.

H5: It appears that the certainty effect in the investor's decisions depends on age and education. The younger investors aged up to 30 are not subject to the certainty effect. In contrast, persons over 30 are not willing to take the risk of losing a proportion of capital if they stand a chance of gaining some earnings – they are subject to the certainty effect.

H6: The respondent's responses indicate that financing current consumption with credit and not with the sale of shares of a dividend company is considered appropriate by middle-aged persons. This can mainly result from the financial possibilities of the middle-aged respondents. Young people do not have suitable creditworthiness yet and they are generally at the point of starting their professional career. In contrast, older persons do not want to take a risk of financing current consumption with credit or they simply do not have to finance it with credit, but with accumulated cash.

H7: The education of the investor does not considerably affect impatience and impulsiveness in taking investment decisions. It follows that, irrespective of the knowledge they have, every individual is subject to the influence of psychology in taking investment decisions.

H8: A prolonged increase in the value of the portfolio or financial security of the future determine the current consumption with credit, which makes it possible at the same time for the investors to leave dividend shares in the portfolio. However, if the aim of investing is receiving high dividends, accumulating the means for the purchase of durable goods or the financial security of other persons causes the respondents to be willing to finance current consumption with capital from the sale of a proportion of shares. Consequently, the aim of investment considerably determines the decisions about assigning the received dividend for consumption.

H9: The investors who are planning to spend the received dividend on current consumption are able to sell shares of a company paying out high dividends in order to finance current consumption (the purchase of a car) or to renovate property (without waiting for the possibility of financing it with the received dividends.) An investor's consumer lifestyle affects the sale of the company's shares even when it pays out high dividends. In turn, the respondents who are planning the next investment with the use of the earnings from dividends are able to wait for a year, if the renovation of property was to be financed with the prospective dividend.

7. Final remarks

Taking into consideration the conducted research, the general and detailed conclusions as well as the verified hypotheses, it has to be said that drawing conclusions concerning the psychology of a stock exchange investor without the simultaneous categorisation of a research sample can affect erroneous interpretations and the too far-fetched generalisation of the research results.

The conducted research allows the following conclusions:

- it cannot be unambiguously stated that each individual belonging to the community takes investment decisions which are characterised by *the effect of certainty*,
- *impatience* and *impulsiveness* of the investors cannot be interpreted unambiguously. They both depend on whether or not the investors expressed their willingness to invest the received dividend in the same company which paid out this dividend,
- the problem of *financing current consumption with the received dividend and not with the sale of shares* has to be considered as the primary purpose of investing in shares (is the accumulation of capital for financing an important life investment a purpose?) and not only as a decision about consumption from dividends or from the sale of shares.

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APPENDIX

Survey questions and answer results of the respondents

1.	**Please, indicate your sex**		
	Response	***%***	***Number of responses***
1)	Female	30.43	35
2)	Male	69.57	80
2.	**Please, indicate your age**		
	Response	***%***	***Number of responses***
1)	under 18 years of age	0.00	0
2)	18-25 years of age	18.26	21
3)	26-30 years of age	22.61	26
4)	31-40 years of age	27.83	32
5)	41-50 years of age	14.78	17
6)	51-60 years of age	8.70	10
7)	over 60 years of age	7.83	9
3.	**Please, indicate your education**		
	Response	***%***	***Number of responses***
1)	primary	0.00	0
2)	vocational	0.00	0
3)	secondary	14.78	17
4)	higher: bachelor/engineer	18.26	21
5)	higher: MA	42.61	49
6)	MBA diploma	1.74	2
7)	academic degree	22.61	26
4.	**Please, indicate your professional activity**		
	Response	***%***	***Number of responses***
1)	member of the board	5.22	6
2)	academic member of staff	23.48	27
3)	entrepreneur	7.83	9
4)	director	2.61	3
5)	manager	8.70	10
6)	specialist in finance and banking	11.30	13
7)	specialist in other sectors	9.57	11
8)	civil service officer	1.74	2
9)	other white-collar worker	12.17	14
10)	labourer	2.61	3
11)	pensioner	1.74	2
12)	retiree	1.74	2

13)	student	9.57	11
14)	unemployed	1.74	2
5.	**What is your average yearly income from investment on the capital market so far?**		
	Response	***%***	***Number of responses***
1)	less than my monthly salary	76.52	88
2)	at my monthly salary level	13.04	15
3)	at my quarterly salary level	4.35	5
4)	at the level of my salary for 6 months	2.61	3
5)	at my yearly income level	0.00	0
6)	more than my yearly income	3.48	4
6.	**How do you evaluate your knowledge about investments on the capital market?**		
	Response	***%***	***Number of responses***
1)	expert	2.61	3
2)	advanced	17.39	20
3)	intermediate	33.04	38
4)	low	27.83	32
5)	beginner	19.13	22
7.	**What is your lowest satisfactory level of rate of return on the capital market?**		
	Response	***%***	***Number of responses***
1)	up to 5%	13.91	16
2)	6-10%	57.39	66
3)	11-20%	24.35	28
4)	over 20%	4.35	5
8.	**What is your motivation for investing in shares?**		
	Response	***%***	***Number of responses***
1)	a rapid growth in the value of an investment	26.09	30
2)	security of an investment, allowing for a risk of losing a small proportion of the capital	53.91	62
3)	security of an investment without a loss	20.00	23
9.	**What is your purpose of investing in shares?**		
	Response	***%***	***Number of responses***
1)	a long-term increase in the portfolio value	36.52	42
2)	receiving high dividends	8.70	10
3)	accumulation of means for the purchase of durable goods	14.78	17

4)	financial security in the future	36.52	42
5)	financial security of children	1.74	2
6)	financial security of grandchildren	1.74	2
10.	**When planning investments on the capital market you try to**		
	Response	*%*	***Number of responses***
1)	make investments only in a bull market	14.78	17
2)	make investments only in a bear market	16.52	19
3)	make investments both in a bear market and a bull market	68.70	79
11.	**What kind of company do you prefer in your portfolio?**		
	Response	*%*	***Number of responses***
1)	with a stable quotation	70.43	81
2)	with stable yearly dividend, but with a greater change in a quotation rate	29.57	34
12.	**When analysing a company, which parameter is a priority for you?**		
	Response	*%*	***Number of responses***
1)	earnings per share (EPS)	16.52	19
2)	price – earnings per share (P/E)	20.87	24
3)	price – book (P/BV)	6.09	7
4)	dividend rate	16.52	19
5)	other parameter	12.17	14
6)	I don’t use the parameters of a fundamental analysis	27.83	32
13.	**In your opinion, what information about the company is most important on its website?**		
	Response	*%*	***Number of responses***
1)	ownership structure	3.48	4
2)	selected financial data	52.17	60
3)	new trade contracts	19.13	22
4)	plans for expansion of the subject	13.04	15
5)	dividend policy	6.09	7
6)	other	6.09	7
14.	**In your opinion, where should the information about dividend policy be placed on the company’s website?**		

	Response	*%*	***Number of responses***
1)	on the main page	13.91	16
2)	in the section describing the company	8.70	10
3)	in the section about the investor's relations	40.87	47
4)	in the section on the selected financial performance	20.87	24
5)	in a separate section describing the dividend policy	15.65	18
15.	**In your opinion, what dividends should the company pay out?**		
	Response	*%*	***Number of responses***
1)	every year, of a similar amount	16.52	19
2)	every year, of a dividend rate comparable with the profitability of treasury bonds	6.09	7
3)	fixed dividend dependent on the company's investment plans	22.61	26
4)	floating dividends, dependent on the company's profit	49.57	57
5)	floating dividends, dependent on other factors	2.61	3
6)	a company should not pay out dividends	2.61	3

16.	**Assuming that you are constructing an investment portfolio for a period of 10 years, which can include only one of the following companies:** • **company A does not pay out dividends and has an average yearly return rate on the difference in quotation equal to 15%,** • **company B pays out dividends roughly every 3 years and has an average yearly return rate on the difference in quotation equal to 10%,** • **company C pays out high dividends every year and has an average yearly return rate on the difference in quotation equal to 5%,** • **please, indicate, which choice would be good in your opinion.**		
	Response	*%*	***Number of responses***
1)	company A	36.52%	42
2)	company B	34.78%	40
3)	company C	28.70%	33
17.	**Despite a decrease in the share prices in the portfolio, receiving dividend causes you to:**		
	Response	*%*	***Number of responses***
1)	plan the next investment with the means from the dividend	59.13%	68

2)	to eagerly invest the earnings from the received dividend in the same company which paid out this dividend, hoping for more dividends in the future	22.61%	26
3)	to withdraw the means for consumption purposes	18.26%	21
18.	**You can invest capital in one of these two investments. Investment A can generate: a) 2,000 PLN profit with a probability of 0.33, b) 1,000 PLN profit with a probability of 0.66, or c) 0 PLN profit with a probability of 0,01. In turn, investment B can generate 1,000 PLN with a probability of 1. Please, indicate, which choice would be good in your opinion.**		
	Response	*%*	***Number of responses***
1)	investment A	31.30%	36
2)	investment B	68.70%	79
19.	**You have invested 1,000 PLN in company A. President of the company announced that in the following year the company could pay out dividends. You can either sell your shares now (after a year) earning a profit of 500 PLN without receiving dividend or wait another year earning a profit of 550 PLN and, possibly, dividend. Please, indicate which choice would be good in your opinion.**		
	Response	*%*	***Number of responses***
1)	I am selling the shares now, earning a profit of 500 PLN	40.87%	47
2)	I am selling the shares after a year, earning a profit of 550 PLN and prospective dividend	59.13%	68
20.	**You are investing you savings in the shares of a company paying out high dividends in order to buy a flat worth 300,000 PLN. At the moment, the portfolio value equals 200,000 PLN. From the recent history of the investment it is evident that in 4 years' time the portfolio value together with dividend shall amount to 300,000 PLN. Meanwhile, you have decided to buy a new car which costs 50,000 PLN. There is a possibility of financing the purchase with credit of a 15% credit rate. Please, indicate which choice would be good in your opinion.**		

	Response	*%*	*Number of responses*
1)	I am selling a proportion of my shares in order to finance the purchase of a car	45.22%	52
2)	I am financing the purchase of a car with credit	54.78%	63
21.	**You own shares of a company paying out high dividends, and you receive on average approx. 10,000 PLN a year. The portfolio value is about 100,000 PLN. You are planning to renovate your flat and it will cost about 20,000 PLN. Please, indicate which choice would be good in your opinion.**		
	Response	*%*	*Number of responses*
1)	I am selling a proportion of my shares in order to finance renovation of the flat now	22.61%	26
2)	I am waiting for another year in order to finance renovation of the flat with dividends.	77.39%	89