

Features of the Influence of the Internet Space on the Information Support of Risk Management

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Abstract: The reasons for the irrational market behavior of an individual are different and are often related to the perception of information about the state of the environment. The information in the Internet space has its own peculiarity. Currently, the issues of developing the theory and methodology of interaction between behavioral economics models and the methodology of information assessment and risk management in the activities of organizations are becoming more acute. Summarizing the research of various groups of scientists, all the psychological and motivational factors that, in one way or another, affect the behavior and decision-making of managers of organizations can be divided into two groups. The first group includes an erroneous perception of reality or an incorrect assessment of the situation, as a result of which incorrect decisions are made. These factors are inherent in absolutely all people. The second group includes emotional factors that determine the behavior of people in certain circumstances. The role of emotional factors increases in situations of risk and uncertainty that prevail in management tasks using information from the Internet space. Together with possible errors, these factors carry an essential element of creativity and the potential for difficult-to-predict heuristics, acceptable risk levels, and creativity in managerial decision - making.

1 INTRODUCTION

Many errors in assessing risk outcomes when using information on the Internet are associated with the definition of a so-called representative sample of data for analysis. The practice of analyzing risk situations shows that the mathematical statistical rules for estimating the probability of samples that have been popular in recent years (and even decades) are very limited for use in assessing risks in the activities of organizations as probable events leading to a deviation from the management goal. A note on the specifics of understanding the terms "probability" and "possibility" in the English version of ISO/IEC 31000: 2018 "Risk Management" and the translation of these terms into other languages are discussed specifically. However, not all experts understand the reasons and the essence of this remark. This is also confirmed by risk management consultants when they talk about the features of the assessment, the specifics of determining the ensemble probability, the qualitative differences in the statistical risk assessment of repeated events and the probabilistic risk assessment of rarely repeated or unique events. Many errors are caused, on the one hand, by the

peculiarities of the perception of information data by analysts in the Internet space, and on the other hand, by the peculiarities of decision-making by analysts related to their personal qualities, the so-called "irrational and heuristic" decisions. The study of these features that define such a new phenomenon as behavioral economics is the goal of this paper. From the analysis of risk management practices and such "heuristic" intuitive methods, the assessment of subsequent risk outcomes was underestimated, was less significant than in reality. This phenomenon of cautious risk assessment was called "conservatism" by the Nobel Prize winner in Economics, D. Kahneman. Other examples of heuristic estimates (according to D. Kahneman and his co-author A. Tversky), for example, the emergence of an estimated illusion of control as a result of people's tendency to see patterns where they do not exist: or an example of a heuristic (in fact, erroneous) acceptance of an overestimated risk for profit (house money). This effect is reflected in the economically irrational behavior of investors: they tend to risk more on the profits already received from the investment. Another example, the deviation of estimates and, accordingly, decisions due to diversification (diversification bias,

diversification/choice heuristic). These and other features of the individual assessment of information have been studied in detail in numerous subsequent works, so there is no need to describe them in detail. Taking into account the topic of the article, it is possible to continue studying these issues based on the results of the analysis, taking into account the peculiarities of perception of information obtained from Internet sources of varying degrees of reliability and completeness.

Confidence in such "objective" observations and heuristics, as well as the use of well-established evaluative "cognitive stereotypes", is characteristic not only of people at the household level. Experienced researchers and experts share the same "intuitive biases" (according to D. Kahneman) or make mistakes when relying on such heuristic estimates. Usually, specialists who know the methods of statistics make fewer elementary mistakes, but, nevertheless, the general rule is that an individual makes decisions based on the established relationships of facts and events, believing that he acts rationally, taking into account the revealed subjective features, acts irrationally both for the purposes of management and for the subject of management itself. This is especially evident in the analysis and intuitive judgments in complex, confusing or new and non-standard situations that have arisen, characterized by a high level of context uncertainty. Such situations are becoming common today in conditions of instability of the context of the functioning environment and the turbulent flow of many socio-economic processes.

2 THE CONTENT AND RESULTS OF THE STUDY

The methodology and models of decision-making taking into account the risk-based approach still do not take into account the creative properties and qualities of the economic phenomenon called capital among the factors of uncertainty. Its properties and mechanisms of influence on management decision-making are the content of the study. The purpose of the study is to develop a methodology for taking into account the creative quality of capital when assessing its value. Behavioral economics can also be considered through the functions performed as a paradigm of economic and financial management, which explains the influence of psychology on economic activity and its results. This approach has emerged in part in response to the growing difficulties

associated with the limited effectiveness of regulation in the face of increasing instability and shocks based on the traditional financial paradigm. Consider the traditional and behavioral financial and economic management paradigms in a comparative way.

The traditional concept of corporate finance management offers a set of different tools and mechanisms for managing the company's activities. These include value management, portfolio investment theory, project investment selection criteria model, and others. These tools help you calculate the necessary indicators, choose a strategy for the company's behavior, however, the results of calculations and models very often differ significantly from what happens in the real world.

When analyzing the reasons for this discrepancy, the approach to reduce the complexity of management comes out in the first place, as if simplifying the picture of reality for the adequacy of the created models, which leads to erroneous decisions with a higher complexity of the object of regulation.

The classical economic paradigm postulates the initial assumption that individuals act in their own interests and are rational in this sense. The behavioral paradigm assumes that financial events can be explained by other model representations, in which an individual's behavior is characterized as not completely rational. This determines the need to introduce a new methodological apparatus for risk management in the outline of the general management of the company, which could take into account the irrationality of employee behavior.

It is worth noting that this approach did not arise from scratch. For many years, the classical financial paradigm could not answer a number of questions that arose in various empirical studies. The accumulated problems led in the mid-90s of the twentieth century to the explosive appearance of different formats of risk management standards in several countries (Australia, New Zealand, the United States, South Africa, the United Kingdom, Japan, Austria, and others). The theory of behavioral economics has gradually been able to offer models that provide answers to many of the newly raised questions. The main purpose of behavioral models so far is to modify existing financial theories at the request of business practice. However, the potential for the formation of fundamentally new solutions in the theory and methodology of economics is gradually accumulating (Simon, 1957; Anishchenko, 2014; Vashchenko, 2006). The behavioral approach plays an important role in the management of corporate finance, and currently almost all processes of complex socio-

economic systems at any level, moving from the micro-level of the enterprise to the regional and national levels of regulation.

From the point of view of the psychological paradigm, as noted in their research by many authors (V. V.). Avtonomov, V. Pareto, K. Arrow, Rabeck, and Vargler (Avtonomov, 1998; Simon, 1957; Pareto, 2007)], there are two different approaches to the application of behavioral concepts in corporate finance. The first suggests that external investors are irrational, while the firm's managers are rational. In this case, managers are forced to make decisions in response to the actions of irrational investors. The second approach indicates that the managers of the firm can also be influenced by various behavioral factors, so the decisions they make are the result of the influence of these factors. For example, managers may make certain decisions because they are overconfident in assessing their abilities or the prospects of the company (Lukashov, 2004). In various works, these approaches are also called internal and external obstacles to maximizing the company's shareholder value.

In the work of R. Thaler (Thaler, 2017), it is the internal factors of behavioral irrationality that cause errors in the assessment and losses in the capitalization of the firm, in particular, caused by the mistakes of the company's managers due to limited cognitive resources or under the influence of emotions. As a result, managers can often make risky or even wrong decisions. Thus, there is a conscious need to take into account the psychological factor in the process of developing and making corporate decisions. This process was gradual, accumulating both unresolved management issues and individual approaches and methods for solving some private applications. Historically, behavioral interpretations have appeared in some studies by authors such as J. M. Keynes (Keynes, 2007) V. Pareto (Nenasheva, 2008). But in a systematic form in the first half of the XX century, the psychological aspect did not find application in economic model constructions. Since the second half of the XX century, as already noted, the active integration of psychology into various sciences, including economics, management, and finance, began. In our opinion, the behavioral theory of decision-making under conditions of uncertainty, which began in the United States in the 1950s, can be attributed to the forerunner of behavioral economics (Hardy, 2010). In the 60-70s of the XX century, research on the development and development of a new theory, which was supposed to be an alternative to the theory of expected utility, received the support of the US Department of Defense, which also helped

the development and development of the Internet (see the work of Herbert A. Simon "The Behavioral model of rational choice" and others) (Nenasheva, 2007; Pareto, 2007). In the study "Perspective Theory: Analysis of Decision-making under risk conditions", D. Kahneman and A. Tversky investigate decision-making under risk conditions, using cognitive psychological methods to explain a large number of uncertainties in the field of decision-making. In particular, it has been proven that people tend to overestimate small values of probabilities, attach more importance to losses than gains, even if their mathematical probability is the same. The most important conclusion of the perspective theory is that the formulation of the problem affects people's preferences and their attitude to risk. If the task is presented in terms of acquisitions, then people try to avoid risk. If the task is presented in terms of losses, then people prefer to take risks as a so-called "framing effect". The first application was the use of the model in explaining the riddle of dividends (1984, H. Shefrin and M. Statman) At the same time, a behavioral finance section was created within the American Financial Association, and in 1985, it became brokers, and in 1972. the results of his research were published in the Journal of Finance.

In Russia, due to the more recent development of the market economy compared to other countries, interest in behavioral finance has emerged only relatively recently. The transition to a new model of behavioral economics in most domestic economic research centers is quite gradual. Nevertheless, some research centers, such as the Financial University, the Higher School of Economics, and the Faculty of Economics of the Lomonosov Moscow State University, conduct systematic research in the field of behavioral finance.

Most of the works on behavioral finance published in Russia are a review of foreign articles published abroad (D. Repin, A. Lukashov, E. Nenasheva, A. Solodukhina, etc.) (Lukashov, 2004; Nenasheva, 2008; Nenasheva, 2008). The author considers such concepts and models of behavioral finance that affect the company's capital structure, initial placement of capital or IPO, the policy of share repurchases, the issue of debt obligations and the policy of paying dividends in the company. The review also compares the models of traditional and behavioral finance. Almost in parallel, the development of the theory and methodology of risk management of organizations was carried out, which paid considerable attention to the assessment of human behavior when making management decisions in the unstable environment of their functioning. It

can be noted that to date, the main postulates of behavioral economics and finance have been formulated, but the interaction of these theoretical constructions has not been theoretically discussed. More and more researchers are coming to the conclusion that behavioral factors play a huge role in finance and are expressed in decision-making, the choice of alternatives, and information processing, thus directly addressing the issues of risk management in the activities of organizations. Due to the novelty of behavioral economics and finance models, there are few studies and models that search in this area. But their relationship with the risk management models of organizations was not considered. As it was mentioned in the first part of the article, there are practically no published studies in Russia at the moment. As for the works of foreign authors, most of them considered the influence of one or two factors on the decision-making by the management of organizations, as well as on the financial results of companies without a systematic approach to the models of systemic risk management.

The problem of the influence of the factor of optimism on the risks of decision-making by managers in the organization requires a comprehensive study of the theoretical provisions and systematization of the accumulated practical foreign experience of conducting empirical research. As noted above, the pioneer is Herbert Simon (Simon, 1959). He proposed the theory of bounded rationality, which is a generalized descriptive model of economic behavior. In it, the decision-making process is divided into two stages: the search and the adoption of a satisfactory option. Simon assumes that in the decision-making process, there are no ready-made alternatives in front of the person making these decisions. Therefore, you need to build them yourself. It is not assumed that in the process of searching for options, it is possible to maximize the usefulness due to the lack of necessary (and sufficient) information. It is in this part that the information field of decision-making can be supplemented by the evaluation information generated when applying risk management methods. It is at this stage, in our opinion, that it is useful to include risk management methods to justify solutions. And therefore, in the concept of the level of claims, the assumption about the possibilities of choice at each moment in a person is based on a more representative base. We can also use the results of the work of D. Kahneman and A. Tversky (Kahneman, 2000) to build bridges of model relationships.

This work is largely fundamental to the disclosure of the content of behavioral economics. The theory

describes the decision-making of people, in conditions of risk. This theory refuted the previously existing concept of decision-making, based on the theory of probability and the rationality of decision-making subjects. The study is a critique of expected utility theory as a descriptive theory of risk-based decision - making, and develops an alternative model.

In contrast to the generalizations of the "theory of expected utility", the "theory of prospects" was derived from the empirically revealed features of the behavior of individuals in risk conditions. Meanwhile, it was concluded that individuals make decisions under a different measure of the influence of emotions, thereby generating additional management risks. In the course of the study, the mechanisms of decision-making under conditions of uncertainty, called decision-making heuristics, were identified, which can be defined as the use of experience to make decisions or improve the result. It should be noted that the use of methods and means of regulation based on risk management standards that summarize the best management practices of organizations increases the level of creativity of solution methods. Heuristics means a quick, selective interpretation of information, almost equivalent to intuition, taking into account the fact that conclusions may not give the desired result due to the speed of decision-making and/or incomplete knowledge of information. But the application of risk management reduces the uncertainty of the context, leaving intuitive solutions less regulatory space and improving the quality of management in the organization.

One of the main conclusions of the work of D. Kahneman and A. Tversky is that the cost can be fairly reliably estimated in terms of gains and losses. The value function establishes the relationship between objectively determined losses or profits (i.e., losses or profits expressed in monetary units) and the subjective value that, based on these losses and profits, the individual evaluates for himself. Moreover, the cost function in terms of losses is different from the cost function in terms of gains. This is reflected in the methods of assessing risk consequences, in particular, it can explain the fact that when constructing numerous scenarios for the development of complex socio-economic systems, in practice, the average forecasts are not implemented, as it might seem with the classical approach, in the scenario under more negative modeling conditions (explaining the well-known statement of V. S. Chernomyrdin "we wanted the best, but it turned out as always"). It was also found that people's attitude to risk depends on the formulation of the choice task.

The form of task formulation thus affects people's preferences and their attitude to risk. If the task is presented in the form of winnings, then people shy away from the risk. If the task is formulated in terms of losses, then people prefer to take risks. As it was already written above in this paper, this phenomenon is called the framing effect.

Many firms have mechanisms and tools for solving the agency problem based on the established past practice, so that the financial management of the firm is focused on maximizing its value. The problem is that, most likely, these mechanisms do not affect managers, since the latter make irrational decisions and actions. Decisions and actions resulting from these decisions do not increase the value of the firm, although this may not be entirely true for managers. In this case, they think they are already doing the right thing, so various mechanisms aimed at eliminating the agency problem will not have an effect. An even more difficult task arises when formulating the organization's development goals, if the issues of increasing profits have become a priority. And if there is a conflict of interest between the owner and the top management of the organization, the management risks increase, and the consideration of the behavioral component in management becomes critical.

The most popular work on the topic of behavioral phenomena of management decision-making in corporate finance is the study of R. Roll. The hypothesis of arrogance in mergers and acquisitions that he identified is based on the assumption that managers are inherently overconfident. This leads to managers overestimating the profits from future transactions. Excessive self-confidence of managers can lead to an increase in the activity of acquisitions.

A study of the studies carried out (Malmender and Tate, Heaton. Bertrand and Skoar (Malmendier, 2002)) in the field of behavioral finance showed that the greatest attention was paid to the optimism factor. An exploration of the phenomenon of optimism can also be found in Weinstein's work. All the existing works of Russian authors are qualitative studies that systematize the works of foreign authors. But an acceptable unified classification of the various behavioral phenomena studied by various authors in the context of risk management has not yet been created.

3 CONCLUSIONS

Considering the approaches to solving the issues listed in the introduction, we can note the following. The reasons for an individual's irrational market

behavior vary. They change over time, changing as the socio-economic context of the functioning of complex socio-economic systems develops. Currently, the issues of developing the theory and methodology of interaction between behavioral economics models and risk management methodology in the activities of organizations are becoming more acute. Summarizing the research of various groups of scientists, all the psychological and motivational factors that, in one way or another, affect the behavior and decision-making of managers of organizations can be divided into two groups.

The first group includes an erroneous perception of reality or an incorrect assessment of the situation, as a result of which incorrect decisions are made. These factors are inherent in absolutely all people. Errors can vary in their consequences, and the use of risk management methods and tools is an important component of the sustainability and economic security of these systems.

The second group includes emotional factors that determine the behavior of people in certain circumstances. The role of emotional factors increases in situations of risk and uncertainty that prevail in corporate financial management tasks. These factors are inherent in human nature and are inherent in most individuals. Together with possible errors, these factors carry an essential element of creativity and the potential for difficult-to-predict heuristics, acceptable risk levels, and creativity in managerial decision-making.

It is also necessary, based on the results of research presented in a number of our works (Avdiyskiy, 2020; Anishchenko, 2014), to identify the third group of reasons associated with possible mistakes of the "blunder type", accidental blunders and/or internal misconceptions or ideological attitudes (for example, managerial conservatism in the organization). These possible errors can lead to deviations from the goal of the organization's development, and their allocation to a separate group is associated with the need for their regulation in risk management by special methods that differ from the risks and methods of their regulation in the first two groups.

When people have to make decisions in conditions of uncertainty, they are forced to estimate the probability of a particular event in the future, to predict the values of unknown quantities based on the information available to them. As a rule, people do not use mathematical formulas, but use a set of a certain number of psychological motives and intuitive heuristic methods that, based on the use of decision-making stereotypes, simplify the task of making a

judgment about a certain event based on the limited information available, previous experience and stereotypes.

Heuristics as a set of research methods that contribute to the discovery of the previously unknown, as an approach to solving a problem based solely on intuition and human experience, has a significant potential for creativity and creative solutions. But their feasibility (selection, evaluation, processing, and application) can only be established using risk management methods and tools. The combination of these two approaches is the most important condition for further progress in this direction.

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