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Assessment and management risks of agricultural entrepreneurial structures on the micro-level.

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ABSTRACT

The current stage of development of the economy is characterized by large-scale transformations taking place in the real sector of the economy, including the interrelated spheres of agriculture. These changes are implemented in the framework of the priority national projects, need to be addressed both theoretically and practically significant problems that have accumulated in the branches of the agrarian sector, the processing industry, and trade. The most significant of these include issues related to the functioning of these sectors in terms of increased risk, pointing to the need to minimize them. The process of reducing risk – a flexible management mechanism, which is represented as an algorithm consisting of several successive stages. The first stage – the analysis risk factors to conduct a quantitative and qualitative assessment of economic risk with the choice of methods to influence the risk of the second stage of this – the decision on the choice of alternatives and the implementation of the method chosen. The third phase which closes the algorithm and makes it loop it to monitor and control the implementation of the selected method of risk reduction.

Keywords: risk, assessment, insurance, limiting, diversification

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INTRODUCTION

In modern conditions, the most acute issue is the provision of food security of the country on the basis of intensive and stable development of the agricultural sector of the economy. The critical position of the modern agro-industrial complex of Russia, which is a complex dynamic system, is related to the depth of unresolved problems of its individual subsystems. The enterprises of the agro-industrial sector have to work in conditions of acute shortage of financial resources for the implementation of expanded reproduction, significant moral and physical wear and tear of the basic production assets, opposition from natural factors, the lack of effective information links and pronounced asymmetry of information. In many respects this situation is connected with the instability of the macroeconomic environment in which business entities operate, and, consequently, with the presence of a significant number of risks at the micro level.

There are two groups of factors that exert a significant influence on the activities of agrarian formations. The first group is exogenous factors, which are external to the enterprise, and it is practically impossible to reduce their influence on the activities of agrarian formations. Such factors include weather conditions, geographic location, political, economic, demographic, social, environmental situation in the country, legislative base, inflation rate in the country, level and quality of life of the population, etc. The main feature of external risks is their objective nature, i.e. they are not directly related to the productive activities of the economic entity, and the agrarian enterprise must, with a certain degree of probability, predict their occurrence and adapt to their influence. The emergence of the second group of factors (endogenous, internal) is directly related to the activities of the agribusiness enterprises themselves. Their level depends on the business activity of the manager, the choice of strategy and tactics of the company's development, the availability of necessary resources, the magnitude of the production potential, technical equipment, labor productivity, etc. Internal factors, unlike external ones, are conditionally regulated.

MATERIALS AND METHODS

Risk management is understood as an activity aimed at overcoming uncertainty and preventing possible losses from production and financial activities of an economic entity, choosing an optimal solution from among existing alternatives, in order to ensure its stable functioning with an orientation to expanded reproduction. The process of risk reduction is a flexible management mechanism [2], which can be represented in the form of an algorithm consisting of several consecutive stages. The first stage of risk management involves conducting a quantitative analysis of economic risks, which is a continuation of the qualitative study and assumes the formation of a basic version of the project calculation. Quantitative assessment of economic risks in the agro-industrial complex can be carried out using statistical and analytical methods, financial stability analysis methods and expert assessments. Statistical methods are the most common methods of quantitative risk assessment, since they have a certain universality. However, their application requires the formation of an extensive database, the results obtained can be interpreted ambiguously, certain difficulties arise in the analysis of dynamic series, etc. The main purpose of using these methods is to determine the statistics of losses and profits that occur in a given region in order to determine the probability of occurrence events and the establishment of an assumed risk level [3]. The main tools of statistical methods for calculating risk are: - the average value of the random variable being studied; - variance; - Standard (rms) deviation; - the coefficient of variation; - probability distribution of the random variable under study. Currently, the most commonly used method is the "decision tree", which involves assessing the risks in making decisions that have several development options. When using the scenario method, the calculation of the resulting indicators is carried out in the development of the most probable, optimistic or pessimistic variants of the development of events. The method of variation of the parameters of the management solution allows us to establish and investigate the relationship between the explanatory and the resulting variables, by changing the former.

This group of methods includes: - methods of simulation; - calculation of the sensitivity coefficient; - determination of breakeven point; - determination of the coefficient of financial stability. Methods of simulation imply experiments with the mathematical component of the model in order to determine the variation in the behavior of the system in a certain period of time. To assess the systematic risk associated with fluctuations in market prices and profitability, the sensitivity coefficient is used. With its help, the degree of influence of each of the varied factors on the outcome of the project is determined. The breakeven point allows to reveal the critical volume of production, at which the enterprise will receive a zero profit, because

the proceeds from the sale of manufactured products is equal to the cost of manufacturing it [3]. The method of analyzing financial sustainability illustrates the impact of changes in various factors on the change in the main economic indicators of the project. The main advantage of this method is the clarity, because it shows how the individual input factors affect the final result of the project.

One disadvantage is that the change in one factor is considered in isolation, without interrelation with other factors. Therefore, the application of this method as an independent tool in the evaluation and analysis of risk is very limited.

RESULTS AND DISCUSSION

As part of the analysis of the financial stability of an enterprise and an assessment of the level of entrepreneurial risk, solvency indicators are used that characterize the willingness of an entity to pay off its short-term obligations in the event of simultaneous presentation of claims from all creditors. The application of these indicators allows you to determine the willingness of an enterprise to settle on top-priority payments with creditors by its own means. After the qualitative and quantitative risk assessment, a set of methods is developed to prevent the development of adverse situations.

At the second stage there is a choice of a method of influence on risks of industrial, processing and trading enterprises of agroindustrial complex with the purpose of minimization of possible losses in the future. If the enterprises of the agro-industrial complex choose the first group of methods, then the risk management is carried out through limitation and self-insurance. With the help of limiting, the agrarian formations establish the limiting values of the economic performance of their activities, which are determined on the basis of economic and mathematical modeling, and the achievement of which will require economic entities to either review the strategic decisions or move to a new alternative strategy. Limiting is connected, first of all, with money resources and assumes an establishment of the limiting sums: expenses, credits, investments. Another method of minimizing the risk of agrarian formations is its transfer, and here as a tool are the method of "search for guarantors" and insurance. When applying the first method in this group, namely the method of "searching for guarantors" of an agro-industrial complex, striving to reduce its own risk, conclude partnership agreements with other companies, actively integrating into the integration process. Integration can be: - vertical, when at least two consecutive stages of production of goods occur, while the result of the previous stage serves as the starting point for the subsequent, therefore vertical integration is often inter-branch; - horizontal, involving the unification of enterprises of the same branch of the agrarian sector of the economy, producing a homogeneous product [4]. The damage caused by changes in the natural and climatic conditions of agricultural production, significantly reduces its stability, deprives of the weighty reserves of financial stabilization. Therefore, the application of insurance in the agroindustrial complex makes it possible to ensure stable conditions for the production of agricultural products, regardless of natural anomalies. The most widespread in the agro-industrial complex has received property insurance, in which the object of insurance relations are both property interests, and the property itself (buildings, structures, equipment, agricultural land, livestock of agricultural animals, etc.). Agricultural insurance in Russia with state support is carried out in accordance with Federal Law No. 264-FZ of December 29, 2006, "On the Development of Agriculture," according to which a partial coverage of the costs of insurance for agricultural producers from the budget funds is granted a subsidy of at least 50 % of the paid or insurance premium under the insurance contract. At the same time, agricultural insurance and planting of perennial plantations are subject to insurance with state support [2]. The basis of the third group of methods is diversification of activity and reservation. Diversification of activities involves risk reduction based on the development of several strategic areas of activity of agricultural enterprises due to the possibility of compensation for losses from one of the activities due to profits from other areas. Diversification to the enterprises of the agro-industrial complex makes it possible to free themselves from the influence of the conjuncture of a specialized market. Experiencing difficulties with the sale of products in one of the commodity markets, the diversified enterprise of the agro-industrial complex can increase sales volumes on the other and thus compensate for its losses. Reserving involves the formation of reserves of resources, which allows the enterprise of the agricultural sector to significantly reduce the possibility of occurrence of a risk situation. Reservation is a universal method of risk management, however, significant working capital reserves lead to the emergence of secondary risks associated with a decrease in liquidity and investment attractiveness of enterprises of the agro-food complex [4]. The final stage in risk management is the evaluation of the results obtained and the correction of the methods used to reduce the

risk taking into account the information obtained. To ensure that activities to minimize the risks of agricultural enterprises are effective, they must be systemic.

CONCLUSION

The algorithm proposed by us will allow to take into account the influence of both external and internal factors on the formation of various risk groups, to make their qualitative and quantitative assessment and to develop risk management methods that will be adequate to the current situation. This is especially true now, since the sustainable development of the agro-industrial complex can positively affect the country's food security, ensuring full satisfaction of the population's needs for high-quality and safe food for food, sold at affordable prices. Consequently, management in the sphere of agribusiness, aimed at reducing risks, will help improve the creditworthiness of economic entities, increase the investment attractiveness and social attractiveness of rural areas as a place of livelihoods of producers of agricultural products [1].

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