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Risk Passport as an Effective Measure to Overcome Negative Consequences in the Conditions of Enterprise Functioning

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***Abstract*—The nature and content of the risk passport are considered, an algorithm for its implementation in the enterprise of the agricultural sector is provided in the article. A set of information about the risk area, risk criteria, as well as instructions on the necessary methods application to manage or minimize the risk are understood under the passport of economic risk. A graphic representation of the risk passport in the content of various sections such as: type or subtype of an economic risk passport (ERP); subdivision in the direction of which economic risks can be identified; the validity of the risk passport; risk description; general information; risk area; risk management techniques; contact information. This study also includes a specific algorithm for the application of integrated risk management in enterprises of the agro-industrial complex using a risk passport, which implies:, accounting reports on the production and economic activity of an enterprise on the result of identifying business risk for set period of time is analyzed using specialized software that contains risk passports; the identified risk is analyzed by risk managers who determine its level using the method of identifying, analyzing and assessing risks; if the risk level is recognized as risk-free or acceptable, then observation of the analysis objects (information analysis) continues until the risk level changes to critical or catastrophic; if the risk level is considered as critical, then the risk manager prepares a draft memorandum to the head of the enterprise; if the risk level is recognized as catastrophic, then the risk manager of the agricultural enterprise forms the draft risk passport and an explanatory note to it using a special software tool; according to the last block, matching with the coordinating division head and the enterprise head; registration project of the risk passport in a special software.**

Keywords— risk, economic risk, risk passport, risk description; risk area; agricultural enterprise, risk identification, risk analysis and assessment, risk management, integrated risk management; risk level; risk minimization methods.

I. INTRODUCTION

In terms of economic activity, the management of an agricultural enterprise has a key role in solving problems of managing economic risk, since it approves measures programs to reduce risk, makes decisions about starting their implementation in critical situations, if it considers them reasonable, it takes, if on the contrary, rejects. The implementation of a risk management system using a software tool based on the use of a risk passport for each type of business risk will help the entrepreneur control these measures. The essence and content, structure and algorithm of applying a risk passport are discussed in detail in this article.

The study aim is to increase the role and importance of risk management for the sustainable functioning of agricultural enterprises in an unstable market environment. The adaptation issues of agricultural production to risks are of particular importance, which are largely connected to differences in the natural, social economic, technical and technological conditions that determine the agri-food industry functioning and development. Comprehensive, objective, timely accounting and scientifically-based risk management are of fundamental importance in the agro-industrial complex, since the dependence of economic activity conditions and results on random, primarily weather factors, as well as fluctuations in market conjuncture is particularly great.

II. EASE OF USE

Generally accepted methods and techniques of economic research were used in the study process: monographic (in the process of studying risk management theoretical foundations), statistical and economic (when studying trends of AIC enterprise development and functioning), design-constructive (when justifying and calculating indicators of enterprise functioning), abstract and logical (when generalizing conceptual and methodological approaches in identifying, analyzing and assessing risks), comparative analysis (synthesis of native and foreign risk management experience), various risk assessment methodologies.

III. RESULTS AND DISCUSSION

In a market economy, an entrepreneur has to conduct its business in the conditions of uncertainty and risk. And if we consider agriculture, it is characterized by the influence of specific risk factors affecting economic activity (land, living organisms, weather conditions, etc.) therefore, an entrepreneur has to take into account the entire risk sector for the effective

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functioning of its economic structure. Any activity carries uncertainty about future events and, of course, is associated with a large number of risks.

Analysis of the economic literature devoted to the risk management problem of such authors as: V. Abchuk, A. Algin, I.T. Balabanov, V.I. Vyatkin, O. S. Belokrylova, V.P. Buyanov, P.G. Grabovyi, V.Ya. Gorfinkel, L.F. Dogil, V.M. Granaturov, I.B. Zagaytov , A.K. Kamalyan, M.G. Lapusta, N.N. Malashikhina, B.A. Raizberg, N.K. Syropolis, I.M. Surkov, L.N. Tapman, N.V. Khokhlov, A.S. Shapkin and others shows the absence of common risk interpretation among native researchers (Table 1).

TABLE I. RISK INTERPRETATION NATIVE RESEARCHERS

№	Native researchers	Risk interpretation	Author relation
1.	Dictionary by V. Dahl (1863-1866) [1]	Risk - indulge in luck, go at random, do without correct calculation.	Keywords: “luck”, “calculation”. A generalized concept, more philosophical than economic.
2.	Russian Dictionary by S. Ozhegov (1960), so as [87] I.T. Balabanova, M.G. Lapusta, L.G. Sharshukova[2, 3]	Risk - possible danger, action at random in the hope of lucky chance.	Keywords: "opportunity", "danger", "action". This interpretation comes closest to our research, since it observes two sides of a risk, such as the probability of loss and the probability of making a profit..
3.	Big Economic Dictionary (1998) [4]	Risk - the possibility of event occurrence with negative consequences as a result of certain decisions or actions	Key words: "opportunity", "consequences", "action". Only one side of the risk result is considered - negative.
4.	Abchuk V.A. [5]	Risk - a course of action in an unclear, uncertain environment (at random)	Keywords: “uncertainty”, “action”. The concept is aimed at the actions or procedures of the risk subject, but the risk object, economic relations are not distinguished in any way..
5.	Algin A.P. [6]	Risk - the subject activity of economic life associated with overcoming the uncertainty.	Keywords: “uncertainty”, “activity”. Not all risk traits can be traced in interpretation.
6.	Grabovyi P.G., Petrova S.N., Poltavtsev S.I., Z. Badevits, V. Shakhov, L. Rastrigin, B. Raizberg and other economists [7]	Risk - the possibility of harm, loss, damages	Keywords: “opportunity”, “loss”. Only one side of the risk result is considered - negative.
7.	Rudashevski V.D. [8]	Risk is determined in terms of decision making and directly depends on the probability of an event	Keywords: "probability", "decision making". In interpretation, the risk result is missed in obtaining profit or loss.

Our understanding of the risk interpretation comes closest to the opinion of such scientists as: I.T. Balabanova, M.G. Lapusta, L.G. Sharshukova. The above definitions of risk, for the most part, do not contradict, but to some extent complement each other [10].

Taking into consideration the above mentioned and summarizing the analysis of risk definitions, we can give its author characteristic, which is realized in a narrow (specific) and broad (economic and philosophical) sense to social life levels.

Risk in a broad sense (economic risk) is an objectively determined set of economic relations characteristic of any social economic formations and economic systems, which are expressed in the actions and decisions of economic entities in conditions of uncertainty. These actions or decisions are related to the production, distribution, exchange and consumption of products, goods, services and in the course of activities which are likely to assess the risk situation and achieve positive results regarding other economic entities.

Risk in the narrow sense (entrepreneurial risk) represents a specific result of economic activity obtained exclusively in a system based on a market economy, as well as an assessment of opportunities, which implies, on the one hand, risk is viewed as the possibility of receiving a loss from the implementation of a planned action or decisions in the economic process, in the form of material, labor, financial, informational and other losses. On the other hand, it is expressed in the possibility of making a profit as a result of an action or decision implementation. These two sides of the same process of achieving the goal in the management decisions or actions implementation that have the same direction, that is greater profit corresponds to greater risk [9].

Entrepreneurial risk arises at all stages of the reproduction process under uncertainty conditions, for instance, the conduct of commodity-money and financial transactions, as well as the of production and management activity implementation at the enterprise in the production and sale of products.

The agricultural enterprise faces a wide range of business risks in the course of its operation. This means that risk management should provide a unified system of effective measures to cope with negative consequences, that is, manage the entire set of risks comprehensively using such a concept as risk passports.

A.A. Kudryavtsev calls a risk profile such a comprehensive view of a set of risks in his works, and its documentary expression is called a risk passport [11].

In our view, an economic risk passport is a complex of information about the risk area, risk criteria, as well as instructions for applying the necessary methods to manage or minimize the risk. Graphically, the content of the risk passport for agricultural enterprises can be represented on the developed layout (Fig. 1).

ECONOMIC RISK PASSPORT (ERP) №

ERP type:_____	ERP validity:from_____to_____ ERP expiration date (except for permanent ERP)

Subdivision in the activity direction of which economic risks can be identified	
Subdivision name	Activity code

Functional operations of AIC enterprises, in which ERP is applied	
Operation name	CODE
Economic risk characteristic	
Classification of typical production process criteria, intermediary services, commodity-money and commodity-exchange operations, material and financial assets, social economic and scientific and technical projects to risk groups	Emergence:
Economic risk description **Risk indicators and risk area indicators**	
Risk management methods	
Contact information: Responsible structural units of the enterprise for monitoring ERP operation	

Fig. 1. Economic risk passport model

The risk area is the analysis and assessment objects of economic risk. Risk is an integral part of all business transactions and is inherent in all enterprise activities. The objective nature of the risk manifestation remains unchanged. The risk objects are the production process at a certain level, intermediary services, commodity-money and commodity-exchange operations, tangible and financial assets, social economic and scientific-technical projects [10].

The risk criteria refer to signs, in accordance with which the risk significance is assessed. Risk criteria can be taken from standards, laws, policies, and other requirements [12].

A set of measures should be considered under the methods to prevent or minimize the risk, the implementation of which will reduce risk impact in enterprise functioning.

Risk passport (Fig. 1) contains the following elements (sections, subsections, columns and fields):

1. The type and subtype of economic risk is indicated in the column of "ERP type" and "ERP subtype". 4 types of economic risk for an agricultural enterprise were identified: industrial, financial, commercial and managerial. Each of them has its own economic risk subtype. For instance, financial risk has the following subtypes: the risk of solvency loss; the risk of liquidity loss; risk of business activity loss; risk of financial stability loss; risk of the enterprise profitability loss [10].
2. Two numerals of the structural subdivision code of the agricultural enterprise are indicated in the column of "Subdivision in the activity direction of which economic risks can be identified", in the direction of which the risk is identified, in accordance with Table 2.
3. Start and expiring dates are indicated in "Risk passport validity" column. When indicating the risk passport start date, it should be applied from the indicated date. When indicating the risk passport expiring date, this date will be considered the last day of the risk passport application.
4. The risk characteristics on the basis of the designated criterion for assigning the production process, intermediary services, commodity-money and commodity-exchange operations, material and financial assets, social economic and scientific and technical projects to risk groups with specific information about this risk is indicated in "Risk description" column.
5. The functional operations of AIC enterprises are also indicated in "General Information" column, in which

the risk contained in the risk passport is to be identified (Table 3).

6. Risk indicators (risk description, assessment method) are indicated in "Risk area" section, synchronous coinciding of risks contained in a risk passport is considered as identified. Also the exceptions of the risk passport validity are indicated in this section.
7. Risk mitigation measures in accordance with Table 4 are indicated in "Risk management methods" section.
8. The column "Notes to risk management methods" contains detailed instructions to managers and specialists of the enterprise on the procedure for applying the listed risk management methods.
9. The short names of the structural enterprise subdivisions, which are charged with monitoring the use of the risk passport, are indicated in the column of "Responsible structural subdivisions of the enterprise for monitoring the ERP validity", section "Contact information". The choice of such subdivisions directly depends on the risk characteristics, risk indicators and criteria for classifying the production process, intermediary services, commodity-money and commodity-exchange operations, material and financial assets, social economic and scientific and technical projects as risk groups.

TABLE II. CLASSIFIER OF THE AGRICULTURAL ENTERPRISE STRUCTURAL SUBDIVISIONS OF, ACCORDING TO THE ACTIVITY LINES OF WHICH RISKS ARE IDENTIFIED

Structural subdivision code of the enterprise	Structural subdivision name of the enterprise
01	Main production subdivision (crop production, animal breeding)
02	Subdivisions serving the main production, including industrial production (car garage, repair shop, tank farm, spare parts warehouse, machine yard, electrical equipment)
03	Functional services (zootechnical, veterinary, engineering, technical, economic, accounting service)
04	Subdivisions serving the cultural and daily needs of the economy (food warehouse, outlet, culture center, kindergarten)
00	All activities

TABLE III. CLASSIFIER OF THE NAMES OF AIC ENTERPRISES TO IDENTIFY RISKS

Functional operations code	Functional operations name
01	finance management
02	staff management
03	research and development (for production efficiency and expansion of product sales markets)
04	marketing
05	manufacturing function
06	logistics
07	ecological function
08	social function
09	adherence of current standards, regulations, state laws
99	any

The risk contained in the risk passport is detected at a certain enterprise functional operation or at various functional operations (if it is provided in the risk passport, the operation code - "99" - any).

TABLE IV. RISK MANAGEMENT CLASSIFIER

№	Name	Code
Risk avoidance methods		
1	Rejection of unreliable partners	101
2	Refusal of risky projects	102
3	Economic risk insurance	103
4	Warrantor search	104
5	Replenish real equity capital	105
6	Limit the growth of non-current assets	106
7	Limit the growth of accounts receivable	107
8	Increase the turnover of own current assets	108
Risk localization methods		
1	Venture enterprises creation	201
2	Special structural subdivision creation to carry out risky projects	202
Risk dissipation methods		
1	Diversification of activities	301
2	Diversification of sales and supplies	302
3	Investment diversification	304
4	Responsibility distribution between the production participants	305
5	Risk time distribution	306
Risk compensation methods		
1	Strategic activity planning	401
2	External situation prediction	402
3	Social economic environment monitoring	403
4	Regulatory legal environment monitoring	404
5	Reserve systems creation	405
6	Active targeted marketing	406

The modern concept of risk management considers risks in a complex. At the same time, risk management should not focus on one type of risk, but be sure to consider all possible risks. Such an approach is usually called integrated risk management or risk management at the enterprise level.

The main advantage of this approach is a systematic view at the enterprise economic risks. This gives a chance, firstly, to see the economic risks faced by the company. Secondly, the combination of economic risks ensures proper management decision making in strategic management, staff management and financial management [13].

The need for integrated risk management can be carried out using a developed risk passport, which at an agricultural enterprise will lead to the fact that risks will be investigated at two levels:

1. Separate risk analysis using a risk passport for each identified type of risk.
2. The risk profile study in general [11, 14]. The risk profile description is any set of risks. Such a set may include risks that apply to the whole organization or its part [12].

The presented application algorithm of an integrated system for managing economic risks in the agrarian sector enterprises using a risk passport includes the following blocks: analysis of accounting reports on the production and economic activity of an enterprise on the result of identifying business risk over a set period of time using a software tool for managing business

risks; the identified risk is analyzed by risk managers who determine its level (risk-free, acceptable, critical and catastrophic levels); risk management measures are proposed depending on the level (Fig. 2).

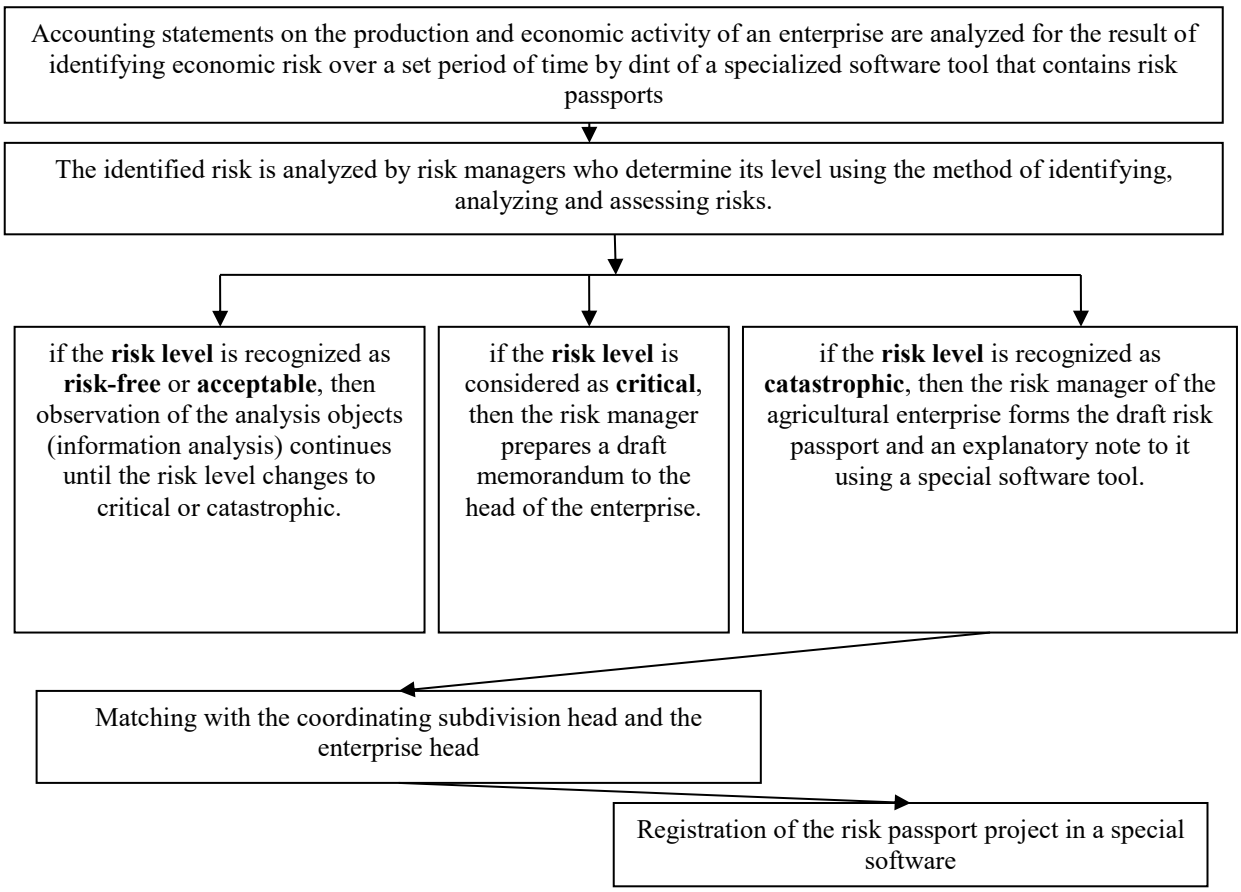

Fig. 2. Application algorithm of an integrated risk-management in the agrarian sector enterprises using a risk passport

Enterprise specialists (risk managers) engaged in the identification, analysis and assessment of risks use information from the sources indicated in the accounting statements of the enterprise production and economic activity. Information analysis is carried out in economic activity areas.

The risk manager role can be performed by an individual employee of the enterprise or a specialized consulting service that provides services to agricultural enterprises for analyzing and assessing risks [15, 16]. In any case, this activity should be supported by the relevant regulations and organizational regulatory documents defining the rules for the enterprise and conducting risk analysis and assessment.

In order to uniformly identify, analyze and assess risks, research institutes are proposed to be used for informing and consulting the companies that can develop methods for identifying, evaluating, analyzing and managing risks on the basis of proposals in the agrarian sector enterprises.

When identifying a risk, the risk manager determines its level using the risk identification method and (or) expert method or another one [17].

At a catastrophic risk level, the risk manager of an agricultural enterprise forms a draft risk passport and an explanatory note to it using special software that contains the following information: information sources, based on the analysis of which the risk passport has been developed; a description of the logical and settlement operations used to identify the risk; an assessment of the risk level with the potential negative consequences description of the risk; proposed passport validity period.

The risk passport project and the explanatory note to it are matched with the coordinating subdivision head and the enterprise head in terms of identifying risk indicators, the list and procedure for applying risk management methods.

After signing and agreeing on a risk passport project and an explanatory note to it, the risk manager or specialist of the company coordinating department registers the risk passport project in the registration book of risk passport projects implemented in the special software and assigns the registration number to the risk passport project.

IV. CONCLUSION

The enterprise management has a key role in solving the integrated management problems of economic risks with a risk passport use, since it approves measures programs to reduce risks, makes decisions about beginning of their implementation in critical situations; if it considers them reasonable, it takes, if on the contrary – rejects.

The risk consequences mitigating will require tangible costs of risk research (identification of risk factors, assessment and analysis, etc.) and taking measures to minimize the risk [18]. Traditional decision-making schemes do not take into account the risk compensation cost [19], because not every enterprise of the agro-industrial complex is able to implement a risk management system to the extent it is presented in the work. The important factors of the enterprise functioning - the enterprise size, its financial position, production scale growth, etc. – are taken into consideration. Many agricultural enterprises have enough efforts of their own employees and the services of specialized consulting firms for managing business risks using risk passports [20].

A study on the implementation of an economic risk management system using a risk passport in the operation of agricultural sector enterprises in the economic activity course focuses on the real conditions of specific enterprises, which allow them to plan appropriate organizational measures, calculate the necessary costs, and also formulate the need for methodological developments, providing a new specific side of the activity.

The immediate implementation of risk management measures with the risk passports use often contradicts the activity of the main production and management departments of an enterprise, as it requires costs that do not bring immediate income or the deadening of a capital part when creating insurance reserves. Therefore, it is very important that the final risk management decisions are made at the highest level of enterprise management, in order not to be scattered on the intermediate goals of individual departments and their managers.

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