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## **Risk Management as a Specific Activity of Danube-Basin Enterprises**

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**Abstract:** The development of risk management at enterprises in Ukraine is a young and insufficiently studied phenomenon. The high importance of timely detection, assessment and risk reduction activities are being more and more important in the period of economic instability. The new conditions in which shipping companies operate make it necessary to investigate the implementation of risk management, to determine models of its application at certain stages of the enterprise's existence. Risk management issues are considered as an integral part of the company's management system. They are organically integrated, starting from the company's philosophy, its policies, and ending with business plans and day-to-day activities. Anticipated determination of types and characteristics of possible risks, timely control of risk situations at an enterprise contributes to clear definitions of systemic actions that have a positive impact on the financial and economic stability of enterprises, helps to specify the choice and substantiate rational decisions based on the adaptation of modern risk management models.

**Keywords:** risk management; enterprise; integrated approach; anti-crisis management; business environment

### **1. Introduction**

The development of risk management in Southern Ukraine is a young and insufficiently studied phenomenon. Its high urgency is becoming more and more important in the period of economic instability. The new conditions in which shipping companies and other enterprises operate inspire the implementation of risk management, determining models of its application at certain stages.

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Shipping companies of the Danube region, including The Ukrainian Danube Shipping Company, make various attempts to introduce modern concepts of risk management into a system, which requires solving a whole set of tasks, considered as an integrated part of the company's management system, beginning with its philosophy, policy and ending with business plans of day-to-day activities.

The relevance of an in-depth study of enterprise risks is explained by the need to correctly identify the risk types and take timely measures to control possible risk situations at the enterprise. This will contribute to a clear definition of the systemic characteristics of all kinds of risks that affect the financial and economic stability of the enterprise, specifying the choice and justifying a rational solution on the Ukrainian and European markets based on the adaptation of modern risk management models to the work of a specific enterprise.

## **2. Research Methodology**

In the economic literature of the 21st century, a lot of attention is paid to the current problems of ensuring the effective operation of different organizations and enterprises. A systematic approach of using various risk management methods contributes to the further development of these enterprises, even in the presence of difficult situations they face (Zanora, Nedotopa, 2016. p. 5). It takes into account a wide range of factors: microeconomic and macroeconomic, regulatory, institutional, sectoral, organizational, technical and technological, informational, etc.

There is a close interrelationship between the risks and the competitiveness of the enterprise. Researchers believe that the causes of risks that can affect competitiveness are:

- the need to choose different options for a competitive strategy;
- growing uncertainty;
- factual impossibility to estimate the probability of the occurrence of certain events (Berdanova & Vakulenko, 2012, pp. 14-15).

There is an assumption that the complexity of modern entrepreneurial activity and business management is so multidimensional that even an experienced manager cannot always correctly assess the possibility of complications in many specific areas of the enterprise, especially those determined by the external environment. As a result, there is a need for risk management, at the center of which are the tasks of

providing managers of organizations and enterprises with all the necessary information for making correct management decisions, as well as solving the problem of subordination and responsibility for the course of all the processes (Kolenda, 2016, p. 147).

In the process of carrying out economic activity, the lack of specifics turns into entrepreneurial risk, which is expressed in the probability of certain consequences, and successful entrepreneurial activity involves the distribution of risks even in the planning process. In addition, the risk management system correlates with financial relations arising in the management process” (Popovych, 2013, p. 364).

### **3. Complexity of Risk Management Approach**

The trend of partial mutual integration of anti-crisis management and risk management is quite significant among the interdisciplinary aspects of crisis management. The mutual interweaving of risk management and anti-crisis management methods is completely logical and natural, as it allows to build a single and consistent policy of prevention and resolution of corporate crises without a clear distinction between anti-crisis practices on preventive and reactive ones. This synthetic approach was adopted in foreign literature (Muelbroek, 2005, pp. 56-57) called “A Senior Manager’s Guide to Integrated Risk Management”.

Myron Scholes emphasizes the need for integration of crisis management and risk management, illustrating this with the well-known example of the company Long-Term Capital Management, for which the actualization of risks in the form of a devastating crisis was particularly fast. Various researchers with variations and additions that explain their own vision of approaches to solving the problem understand the concept of an integrated approach to the study of risk management. In addition to aspects of risk and crisis, some authors, such as S. Ward, propose to include virtually all-strategic planning in a single module, while others consider it sufficient to add only the analysis of scenarios and real options. Therefore, polysemantic terminology occurs when the following terms are used synonymously: integrated, enterprise-wide, holistic, total, and organization Risk Management. However, this tendency is not prevailing or universal. Both types of risk management and anti-crisis management remain independent and full-fledged disciplines (Scholes, 2000, pp. 17-18).

At the international level, we can note an integrated approach to risk management, as opposed to situational and fragmented. Top management carries out coordination of risk management, although risk management is an important stage of the work of every employee. A special place in risk management is defined by its role, main goal, principles and structure of management, as well as adaptation to conditions that change under the influence of external and internal factors, taking into account the best global practices (Conrow, 2003, p. 118).

Today we can note different risk management standards. First, we should mention the standard “Risk management of the organization. An integrated model”, developed by the Treadway Committee of Sponsoring Organizations (COSO, 2004, p. 14). Its basis is the relationship between the organization’s goals, risk components, structural components, and the organizational structure itself. It is aimed at identifying possible risk events and connects the company’s strategic planning with other aspects. These interrelationships can be illustrated with the help of a three-dimensional matrix, in one plane of which goals are combined at the strategic, operational levels, as well as within the framework of financial activities and compliance with established requirements; in the second - risk management process; in the third - subdivisions of the organization (Kalinichenko, 2021, p. 183).

In 2013, there appeared an improved version, the model COSO (COSO II), in which the Treadway Commission praised the growing importance of non-financial reporting. In the COSO II model, the internal system control consists of five components: environment of management; risk assessment; control activity; information and communication; monitoring (COSO, 2017).

As the nature and complexity of risks is changing in the course of time, new risks appear, and it becomes obvious that their management system has to change as well. Consequently, in September 2017, there was presented the Risk Management System of the COSO organization, which is a progressive view of the organization’s risk management (Prukazyk & Mendryk, 2020).

Enterprise risk management based on the latest edition of the COSO standard (2017) is a set of 20 principles organized into five interrelated principles components corresponding to the life cycle of the business. The risk should not be considered only as a potential limitation or a challenge in the development of strategy implementation. Changes underlying risk and response organizations at risk creates strategic opportunities capabilities and key differentiation capabilities That is, risks

should be considered not only as a threat, but also as an opportunity (Prukazyk & Mendryk, 2020).

We could also mention the Standard of the Federation of European Associations of Risk Managers (FERMA), which includes the connection with the methodology established by the International Organization for Standardization. This Standard emphasizes the presence of four types of risks, the first three include classic, depending on the planning horizon: operational, strategic, as well as financial and hazard risks. The FERMA standard is proposed for corporations mainly involved in the manufacturing sector or in the real sector of the economy.

According to the latest reports, the involvement of risk managers in corporate strategy and sustainability has consolidated. In terms of transition to a digital and green Europe, collaboration between risk management and IT and information security has consolidated over the past few years and is now a normal aspect of their work. Risk managers are also increasingly involved in sustainability matters and environmental, social and governance (ESG) related risks. According to the report, the top risks are: cyber threats, supply chain or distribution failure, geopolitical uncertainties, uncertain economic growth, over-regulation (FERMA, 2022).

As noted by V. L. Dykan and I. M. Posokhov in the work “Research on international standards of risk management” (2014), a comparison of the content of the standards shows their gradual transition to a more generalized form with the selection of key stages of the process of regulating risk factors (Dykan & Posokhov, 2014, p. 315).

The holistic theory of entrepreneurial risks is in a state of finalization, and is based on the achievements of recognized scientific schools. In Ukraine, risk management is going through a period of its formation: where gradually appear professional associations and set themselves the goal of solving certain problems in the field of risk management. Large industrial companies initiate the creation of corporate risk management systems; global consulting companies dealing with risk management and offering the best foreign practice in this issue are entering the Ukrainian market. The Ukrainian economy fully perceives all major foreign economic shocks, primarily those related to the movement of financial capital.

The application of objectively acceptable approaches at the national and corporate levels of standardization in the country as part of the construction of corporate risk management systems allow improving the risk management of organizations and enterprises. This aspect carries out an assessment of approaches to the organization of risk management by corporation experts who identify weakness and strength of

corporate risk management from the point of view of general approaches; reduce the costs of preparing documents for the corporate risk management system and make the necessary changes to its organizational structure, focusing on typical approaches to the needs of enterprises. Furthermore, it may enlarge the efficiency of the process of transferring functions from the design and implementation of corporate risk management systems to outsourcing due to the possibility of introducing a single terminological base of recommendations for the construction of individual elements of a single system coming from third-party companies; exchange theoretical and practical experience in the field of risk management at the national and international levels; increase the effectiveness of risk management of corporations and enterprises (Kalinichenko, 2021, pp. 165-168).

The place of risk management in enterprise management is provided by the tasks that must be solved in the course of activity:

- effective use of the company's available resources, as well as the ability to attract additional resources to ensure the dynamics of development;
- strengthening of competitive advantages and the enterprise's ability to effectively form, develop and use them;
- construction of a favorable market situation for the enterprise and its predicted change in both the medium and long term;
- choosing the strategy and tactics of the enterprise's behavior on the relevant market of goods or services and timely adjusting their content and implementation mechanisms;
- professional risk management (minimization of risks as a source of danger and creation of risks as an additional condition for obtaining profit) (Zanora & Nedotopa, 2016, pp. 8-9).

Structural elements of risk management combine: risk identification and its evaluation and financing (monetary expenses for risk management); risk control. Researchers also note that there are three main directions in the theory and practice of risk management:

- development of a system of measures aimed at prevention and prevention of risks;
- minimization of negative consequences that may be caused by organizational risks;
- opportunity to receive additional income or other commercial advantages in risk situations (Baldzhi, 2013, p. 9).

#### **4. Regional Risk Management Approach**

As for the regional component of business risks, we can see a clear trend towards such parts of the Ukrainian territory, where the state of “normal” riskiness, always inherent in business, has turned into a state close to a disaster, since a complete change of the existing conditions, within which entrepreneurial activity is taking place. From the point of view of internal factors, contributing to the growth of the level of riskiness of entrepreneurial activity to supercritical levels, the inability of the Ukrainian ruling class to build a modern model of the market economy capable of taking into account the vital interests of both large capitalists and the petty bourgeoisie, the working class, the peasantry, and the intelligentsia should be noted as the main factor.

The diversity of economic activity explains many different risks, which, in turn, requires appropriate systematization and gives rise to many approaches to classification according to one or another characteristic.

One of the common classifications of risks in business and scientific literature is based on the cause of occurrence.

According to this feature, the following risks are being distinguished:

- natural risks occur as the result of the manifestation of natural factors (floods, hurricanes, volcanic eruptions, earth quakes);
- environmental risks are related to the civil liability for causing damage to the environment (man-made ecological catastrophes, extensive use of agrochemicals, activities that lead to raising of carbon dioxide level);
- political risks - presuppose losses or reduction of profit as the result of state policy and negative political situation in the country;
- transport risks may occur during cargo transportation by various modes of transport (cargo vessels, tankers, cargo trains);
- property risks may be caused by the factors indicating loss or reduction of property for the reasons that depend on the business entity (theft, negligence, sabotage);
- trade risks are connected with losses due to payment delays, refusal to pay, under delivery or lack of goods, etc. (Granaturov, 2003, pp. 14-16).

The main financial risks include:

- credit risks warns of the probability of non-fulfillment of obligations of counterparties to the creditor when paying interest on the loan. These risks include the creditworthiness and bankruptcy of an enterprise / borrower;
- operational risk. combines unforeseen losses of the company due to technical errors and failures, intentional and accidental errors of personnel;
- the risk of liquidity or solvency of the enterprise means the risk of the impossibility of full payment to borrowers at the expense of funds and assets;
- market risk indicates the probability of a negative change in the market value of the company's assets as a result of various macro-, mega- and micro-factors (for example, interest rates of the central bank, exchange rates, cost and other factors) (Zachosova, 2019, pp. 35-36).

In the presence of inflation risks, the company suffers real losses due to the fact that its revenues depreciate faster than they grow, therefore, inflation risk is determined by the possibility of depreciation of the real value of capital, expressed in the form of monetary assets, as well as expected revenues and profits in connection with the growth of inflation. At the same time, the effect of this risk can be expressed as follows: raw materials and components used in production become more expensive than finished products; the finished products of the enterprise become more expensive than competitors' prices for a similar type of product.

Besides, risk management is based on the active use of modern technologies. For example, the analysis of the occurrence of risks during the operation of ships is based on procedures that contain a qualitative description of emergency situations and reveal the tasks of risk management. The target tasks should be the identification of potential risk zones, determination of associated risks of steamship operations, preparation of a forecast of possible negative consequences of the identified risks and practical advantages. Minimization of technical and technological risks, including organizational risks of transport security, preventing terrorism, compliance with the relevant norms of international law, elimination of navigational safety risks, prevention of ship accidents, improvement of state supervision of the merchant fleet - all this covers risk management work in the Southern Ukrainian companies.

Risks arising from the activities of enterprises in the south of Ukraine, as well as in its other regions, may have a political, market, commercial or legislative nature also depend on changes in the exchange rate and the level of inflation in the country. We can also single out factors that affect the company's internal environment and



generate the following risks: high capital intensity, seasonality of certain types of work, possible low-profitability and highly competitive activity.

Taking into account the importance of the regional geographical location and the crucial role of shipping, it is possible to note that the risks related to personnel affect the emergency shipping. The analysis of existing methods and approaches to the assessment of risks associated with the human factor allows us to identify their advantages and disadvantages and to justify acceptable ways of solving and predicting these risks.

The level of transport security of shipping mainly depends on the interaction of negative and positive factors of influence in the following fields of manifestation: technical-technological, organizational-management, environmental and anti-terrorist (provides protection against acts of illegal interference in transport activity).

The elimination of technical and technological risks involves:

- ensuring and controlling the proper technical condition of transport infrastructures, transport facilities, vehicles;
- development and control of technical safety regulations for the entire life cycle (design, production, operation and disposal) of technical and technological transport safety objects;
- measures, regarding scientific and technical development and improvement of technical and technological transport safety facilities.

In the field of organizational and management factors of transport safety, there is a need to:

- perform constant monitoring of the level of transport safety, control and supervision in the field of transport activity;
- control early and sufficient resource provision (personnel, scientific and technical issues, funding);
- carry out the distribution of transport security objects according to the degree of vulnerability;
- promote high-quality and timely licensing and certification.

Minimization and elimination of risks for the prevention of terrorism involves:

- development of a set of measures of a legal, administrative, military nature, which have;

- control over the creation and functioning of coordinating bodies and operational headquarters of various levels, divisions of the maritime security service;
- security control of ships and port facilities, inspection of ship crew members, service personnel, passengers, hand luggage, baggage, cargo, technical support and food supplies.

Navigation safety should be ensured, first of all, by the strict implementation and observance of the relevant norms of international law and Ukrainian legislation by participants in transportation and other activities in water areas.

The work on navigational safety of shipping carried out at the company level is based on the implementation of international conventions, requirements of national legislation and is aimed at increasing the level of safety of shipping and preventing ship accidents, improving state supervision of the merchant fleet.

According to observations, the following factors lead to an increase in ship accident risks: minimization of costs of shipping companies for technical re-equipment and maintenance of the ship, its machines, mechanisms, devices and systems in the necessary technical condition, the age of the ships. The transition of the river shipping fleet to modern energy installations will save several million euros in fuel costs every year. Risk reduction will contribute to:

- modernization and renovation of the outdated fleet by replacing main engines and diesel generators on river tugs with the aim of reducing harmful emissions into the atmosphere, reducing direct costs for fuel and replacement and spare parts;
- maintenance of the passenger, sea and river fleet in a technically sound condition, provision of timely procurement of spare parts, implementation of high-quality ship repairs (*Strategy...*, 2021).

In addition to increasing operational efficiency and reducing direct costs for fuel, maintenance, spare parts, etc., the modernization of the existing fleet with more powerful engines will allow expanding the navigation area, and increasing the dimensions of the caravans.

## **5. Conclusions**

The most important factors determining the development of organizational forms in the industry are innovations aimed at increasing operational efficiency and active risk management and the use of commercial opportunities. The main areas of innovation are the construction of vessels; propulsion plants and equipment; environmental protection measures; methods of market forecasting and risk management and innovative business models.

The competence of the personnel is gaining crucial importance. This applies to both managers and their knowledge of the market, as well as specialists in the technical field and in the field of finance. In most segments of the shipping industry, the critical success factors are subject to rapid change, which to some extent reflects fluctuations in macroeconomic conditions. The process of organizational change is almost continuous. Speed in decision-making combined with risk management is required. The head of the company must possess the qualities necessary to catch any favorable business opportunity and form teams capable of solving the tasks that arise.

When implementing innovative development technologies and increasing competitive stability, it is necessary to focus attention on the systematization of factors for optimizing the results and energy intensity of functional activities. The effect of the strategy of leadership of the competitive level of costs is calculated taking into account the reduction of energy and material intensity in natural terms in relation to the volume of transport work. Thus, the impact of the opposite change in the price of resources is leveled. Options for optimizing the real state of the national shipping complex are determined by both external and internal factors of the development of the world and national economy. Among the external factors, it is enough to single out the parameters of competition in the system of the global maritime trade market. Moreover, it is important to focus attention on the production and implementation of the development of the merchant fleet, at least at the level of freight independence of foreign trade. This should be the basis of the state maritime transport policy and stimulation of proactive investment activities of ship owners and operators.

Speaking about the state of business affairs in the south of Ukraine, we should note that military operations are the factor of new challenges and tests of business strength and stability. Its effective operation in difficult conditions presupposes understanding of the possible loss of both personal and collective security at any time; the possibility of property loss due to hostilities, instability of the energy

structure; risks of failure of partner enterprises to fulfill their obligations. Furthermore, managers are expected to possess the ability to make decisions quickly, and set correctly priorities in the moments of general uncertainty. Minimization of risks will be facilitated by constant maintenance of contacts with customers and partners, publication of information releases regarding the company's plans, production news, solving logistical issues while focusing on opportunities. Logistics remains a major challenge, so new supply chains should be entirely rebuilt.

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