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ANALYSIS OF THE IMPLEMENTATION OF RISK TECHNOLOGIES IN THE CORPORATE SECTOR OF UKRAINE

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The system of managerial decision-making and methods of analyzing the effectiveness of risk management in a corporation are studied. It is noted that the state of implementation of risk technologies in the corporate sector of Ukraine is determined by both positive aspects and challenges that require attention and improvement. On the one hand, Ukrainian companies are already implementing certain risk management practices that help reduce the impact of negative events and ensure stability in their activities. On the other hand, there are certain challenges, such as political instability, economic difficulties, technological changes and others, which require a comprehensive and innovative approach. It is shown that risk management within the corporation involves not only the connection of all factors, causes and types of risk, but also the interconnection of all elements of the risk management system, namely the analysis and assessment of risks, measures to reduce their negative impact, formalization of mechanisms for preparing management decisions and analysis of their effectiveness. In addition, according to the new interpretation of risk management, the goal of risk management is not only to reduce possible losses in the event of a risk situation, but also to increase benefits by using potential opportunities.

The financial condition of the enterprise TDV «Yagotynskyi Maslozavod» was analyzed, the application of risk technologies was assessed and recommendations were given for improving risk management to ensure effective management decision-making. The implementation of appropriate software for the risk management system using neural networks will prevent the negative impact of risk on the company's financial condition from decreasing in the future. The integration of risk management into strategic planning and the use of innovative risk technologies will contribute to increasing the efficiency and sustainability of Ukrainian enterprises.

АНАЛІЗ ВПРОВАДЖЕННЯ РИЗИК-ТЕХНОЛОГІЙ В КОРПОРАТИВНОМУ СЕКТОРІ УКРАЇНИ

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інновації, корпорація, ризик-
менеджмент, ризик-технології,
рентабельність.

Досліджено систему прийняття управлінських рішень та методи аналізу ефективності ризик-менеджменту в корпорації. Зазначено, що стан впровадження ризик-технологій в корпоративному секторі України визначається як позитивними аспектами, так і викликами, які потребують уваги та вдосконалення. З одного боку, українські компанії вже впроваджують певні практики ризик-менеджменту, що сприяють зниженню впливу негативних подій та забезпечують стабільність у діяльності. З іншого боку, існують певні виклики, такі як політична нестабільність, економічні труднощі, технологічні зміни та інші, які вимагають комплексного та інноваційного підходу. Показано, що ризик-менеджмент в межах корпорації, передбачає не тільки зв'язок всіх факторів, причин і видів ризику, але й взаємозв'язок всіх елементів системи управління ризиками, а саме аналізу та оцінки ризиків, заходів щодо зниження їх негативного впливу, формалізацію

механізмів підготовки управлінських рішень та аналізу їх ефективності. Крім того, відповідно до нової інтерпретації ризик-менеджменту, мета управління ризиками полягає не тільки скорочення можливих збитків у разі реалізації ризикової ситуації, але й у збільшенні вигоди шляхом використання потенційних можливостей.

Проаналізовано фінансовий стан підприємства ТДВ «Яготинський маслозавод», проведена оцінка застосування ризик-технологій та надано рекомендації щодо вдосконалення ризик-менеджменту для забезпечення ефективного прийняття управлінських рішень. Впровадження відповідного програмного забезпечення системи ризик-менеджменту із застосуванням нейронних мереж запобігатиме зменшенню негативного впливу ризику на фінансовий стан компанії в майбутньому. Інтеграція ризик-менеджменту в стратегічне планування та використання інноваційних ризик-технологій сприятимуть зростанню ефективності та стійкості українських підприємств.

Statement of problem

In today's difficult conditions, management activities in Ukraine require the development of new progressive methods and mechanisms that are capable of ensuring a technological breakthrough in the country's economy. Among such urgent challenges is the creation and implementation of an effective risk management system in the real sector, designed to provide an adequate response to the factors of a globalized and integrated world. However, it should be noted that in conditions of turbulence and constant changes in the external environment, including those provoked by the pandemic and the full-scale war in Russia, the functioning of enterprises requires constant monitoring and adjustment in order to identify and prevent potential risks, and prevent a decrease in the efficiency of economic activity.

Any economic entity, faced with various risks, develops its own measures to influence risks from avoidance to acceptance and management. Unfortunately, these measures are usually reactive in nature, that is, they are carried out when a risk event occurs. To ensure effective development and competitive advantages at the corporate level, it is necessary to develop and implement a rational risk management system.

However, despite the significant achievements of scientists and practitioners, the implementation of modern risk management systems at individual large enterprises, they are all episodic in nature, while we are talking about creating a new corporate culture of risk management.

Analysis of recent studies and publications

A significant contribution to the understanding of risk and its place in enterprise management was made by famous foreign scientists F. Knight, E. Brickham, W. Sharp, R. Ackoff, G. Markowitz, etc.

Risk issues were studied both at the macro level and at the level of economic entities. Considerable attention in such studies was paid to the study of the essence of economic risk, its main elements and features, and the principles of its occurrence [1]. O. Filippov draws attention to the need to develop risk management at Ukrainian enterprises, since this will significantly increase the level of efficiency of their economic activities [2]. A number of works consider the issues of implementing international risk management standards at

domestic enterprises. Thus, N. Strelbitska emphasizes the need for unification of such standards and outlines the problems of their adaptation to Ukrainian realities [3].

Approaches to the definition of risk management were reflected in the works of Bashynska I. O., Dudneva Yu. E., Granaturov V. M., Kuznetsova I.O., Kravchenko M. O., Golyuk V. Ya. [4,5] and others. The developments of scientists are mostly devoted to the study of risks arising in the process of entrepreneurial activity, the identification of factors and primary sources of its formation, the features of methods for assessing and controlling the degree of risk.

Objectives of the article

The purpose of the study is to identify, analyze and systematize the main problems that companies face when implementing risk management, as well as to provide recommendations on the use of advanced risk technologies to ensure the effectiveness of management decisions.

In accordance with the goal, a set of main tasks has been defined: to consider the theoretical foundations of management decision-making at the enterprise; to investigate the use of risk technologies and their impact on the financial condition of the corporation TDV «Yagotynskyi Maslozavod»; to propose effective management measures to avoid the threat of a financial crisis for the company.

The main material of the research

In today's world, where the business environment is constantly changing, risks are becoming an integral part of the successful functioning of corporations. The ability to effectively manage risks is becoming a decisive factor in ensuring the sustainability of a business and its competitive advantages.

Risk management can be described as a set of methods and measures that allow predicting the occurrence of risk events and taking measures to avoid them or reduce their negative consequences. In general, the study of scientific works by modern scientists allows us to distinguish three approaches to understanding the features of risk management: comprehensive, fragmented, integrated.

The modern approach to the interpretation of risk management notes that integrated risk management involves not only the connection of all factors, causes and types of risk, but also the interconnection of all elements of the risk

management system, namely the analysis and assessment of risks, measures to reduce their negative impact, formalization of mechanisms for preparing management decisions and analyzing their effectiveness. In addition, the goal of risk management is not only to reduce possible losses in the event of a risk situation, but also to increase benefits by using potential opportunities.

With the development of digitalization processes, there are wider opportunities for qualitative and quantitative assessment of the riskiness of business processes. There is a growing need to form a system of indicators that would comprehensively characterize the effectiveness of activities, without complicating their interpretation. For this purpose, it is proposed to use a system of profitability indicators that would highlight the effectiveness of the use of capital and assets of the corporation and its structural divisions from different angles.

From the above table it is clear that the proposed system of balanced indicators can most accurately highlight the features of the functioning and development of the corporation in terms of internal economic potential and reveal the real economic processes taking place in the corporation. In addition, it provides the possibility of high-quality monitoring of the volume of financial resources and their use, while covering the transparency of the relationships of all parts of the company.

We conducted an assessment of the efficiency of business processes at the «Yagotynskyi Maslozavod». At the first stage, the system of proposed efficiency indicators was studied (Table 2).

The general conclusion from the above data shows that in the analyzed period, the efficiency of business processes at the «Yagotynskyi Maslozavod» significantly deteriorated. Negative dynamics in 2021-2023 were observed in the following indicators: return on assets (-8%), return on net assets (-13.27%), share of intangible assets in total assets (- 37.96%), fixed assets renewal ratio (-82%), cash flow value added indicator (-94.54%), as well as the fixed assets depreciation ratio (+32%). Improvement is observed only in return on investments (180%).

The state of risk management at Ukrainian enterprises is determined by both positive aspects and challenges that require attention and improvement. On the one hand, Ukrainian companies are already implementing certain risk management practices that help reduce the impact of negative events and ensure stability in operations. However, there are certain challenges, such as political instability, economic difficulties, technological changes and others, that require greater attention and effective management.

Creating an effective risk management system in a corporation based on the most modern risk technologies also requires a modern approach to the implementation of innovations. Table 3 shows the innovation index ratings for Ukraine. According to the Global Innovation Index (GII) report for 2023, Ukraine ranked 55th on the list among 132 countries in the world, which is a better result compared to 2022, when Ukraine ranked 57th (published by the World Intellectual Property Organization). As of 2023, Ukraine ranks 3rd among 37 lower-middle-income countries and 34th among 39 economies in Europe. The main innovation advantages of Ukraine are the number of utility models by origin, high software costs [8].

Therefore, from the considered risk management system and the characteristics of its elements, it is worth developing software for the successful identification of risks, as well as factors influencing effective management decision-making in order to create an effective risk management system and partially or completely eliminate the risk at the «Yagotynskyi Maslozavod». One of such areas may be the use of neural networks, which are currently actively developing. It should be noted that neural networks are computational systems inspired by the structure and functions of the brain. They include layers of neurons that interact with each other to form forecasts or make decisions. Among the main types of neural networks [10]:

- artificial neural networks (ANN);
- convolutional neural networks (CNN);
- recurrent neural networks (RNN);
- deep neural networks (DNN);
- deep learning networks (DLN).

Fragmented risk management	Comprehensive risk management	Integrated risk management
The goal is to minimize losses in individual operations and in individual subsystems.	The goal is to minimize losses and maximize the value of the company.	The goal is to increase the potential for achieving target parameters.
Risk management is a source of additional costs.	Risk management is a necessary management function.	Risk management is a source of creating competitive advantages.
Specialized management: managing specific types of risks.	Comprehensive risk management: assessing the combined impact of factors that are the source of risk.	Comprehensive risk management: considering all risks and opportunities of the organization.
Does not provide for the separation of the risk management function	Risk management is an autonomous area of general management.	Risk management is integrated into management processes and decision-making.
Each division independently manages risks.	Risk management is carried out both at the level of functional divisions and by a specialized department (specialist).	All management and operational processes are formalized taking into account risk, risk management is coordinated by senior management.
Situational risk management: risks are managed when managers deem it necessary.	Ongoing risk management: risk management is cyclical.	Continuous risk management: the risk management process continues continuously.

Fig. 1 – Key characteristics of conceptual approaches to risk management

Table 1 – Indicators of the effectiveness of the corporation's business processes

Indicators	Description of functional characteristic
Return on investment (ROI)	It characterizes the volume of investment in the enterprise and its investment attractiveness for potential investors.
Return on assets (ROA)	Provides an assessment of the adequacy or lack of capital of the enterprise to conduct its own activities.
Return on net assets (RONA)	It expresses the ability of an enterprise to generate profitability for the current period, based on the principles of the influence of internal and external factors.
Added value of cash flow (CVA)	Determines the objective situation, which is associated with providing a comparison of the volumes of planned cash flows with reported indicators for a given period, identifying certain shortcomings in the excessive amount of expenses and difficulties with the return of investment injections in the form of cash flows.
Share of intangible assets in total assets (RIA)	It characterizes the volume of intangible assets in the total share of assets.
Fixed assets renewal rate (FAR)	Shows the ability of fixed assets to be renewed over a certain period of time.
Depreciation rate of fixed assets (WTC)	Reflects the level of depreciation of fixed assets per a certain cost unit.

Source: author's development

Table 2 – Efficiency indicators of business processes at the «Yagotynskyi Maslozavod»

Indicators	2021	2022	2023	Deviation 2023-2021 .	
				+/-	%
Return on investment (ROI)	-1	0	-2	-1	180
Return on assets (ROA)	0,08	0,00	0,08	-0,01	-8
Return on net assets (RONA)	0,06	0,00	0,05	-0,01	-13,3
Added value of cash flow (CVA)	326380	72171	17816	-308564	-94,5
Share of intangible assets in total assets (RIA)	0,34	0,27	0,21	-0,13	-37,9
Fixed assets renewal rate (FAR)	0,26	0,05	0,05	-0,21	-82
Depreciation rate of fixed assets (WTC)	0,39	0,46	0,52	0,13	32

Source: compiled by the author based on [6, 7].

Table 3 – Innovation Index Ratings for Ukraine for 2020-2023

Year	Global Innovation Index (GII)	Innovative contribution	Innovative result
2020	45	71	37
2021	49	76	37
2022	57	75	48
2023	55	78	42

Source: compiled by the authors based on [8]

Therefore, it can be concluded that the development and implementation of a risk map based on a neural network will help increase the efficiency of management decision-making at the «Yagotynskyi Maslozavod» and will contribute to reducing the impact of various risks in the future.

Effective risk management is an integral part of ensuring business success and forming competitive advantages of the corporation. The choice of forms and methods of improvement and economic modeling of risk management involves: developing strategic and tactical goals for improving risk technologies, determining parameters and indicators for achieving set goals, developing directions for future transformations, assessing the effectiveness of the proposed improvement measures, calculating the integral effect of innovative processes, monitoring the achievement of goals, identifying the reasons for the imbalance of goals and results, identifying unused opportunities for effective management.

Conclusions

The indisputable condition for the effective operation of a business entity should be the formation of a risk management system at the enterprise. Since it is impossible to completely avoid risks, they can and should be consciously managed, taking into account the fact that all types of risks are interconnected and their level is not static, but constantly changing under the influence of the external and internal environment. In international science and practice, risk management has long been considered one of the main sections of management.

In the modern business environment, especially in the conditions of a large-scale war, the effectiveness of management decision-making through the creation of an effective risk management system plays an important role in increasing financial potential and protecting competitive positions.

It can be concluded that there are different approaches to assessing the riskiness of business processes and their

integration into the organizational and structural management system of the company. A complete and comprehensive analysis allows you to determine and fully characterize the current state of all areas of activity of the business entity and identify weaknesses in business process management in order to provide effective

recommendations to strengthen the competitiveness of the corporation.

Research on the level of riskiness of business processes of business entities allows you to objectively assess their functional state in various areas of activity and identify the main problems and methods and tools for solving them.

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