
МЕНЕДЖМЕНТ

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ENTERPRISE RISKS MANAGEMENT IN MODERN CONDITIONS

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Abstract. The article is aimed at researching problems related to enterprise risk management in modern conditions. The purpose of the article is to consider the features of risk management at the enterprise in conditions of uncertainty, in order to increase its adaptability and flexibility, as well as to determine the main principles and management methods that allow a quick response to existing and potential threats and minimize the negative impact of risks on the enterprise's activities.

The following research methods were used in the research process: theoretical generalization - to form definitions of concepts, general approaches and principles; analysis and synthesis; modeling - to form a model of the risk management process.

To realize the set goal, the concepts' definitions of "risk" and "risk management" were considered. The key conditions under which the risk assessment process will be most effective were formulated. The principles, compliance with which will contribute to enterprise's successful risk management, were outlined. It was established that risk management requires careful development of strategy and tactics, which must be constantly coordinated with other system parameters and economic criteria of the enterprise's efficiency.

The scientific novelty of the conducted research consists of solving tasks that have theoretical and practical significance in enterprise risk management field in modern conditions. The following tasks were solved to achieve the set goal:

- Aspects of risk concept in the economic sphere are considered, including risk as a danger or threat, risk as an opportunity and risk as uncertainty.

- The purpose of enterprise's risk management is determined and it is aimed at preventing problems or negative consequences through effective crisis management and avoiding additional costs.

- The risk management policy was established and it includes various methods and techniques aimed at reducing the risk of making wrong decisions and minimizing negative consequences.

- The process of risk management was considered and it was established that it is cyclical and includes a sequence of well-defined stages, which help entrepreneurs identify business risks: risk identification, risk analysis, risk assessment, formulation of an action plan, mitigating the impact of risk, monitoring and controlling risks.

- Risk management methods were investigated, including: risk avoidance (deviation from risk or prevention of its occurrence); risk neutralization through its transfer (includes insurance, hedging and financial guarantees), reduction (includes diversification, limitation, optimization and localization) or

preservation (includes the creation of a reserve fund, self-insurance and the creation of insurance reserves for stocks of raw materials and cash).

Keywords: risk, risk management, risk management principles, risk management system, risk management process, risk management methods.

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УПРАВЛІННЯ РИЗИКАМИ ПІДПРИЄМСТВА В СУЧАСНИХ УМОВАХ

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Анотація. Стаття спрямована на дослідження проблем, пов'язаних з управлінням ризиками підприємства в сучасних умовах. Метою статті є розгляд особливостей управління ризиком на підприємстві в умовах невизначеності, задля збільшення його адаптивності та гнучкості, а також визначення основних принципів і методів управління, які дозволяють швидко реагувати на існуючі та потенційні загрози та мінімізувати негативний вплив ризиків на діяльність підприємства.

В процесі дослідження використано методи теоретичного узагальнення - для формування визначень понять, загальних підходів та принципів; аналізу та синтезу; моделювання - для формування моделі процесу управління ризиками.

Для реалізації поставленої мети розглянуто визначення понять "ризик" та "управління ризиком". Сформульовано ключові умови, за яких процес оцінки ризику буде найбільш ефективним. Окреслено принципи, дотримання яких сприятиме успішному управлінню ризиками підприємства. Встановлено, що управління ризиком вимагає ретельної розробки стратегії і тактики, які потрібно постійно узгоджувати з іншими системними параметрами та економічними критеріями ефективності підприємства.

Наукова новизна проведеного дослідження полягає у вирішенні завдань, які мають теоретичне та практичне значення в сфері управління ризиками підприємства в сучасних умовах. Для досягнення поставленої мети було вирішено такі завдання:

- розглянуто аспекти поняття ризику в економічній сфері, включаючи ризик як небезпеку або загрозу, ризик як можливість та ризик як невизначеність;

- визначено мету управління ризиками на підприємстві, яка полягає в запобіганні проблемам або негативним наслідкам через ефективне кризове управління та уникнення додаткових витрат для підприємства;

- встановлено, що політика управління ризиками включає різні методи і прийоми, спрямовані на зменшення ризику прийняття неправильних рішень та мінімізацію негативних наслідків;

- розглянуто процес управління ризиками та встановлено, що він є циклічним і включає в себе послідовність чітко визначених етапів, за допомогою яких підприємці можуть ідентифікувати ризики, що виникають у процесі їх діяльності: ідентифікація ризиків, аналіз ризиків, оцінка ризику, розробка плану дій, зниження впливу ризику, моніторинг та контроль ризиків;

- досліджено методи управління ризиками, що включають у себе: уникнення ризику (відхилення від ризику або запобігання його виникненню); нейтралізацію ризику шляхом його передачі (включає страхування, хеджування та фінансові гарантії), зменшення (включає диверсифікацію, лімітування, оптимізацію та локалізацію) чи збереження (включає створення резервного фонду, самострахування та створення страхових запасів сировини та грошових коштів).

Ключові слова: ризик, управління ризиками, ризик-менеджмент, принципи управління ризиками, система управління ризиками, процес управління ризиками, методи управління ризиками.

Introduction. Risk is an inherent aspect of economic activities and significantly influences the business environment of enterprises. Ukrainian scholars and business leaders recognize risk management as a pivotal function, albeit many firms presently adopt only specific components of risk management, predominantly from a functional standpoint. The primary aim of such management is to prevent or mitigate potential losses. Nonetheless, empirical evidence suggests that adopting a process-oriented approach facilitates superior formulation and execution of development strategies geared towards sustaining competitiveness, given the diverse array of risks encountered by Ukrainian enterprises necessitating integrated management.

Ukrainian enterprises operate within a dynamic economic landscape, necessitating swift responses to external exigencies. Persistent uncertainties stemming from low competitiveness, absence of market prognostications, and intricate political circumstances impel enterprise management to contend with a plethora of risks influencing managerial decisions. Ensuring the effective implementation of risk management is imperative for the successful functioning of domestic enterprises. A profound comprehension of the essence of risks, which could detrimentally impact business operations, underscores the efficacy of chosen development strategies.

The principal objective of effective risk management should entail leveraging insights from various domains to mitigate risks. Enhancing enterprise performance in Ukraine demands heightened focus on risk management within contemporary contexts, underscoring the salience of risk management issues garnering entrepreneurs' attention, given the inherent risk associated with entrepreneurship.

Prominent risk management frameworks include national standards from countries like Australia, New Zealand, Canada, and South Africa, along with publications from international bodies such as the International Organization for Standardization (ISO), the European Committee for Standardization (CEN), the American National Standards Institute (ANSI), and the German Institute for Standards (DIN).

Ukrainian scholars, including O. R. Savchenko, O. V. Shepelenko, T. Borysova, T. L. Mostenska, N. S. Skopenko, V. V. Vitlinskyi, S. I. Nakonechnyi, R. V. Pikus, and N. V. Prykaziuk, are actively engaged in researching risk management issues. However, their perspectives occasionally diverge, complicating the establishment of an enterprise risk management framework. The dynamic nature of entrepreneurship necessitates ongoing refinement of risk management theory across various spheres of activity. Divergent scholarly viewpoints on the essence and functions of risk management pose hurdles to the effective implementation of risk management systems, warranting further investigation.

Task statement. The objective of this study is to explore the intricacies of enterprise risk management amidst uncertain conditions, aiming to enhance its adaptability and flexibility. Additionally, it seeks to identify key principles and management strategies enabling prompt responses to current and potential threats while mitigating the adverse effects of risks on enterprise operations. To accomplish this objective, methods of analysis and synthesis, as well as theoretical generalization, and modeling methods were employed.

Results. In the current context of a market-driven economy characterized by intense competition, enterprises must swiftly adapt to changes and incorporate risk considerations into their operational planning. This necessitates a thorough examination of the definitions of "risk" and "risk management".

The economic concept of risk can be analyzed from three perspectives:

1. Risk as a peril or threat, whereby potential adverse outcomes of events on individuals or enterprises are taken into account.
2. Risk as an opportunity, wherein a higher potential income is feasible depending on the risk level. Risk management in this context involves minimizing losses and maximizing profits.
3. Risk as uncertainty, where risk evaluation is tied to various possible outcomes of decisions. This aspect is utilized in decision-making theory and game theory under conditions of uncertainty.

Ukrainian economists approach the concept of "risk" from diverse angles, with many emphasizing its association with uncertainty and costs. For instance, O. V. Bondar defines risk as the potential loss of resources or income deviation from the expected resource utilization [1, p. 91]. Yu. V. Tiuleneva underscores the pervasive nature of risk across all stages of economic activity, from production setup to goods and services sale [2, p. 49]. Savchenko O. R. characterizes risk as the likelihood of resource loss, income deficiency, or additional costs stemming from enterprise production and financial activities [3, p. 156]. Sakhartseva I. I. and Shliaha O. V. view risk as a combination of activity result uncertainty and the potential adverse consequences of failure [4, c. 455]. Meanwhile, O. V. Shepelenko posits risk as a method of management within uncertain conditions, aiming to prevent or mitigate negative outcomes while generating entrepreneurial income [5, p. 193].

Risk management constitutes an essential component of enterprise governance systems, ensuring their reliability and efficiency. The overarching objectives of enterprise management systems include safeguarding owner welfare, maintaining financial stability, fostering development, and enhancing competitiveness. Even small-scale enterprises grapple with activity risk management challenges, often addressing them through intuitive means, while larger enterprises typically boast more developed risk management frameworks.

Risk management entails a managerial domain focused on risk analysis and reduction through the utilization of diverse methods and techniques to address existing or potential risk factors. Its aim is to avert problems or adverse outcomes through effective crisis management and avoid additional costs for the enterprise. In contemporary economic literature, this practice is commonly referred to as risk management, encompassing a systematic array of interrelated actions designed to mitigate potential risks and achieve organizational objectives.

Scholars present various interpretations of the concept of risk management, which can be categorized into several approaches.

1. Advocates of the first approach characterize risk management as a distinct domain within enterprise management. It encompasses the processes of risk identification, assessment, and mitigation to preempt adverse impacts on business operations. Despite its prevalence in scholarly discourse, this approach is critiqued for occasionally overlooking the fundamental principles underlying this management paradigm. For instance, T. Borysova conceptualizes risk management as a specialized managerial discipline focused on identifying and evaluating potential risks to minimize their repercussions [6, p. 116].

2. Proponents of the second approach view risk management as a procedural framework aimed at recognizing, evaluating, and controlling risks using prescribed methodologies to mitigate their effects on the enterprise. This perspective entails the deployment of diverse risk management techniques and interventions to exert effective oversight. Mostenska T. L. and Skopenko N. S., for instance, define risk management as a process designed to influence the

entity, thereby minimizing the fallout from adverse risky occurrences and formulating a contingency strategy for entity behavior in such events [7, p. 74]. According to V. V. Vitlinskyi and S. I. Nakonechnyi, risk management constitutes a multifaceted process encompassing strategy formulation, risk identification, analysis, and evaluation to mitigate or eradicate their adverse impacts [8, p. 55].

3. Proponents of the third approach conceive risk management as a toolkit of methods and measures aimed at forecasting and mitigating the consequences of risky events. However, this approach may overlook certain dimensions of risk management, such as strategic management and preemptive measures for risk avoidance. For instance, R. V. Pikus and N. V. Prykaziuk delineate risk management as a framework of measures geared toward averting accidental events, minimizing losses, and financing their remediation [9, p. 15].

Enterprises employ various conceptualizations of risk and risk management within their operations. The first conceptualization views risk as a peril or threat capable of causing harm. In this context, risk management aims to diminish the likelihood of risk events or mitigate their adverse effects. This conceptualization forms the cornerstone of theories concerning the occupational and environmental safety of enterprises.

Another conceptual framework regards risk as an opportunity intertwined with the relationship between risk and revenue. Here, risk management focuses on optimization rather than mere risk minimization, fostering modernization and innovation in production by harnessing advancements in science and technology.

The third conceptualization perceives risk in the uncertainty surrounding the outcome of risky events. This viewpoint is prevalent in theories of game theory or portfolio investments, where risk management seeks to minimize the variance between expected outcomes and actual results in the company's operations.

Risk assessment lacks a uniform interpretation across diverse domains of knowledge, complicating its analysis and identification process. Typically, researchers concentrate solely on specific facets of risk or its repercussions, often neglecting the degree of risk uncertainty and the interplay among different system elements. Let us articulate the fundamental conditions conducive to an effective risk assessment process [10, p. 65-66]:

1. Systematic risk management necessitates the integration of internal and external factors, as well as the establishment and evaluation of relationships among stakeholders.
2. Effective risk management relies on accurate and timely information, mandating optimization of data volume to prevent information overload.
3. Tools for quantifying the likelihood of risk realization play a crucial role, affording the ability to differentiate risk from uncertainty.
4. Adaptation to enterprise conditions and continuous monitoring of the outcomes of risk mitigation measures are imperative for successful risk management.
5. Risk management should not only aim at minimizing adverse consequences but also at harnessing opportunities effectively.
6. It is paramount to consider the enterprise's potential and employ analytical instruments to identify avenues for development.

Consequently, effective risk management demands a holistic approach and collaboration across various sectors and realms of activity.

The risk management policy constitutes a pivotal facet of enterprise governance, encompassing diverse methodologies and approaches aimed at mitigating the risk of erroneous decision-making and minimizing adverse outcomes. The execution of this policy entails several steps, including the identification of distinct risk types, evaluation of pertinent information to gauge risk levels, analysis of factors influencing risk levels, selection and utilization of methods to assess the likelihood of risk events, estimation of potential losses in case of such events, establishment of risk threshold levels, determination of strategies for

mitigating adverse risk consequences, utilization of both internal and external risk mitigation mechanisms, and evaluation of the efficacy of risk management interventions [11, p. 61].

Effective risk management necessitates meticulous formulation of strategies and tactics, perpetually aligned with other system parameters and economic benchmarks of enterprise efficacy. The management strategy delineates the resource utilization approach to attain objectives within defined parameters and constraints, while management tactics encompasses specific methodologies and techniques essential for goal achievement under specific circumstances. However, devising a risk management strategy alone is insufficient. The enterprise must institute a comprehensive implementation framework, encompassing rigorous risk assessment and control mechanisms, designation of a dedicated personnel or unit for risk oversight, and earmarking of financial resources for strategy implementation.

Given the diverse nature of management tasks and risk categories, management strategies and processes exhibit a plethora of variations. Nonetheless, fundamental principles remain steadfast. Thus, successful enterprise risk management necessitates adherence to the following principles [12, p. 399]:

1. Maximization of profit: opting for decisions yielding the greatest returns with minimal or acceptable risk exposure for the enterprise.
2. Optimization of result probability: selecting solutions with an acceptable likelihood of yielding favorable outcomes for the enterprise.
3. Optimal balance of gain and risk: opting for decisions where the ratio between profit and loss is maximized.
4. Optimal result fluctuation: choosing decisions wherein the disparity between the risk of gain and loss is minimized.
5. Minimization of risk scope and its impact on company operations.
6. Adequate response to changes and prompt reaction to potential risks.
7. Prudent acceptance of reasonable risk.

In accordance with the contemporary risk management paradigm, risk management can be viewed either as a framework or a process. Conceptualized as a framework, risk management encompasses management objects—namely, the risks confronting the enterprise—and management subjects—comprising a specialized cohort of individuals wielding managerial influence over these risks through a myriad of methods and techniques.

Within the realm of risk management, the principal duties of a managerial entity encompass:

- Forecasting: the formulation of scientifically grounded predictions regarding the prospective evolution of the management object.
- Regulation: the deployment of mechanisms to exert influence on the management object, ensuring its stability amidst uncertainty.
- Coordination: a suite of measures aimed at fostering synergy within the entire risk management apparatus.
- Control: the collation of data concerning the implementation of planned risk management interventions.

The risk management framework within an enterprise presents distinct characteristics warranting consideration:

1. The outcome of implementing the risk management system within an enterprise is multifaceted and contingent upon various factors, including: substantial expenditure associated with establishing an efficacious risk management infrastructure; availability of skilled personnel for system creation and adaptation; intricacies inherent in risk assessment with no guarantee of anticipated outcomes; necessity to align the enterprise's overarching management framework to accommodate risks' impact across diverse operational facets.

2. A robust system should meticulously address both prominent external and internal risks impacting financial performance, tailored to the enterprise's unique idiosyncrasies.

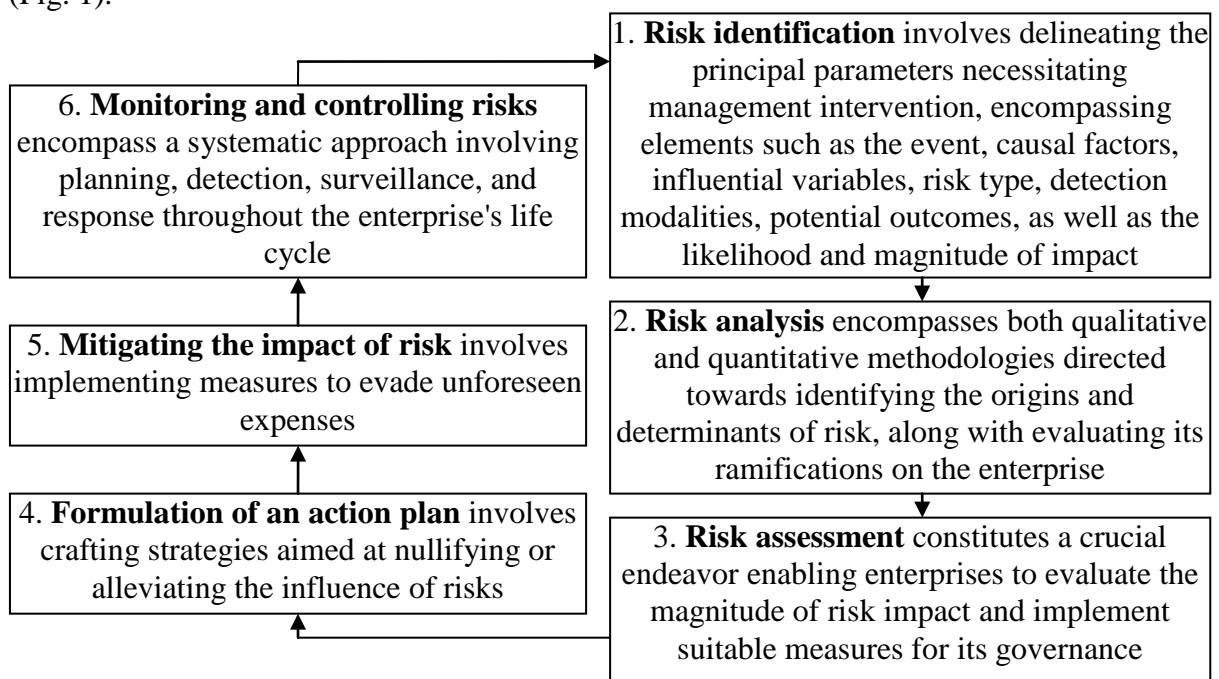
3. Alignment of the risk management system with the enterprise's mission and developmental objectives while accounting for the external milieu is imperative.

4. Striking a balance among stakeholders' interests—owners, management, and personnel—within the risk management paradigm is paramount.

5. Optimization of management decisions facilitates cost efficiency and underscores pivotal aspects of risk management system operation.

The management process entails the subject's capacity to exert influence over the management object via information exchange between managerial and controlled subsystems. This process encompasses reception, transmission, processing, and utilization of information.

The risk management process itself unfolds cyclically, delineated by a sequence of well-defined stages empowering entrepreneurs to identify risks inherent in their operations. Economic literature commonly delineates six primary stages of the risk management process (Fig. 1).



*Fig. 1. The main stages of the risk management process
Formed on the basis of [8, p. 93]*

Contemporary risk management encompasses a spectrum of management paradigms and methodologies necessitating recurrent updates and adaptation to evolving circumstances. This facilitates compliance with the imperatives of dynamism and adaptability in the realm of managerial decision-making.

Based on response timing, two primary approaches emerge: reactive, entailing responses to risks upon their manifestation, and proactive, characterized by systematic engagement with potential risks.

Various management styles can be employed within the ambit of risk management:

- Conservative, entailing risk avoidance to minimize adverse outcomes and circumvent high-risk ventures.

- Aggressive, involving risk-taking to maximize profits, even when potential losses may not be fully offset by income escalation.

- Moderate, recognizing that heightened risk is offset by commensurate profit augmentation in individual operations or projects.

The delineation and adoption of risk management methodologies entail discerning the most efficacious tools for risk mitigation, which can be categorized into three principal groups. The first group encompasses tools available for autonomous utilization by the enterprise. The second group encompasses instruments necessitating engagement with external entities such as banks, investment firms, lessors, or insurers. The third group encompasses macroeconomic instruments. The efficacy of risk management can be evaluated in terms of the ratio of risk management expenditures to potential resource losses in case of a risk event. These benchmarks vary contingent upon the strategic objectives set and the enterprise's condition at the time of decision-making.

Risk management methodologies can be categorized and delineated as follows:

1. Risk avoidance: this involves deviating from risk or preempting its occurrence.

2. Risk neutralization: this encompasses risk transfer (including insurance, hedging, and financial guarantees); risk reduction (encompassing diversification, limitation, optimization, and localization); and risk preservation (involving the establishment of a reserve fund, self-insurance, and the creation of insurance reserves for stocks of raw materials and cash) [13, p. 208].

These methodologies can be concurrently employed as they are not mutually exclusive. It is noteworthy that they can be applied both during the preliminary risk analysis stage and in the decision-making process of management, as well as during their adaptation due to a certain level of uncertainty inherent in both the external and internal environments.

Various factors may prompt shifts in approaches to risk management, such as the discovery of novel information, additional analyses, the advent of new data analysis tools, clarification of the impact of external factors on risk, and adjustments to the principal indicators of the enterprise.

Given the multifaceted nature of risks, it is imperative to contemplate the potential interdependence among them when selecting risk management methodologies. Such interdependence can either fortify or diminish the influence on the outcomes obtained when altering one of the methodologies.

Conclusions. The research conducted contributes to the scientific domain by addressing tasks of both theoretical and practical significance within the realm of enterprise risk management in contemporary settings. To accomplish this objective, the following tasks were undertaken:

- Delving into aspects of the risk concept in the economic sphere, encompassing risk as a peril or threat, an opportunity, and an uncertainty.

- Defining the purpose of enterprise risk management, which aims to avert problems or adverse outcomes through adept crisis management and cost avoidance.

- Identifying the array of methods and techniques within risk management policies geared toward minimizing erroneous decisions and mitigating adverse repercussions.

- Establishing that effective enterprise risk management necessitates adherence to principles such as profit maximization, optimal outcome probability, favorable profit-risk ratio, minimal outcome fluctuation, risk spectrum minimization, adaptive response to changes, and judicious risk acceptance.

- Examining the cyclical nature of the risk management process, delineating a sequence of distinct stages enabling entrepreneurs to identify risks emerging during their activities: risk identification, risk analysis, risk assessment, formulation of an action plan, mitigating the impact of risk, monitoring and controlling risks.

- Exploring risk management methodologies, encompassing risk avoidance (by deviating or preempting risk occurrence), risk neutralization via transfer (comprising

insurance, hedging, and financial guarantees), reduction (involving diversification, limitation, optimization, and localization), or preservation (entailing reserve fund creation, self-insurance, and the establishment of stocks of raw materials and cash insurance reserves).

Further research is imperative to enhance the components of enterprise risk management systems to ensure their effectiveness in contemporary business environments.

1. Бондар О. В. Ситуаційний менеджмент: навч. посіб. Київ: Центр учбової літератури, 2010. 326 с.
2. Тюленева Ю. В. Визначення категорії «ризик підприємницької діяльності» як основа ефективної діяльності підприємств. *Економічний вісник НТУУ «Київський політехнічний інститут: збірник наукових праць*. 2009. № 6. С. 47-52.
3. Савченко О. Р. Роль і місце ризик-менеджменту в діяльності підприємств. *Наукові записки ТДПУ ім. В. Гнатюка*. 2003. № 15. С. 155-160.
4. Сахарцева І. І., Шляга О. В. Ризики економічної діагностики підприємства. Київ: Кондор, 2008. 380 с.
5. Шепеленко О. В. Управління підприємницькими ризиками суб'єкта господарювання. *Економічні науки: Вісник ДонНУЕТ*. 2011. № 4(52). С. 189-199.
6. Борисова Т. Теоретичні аспекти управління ризиком на підприємстві. *Актуальні проблеми економіки*. 2005. №7. С. 116-121.
7. Мостенська Т. Л., Скопенко Н. С. Ризик-менеджмент як інструмент управління господарським ризиком підприємства. *Вісник Запорізького національного університету. Серія «Економічні науки»*. 2010. № 3. С. 72-79.
8. Вітлінський В. В., Наконечний С. І. Ризик у менеджменті. Київ: Борисфен-М, 1996. 325 с.
9. Пікус Р. В., Приказюк Н. В. Управління фінансовими ризиками: навч. посіб. Київ: Знання, 2010. 598 с.
10. Рязанова Н. О. Формування системи управління ризиками на промислових підприємствах. *Академічний огляд*. 2022. № 1 (56). С. 63-71.
11. Куцик П. О. Управління фінансовими ризиками: навчальний посібник. Львів: Растр-7, 2016. 318 с.
12. Балджи М. Д., Карпов В. А., Ковальов А. І., Костусєв О. О., Котова І. М., Сментина Н. В. Обґрунтування господарських рішень та оцінка ризиків: навч. посіб. Одеса: ОНЕУ, 2013. 670 с.
13. Захарова Н. Ю. Управління ризиками на підприємстві: сутність, підходи та методи. *Бізнес Інформ*. 2023. № 1. С. 203-209.

References

1. Bondar, Oksana. *Situational management: training manual*. Kyiv, Center for Educational Literature, 2010.
2. Tiuleneva, Yu. V. "Definition of the category "business risk" as the basis of effective enterprise activity." *Economic Bulletin of NTUU "Kyiv Polytechnic Institute: collection of scientific works*, no. 6, 2009, pp. 47-52.
3. Savchenko, O. R. "The role and place of risk management in the activities of enterprises." *Scientific notes of TSPU named after V. Hnatyuk*, no. 15, 2003, pp. 155-160.
4. Sakhartseva, Iryna, and Olha Shliaha. *Risks of economic diagnosis of the enterprise*. Kyiv, Condor, 2008.
5. Shepelenko, O. V. "Management of business risks of the economic entity." *Economic sciences: Bulletin of DonNUET*, no. 4(52), 2011, pp. 189-199.
6. Borysova, T. "Theoretical aspects of risk management at the enterprise." *Actual problems of the economy*, no. 7, 2005, pp. 116-121.
7. Mostenska, T. L., and N. S. Skopenko. "Risk management as a tool for managing the enterprise's economic risk." *Bulletin of Zaporizhzhya National University. Series "Economic Sciences"*, no. 3, 2010, pp. 72-79.
8. Vitlinskyi, Valdemar, and N Stepan akonechnyi. *Risk in management*. Kyiv, Borysfen-M, 1996.
9. Pikus, Ruslana, and Nataliia Prykaziuk. *Management of financial risks: training manual*. Kyiv, Znannia, 2010.
10. Riazanova, N. O. "Formation of the risk management system at industrial enterprises." *Academic review*, no. 1 (56), 2022, pp. 63-71.
11. Kutsyk, Petro. *Financial risk management: training manual*. Lviv, Rastr-7, 2016.
12. Baldzhy, Maryna, Karpov, Volodymyr, Kovalov, Anatolii, Kostusiev, Oleksii, Kotova, Inna, and Nataliia Smentyna. *Justification of business decisions and risk assessment: training manual*. Odessa, ONEU, 2013.
13. Zakharova, N. Yu. "Risk management at the enterprise: essence, approaches and methods." *Business Inform*, no. 1, 2023, pp. 203-209.