

# PROJECT RISK MANAGEMENT: MODERN TRENDS AND EFFECTIVE PRACTICES

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**Annotation.** The article is devoted to the management of project risks, with the aim of their timely detection and identification, which in turn will ensure the successful implementation of the project and its completion. Special attention is paid to the stages of project risk management and analysis of methods aimed at minimizing and avoiding project risks.

The most modern and well-known methods include such methods as: risk avoidance; insurance; self-insurance; risk financing; diversification; risk taking; risk limitation; risk distribution and risk prevention, the complex application of which will ensure the successful implementation of the project and protect the project from the influence of destabilizing external and internal factors.

**Key words:** projects, risks, management, methods, mechanism.

## 1. Formulation of the problem.

In today's rapidly evolving landscape of innovative processes, the question of financial support for the development, implementation, and successful completion of innovative projects becomes crucial. Attracting investment capital for project planning and execution leads to positive effects at both economic and social levels. The benefits extend not only to the project executor but also to society as a whole, encompassing regions and countries. Investing in projects during their implementation and operation contributes to the creation of new jobs, addresses social issues, and contributes to tax payments to local budgets.

It is important to note that, in contemporary conditions, the investment support of innovative projects is complex and requires careful attention due to the significant risks involved. Imperfect regulatory frameworks for investment and innovation activities do not encourage investors to engage in this risky business. The development and implementation of innovative projects involve substantial capital investment, including "venture capital." Increasing uncertainties and risks cast doubt on the successful realization of projects. Risks are an integral part of any project, and effectively managing them is crucial for achieving success in project implementation.

These circumstances underscore the need for further scientific research and emphasize the relevance of the topic addressed in our study.

## 2. The state of elaboration of the problem.

The issue of project risk management has been the subject of research by renowned scholars such as Samura Yu.O., Kasyanova N.V., Yatsyuk S.S., Azarova I.B., Hreskiv I.R., Stasyuk N.R., Dorosh O.I., Poyda-Nosik N.N., Cherlenyak I.I., Volinets I.G. However, it is noted that the project risk management system has not been sufficiently explored and requires further scientific development.

**3. The aim** of the article is to substantiate the theoretical and methodological foundations and provide practical recommendations regarding project risk management.

#### 4. Presentation of the main material.

Risk management of a project is one of the fundamental tasks in the project management system.

This task is not defined separately but is considered in conjunction with other project management functions and requires a systemic approach. When preparing the project budget and planning the scope of financial assets necessary for its implementation, signing contracts, and carrying out the project realization process, there is a need to protect the project and all its participants from the impact of various risks through timely identification.

Since risks can arise at any stage of project work, effective management of them is crucial until the project's completion. During project implementation, it is the responsibility of the risk manager to coordinate and manage risks based on a developed algorithm, as the lack of proper attention to this task can lead to negative consequences in project activities.

The concept of "risk management", in a broad sense, represents a specific type of activity of top management and relevant services, which is aimed at eliminating or minimizing the impact of risk factors on project implementation processes.

In the context of studying the issue of project risk management with the use of tools provided for and localization of project risks, it is necessary to take into account various approaches, such as informational, economic and rational, which makes it possible to use them both separately and comprehensively. Each of these approaches has its own purpose, which arises in the management of hypothetical or real risks.

A rational approach involves making logical and balanced decisions in the risk management system. Decision-making entities must apply a rational approach, taking into account the long-term prospects of the existence of threats, analyzing their impact on the project from the point of view of legal, financial and technical factors of the external environment.

The economic approach to forecasting and identifying risks basically involves assessing the liquidity of assets and the financial stability of the entities implementing the project with the possibility of additional financing in the event of risky events.

The ideological approach involves an analysis of the conformity of the adopted decision with the main ideas of the project.

This approach is risky, as unforeseen circumstances may arise at the analysis stage that may affect the prospects of project implementation. In this case, the customer himself decides whether to continue the implementation of the project or to abandon it.

An information approach helps to make decisions based on data known to an expert in the relevant field. An important factor is the availability of reliable and complete information about the project, which includes environmental factors and the level of scientific developments.

A comprehensive approach simultaneously combines several approaches. This is the most optimal option, because it is difficult to immediately predict at what stage of the project this or that type of risk may arise.

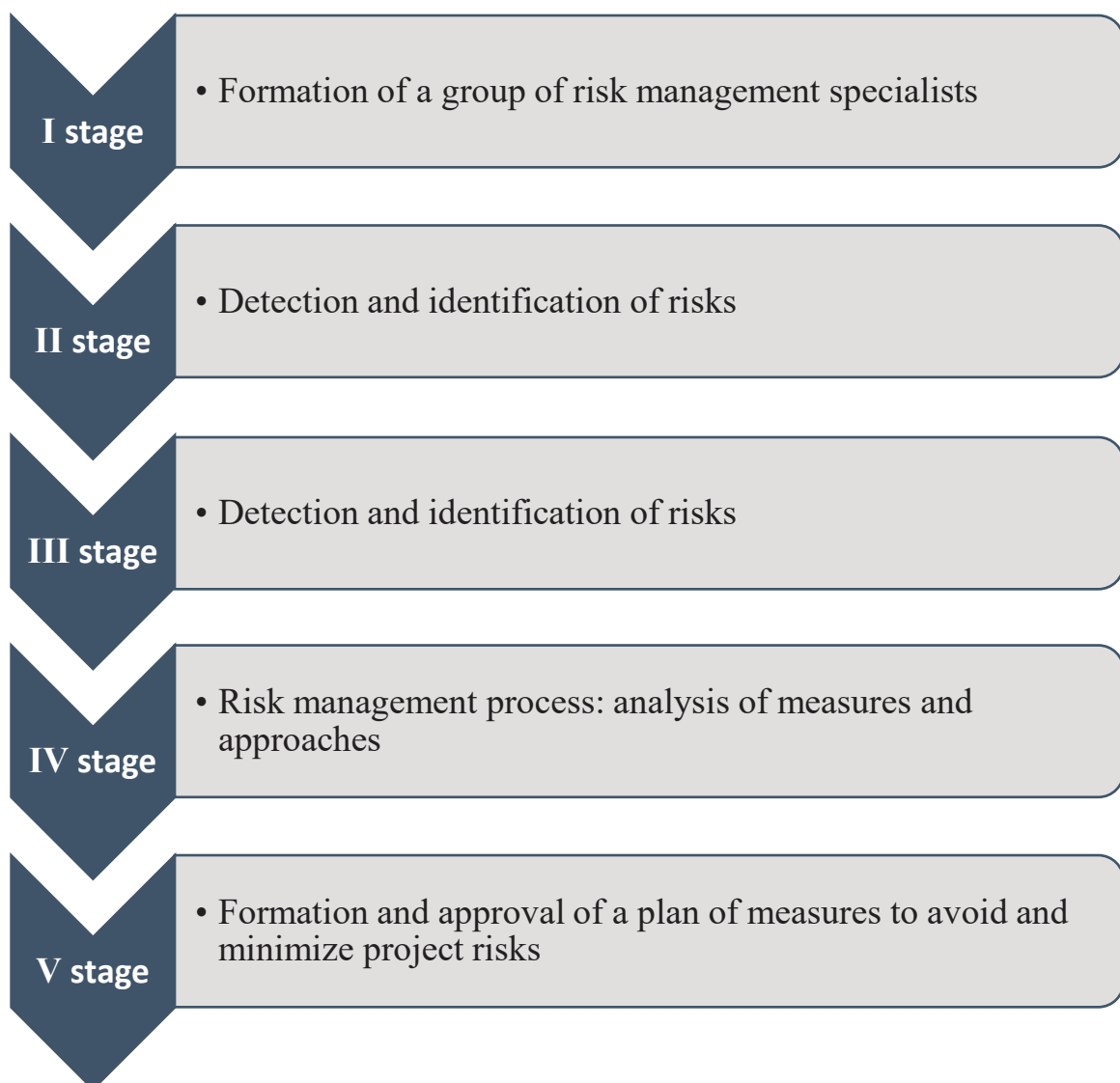
Taking into account the peculiarities of the interaction of the components of the risk management system, it is possible to design a structure of processes and stages of project risk management, which will include the following components [6]:

- formation of a group of specialists in the field of risk management who will conduct research on risks and methods of their management;
- risk detection and identification, which involves identifying risks, analyzing their types, impact and level of threat to project implementation [1];
- risk assessment based on quantitative indicators, each of which is modeled and argued;

- risk management is carried out by forming a system of measures aimed at ensuring the competitiveness of the project by optimizing the risks of the relevant field in order to obtain a positive final result;
- formation and approval of relevant plans and measures aimed at eliminating or minimizing the consequences of project risks [4].

For the purpose of visual demonstration, Figure 1 presents the successive stages of project risk management and the corresponding algorithm of actions.

From this figure, we can come to the conclusion that after the formation of a group of risk management specialists and the identification and identification of project risks, the procedure of risk analysis and assessment takes place, where qualitative and quantitative indicators are used. The risk assessment method is chosen individually by the risk manager depending on the specific situation associated with the occurrence of the risk and taking into account the time required to localize the risk.



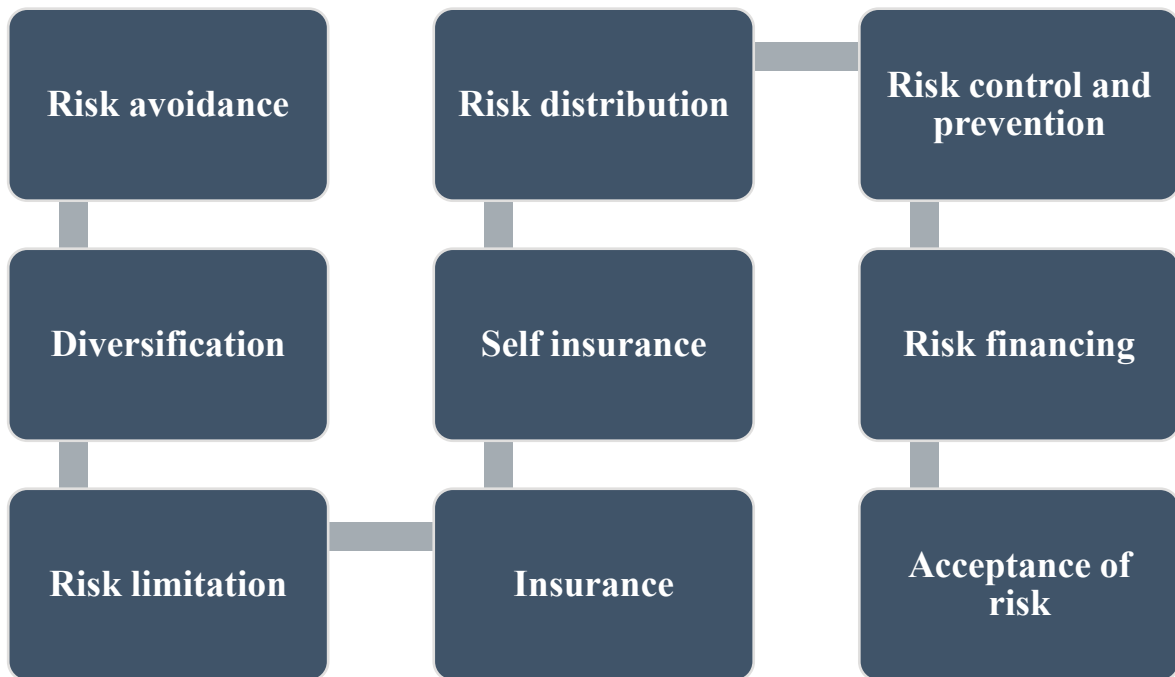
**Fig. 1 – Stages of project risk management [3]**

Therefore, the risk management system is an integral part of the planning, development and implementation of any project. Its main task is to identify and forecast all dangerous factors and events that may affect the implementation of the project.

To minimize losses from possible risks, project managers must have deep knowledge of risk management methods and strategies, which, with timely and effective application, will allow successful completion of the planned project. The right choice of project risk management tools and methods is especially important.

Only after a thorough analysis of all possible risks that may affect the course of project implementation and the selection of effective means of their neutralization can a decision be made on the start of project implementation. A delay in this process can cause conflicts between all interested parties of the project, which in turn can cause the project to stop.

For this purpose, we systematized possible measures to neutralize and reduce project risks and presented them in the form of a single mechanism in Figure 2.



**Fig. 2 – The mechanism of neutralization and reduction of project risks [5, p. 299-302]**

Therefore, we offer a brief description of the most well-known and widely used methods aimed at minimizing and avoiding project risks:

*Risk avoidance.* This method of risk neutralization focuses on internal measures during the implementation of the project and involves a complete refusal to carry out financial transactions that may lead to significant risks. However, it can also lead to a loss of planned income, known as “loss risk”. The use of this method requires high qualification and special caution on the part of project participants.

*Diversification.* This method involves minimizing risks by distributing capital investments between unrelated projects. Its use can contribute to the reduction and avoidance of risks within one enterprise.

*Risk limitation.* This method includes setting specific limits for individual areas of project activity. Norms and limits refer to risks that are subject to limitation.

*Risk distribution.* This method involves the partial transfer of risks to the project partner through relevant agreements. Such distribution of risks can contribute to the minimization of investment risk by delegating construction risks to contractors, credit risks to banks, etc.

Risk distribution should take place at the stage of development and preparation of the investment project plan and relevant contractual documents. These steps include the fulfillment of responsibilities

by each project participant and acceptance of responsibility in the event of a violation of the project schedule. It is worth noting that, despite this, the main risks fall on the investor, therefore, as the number of risks increases, the chances of attracting a reliable and solvent investor decrease.

*Self insurance.* This method provides for the creation of special reserve funds for the prompt coverage of unforeseen costs or losses that may arise as a result of risks.

*Insurance.* This method is used when some risks are transferred to insurance companies through the conclusion of insurance agreements and the payment of insurance premiums. This provides cover for losses in the event of adverse events. However, the amount of insurance premiums and the terms of their payment should be taken into account.

*Risk control and prevention.* This method includes constant monitoring of the external and internal environment of project implementation to effectively influence risk factors and reduce the possibility of undesirable events.

This method often involves the simultaneous use of risk control and prevention strategies. For example, when concluding an insurance contract, it is important to take into account the requirements for compliance with labor protection rules and fire prevention measures.

*Risk financing.* This method is used when it is impossible to prevent or reduce risks and when preventive measures are ineffective. Involves the use of several methods such as insurance, self-insurance and finding funds to cover losses from risk events [5, p. 299–302].

*Acceptance of risk.* This method is used when the probability of risks and their impact on the project are small, and losses do not have a significant impact on its implementation. In such cases, the risks and their consequences rest entirely on the project participants [2].

## 5. Conclusions.

Risk management is an integral part of project planning, development and implementation, which consists in forecasting and identification of all dangerous factors and events that may affect project implementation. Timely identification of risks and the choice of the right methods aimed at neutralizing risks and minimizing their negative impact will ensure the successful implementation of the project.

After analyzing the methods of neutralization and risk reduction, we conclude that the use of only one method is not always optimal. That is why we recommend combining these methods to achieve a better effect and protect the project. Thus, risk management should take place at all stages of the project life cycle, with the help of constant monitoring and full control. This will make it possible to detect unforeseen deviations in time and, in necessary cases, to take corrective measures in the early stages, ensuring the successful implementation of the project and its timely handover to the customer.

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