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**RISK MANAGEMENT CONCEPT IN INNOVATIVE ACTIVITIES OF  
MODERN ENTERPRISES**

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**Abstract.** *Innovative activity is associated with risk, since there is practically no full guarantee of a positive result. As a result, innovative projects are more dependent on the uncertainties that are the cause of the risks. Innovation risk is the probability of losses arising in the event an entrepreneurial firm invests in the production of new goods (services) that may not find the expected demand in the market. The main goal of risk management is their qualitative and quantitative assessment and application of methods to minimize, avoid or prevent it. To minimize risks, it is necessary to have sufficient information about all the possible risks that, with one or another probability, may arise during the implementation of an innovative project. When implementing an innovative project, there is always a high probability that a new product will not be accepted by the market, and the funds will be wasted.*

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**Introduction.**

The strategic direction in the development of the Ukrainian economy is the transition to an innovative model based on the development and implementation of new generations of equipment and advanced technologies. The implementation of the state innovation policy, within the framework of which it is supposed to update the material and technical base of production, the creation of new high-tech enterprises aimed at overcoming the technological lag of the domestic economy from the developed countries of the world. Building innovative potential depends on the desire of the enterprise not only to survive in tough competitive conditions, but also to squeeze out competitors, enter new markets, providing itself with a path to economic growth [5-8]. From the general scientific point of view, development is a complex irreversible process of a logical transition from one state to another, aimed at achieving a new quality. Enterprise development is the process of transition from the current state of the enterprise to a better (perfect) compared to the previous state in accordance with the goals. For this reason, the innovative development of the enterprise occurs, first of all, through the use of the results of scientific and technological progress, namely innovation (new equipment, advanced technology, etc.), which ensures the production of competitive products [9-12].

Innovative development is the main condition, which guarantees the expanded reproduction of scientific and technological potential, the creation of high-tech industries, as well as the transition to new technological structures [5-6]. To establish Ukraine as a high-tech state, it is necessary to increase and effectively use the potential of fundamental science, to promote the development of applied research, and is the basis for innovative and technological re-equipment of domestic enterprises. An important reserve for accelerating the innovative development of domestic enterprises is the unique technological potential of the military-industrial complex. It is necessary to create effective technology transfer mechanisms and relevant structures under state control that could effectively introduce new high-tech developments into the production of competitive products oriented to the consumer market [8]. An important component of the transition of the Ukrainian economy to an innovative path of development is the creation of an appropriate infrastructure that provides the necessary conditions for the implementation of innovative priorities, the creation and implementation of new equipment and advanced technologies in production. Today, only the necessary links of innovation infrastructure are being created; they must form effective mechanisms for innovation shifts in the country. The need for accelerated innovative development of all sectors of the national economy, industrial enterprises and the implementation on this basis of an active social policy aimed at significantly improving the quality of life is associated with the solution of many organizational and economic problems in the implementation of scientific and technical programs, within the framework of which an innovative update of the material and technical base is assumed production, the creation of new high-tech enterprises that meet modern requirements of scientific and technical progress [8-10].

The solution to these problems is associated with new approaches to the activation of innovative processes in the basic sectors of the economy, in the institutional support of innovative activities, to the level of financial support for innovative development. The innovative development of enterprises is possible using the results of scientific and technological progress, an active creative search for innovators, highly qualified designers and technologists capable of realizing the innovative idea of scientists, as well as prioritizing the financing of innovative processes and programs, contributing to the creation of production of higher technological structures [13-16]. Today, the innovative potential of domestic enterprises is quite low, due to the low pace of technological re-equipment of their fixed assets, the lack of significant results in innovative processes and curtailing the volume of scientific research. Accelerating the innovative development of manufacturing enterprises is possible provided an integrated approach to solving the problems that hinder innovation processes in the real sector of the economy. Comprehensive impact on the innovative development of manufacturing enterprises is carried out due to market demand for innovative goods and services, understanding the need for innovative updating of means of production, development and implementation of new equipment and advanced technologies [8-12].

Innovation activity in Ukraine has negative development trends, the number of enterprises engaged in innovation activity is reduced, and research in scientific institutions and higher educational institutions is being curtailed due to reduced funding. Today, only eight technology parks are registered, an insufficient number of innovative enterprises, scientific and technical centers, technology incubators, venture firms, technology transfer centers, innovation clusters, etc. Based on the crisis state of the innovation sphere of the national economy, maximum efforts should be made to rectify the situation. It is necessary at the state level to develop measures to enhance the innovative activities of enterprises, to determine innovative priorities for the development of domestic production, to create favorable working conditions for innovators, to provide them with appropriate status and respect in society [8, 11, 17].

Now the implementation of the innovative model for the development of the Ukrainian economy, the problem of improving the efficiency of innovative activities of business entities is of great importance, since its solution will allow for the technological re-equipment of enterprises, switch to a new technological structure, and create conditions for improving the quality of life of the population. Creation of innovations, their implementation in new equipment, technology, in new products is the basis of innovative development of the enterprise.

### **1. Risks in the innovation activity of enterprises.**

As experience in the development of the economy of various states shows, risk is an integral factor in a market economy. Limited resources, increased competition lead to an increase in the uncertainty of economic conditions. The growth of uncertainty leads to an increase in the risks of enterprises. As a result, such features of risk at the present stage, as its totality and inclusiveness, have led to the emergence of claims that the risk problem acquires general economic significance, since risk is perceived as one of the main factors of modern and especially future society. Some authors, in particular Robert Schwebler, Ulrich Beck, even see this as the beginning of the process of forming a new stage in the development of society - the «risk society» and argue that humanity has already entered this new phase (stage) of development [2-4].

The reason for this change, according to the aforementioned authors, is that in modern conditions the majority of threats and the risks caused by them are no longer local in nature, but become global. The main problem of future economic growth will be not so much the growing need for funds to finance new investments, but rather the need to reserve capital in order to meet the needs that will be caused by risks. This approach is reflected in such a definition of a risk society: «A risk society is a post-industrial formation that differs from an industrial society in certain features, the main difference is that the distribution of benefits was characteristic of the industrial society, and the distribution of threats for the risk society and the risk is due to this» [2, 3, 11].

Moreover, many experts in the field of risk theory suggest that in the near future it will be logical to further transform the «risk society» to a higher level society - a society based on risk management.

That is, the company will build its economic development strategy not only taking into account risk, but even on the basis of risk management. There are many different definitions of risk in the economic literature. Some authors define risk as an activity related to overcoming uncertainty in an inevitable choice situation, during which it is possible to quantitatively and qualitatively assess the probability of the expected result, failure and deviation from the goal [2, 4, 20]. You can also meet the definition of risk as the possibility of an event that negatively affect the activities of the enterprise or technical system, is determined by the probability and consequences. Risk is not the event itself. Risk is an opportunity [2]. At the same time, some scientists define risk as an event or a group of random events that cause loss of an object that is affected by this event.

There is a definition of risk as the expectation of negative consequences of economic activity. It is noted that risky activity does not always bring only losses, the result can also be zero or profitable. Or it is determined that the risk is the conscious activity of the enterprise, aimed at solving the situation of uncertainty in order to obtain the most acceptable result and as a result of decision-making under incomplete, inaccurate and (or) conflicting information, that is, uncertainty or incomplete certainty. Under the uncertainty should be understood the impossibility of assessing the future development of events both in terms of the probability of their implementation, and for their manifestation. Uncertainty is something that cannot be evaluated, that is, we are talking about incomplete certainty (risk). The conditions of uncertainty that occur with any type of entrepreneurial activity related to the fact that economic systems in the process of their functioning depend on many reasons. Accordingly, we can distinguish economic uncertainty, political uncertainty, natural uncertainty, temporary uncertainty, etc. [18-20].

Innovative activity, in comparison with other types of activity, is more associated with risk, since there is practically no full guarantee of a positive result. As a result, innovative projects are more dependent on the uncertainties that are the cause of the risks. Innovation risk is defined as the probability of losses arising in the event an entrepreneurial firm invests in the production of new goods (services) that may not find the expected demand in the market. Considerable attention is paid to the study of the risks affecting the implementation of innovative projects in the economic literature, in particular, some authors classify these risks into groups such as financial, organizational, marketing, product and personnel management risks. Risk management in innovation is understood as a set of practical measures that can reduce the uncertainty of the results of innovations, increase the usefulness of implementing innovations, and reduce the cost of achieving an innovation goal. To manage the risks of innovation, it is necessary to identify possible risks, that is, analyze and evaluate the identified possible risks. Risk classification is one of the stages of risk analysis; it allows the identification and assessment of risk in the future, as well as the development of methods for managing them. Classification consists in the distribution of risks among groups according to various classification criteria [11, 19].

The most common methods of responding to risks are, firstly, to avoid innovative risks, and secondly, the adoption of innovative risks, when an analysis and assessment of likely risks is carried out and the company's activity strategy is developed in case of their occurrence, as well as minimizing the level of influence of innovative risks. Risk minimization can be carried out through the distribution of risks between project participants in order to make the participant responsible for the risk, which is able to best calculate and control risks and the most financially stable, able to overcome the consequences of the risks. Methods for minimizing risk include external risk insurance, setting limits, diversification, and creating reserves and reserves. The choice of a method of minimizing economic risk is determined by several factors, in particular, the propensity of the decision maker to take risks, types of risk, and the like. Moreover, the main condition for this choice should remain economic feasibility. Risks can be minimized through the diversification method. This method allows you to reduce risks by distributing investments in various areas, such as, for example, in different markets, financial instruments, and trading strategies. Portfolios of risky assets can be formed in such a way that if, as a result of unforeseen events, one of the investment projects proves to be unprofitable, then other projects can be successful and profitable [1-4].

Also quite often in their activities in order to minimize or optimize risks, entrepreneurs use insurance and hedging methods. Insurance as a system of economic relations includes the formation of a special fund of funds (insurance fund) and its use (distribution and redistribution) to overcome through the payment of insurance indemnity of various kinds of losses, damage caused by adverse events (insured events). The company may independently establish a reserve fund to cover losses, and may apply to the insurance company. Hedging is an effective way to reduce the risk of adverse changes in the price environment by concluding derivatives contracts (futures and options). By buying and selling futures contracts, an entrepreneur protects himself from price fluctuations in the market and thereby increases the certainty of the results of his production and business activities. There is a significant difference between insurance and hedging. During hedging, the company avoids the risk of losses, refusing the opportunity to make a profit. In the case of insurance, the company pays an insurance premium in order to avoid the risk of losses, however, it retains the opportunity to make a profit [2-4].

Some authors propose new methods of risk management, in particular, this is the method of total risk management. The essence of this method is to create a system of corporation activities aimed at the continuity of the improvement process. The methodology of the total risk management method is that the company constantly keeps records and monitors risks. When making any management decisions, a forecast of risks or negative consequences is made and thus the process of continuous improvement of company management systems is established. Moreover, the risk is understood as the possibility of an undesirable development of the situation in all processes - from the operation of individual equipment to the implementation of the enterprise's market strategy [8, 11, 19, 20].

When making a decision in a risk environment, the following risk management rules must be considered: you cannot risk more than it allows equity; you need to think about the consequences of risk; you cannot risk more for less; a positive decision is made only in the absence of doubt; you can't think that there is only one solution, perhaps there are other solutions. The implementation of the first rule requires determining the ratio of the maximum possible amount of losses and the amount of the investor's own financial resources represents a degree of risk, which leads to bankruptcy. This indicator is measured using a risk coefficient according to the formula (1):

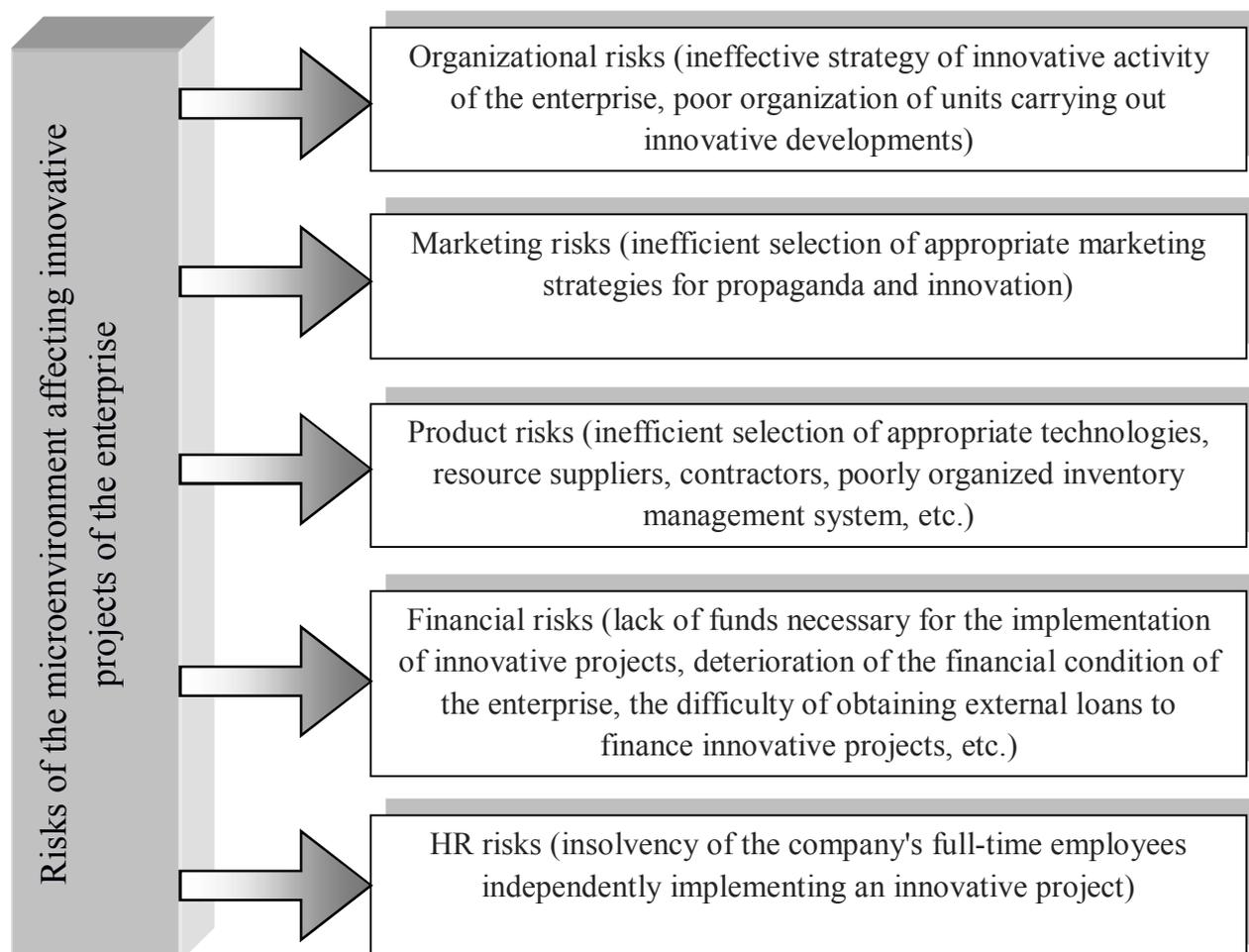
$$Rf = \frac{Md}{Fr} , \quad (1)$$

Rf is the risk factor; Md - the maximum possible amount of damage (uah.) Fr - the volume of own financial resources (taking into account precisely known receipts, uah.).

Studies of risk situations showed that the optimal risk ratio is 0.3, and the risk coefficient, which can lead to bankruptcy of the investor, is 0.7 and higher. Thus, the risk of an innovative project is a set of risks that combine the elements associated with this particular innovative project, that is, for each specific project and the entity producing it, there will be its own set of risks. The implementation of innovative projects has certain features that must be considered in the process of managing innovative risks. These features include [2-4]: the extension of innovative projects in time (for individual projects, the project cycle can last for years); quite often, a large number of participants (lenders, investors, customers, consultants, designers, policyholders, etc.) are involved in the implementation of innovative projects; innovative projects are often complex, that is, a combination of «simple» forms of economic activity (scientific, technical, financial, credit, insurance, etc.); innovative projects can also be international in nature, as a result of which innovative risks of various countries and policies may arise.

The risks of innovation can be considered in two aspects: firstly, as the possibility of threats to the enterprise; secondly, as the consequences that these threats can cause. The so-called microenvironment risks can have a significant impact on innovative projects of an enterprise (Fig. 1) [2-4].

After identifying all the possible risks of the implementation of the innovation project, the so-called quantification of risk is carried out, that is, a quantitative expression of the probability of occurrence of each such risk and an assessment of its impact on the implementation of the innovation project. So risk quantification is carried out quite often in conditions of limited access to complete and objective information, and also because the subjective factor of experts significantly affects it, it is advisable to understand the results of risk quantification not as absolutely true calculations of possible losses, but only as a basis to separate innovative risks into substantial (that is, those that you should pay attention to and apply appropriate means of response) and insignificant (those that can be ignored whether or not to use any means of response on them).



**Fig. 1. Types of microenvironment risks affecting innovative projects of the enterprise**

*Source: edited by the author based on [2-4]*

So, innovation risk is inherent in any enterprise that implements innovative developments that require significant financial injections. Based on this, it is quite safe to argue about the dualistic nature of risk - on the one hand, it allows you to get certain competitive advantages, and on the other hand, it can lead to a negative result in the form of losses, as well as bankruptcy of the company. It is for these reasons that there is a need for risk management, its identification and minimization.

## **2. Identification, minimization of risks of innovative projects and a mechanism for their evaluation**

Identification of risks in the implementation of innovative activities is a very complex issue. The main problem is that in the scientific and methodological literature, for the classification of innovative risks, it is proposed to use the basic classification of risks. But innovative risks are specific in nature, which means that they need additional delimitation. Innovative risks are associated with the introduction of new technologies, new products, with access to new markets. The combination of these causes of risks leads to a different level of threats, the maximum of which is determined by the simultaneous presence of all risk factors [2,3].

The determination of the risk category, which corresponds to the interest rate of the probability of success, was carried out expertly, taking into account the marketing approach to the promotion and marketing of innovative products. Innovative activity is determined by the very riskiness in comparison with other types of activity, since there is no full guarantee of a positive result. Thus, the innovative activity of enterprises enhances the riskiness of its functioning, the likelihood of loss of resources, funds, etc.

The risk minimization algorithm for innovative projects contains the following steps [18-20]:

1. Construction of an enlarged classification matrix of risks of the investment project.
2. Analysis of the matrix and identification of the most likely risks.
3. Construction of a chain of risks and the establishment of dangerous links.
4. Determination of the overall risk of the innovation project.
5. Risk ranking by the magnitude of their impact on the result of the implementation of an innovative project and the search for the most significant for subsequent analysis.
6. Conducting detailing of certain risks through in-depth analysis in order to find the causes of their occurrence.
7. Development of measures to minimize the impact of established risks on the result of an innovative project.
8. Assessment of the overall risk of the innovation project after measures to minimize them.
9. Making decisions on the implementation of the project in the new organizational and economic conditions.

The proposed structure of the algorithm provides an integrated approach to risk analysis of innovative projects, which allows more confident to make decisions on the implementation of innovative projects in difficult conditions of economic uncertainty. The risk in a quantitative sense can be expressed in absolute and relative values, which reflect the degree of uncertainty in the implementation of the decision. In absolute terms, risk can be estimated by the magnitude of projected losses, and in relative terms, as the amount of losses relative to a certain “base”, which may be production costs, the cost of fixed assets, enterprise assets, profit, the cost of individual resources, etc. [2-4].

The absolute value of risk ( $W_i$ ) by the  $i$ -th parameter is calculated by the formula (2):

$$W_i = P_i \times \beta_i \quad (2)$$

$P_i$  – the planned value of the  $i$ -th parameter with a favorable result;

$\beta_i$  – calculated value of the degree of risk (coefficient of variation).

The advantage of this calculation is that the  $i$ -th parameter ( $P_i$ ) can be a wide range of indicators, according to which the company predicts losses in case of a certain risk or group of risks [2-4].

It is also possible to calculate the absolute level of the non-recessed part ( $L_i$ ) by formulas (3) and (4):

$$L_i = P_i \times 1 - \beta_i \quad (3)$$

$$L_i = P_i - W_i \quad (4)$$

The calculation of risk in relative terms ( $R_i$ ) is recommended to be calculated by the formula (5):

$$R_i = \frac{L_i}{P_i} \quad (5)$$

After an absolute, relative and generalizing expression of a quantitative risk assessment in decision-making, the result obtained is refined using qualitative assessments, and, finally, the final result indicates the magnitude of the risk, which can be minimal, medium or maximum.

To quantify the risk, use the magnitude of the expected loss, multiplied by the probability that these losses occur; the optimal solution as to whether or not to take risks is the minimum value of possible losses, which is calculated by the formula (6):

$$V = V_1 \cdot I_1 + V_2 \cdot I_2 \quad (6)$$

$V$  – real risk loss;

$V_1 + V_2$  – losses from decisions made;

$I_1, I_2$  – the likelihood that errors will occur when making these decisions [2,3].

Since the losses also increase with each stage of the promotion of the innovation project, and no one can compensate them, in case of failure at the next stage of the development of the innovation project, the amount of expenses will be significantly higher than in the previous stages, since it covers the amount of all losses in the previous stages. The amount of losses from risks arising from the implementation of an innovative project is determined by the probability of this type of risk and the threat of a situation that form the importance of risk. Each enterprise, based on the specifics of its activities, uses its own methods for calculating the possible costs of unsuccessful innovation. To attract investment deposits in domestic enterprises, it is necessary to reduce a significant degree of uncertainty, which causes the onset of adverse risk events. Therefore, enterprises must develop a system for calculating innovative risk, based on the specifics of their activities, industry characteristics, in order to determine the boundaries of the acceptable level of risk, to assess the possible losses that the company may allow in the event of an adverse event [1-4].

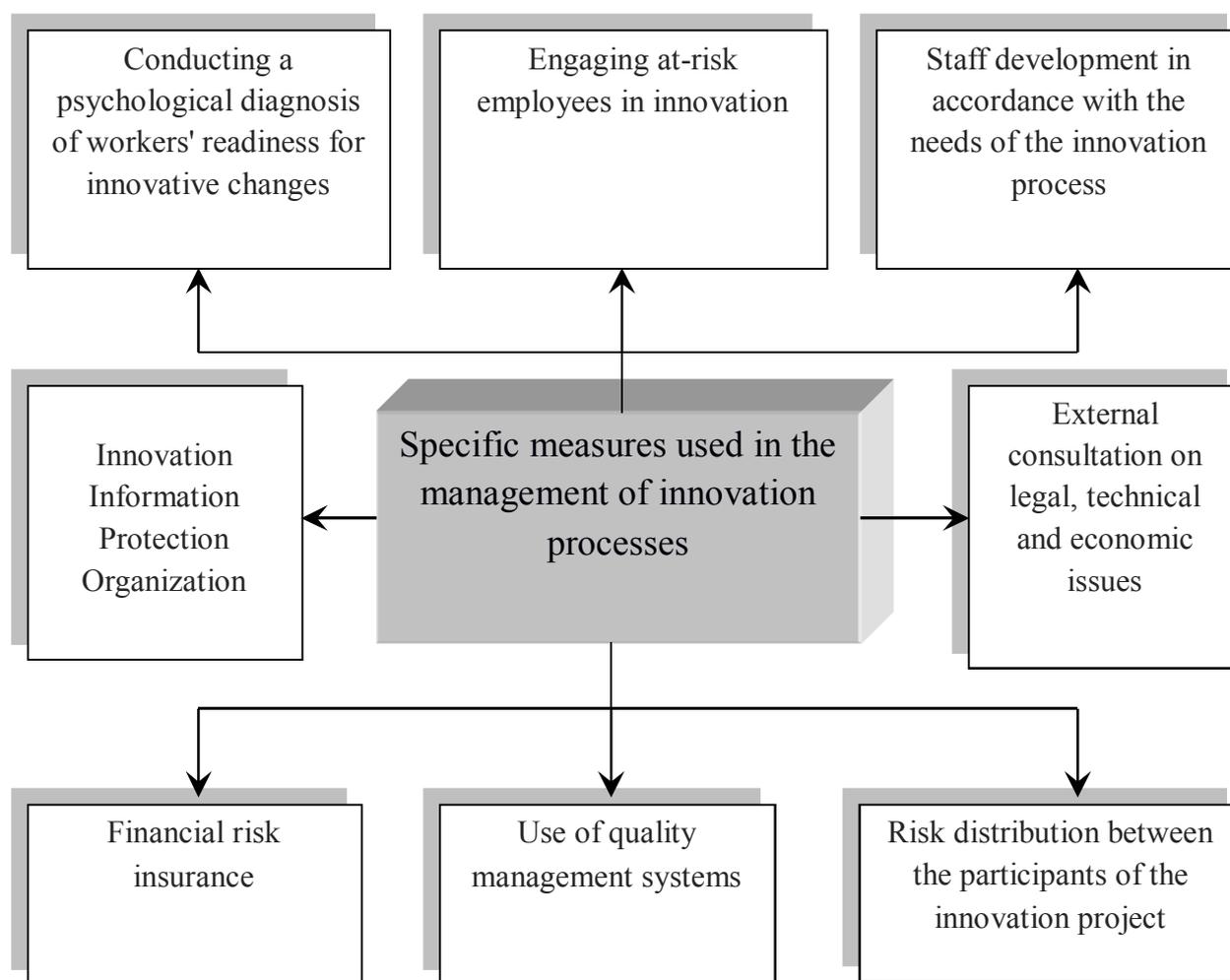
Therefore, the risk management of innovation is to implement a set of practical measures to reduce the uncertainty of the results of innovations, increase the usefulness of introducing innovations, and reduce the cost of achieving an innovation goal. The main

stages of innovation risk management are: identification of possible risks; analysis and assessment of risk factors by direct and indirect methods (frequency of occurrence, magnitude and consequences of risks, etc.); development of a risk management strategy (collection and analysis of information on risks arising in the process of project implementation, actions aimed at eliminating risks); development of an action plan to reduce risks and eliminate the consequences of events that may occur as a result of risks; monitoring the innovation process and making tactical decisions on risk management; choice of risk management method; analysis of the situation and development of recommendations for taking into account the experience gained in the future.

It is impossible to completely avoid the risks of innovation, but they can be minimized. One of the traditional options for minimizing innovation risk is the diversification of innovation, which consists in the allocation of resources and efforts of researchers to carry out various innovative projects that are not related to each other. If one of the projects proves to be unprofitable, then other successful ones can cover the losses that arise. The next way to minimize investment risks is to transfer (transfer) risks through the execution of contracts for too risky work on the project by an external organization. This transaction can be beneficial for both parties if the receiving party has the risk and has better conditions for reducing losses or managing risks.

In practice, the method of reducing innovative risks through their insurance is widely used. At the same time, domestic insurance companies avoid insurance of innovative projects. In many cases, negative results can be avoided or the risk of innovation can be reduced by simple direct management impacts on individual risk factors, for example, assessing the prospects of an innovation project, checking expected partners, selecting personnel involved in the implementation of an innovation project, etc. [2-4, 8-11]. The choice of option to reduce innovation risk depends on certain factors, among which the most important are the experience of the head and the capabilities of the enterprise. To obtain a more effective result, it is advisable to use several methods to minimize risks at all stages of the implementation of innovative projects. An important task for enterprises in the process of developing and implementing an innovative project is to optimize risks in order to prevent their negative consequences. In addition to traditional methods of minimizing risks (obtaining primary information, limiting, reserving, diversifying, business planning, organizing stocks, using derivatives, checking business partners), it is advisable to use specific measures in managing innovative processes (Fig. 2) [2-4]:

Thus, taking risks into account in the management of the innovation process will increase the likelihood of successful implementation of innovation projects, create an effective management structure in accordance with the requirements of innovation, and reduce the number of negative phenomena of a socio-psychological nature in the process of innovation changes.



**Fig. 2. Specific measures used in the management of innovation processes**

*Source: compiled by the author based on [2-4]*

### Conclusions.

The main goal of risk management is their qualitative and quantitative assessment and application of methods to minimize, avoid or prevent it. To minimize risks, it is necessary to have sufficient information about all the possible risks that, with one or another probability, may arise during the implementation of an innovative project. When implementing an innovative project, there is always a high probability that a new product will not be accepted by the market, and the funds will be wasted. Creating innovations is a rather lengthy process and can take years. First they create an idea, then they realize it and finally enter the market.

This process is quite difficult and requires both significant financial and other expenses. In this case, you can make a mistake at any stage. For example, a promotion and sale strategy can be expensive, which, in turn, makes even the most successful innovation unprofitable, and on the other hand, it is also impossible to refuse costs, because there is a high probability of losing competitiveness in the market. Innovation risk arises when an economic entity carries out innovative activity, so this type of risk can arise under such conditions [1]: when implementing a cheaper production method compared to the one that was used earlier.

Such latest developments bring superprofits, while the company will be the sole owner of this development; in the case of the production of a new product or the creation of a service on old equipment. In this case, we are talking about the risk of a mismatch of the quality level in connection with the use of equipment that does not allow us to provide the necessary quality; in the case of the production of a new product or service using new equipment or technologies.

### References

1. Tkachenko, V., Kwilinski, A., Tkachenko, I., & Puzyrova, P. (2019). Theoretical and Methodical Approaches to the Definition of Marketing Risks Management Concept at Industrial Enterprises. *Marketing and Management of Innovations*, 2, 228-238. <http://doi.org/10.21272/mmi.2019.2-20>.
2. Vitlinskyi, V. V. (2013). Kontseptualni zasady modeliuвання ta upravlinnia lohistychnym ryzykom pidpryiemstva [Conceptual bases of modeling and management of logistic risk of the enterprise]. *Problemy ekonomiky. - Economic problems*, 4, 246-253.
3. Holiash, I. & Danyliuk, I. (2012). Analiz marketynhovykh ryzykiv pidpryiemstva [Analysis of marketing risks of the enterprise]. *Ekonomichnyi analiz. - Economic analysis*, V. 10. Ch. 4. 9-62.
4. Honcharov, V.M. (2014). Rozrobka efektyvnykh mekhanizmiv upravlinnia ryzykamy v pidpryiemnytskii diialnosti [Development of effective risk management mechanisms in business]. *Aktualni problemy ekonomiky. – Actual problems of the economy*, 5, 76-81.
5. Bazhal, Yu. M. & Bakushevych, I. V. (2015). Innovatsiine pidpryiemnytstvo: kreatyvni, komertsializatsiia, ekosystema [Innovative Entrepreneurship: Creativity, Commercialization, Ecosystem]. *Navch. posib. dlia vyshchykh navch, zakladiv - Textbook allowance for higher education institutions*, K.: PULSARY.
6. Skrypko, T.O. (2011). Innovatsiinyi menedzhment [Innovation management]. *Pidruchnyk – Textbook*, K.: Znannia.
7. Zakharchenko, V. I., Korsikova, N. M. & Merkulov, M. M. (2012). Innovatsiinyi menedzhment: teoriia i praktyka v umovakh transformatsii ekonomiky [Innovation Management: Theory and Practice in the Transformation of the Economy]. *Navch. posib. - Textbook*, K.: Tsentr uchbovoi literatury.
8. Shkarlet, S. M. & Ilchuk, V. P. (2015). Innovatsiinyi rozvytok pidpryiemstva [Innovative development of the enterprise]. *Navch. posib.- Textbook*, Chernihiv: Chernih. nats. tekhnol. un-t.
9. Korsikova, N.M. (2009). Orhanizatsiino-ekonomichnyi mekhanizm upravlinnia innovatsiinym rozvytkom v suchasnykh umovakh [Organizational and economic mechanism for managing innovative development in modern conditions]. *Ekonomika kharchovoi promyslovosti. Food Economics*, 3, 8-10.

10. Korsikova, N.M. (2006). Osnovni napriamy udoskonalennia ekonomichnoho mekhanizmu aktyvizatsii innovatsiinykh protsesiv [The main directions of improving the economic mechanism of enhancing innovation]. *Ahrarnyi visnyk Prychornomia. Agrarian Bulletin of the Black Sea*, Odesa : ODAU, 40-42.
11. Kravchenko, V. (2007). Suchasni standarty ryzyk-menedzhmentu: osnova diievoi systemy upravlinnia marketynhovymy ryzykamy [Modern standards of risk management: the basis of an effective marketing risk management system]. *Marketynh v Ukraini. Marketing in Ukraine*, 36-37.
12. Kharichkova, S.K. & Doroshuk, H.A. (2015). Menedzhment orhanizatsii i administruvannia [Organization Management and Administration]. *Navchalnyi posibnyk*. Odesa: «Osvita Ukrainy», 444 s.
13. Nazarchuk, T. V. & Kosiiuk, O. M. (2015). Menedzhment orhanizatsii. [Organization Management]. *Navchalnyi posibnyk*. K.: «Tsentr uchbovoi literatury».
14. Illiashenka, S. M. (2004). Menedzhment ta marketynh innovatsii. [Management and marketing of innovation]. *Sumy : Universytet*. knyha.
15. Doroshenko, H. O., Semenets, A. O., Bohoiavlenskyi, O. V., Tertychnyi, O. O., Kutsenko, T. M., Makarova, L.H. & Kalnitska, M.O. (2015). Menedzhment [Management] *Navchalnyi posibnyk*. - Textbook, Kharkiv, "VSV-Prynt".
16. Merkulov, M.M. (2008). Naukovo-tekhnologichnyi rozvytok i upravlinnia innovatsiiami [Scientific and technological development and innovation management]. Odesa: Feniks.
17. Mykytiuk, P. P. (2007). Innovatsiinyi menedzhment. [Innovation management]. - K.: TsUL.
18. Puzyrova, P. V. (2010). Bazovi metody neitralizatsii finansovykh ryzykiv u pidpriemnytskii diialnosti. [Basic methods of neutralizing financial risks in business]. *Aktualni problemy ekonomiky. – Actual problems of the economy*, 5 (107), 143-149.
19. Semenova, K. D., & Tarasova, K. I. (2017). Ryzyky diialnosti promyslovykh pidpriemstv: intehralne otsiniuvannia. [Risks of Industrial Activities: Integral Assessment]. Odesa: FOP Huliiava V.M.
20. Shcherbak, V.H. (2013). Formuvannia intehrovanoi systemy ryzyk-menedzhmentu transnatsionalnymy korporatsiiami [Formation of an integrated risk management system by transnational corporations]. *Formuvannia rynkovykh vidnosyn v Ukraini. The formation of market relations in Ukraine*, 7-8, 3-6.