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QUALITATIVE ANALYSIS OF THE INVESTMENT DECISION RISK

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The article reveals the content of the concept of investment decisions, complexity of its adoption and implementation in conditions of uncertainty. Characteristic features are identified and key investment risk factors are described. A group of qualitative methods for quality analysis of the investment decision risk is studied in detail, and finally, the pros and cons of their use are revealed.

Making investment decisions is complicated by various factors: investment activity type, investment project cost, variety of alternative areas for investment activities, limitation of available funding resources, risk associated with making this or that investment decision. The relevance of this area of research has been determined by the ever-increasing importance of risk management system and effective risk assessment mechanisms for investment decisions.

Various scientists and researchers give their own definition of investment risk. On the basis of this definition they determine the methods of its evaluation as well as ways and means to prevent and reduce it.

The following scientists dedicated their works to investment decision making: K. V. Baldin, S. B. Barnes, B. T. Kuznetsov, V. A. Sergeev, M. A. Eskindarov, etc. It is also necessary to identify scientists who engaged in researches in the field of identification and assessment of investment decision risks, such as, I. A. Blank, V. V. Bocharov, V. Behrens, S. B. Borne, G. Birman, Z. Bodie, F. Brigham Yugi, J. K. Van Horn, L. Gapensky, G. Dithelm, P. I. Havranek, R. N. Holt, W. F. Sharp, S. Schmidt.

The purpose of this article is to analyze the process of making and implementing an investment decision, investigate risk factors in the investment process and identify such methods of qualitative analysis of investment risk that will serve as the basis for its effective quantitative assessment.

Investment decisions are decisions of investors to achieve various goals of obtaining future benefits from acquisition or creation of investment objects. The ba-

sis of investment decisions are always processes of determining the goals of investors, design of the investment climate and conditions for project implementation, as well as justification of possible benefits. Investment decisions are always due to two factors — time and risk, since the moment of obtaining investing benefits is postponed in time from the moment of making investment decisions, and benefits are not guaranteed.

Each investment decision is preceded by an investment proposal, previously analyzed and based on the actual researches conducted [4, *250–258*].

Thus, any investment decision should be based on the assessment of:

- Investment advisability;
- Size of investments required;
- Own financial position;
- Risk level;
- Investment risk management methods;
- Return on investment.

When making management decisions in the field of investment, all enterprises face such a problem as market situation uncertainty. Planning and predicting investment activities, a company tries to reduce market uncertainty, seeking to reduce it to full certainty. Prospective scenarios related to the specifics of legal regulation, the size and development of new technologies, the scale of activities, changes in the production structure as a result of its adaptation to the demand structure, changes in the price level, changes in macro parameters of the economic environment, etc. are generated, then the effectiveness of the investment project on the implemented hypothetical scenario is analyzed.

When assessing the effectiveness of investment decisions, two sides are always considered — profitability and risk level of the investment project. Any investment of funds in this or that degree contains an element of risk, which is called an investment risk. This risk can be described as the risk of total or partial loss of invested funds or the risk of non-receipt of expected incomes. The investor's desire to take a more significant risk indicates an expectation from this investment more income, which in its own way is an incentive motive for investments [2, *9–11*].

It is difficult to imagine investment activities without risks. However, this fact cannot be taken at face value. No effective investment decision can be made without a detailed analysis of the project potential riskiness. Under otherwise equal conditions, the investor will always select a project with a lower expected risk level.

Investment risk in a broad sense means the probability of short-receipt of the planned profit during implementation of the investment project. The risk object in this case are the investor's property interests.

In other words, investment risk means the probability of deviation of the actual income from an investment project implementation from the expected one. In addition, the investment project risk means the possibility of changing the conditions of project implementation, affecting its performance figures.

The following characteristics of investment risks can be distinguished:

- probability of occurrence;

- uncertainty of impact on the economic performance of an enterprise (possibility of occurrence of results different from predicted ones — both positive and negative);
- occurrence in the process of activity implementation (when implementing an investment project from the moment the task is set and till the moment of controlling it, investment risk factors appear);
- fluctuating nature of the risk level (as a result of influence of factors accompanying investment activities, the risk level can either increase or decrease).

As a result of classification by sources of occurrence, two groups of investment risks can be distinguished:

1) investment risks caused by external (exogenous) factors;
2) investment risks caused by internal (endogenous) factors.

External risks are investment risks associated with external (exogenous) factors, i.e. factors associated with the external social and economic system, and having a constant impact on investments. These are unforeseen and unpredictable risks: risk of interest rates increase, and changes in the laws, risks associated with currency exchange (may occur when investing in foreign assets), risks due to political processes in the country, changes in market conditions in which investments are made, sanctions.

Internal risks are risks caused by the enterprise internal factors: technical and production failures, accidents in the business process, change in the enterprise development strategy, errors in formation of an investment project team, differences in views among project participants, unreliability of information on a financial component of the project [1, *285–289*].

There are such types of risks of investment decisions that the investor is willing to take due to their inevitability, basing his/her choice on the following classification of their level:

- acceptable level (does not exceed the amount of profit for a specific investment operation)
- critical level (does not exceed the amount of gross income for a specific investment operation)
- catastrophic level (loss of a substantial part of own equity).

In order to suggest methods for risk reduction or to minimize adverse effects associated with it, it is necessary to identify the relevant factors and evaluate their significance. Determining the degree of probability of occurrence of risk and the amount of possible financial losses upon the occurrence of a risk event is called risk analysis of investment decisions. The objective of this analysis is to substantiate a decision on expediency of investment and preparation of measures to protect against all possible financial losses.

Risk analysis can be divided into two complementary types: qualitative and quantitative.

The main task of qualitative analysis is to identify risk factors, stages and works, during which the risk arises, in other words, to identify potential risk zones and identify all possible risks that may have a significant impact on the investment project deliverable. The advantage of this method is that at the initial stage

of analysis it is already possible to visually assess the degree of riskiness of the investment decision.

The analyzing process of investment risks includes the following steps:

- identification of risks associated with a specific investment project;
- identification of sources and causes of an investment risk;
- identification of external and internal factors affecting the size of a particular risk type;
- identification of composition of the required informative indicators for risk analysis;
- analysis of identified investment risk factors;
- selection of methods for qualitative assessment of investment risks;
- assessment of overall risk level;
- prediction of negative consequences from impact of identified risks;
- development of specific measures aimed at minimization of risks identified.

Among qualitative methods of investment risk assessment, the following are most often used:

1. expert assessment method;
2. analysis of cost relevance;
3. analogue method.

In qualitative assessment of risk level, the expert assessment method, which has a high accuracy of measurement, is most often used. This method consists in sampling of a group of potential risks, sampling of experts who are able to analyze and assess these risks, assessment by each expert of the likelihood of occurrence of each individual risk on a special scale. The expert assessment method includes a set of logical and mathematical statistical methods used for risk assessment:

- Interview method, scenario method is a set of issues related to various risk categories.
- SWOT-analysis is a method of analysis, which consists in identifying the factors of the internal and external environment of an organization and dividing them into four categories: strengths, weaknesses, as well as opportunities from strengths and threats from weaknesses.
- Risk rose and spiral is risk ranking based on qualitative risk factor assessments.
- Delphi method is a comprehensive assessment method based on surveys, interviews of various experts and consolidation of results. It is characterized by the anonymity of experts, that makes it impossible for experts to influence the assessment results, eliminates collective agreement or leader dominance.

The reliability of estimates obtained by expert methods depends on the level of expert qualification, independence of their judgments, as well as on the information and methodological support for examination. The coefficient of concordance (consistency) is one of measures of reliability of expert opinions.

The main problem that arises when using the expert assessment method is related to accuracy and objectivity of results obtained. Such factors as poor selec-

tion of experts, possibility of group discussion, prevalence of any opinion, etc. can have an influence on it [5, *406–410*].

The analysis of appropriateness of expenses is used by investors to minimize the extent of potential damage by dividing the investment project into certain stages of implementation, where each of stages will contain a list of necessary expenses for its implementation. This allows investors to invest their investment capital in stages and partially, and in case of prerequisites to increase in the level of investment risks, the investor can withdraw from the project than will protect the investor from large losses.

The starting point for analyzing the appropriateness of expenses is suggestion that over expenditure may be caused by one or more of the following factors:

- change of design boundaries due to unforeseen circumstances;
- underestimation of the project cost wholly or of its individual stages and components;
- increase in the project cost in comparison with the initial cost due to the impact of inflation or changes in tax laws.
- increase in the project cost in comparison with the initial cost due to the impact of inflation or changes in tax laws.

In the process of analyzing the appropriateness of expenses, details of these factors must be considered, a possible list of expense increase is made for each of alternative project options. The very process of financial investments is divided into stages related to the project implementation phases. This takes into account all relevant information on the project, coming in as it is developed. Namely, the gradual allocation of funds will allow the investor, at the first signs of increase in the risk of investments, to stop financing the project or start search for measures to reduce expenses.

The analogue method is also common for conduct of qualitative assessment of an investment risk. Its essence lies in the analysis of all available data on similar risky projects, study of consequences of impact of adverse factors on them in order to determine a potential risk in implementation of a new project. The source of information can be databases on risky projects, reliability ratings of project, contract, investment and other companies, analysis of trends in market conditions, etc.

The main difficulty in using this method is correct selection of an analogue, since there are no formal criteria that allow to establish the degree of similarity of situations. The second difficulty is formulation of a prerequisite for analysis, a complete and realistic set of possible project failure scenarios, since the majority of such situations are qualitatively different. It is also very difficult to assess the degree of accuracy with which the risk level of a similar project can be taken as the risk under consideration [3, *133–138*].

This demonstrates that qualitative analysis methods are more suitable for describing and characterizing possible risk situations than for obtaining of quantitative and cost estimates of the investment project risk.

We can distinguish the main results of the qualitative assessment of the risk level of investment decisions:

- identification of real risks of the project and its causes;
- analysis of consequences in case of realization of identified risks;
- development of measures to minimize damage.

The results of qualitative assessment often serve as background information for quantitative assessment of the risk level. The main task of qualitative analysis of investment decisions is to identify all types of risks of the project under investigation, to identify and describe the factors of sources affecting this or that type of investment risk. A qualitative analysis describes a probable damage, its cost estimate, as well as a list of measures to reduce or prevent risk (hedging, risk insurance, diversification, creation of reserves, etc.). Thus, the qualitative analysis of an investment decision that does not allow to determine the numerical value of risk is the basis for further researches using quantitative analysis methods based on mathematical statistics and probability theory.

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Фещенко О. Л., Якимова Ю. М. Якісний аналіз ризику інвестиційного рішення.

Розкривається зміст поняття інвестиційного рішення, складність його прийняття та реалізації в умовах невизначеності. Виявляються характерні ознаки і описуються основні фактори інвестиційного ризику. Детально досліджується група методів якісного аналізу ризику інвестиційного рішення. Наприкінці статті розкриваються плюси і мінуси їх застосування.

Мета статті — проаналізувати процес прийняття та реалізації інвестиційного рішення, дослідити фактори ризику в процесі інвестування і виявити такі методи якісного аналізу інвестиційного ризику, які стануть базою для ефективного кількісного оцінювання.

Оскільки момент отримання переваг від інвестиційних рішень відсунутий у часі від моменту прийняття рішень і вигоди не гарантовані, то інвестиційні рішення завжди зумовлені фактором часу і ризиком.

Плануючи і прогнозуючи інвестиційну діяльність, на підприємстві намагаються знизити ринкову невизначеність, намагаючись звести її до повної визначеності. При оцінці ефективності інвестиційних рішень завжди розглядаються дві сторони — прибутковість та рівень ризику інвестиційного проекту.

Інвестиційний ризик — це ймовірність відхилення фактичного інвестиційного доходу від очікуваного. А також ризик інвестиційного проекту — це можливість змін умов реалізації проекту, що впливає на його показники.

Якщо класифікувати за джерелами виникнення, можна виділити дві групи інвестиційних ризиків:

1) викликані зовнішніми (екзогенними) факторами;

2) викликані внутрішніми (ендогенними) факторами.

Визначення ступеня імовірності виникнення ризику і обсягу можливих фінансових втрат при настанні ризикової події називається аналізом ризиків інвестиційних рішень.

Серед якісних методів оцінки інвестиційного ризику найчастіше використовуються наступні:

1) метод експертних оцінок;

2) аналіз доречності витрат;

3) метод аналогій.

Виділяють такі основні результати якісної оцінки рівня ризику інвестиційних рішень:

- *визначення реальних ризиків проекту і його причин;*
- *аналіз наслідків при реалізації виявлених ризиків;*
- *розроблення заходів з мінімізації збитку (ризику).*

Із наведеного випливає, що методи якісного аналізу підходять більшою мірою для опису можливих ризикових ситуації, ніж для отримання більшменш точної оцінки ризику інвестиційного проекту.

Результати якісної оцінки часто служать вихідною інформацією для здійснення кількісної оцінки рівня ризику. Головне завдання якісного підходу полягає у виявленні та ідентифікації можливих видів ризиків цього проекту, а також у визначенні та описі джерел і чинників, що впливають на даний вид ризику.

Крім того, якісний аналіз передбачає опис можливих збитків, їх вартісної оцінки і заходів зі зниження або запобігання ризику (створення резервів, страхування ризиків, диверсифікація і т. ін.). Якісний підхід, який дозволить визначити чисельну величину ризику інвестиційного проекту, є основою для проведення подальших досліджень за допомогою кількісних методів, які використовують математичний апарат теорії імовірності і математичної статистики.

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