



## METHODS OF EVALUATING INVESTMENT PROJECTS AND MANAGING RISKS AFFECTING IT



Allaberganov Sirojali Sahatovich

Independent researcher of International Nordic University

**Abstract:** the basic task of the investment project development is to prepare information that is necessary to grounded decision making about the investments practicability. Therefore, the problem of the methodological approaches adaptation for investment project efficiency evaluation and their practical implementation in bank's activity gains the particular actuality in today conditions of investment business.

**Keywords:** investment, project, management, efficiency of investment, Risk Management, investment projects, light industry.

### 1. Introduction

It is important to use advanced foreign experience in project management and to develop the most optimal options for investment projects in order to increase the effectiveness of projects.

Decree of the President of the Republic of Uzbekistan No. PF-60 dated January 28, 2022 "On the development strategy of the new Uzbekistan for 2022-2026<sup>1</sup>" shows that a number of strategic goals have been set, such as further improving the investment environment in Uzbekistan and increasing its attractiveness, attracting 120 billion US dollars, including 70 billion dollars of foreign investments, in the next five years.

In Uzbekistan, great attention is being paid to the rapid development of the entire economic complex, including turning the light industry into one of the leading sectors of the economy.

### 2. Literature review

The authors B.Samorodov and A.Maslova have grounded the necessity of performing the risk management that should start from prediction the aftermath of the current (present) indicators deflection from the predicted under the influence of demand decreasing, decreasing the interest rates and varying of other parameters. Also, the authors have performed the cash flow systematization from the practical viewpoint of the bank's activity that is conditioned by investment project<sup>2</sup>.

Scientists O.Shvetsova and E.Rodionova<sup>3</sup>, analyze that MCDM methods performed in study provides a guide for the use of these methods, especially the ones based on

<sup>1</sup> Decree of the President of the Republic of Uzbekistan No. PF-60 dated January 28, 2022 "On the development strategy of the new Uzbekistan for 2022-2026

<sup>2</sup> Samorodov, B., Maslova, A., & Mysienko, O. (2014). Evaluation of investment projects effectiveness in a bank's activity. *Економічний часопис-XXI*, (9-10 (1)), 98-101.

<sup>3</sup> Shvetsova, O. A., Rodionova, E. A., & Epstein, M. Z. (2018). Evaluation of investment projects under uncertainty: multi-criteria

interval data, in investment project analysis. Their method improves on the method of calculating economic efficiency based on a one-dimensional criterion and sensitivity analysis, though our proposal involves complicated calculations.

M.Kilic and İ Kaya in their study showed a new evaluation model for investment projects have been proposed for development agencies operating in Turkey. To address ambiguities and relativities in real world scenarios more conveniently, type-2 fuzzy sets and crisp sets have been simultaneously used. As a consequence of this application, it has been observed that the proposed model have proved effective in evaluation of alternatives in multi-criteria group decision making problems in a broader perspective and flexible fashion<sup>4</sup>.

E. Borgonovo and L. Peccati<sup>5</sup> discussed the sensitivity analysis of valuation equations used in investment decisions. Since financial decision are commonly supported via a point value of some criterion of economic relevance (net present value, economic value added, internal rate of return, etc.), they focused on local sensitivity analysis. In particular, we present the differential importance measure (DIM) and discuss its relation to elasticity and other local sensitivity analysis techniques in the context of discounted cash flow valuation models. They presented general results of the net present value and internal rate of return sensitivity on changes in the cash flows. Specific results are obtained for a valuation model of projects under severe survival risk used in the industry sector of power generation.

### 3. Analysis and discussion

The production and management of any project should be scientifically based. Today, the necessary international standards for project management in the world are based on the information of the highly influential PMI - Project Management Institute and the PMBOK Guide.

PMI - Project Management Institute - is a world-recognized scientific, practical and methodological center of project management science. The following international standards have been developed by this institute<sup>6</sup>:

---

approach using interval data. *Entrepreneurship and Sustainability Issues*, 5(4), 914-928.

<sup>4</sup> Kilic, M., & Kaya, İ. (2015). Investment project evaluation by a decision making methodology based on type-2 fuzzy sets. *Applied Soft Computing*, 27, 399-410.

<sup>5</sup> Borgonovo, E., & Peccati, L. (2004). Sensitivity analysis in investment project evaluation. *International Journal of Production Economics*, 90(1), 17-25.

<sup>6</sup><https://www.pmi.org/pmbok-guide-standards/foundational>



**Figure 1. Standards developed by the Institute of Project Management<sup>7</sup>.**

The above picture shows the project management standards, scientific and practical manuals developed by the International Project Management Institute, which are widely used today in the development, management and implementation of any investment project. These standards are recognized at the international level, and their widespread use in the implementation of large investment projects directly serves to increase the confidence of foreign investors in the investment project.

**Moreover, there are several types of assessment of investment projects:**

1. Net Present Value (NPV): NPV calculates the present value of cash flows generated by an investment project, taking into account the initial investment and the cost of capital. A positive NPV indicates that the project is expected to generate value for the investor.

2. Internal Rate of Return (IRR): IRR is the discount rate at which the NPV of an investment project is zero. It provides a measure of the project's profitability, with higher IRR indicating higher returns.

<sup>7</sup><https://www.pmi.org/pmbok-guide-standards/foundational>

3. Payback Period: The payback period calculates the time it takes for an investment project to recoup its initial investment. Shorter payback periods are generally preferred as they indicate quicker returns.

4. Risk Management: Identifying and managing risks that could affect the success of an investment project is crucial. This may involve conducting a risk assessment, developing risk mitigation strategies, and monitoring and managing risks throughout the project lifecycle.

5. Sensitivity Analysis: Sensitivity analysis involves assessing how changes in key variables, such as revenue projections or costs, impact the financial performance of an investment project. This helps to identify potential risks and uncertainties that could affect the project's viability.

6. Scenario Analysis: Scenario analysis involves analyzing the impact of different scenarios on the financial performance of an investment project. This helps to understand the range of potential outcomes and develop contingency plans for different scenarios.

7. Monte Carlo Simulation: Monte Carlo simulation involves running multiple simulations of a project's financial performance based on probabilistic variables. This helps to assess the likelihood of different outcomes and develop risk mitigation strategies.

8. Diversification: Diversifying the investment portfolio by investing in multiple projects across different industries or asset classes can help mitigate risks and reduce exposure to any single investment.

9. Monitoring and Evaluation: Regularly monitoring the performance of an investment project against established milestones and objectives is essential for identifying early warning signs of potential risks and making timely adjustments to ensure project success.

#### 4. Conclusion

There are many tools available to evaluate capital investment projects, but each tool has advantages and weaknesses. As such, each project should be evaluated using all available tools to get a better sense of the full impact of each project. Ideally, a business would invest in all projects with a positive NPV and IRRs above their hurdle rates. However, businesses often have limited funds and must be able to properly evaluate the projects available to them and decide the best forward given their current funds and business goals. PPS has a strong understanding of the financial tools available for evaluating capital investments and can help any business navigate the road ahead.

#### References

1. Decree of the President of the Republic of Uzbekistan No. PF-60 dated January 28, 2022 "On the development strategy of the new Uzbekistan for 2022-2026;
2. Samorodov, B., Maslova, A., & Mysienko, O. (2014). Evaluation of investment projects effectiveness in a bank's activity. *Економічний часопис-XXI*, (9-10 (1)), 98-101;
3. Shvetsova, O. A., Rodionova, E. A., & Epstein, M. Z. (2018). Evaluation of investment projects under uncertainty: multi-criteria approach using interval data. *Entrepreneurship and Sustainability Issues*, 5(4), 914-928;
4. Kilic, M., & Kaya, İ. (2015). Investment project evaluation by a decision making methodology based on type-2 fuzzy sets. *Applied Soft Computing*, 27, 399-410;

5. Borgonovo, E., & Peccati, L. (2004). Sensitivity analysis in investment project evaluation. *International Journal of Production Economics*, 90(1), 17-25;
6. <https://www.pmi.org/pmbok-guide-standards>;
7. <https://www.pmi.org/pmbok-guide-standards/foundational>.

Copyright: © 2024 by the authors. This work is licensed under a Creative Commons Attribution-4.0 International License (CC - BY 4.0)

