Techniques for Assessing the Investment Attractiveness of a Commercial Organization based on Classical Methods of Strategic Economic Analysis

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Abstract:

Purpose: The development of methodological support for assessing the investment attractiveness of a commercial organization, considering modern information requests of stakeholders.

Design/Methodology/Approach: As part of the research, the authors have developed an algorithm for investment attractiveness assessment of a commercial organization by using the scenario method of economic analysis.

Findings: It is proved that the main disadvantages of the existing methods of assessing investment attractiveness are: the lack of strategic orientation of the assessment; ignoring the influence of most external and internal factors of activity; the inability to assess the risk of investing in the analyzed object; the need to compare with the level of investment attractiveness of similar organizations for an objective interpretation of the results.

Practical implications: To eliminate the significant shortcomings of modern methodological support in this area, the authors recommend the use of scenario method of strategic economic analysis in the process of assessing the investment attractiveness of the organization.

Originality/Value: The scenario method of strategic economic analysis proposed by the authors complements the existing approaches with the ability to take into account potential risks when making a far-sighted decision to invest in an organization by combining the results of retrospective analysis and forecasting changes in the quantitative and qualitative characteristics of financial and economic activity.

Keywords: Investment attractiveness, strategic economic analysis, method, assessment, algorithm, scenario.

JEL codes: M21; M40; G32.

Article Type: Research study.

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1. Introduction

In the context of the need to increase the competitiveness of Russian organizations in the world markets, more and more attention is paid to investments. Increasing the efficiency of using economic potential, developing innovations, changing the strategic course in response to the instability of external operating conditions are tasks whose implementation requires significant investments. More often it is about attracting additional financing by taking bank loan or the owner's investment, less frequently is about making a managerial decision regarding the allocation of free internal resources of the organization. In both the first and second cases, it is important to evaluate such a characteristic of a commercial organization as investment attractiveness (Korableva et al., 2019; Nandi and Mistri, 2019; Laužikas and Miliūtė, 2019; Shaitura et al., 2018).

Qualitative analysis of the investment attractiveness of the organization is the basis for making profitable investment decisions, the basis for ensuring reliable interaction between the source and recipient of financing, as well as a tool for the company's activities management in line with the creation of a favorable image for potential investors (Ige, 2019; Molchanov et al., 2017; Shatunova et al., 2019; Ivanova et al., 2019; Turen et al., 2019).

At the same time, the existing system of methods for assessing investment attractiveness does not have a clear structure, what excludes the possibility of its effective practical application (Petrushina, 2015; Kaźmierczyk, 2019; Masood et al., 2019; Movchan and Yakovleva, 2019; Benešová and Hušek, 2019). The main disadvantages of the existing methods of assessing investment attractiveness are:

- the lack of strategic focus of the assessment;
- disregarding the influence of most external and internal factors of activity, including qualitative characteristics;
- inability to assess the risk of investing in the analyzed object;
- the need to compare with the level of investment attractiveness of similar organizations for an objective interpretation of the results.

According to the authors, it is possible to eliminate these shortcomings in the process of assessing the investment attractiveness of the organization by using the scenario method of strategic economic analysis.

2. Literature Review

It should be noted that attempts to systematize existing methods for assessing the investment attractiveness of an organization have been made repeatedly. Zlobina (2006) distinguishes among the methods of assessing investment attractiveness methods of financial and economic analysis, the procedure for determining the creditworthiness of the borrower, rating evaluation (Zlobina, 2006; Prakash and
Nikitina (2005) classifies the existing instruments for investment attractiveness determination by the level of management, namely: at the level of territories, at the level of organization and individual investment projects (Nikitina, 2005). Shaposhnikov (2010) proposed another system of methods for assessing the investment attractiveness of business entities (Shaposhnikov, 2010; Voronkova et al., 2019; Kashirskaya et al., 2019; Havierniková and Kordoš, 2019).

He identifies approaches to the analysis of the studied characteristics based on stock market indicators, official financial statements of the organization, indicators of value added or acceptable investment risks. Any of the proposed classifications can be successfully applied for the purpose of systematizing the methods for assessing the investment attractiveness of an organization, however, the problem of methodological choice that arises before business practices in finding the most relevant way to determine the significance of a particular organization as an investment object remains on the agenda (Frolova et al., 2019; Korableva et al., 2018; Sycheva et al., 2019; Tarman et al., 2015; Magsumov, 2018; Kuznetsova et al., 2019a,b). Given the variety of solutions proposed by the scientific community, in our opinion, the system of methods for assessing investment attractiveness from the point of view of their effective use should reflect information about the advantages and disadvantages of using each of the elements, about their targeting, i.e. about the type of organization for which the shown method will allow to get the most reliable result, about the composition of the necessary information support, forms of output data and the possibilities for their interpretation.

3. Methodology

The theoretical basis of the study was the fundamental provisions of economic theory, as well as scientific works of Russian and foreign scientists in the field of economic analysis of investment attractiveness. System analysis, empirical research, principles of formal logic, synthesis and analysis of theoretical and practical material were used as research tools.

4. Results

Risks and factors that determine the activity of an economic entity are elements of its investment attractiveness and play a key role in shaping the results of its evaluation. In the process of the methodology development of the scenario method in relation to the assessment of the investment attractiveness of a commercial organization, we have developed the following criteria for the selection of factors:

- Level of uncertainty: The model does not include factors of the fourth level of uncertainty;
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- Materiality: Because of correlation and regression analysis, it is necessary to select the factors that have the closest relationship with the effectiveness trait, as well as to exclude multicollinear features;
- Internal consistency: After reducing the number of calculated scenarios to the minimum possible, check them for possible logical contradictions by expert means.

Scenarios are the integration of possible future developments and the type of response chosen to such developments (Mukanov, 2015). The compilation of various combinations of factor influence and possible levels of risk allows to determine what will be the economic results of economic activity for each alternative of the predicted future (Silalahi and Yuwono, 2018; Dagdilelis, 2018; Dunets et al., 2019; Fedulova et al., 2019; Gradoboev and Tesleva, 2017; Dagaev et al., 2019). This property of the scenario method is able to satisfy the interests of any participants in the investment process in the course of investment attractiveness assessment of the organization in the framework of achieving various goals (Vasilev et al., 2018; Goryushkina et al., 2019a; 2029b). At the same time, the authors believe that the level of investment attractiveness determined by the scenario method is the probability of achieving the required output indicators under given constraints and predicted events. Under the restrictions should be understood the known parameters of the internal and external environment, as well as the required amount of funding, the current state of the organization and trends in its activities, objectively formed over the past period. Among the predicted events it is necessary to include unknown parameters of future development of events formed as a result of uncertainty of various types. Internal technologies of scenario planning implementation can be different:

- building a decision tree (Cherkasova, 2009);
- construction of trends by linear, logarithmic and polynomial methods based on the revealed regression (Kapustina, 2015);
- using the capabilities of modern software (for example, “Script Manager” and “Parameter Selection” MS Excel), etc.

In the process of forming strategic scenarios, the following stages can be distinguished:

1. Identification of risk factors and their significance.
2. Selection of the most significant risk affecting the implementation of the goals in the long term.
3. Creating scenarios and testing their reliability.
4. Calculation of the occurrence probability of each scenario.
5. Analysis of the objective possibility of achieving strategic goals.
6. Adjust scenarios as needed.
In this case, the organization of the first stage can be performed as follows (Kapustina, 2015):

1. The choice of indicators of strategic risk factors (the expert way).
2. Selection of the resulting indicators.
3. Collection of indicators from reliable sources.
4. Construction of correlation model, analysis of the obtained correlation dependences.
5. Identification of key risk factors.

In the process of practical adaptation of the methodology of the scenario method of strategic economic analysis to assess the investment attractiveness of a commercial organization, the authors developed the following step-by-step algorithm of actions (Table 1). Assessment of investment attractiveness of a commercial organization using a scenario approach, according to the authors, allows to consider both changes associated with internal factors of activity and possible risks associated with external factors (Hasanudin et al., 2019; Slávik et al., 2019).

**Table 1. Investment attractiveness evaluation of the organization using the scenario method**

<table>
<thead>
<tr>
<th>Stage</th>
<th>Stage contents</th>
<th>Information support</th>
<th>Methodological support and technical means of implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Organizational stage</td>
<td>Appointment of responsible persons for each of the stages, setting deadlines for evaluation</td>
<td>Organizational structure, job descriptions and other regulations of the organization</td>
<td>According to the statements of the internal regulations of the organization</td>
</tr>
<tr>
<td>2. The definition of constraints</td>
<td>Collection of primary information. The participants of the investment process in the evaluation are guided not just by the output data, but by the efficiency coefficients formed on their basis</td>
<td>Target settings of the potential source of investment financing (state, investor, creditor, owner, organization management in case of reinvestment of resources): technical specification,</td>
<td>Observation, interviewing, questioning, etc.</td>
</tr>
</tbody>
</table>

**Note:**
- Table 1 provides a structured approach to evaluating the investment attractiveness of a commercial organization using the scenario method, considering both internal and external factors. The table outlines key stages and their contents, ensuring a comprehensive assessment of the organization's attractiveness.
<table>
<thead>
<tr>
<th>2.2. Analysis of the current state, dynamics and trends of quantitative elements of the organization’s investment attractiveness</th>
<th>Formation of input data about the remaining current assets, the state of the resource base, the capital structure</th>
<th>Analytical notes, budgets, financial statements, etc.</th>
<th>Budgeting, trend analysis, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.3. Determination of the forecast period duration</td>
<td>Based on the given payback period, as well as the range of the most reliable forecast of factor changes</td>
<td>Target settings of the funding source, internal needs of the organization, availability and quality of information on forecasted events</td>
<td>Probability theory, expert estimates</td>
</tr>
<tr>
<td>3. Factor impact and risk assessment</td>
<td>Correlation and regression analysis</td>
<td>The specifics of an organization’s activities</td>
<td>Expert evaluation</td>
</tr>
<tr>
<td>3.1. Definition of performance indicators</td>
<td>Practical experience of the company's management. Factors can be included in the consideration at the request of the source of investment financing</td>
<td>Analytical reports of heads of financial responsibility centers</td>
<td>Expert evaluation</td>
</tr>
<tr>
<td>3.2. Identification of factors determining the parameters of the organization’s activities and the extent of their influence</td>
<td>Assessment of the uncertainty level of a factor trait, the duration of its impact on the effectiveness trait in order to further determine the number of calculated scenarios</td>
<td>Analytical reports of heads of financial responsibility centers</td>
<td>Expert evaluation, grouping method</td>
</tr>
<tr>
<td>3.3. Classification of factors</td>
<td>According to the conducted research, the use of scenario method is possible to predict the factors of the second and third levels of uncertainty</td>
<td>Based on the analytical data obtained in step 3.2</td>
<td>Grouping method</td>
</tr>
<tr>
<td>3.4. Selection of the most significant factors to be included in the investment attractiveness assessment model</td>
<td>Selection of the most significant factors, based on the analytical data</td>
<td>Correlation and regression</td>
<td></td>
</tr>
<tr>
<td>Step</td>
<td>Description</td>
<td>Method/Source</td>
<td>Analysis/Method</td>
</tr>
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<tr>
<td>3.4.3</td>
<td>Identification of logical contradictions</td>
<td>In the presence of mutually exclusive options of development of events, it is necessary to adjust factor influence on change of a effectiveness sign</td>
<td>Based on the analytical data obtained in step 3.2</td>
</tr>
<tr>
<td>3.5</td>
<td>Preparation of matrices of possible outcomes of factor influence</td>
<td>At the intersection of the row and column of the matrix is the possible value of the i factor for the period k</td>
<td>Based on the data obtained in steps 2.3 and 3.2</td>
</tr>
<tr>
<td>3.6</td>
<td>Determination of the number of scenarios for the development of the organization</td>
<td>The total number of scenarios is determined by the basic formula of combinatorics applied to all possible groups of scenarios of development of all factors for the entire period of forecasting</td>
<td>Based on the analytical data obtained in step 3.5</td>
</tr>
<tr>
<td>4.</td>
<td>Preparation of forecast scenarios</td>
<td>Formation of separate scenarios based on specified input variables for each individual combination of all factors</td>
<td>Based on the analytical data obtained in steps 2.2 and 3.6</td>
</tr>
<tr>
<td>5.</td>
<td>Adjustment of the development strategy of the organization considering the forecasts</td>
<td></td>
<td></td>
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<tr>
<td>5.1</td>
<td>Selection of the most favorable scenario as a basis for risk assessment</td>
<td>Determination of the scenario, the result of which is the maximum increment of business value or over-fulfillment of investment attractiveness indicators</td>
<td>Analytical data obtained in steps 2.1 and 4</td>
</tr>
<tr>
<td>5.2</td>
<td>Assessment of the risk component of the investment attractiveness of the organization</td>
<td>Determination of the amount of lost profits or additional costs associated with adverse factor impact through preparation</td>
<td>Analytical data obtained in step 5.1</td>
</tr>
<tr>
<td></td>
<td>of risk assessment matrix</td>
<td>Development and evaluation of the cost and effectiveness of anti-crisis measures</td>
<td>Methodological recommendations for risk management and optimization</td>
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</tr>
<tr>
<td>5.3. Development of measures to minimize risks for each specific scenario</td>
<td>Development and evaluation of the cost and effectiveness of anti-crisis measures</td>
<td>Methodological recommendations for risk management and optimization</td>
<td>Expert evaluation, financial and operational leverages, risk management</td>
</tr>
<tr>
<td>5.4. Adjusting scenarios considering step 5.1</td>
<td>Adjustment of the organization’s performance based on the additional parameters obtained in step 5.1</td>
<td>Analytical data obtained in steps 4 and 5.1</td>
<td>Budgeting, trend analysis, extrapolation, etc.</td>
</tr>
<tr>
<td>5.5. Definition of signal indicators for each scenario</td>
<td>In order to ensure the possibility of rapid response of management to the possible occurrence of risk events, key indicators and their values are determined for each of the periods based on which decisions are made to carry out anti-crisis measures - preparation of the response matrix</td>
<td>Analytical data obtained in step 4</td>
<td>Summary, grouping method</td>
</tr>
<tr>
<td>6. Assessment of investment attractiveness of the organization</td>
<td>Comparison of indicators calculated based on the results of the organization's activities for each of the scenarios with indicators of investment attractiveness. Determining the number of best-case scenarios</td>
<td>Analytical data obtained in steps 2.1 and 5.4</td>
<td>Comparison</td>
</tr>
<tr>
<td>6.1. Determination of the number of scenarios, the results of which correspond to the indicators of investment attractiveness</td>
<td>Comparison of indicators calculated based on the results of the organization's activities for each of the scenarios with indicators of investment attractiveness. Determining the number of best-case scenarios</td>
<td>Analytical data obtained in steps 2.1 and 5.4</td>
<td>Comparison</td>
</tr>
<tr>
<td>6.2. Assessment of the probability of the relevant scenario occurrence</td>
<td>The ratio of the number of optimal scenarios to the total number of scenarios calculated, adjusted for the number of all possible scenarios</td>
<td>Analytical data obtained in steps 3.6 and 6.1</td>
<td>Probability theory</td>
</tr>
</tbody>
</table>
Accompanying tools of scenario method implementation in this case are methods of financial analysis (horizontal, vertical, trend, etc.), statistics (correlation and regression analysis, construction of time series, index method, etc.), planning (balance, normative, extrapolation, technical and economic calculations, etc.), strategic economic analysis (R-analysis, expert assessments, etc.), probability theory and combinatorics.

5. Conclusion

The result of the scenario method of the investment attractiveness analysis of the organization is the probability of occurrence of the relevant scenario of development of its activities, ensuring the achievement of the objectives of the subject of evaluation. There is no need in ranking of value ranges assessment for compliance with the levels of investment attractiveness (low, medium, high), as each of the parties involved in making investment decisions, may determine on the basis of the analysis of how that probability is the optimal from the point of view of possible risks, how representative the sample by values of the factor variables according to which calculation, and if sufficiently the risks assessment and development measures to minimize them conducted.

The proposed adapted scenario method allows to solve the existing problems of methodological support for assessing the investment attractiveness of business, can be used in practice to assess the objects of various organizational and legal forms and activities, to justify tactical, strategic management decisions and forecasts of long-term development of companies that are of interest to different groups of users of information.

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