The risk analysis strategy of the uncertainty in the transport sector

Nataliya Izvarina and Olga Soboleva*

1 Don State Technical University, 1, Gagarin square, Rostov-on-Don, 344000, Russia
2 Rostov State Transport University, 2, Rostovskogo Strelkovogo Polka Narodnogo Opolcheniya sq., Rostov-on-Don, 344038, Russia

Abstract. The limitedness of the available resources in transport companies determines the necessity of rationally using their potential. To formulate a development strategy, management, participants and shareholders of business units are to use strategic analysis to assess the risks and uncertainties inherent in transport companies. The risk analysis strategy provides to formulate the best development model in the field of possible alternatives using the business goals and objectives, and implement a list of appropriate activities. The key management human resources are interested in choosing a strategic position of the company that is acceptable for its functioning in the current and strategic perspective. The risk management forms such strategic foundation and decisions of participants and shareholders. This paper proposes the use of the strategic analysis concept in the transport sector companies. The developed concept is based on the principles of forming a company's strategy in the context of a risk factor and using a model for the implementation of long-term plans. The circular process of the strategic risk analysis under conditions of uncertainty must reduce the divide between desired goals and obtained results. The strategy considers requests of the transport sector companies in operating uncertainty process.

1 Introduction

An effective company development strategy depends on many interrelated factors and circumstances, and the complexity of their analysis when making economic decisions. Despite the severity of the problem, Russian companies do not always use the available opportunities for active and systematic risk management, and the role of strategic analysis in solving this issue is significantly underestimated. At the same time, an effective system of analytical tools in relation to business risks gives the best result, since preventive measures are a decisive factor in reducing them to an acceptable minimum when building a business security system.

* Corresponding author: soboleva@yandex.ru
The relevance of the study stems from the need to develop a concept of strategic risk analysis for implementation in business practice, which increases the company's activities efficiency in conditions of uncertainty.

The key directions of strategic analysis, the provisions concerning the methodology elaboration of the development strategy by economic entities are stated in the works of foreign authors such as R. Akoff, I. Ansoff, M. Porter, etc.

The problems of analytical support of this process were studied by I. N. Bogataya, E. E. Evstafyeva, G. E. Krokhicheva, D. V. Kurseev, V. I. Tkach, N. N. Khakhonova, A. N. Khorin, V. G. Shirobokov, A. N. Shchemelev, and others [1-16].

The main reason for the publication on strategic risk analysis is the shift of the business community's guidelines from the current operating parameters to strategic planning, which does not link the future with past trends by extrapolation.

The scientific publications presented by these authors demonstrate the importance of strategic analysis procedures as an information basis for determining future development trends and the strategic management system as a whole. However, the scientific literature has not considered the issues of strategic analysis by companies whose functioning in the market is related to a significant field of possible development alternatives and associated risk components in conditions of uncertainty.

Thus, the concept formulation of the company’s strategic risk analysis in modern conditions will provide management with an effective tool for diagnostics, strategic vision, rapid managerial response to the risks of the economic, production, technological, information and personnel spheres of the company and the manifestation of negative trends in the use of its resources.

2 Materials and Methods

At present, the normal functioning of the company, the sustainable development of its commercial interests is impossible in the absence of a state of protection from the impact of adverse factors of an external and internal nature. Ensuring control in the company management, despite the type of ownership and legal status, belonging to the jurisdiction, as well as developing its own unique protection mechanism over a long period, contributes to achieving the effectiveness of the business security system.

The effective business management realization is the introduction of risk management technology into the practical activities of companies, which enables us to solve a number of problems, the most significant of which is the stability of business reputation and successful development. Strategic risk analysis allows you to identify the main areas of resources investment in order to place them in the most rational way in the future, based on a development strategy that allows you to preserve and multiply them [1].

When forming the concept of strategic risk analysis, not only the regulatory framework used, but also the scientists’ opinions and methodological approaches on the impact of uncertainty, including those caused by the pandemic, on corporate systems were studied. The theories of strategic analysis laid down in the works of foreign scientists, specialists in the field of understanding strategies, as well as domestic scientists O. S. Vikhansky, V. D. Markova, S. A. Kuznetsova, etc. The use of analytical capabilities during the review of business conditions contributes to the justification of future management decisions. The concept focuses on the relationship between both the qualitative future development of the company and the quantitative growth of its financial indicators for the monetary assessment of the success of business development.

In order for the decisions of the company's management and the choice of the best growth strategy to bring the maximum effect, it is necessary to adhere to the concept developed by scientists based on foreign experience in the work of O. V. Alekseeva and other domestic
and foreign scientists (the concept of a balanced scorecard). The researchers’ current work on the strategic risk analysis, expanded in the context of the epidemiological situation deterioration that affects all areas of business, is the main new direction in strategic analysis, in which the components of the business are considered based on the internal characteristics of the company, and then accumulated and expanded within the external operating conditions for a better consideration. The new structured approach proposed by A. Bogdanov and L. von Bertalanfi is reflected in the Russian scientists' works such as V. S. Anfilatov, A. A. Kukushkina, F. I. Peregudova, F. P. Tarasenko, etc. [2].

In long-term management, risk analysis acts as an independent area of research, implementing various concepts in which it is not always possible to take into account the time factor and evaluate the company's performance. Current publications on strategic analysis do not include theoretical modules for understanding this process. In many publications, competitive and portfolio analysis equated with strategic analysis.

The authors propose to consider strategic risk analysis as a mechanism for selecting strategic alternatives based on a comprehensive analysis of the current and future impact of internal and external risk factors on the company's performance. The need to use such an approach to strategic analysis, in which the results of the company's work are directly dependent on the management decisions made, becomes an urgent task for business. Applying the appropriate tools, each business unit has a model that considers the best effect of risk management. When conducting a set of procedures for external and internal risk events at the stage of developing a strategic plan, it is possible to embed the expected parameters of business development, its best commercial indicators as the basis for achieving the goal.

Thus, there is a need to form such a concept of strategic risk analysis in conditions of uncertainty, which, on the one hand, would ensure the achievement of the main goal of creating mechanisms for timely identification, forecasting, localization and rapid response to risks, and on the other hand, would take into account the uncertainty inherent in doing business.

3 Results and Discussion

The implementation of strategic measures is a critical stage for achieving the planned potential. As a result of the above, the authors propose the following concept of strategic risk management in conditions of uncertainty.

3.1 Formation of the company's business strategy in the context of the risk factor

The financial and economic activities of Russian companies include many risks, the most accurate forecasting of which for the purpose of rational management significantly increases the stability of their financial position. Business risks are a danger for participants in legal relations to incur financial losses, so in most cases they are usually included in the category of financial risks. Working with risks built in a single line of the corporate system of strategic risk management.

The authors used different formulations in order to understand the strategy. The opinions of theorists can be represented with two basic concepts: some of them focus on constructive concepts through the essence of this phenomenon, while the other part adheres to approaches containing descriptive concepts designed to represent the goals of the organization. The basic definition of the strategy is contained in the works of A. Chandler, which implies the essence of this definition through the development and approval of a course of actions using the assets.
that the company has indicates the need for constancy and immutability of long-term guidelines until management changes its understanding of external or internal changes [3].

In case the risk factors persist, the development strategy formation based on the principles that determine the direction of management's work in order to comply with corporate security, is presented in figure 1.

### The principle of integrity
- the strategy of the company's functioning in the presence of risk factors in conditions of uncertainty should be formed as a certain system

### The principle of continuity
- the strategy of the company's functioning in the presence of risk factors in conditions of uncertainty should be used constantly, avoiding gaps in time

### The principle of flexibility
- the strategy of the company's functioning in the presence of risk factors in conditions of uncertainty should change its direction in connection with unforeseen circumstances

### The principle of accuracy
- the strategy of the company's functioning in the presence of risk factors in conditions of uncertainty should be specifically and thoroughly developed and justified

### The principle of participation
- the strategy of the company's functioning in the presence of risk factors in conditions of uncertainty is developed on the condition that it involves part of the management and other employees at different levels of management

**Fig. 1.** Principles of forming the company's business strategy in the context of the risk factor. The figure is prepared by the authors.

Compliance with the principles presented in Figure 1 is the key to the effective work of the company in the implementation of the chosen strategy of activity in the conditions of the risk factor. Companies have a developed business strategy for effective development, considering the risk factor, which allows them to take into account the opportunities and threats caused by external factors and internal influence [4]. It becomes possible to ensure the effective implementation of the strategy if there is an appropriate organizational structure of the business and providing for the financing of this process.

### 3.2 Model of long-term plans implementation by the company

The stability of the actions course of the strategic process is guaranteed by the balance between potential opportunities and the plan to achieve them. Thus, if resources are available, the planned development of the business system will provide compensation for the risk. The descriptive-constructive definition of the strategy is given by I. Ansoff [5]. The strategy is considered by I. Ansoff through a set of requirements for making decisions for a strategic perspective, represented by four different strategies. Since there is little time to implement the strategic plan, the step-by-step scheme of achieving the goals and focusing on the tasks set requires concentration.

The model for implementing long-term plans by the company presented in Figure 2.
The first step in the model of long-term plans implementation indicates the need to develop, constancy and immutability of long-term guidelines for the formation of management's understanding of external and internal changes.

During the strategy formulation and the development options elaboration, management will have to evaluate the strategy implemented at this stage, come to an understanding of its possibilities for further use as a basic or alternative. Then there is the stage of defining a new strategy and developing plans for its implementation, calculating the acceptable level of risk in order to maintain resistance to environmental disturbances and reduce losses from them.

The persistence of strategic goals without their frequent dynamic changes has a positive impact on business. As a rule, the duration of such plans varies depending on the expected actions related to the specification of current tasks and the company's response to the existing prospects.

The course of actions in the long-term plan implementation model makes it possible to conduct a strategic analysis of economic risks, which is risk management in fact in order to choose the optimal balance of risks and results.

The financial and economic activities of Russian companies include many risks, the most accurate forecasting of which for the purpose of rational management significantly increases the stability of their financial position. Business risks are a danger for participants in legal relations to incur financial losses, so in most cases they are usually included in the category of financial risks. Working with risks built in a single line of the corporate system of strategic risk management [6].

The strategic risks inherent in Russian companies are presented in Figure 3.
The strategic risks presented in Figure 3, in the absence of actions to neutralize and reduce them, can lead in certain situations to the implementation of threats and irreversible consequences for the business. The implementation of the concept of effective business management is achieved by identifying, accounting, and implementing the technology of strategic risk analysis in the practice of Russian companies, which allows us to solve a number of problems, the most significant of which is the stability of business reputation and successful development [7].

The company's risk-based business strategy is a strategic alternative associated with opening up new opportunities for the company. For the successful implementation of this strategy, it is necessary to form special competencies, taking into account specific measures and conditions for its implementation. In such conditions, companies are motivated to use special tools, such as purchasing resources from regular suppliers, expanding the sales market, diversifying sources of supply, sales and risks, and hedging (reducing dependence on interest rates).

An important block of the three-component model of the implementation of long-term plans presented in the Figure is the presence or absence of resources, both financial and informational, human resources and others, which can greatly limit the business ' ability to achieve strategic goals. The stability of the strategic process is guaranteed by the balance between potential opportunities and the plan to achieve them. Thus, if the resources are available, the planned development of the business system will provide compensation for the risk.

The components of strategic development are the mission of companies in the market and other tasks of management in the conditions of risk. Important is the structure of the company and the allocation of working units for the purpose of competent use of resources, both financial, information, and labor. Competitive advantages represent qualitatively new business opportunities. Combining resources and functional processes into a single chain creates synergy and overcoming risk factors is not difficult for a business. The strategy of the company's activities, taking into account the risk factor, determines the tasks of its development.
Building a model for the implementation of long-term plans by the company in the field of Russian business is becoming increasingly important, the model should ensure sustainable economic growth and development of the company, increase the competitiveness of its products under the conditions of the risk factor, and is based on the priority of the tasks to be solved [8].

Thus, the construction of a model for the implementation of long-term plans by the company in the current conditions of development uncertainty is of particular importance because it is relevant to create special systems of crisis situations, the main feature of which is a significant level of centrism of management decisions and the speed of response to external and internal changes. Currently, the choice of possible business development strategies in response to these changes is so diverse that the company has to foresee them all.

3.3 Cyclical process of strategic risk analysis in the face of uncertainty

Figure 4 shows the cyclical process of strategic risk analysis under uncertainty.

According to the process shown in Figure 4, strategic risk analysis forms a repetitive process that encourages management to make important strategic decisions.

At the first stage, strategic planning is carried out based on financial analysis data, which allows you to develop key goals and objectives for the development of the company's potential.

The organization of strategic accounting through the use of information about the selected strategy allows you to take into account the influence of factors of the external and internal environment [9]. Strategic control based on the data on the financial components of the
companies' activities allows us to consider the company as a single system of interrelated

elements [10].

Currently, the mechanisms of strategic accounting, analysis and control are an integral

part of the work of management in corporations and holding structures. In practice, the use

of these tools contributes to the economic indicators improvement, makes it possible for

companies to feel adaptive opportunities in the context of risk and competition.

Focusing on the future challenges of the company's development, conducting a strategic

analysis on a systematic basis contributes to the strategy implementation in the right
direction, increasing the competitiveness of the economic entity, guaranteeing it long-term
commercial success. At the same time, the strategic risk analysis, the analysis of the

competitive strategy, taking into account the available resource support, serve as the basis for

corporate security. Having structured the approaches of specialists to the concept of strategic

risk analysis, the correlation of interpretations to its understanding through the prism of

strategic business management is obvious.

Thus, using the tools of strategic analysis allows you to reduce the gap between the
desired goals and the actual results. In this approach, risk management is an undeniable
competitive advantage, as it focuses on a detailed understanding of the situation in the
business development industry.

3.4 The concept of strategic risk analysis in conditions of uncertainty

Since it is quite difficult to make informed decisions on its further development in the

conditions of risk and uncertainty of doing business, only a system of well-established
strategic risk analysis will help the company to maintain a stable position in the market. It is
the strategic risk analysis that makes it possible to quickly and adequately respond to all
changes, including in the future [11].

At the present stage, the complexity of business processes is significantly increasing, the
requirements for improving the efficiency of company management are increasing, which
determine the vector of changes in the corporate policy of strategic risk management. A well-
organized business protection should function on a systematic basis, allowing not only to
reduce the damage from the negative events that have occurred, but also to help diagnose
potential business risks in advance.

Building a system of strategic risk analysis is necessary to protect any business, it is a
condition for its effectiveness and competitiveness, and depends only on the degree of
internal and external risks and their possible impact on the legitimate interests and financial
position of the company [12].

According to the approach to risk analysis through indicators of the internal and external
environment of the company, strategic analysis is considered together with the process of
long-term planning to achieve commercial goals. In the opinion of D. Hasbi the peculiarity
of conducting strategic analysis procedures is their prerogative, together with planning
elements, to contribute to achieving the maximum economic effect in all areas of activity
implemented by managers [13]. Considering the relationship of strategic risk analysis with
the strategic planning process, it is particularly important to conduct analytical activities,
which has been repeatedly noted in the works of a number of authors, such as O. S. Vikhansky
[14]. He meant that the strategic analysis is the main one for the formation of the mission and
long-term vision of the company's future. To do this, you need to use the information field
formed because of the analysis of the business environment. In this case, the key business
benchmarks will be met. The generalization of the company's mission subsequently
transformed into a form that is convenient for managing and setting tasks. However, some
theorists of strategic risk analysis consider it through the prism of the company's management
of future transformational and organizational updates, which provides the organization with a tool for adapting its activities to meet the needs of the environment.

The components of the risk management strategy presented in Figure 5.

<table>
<thead>
<tr>
<th>Purpose of the analysis</th>
<th>• Ensuring reliable protection of the company from risk factors associated with the uncertainty of business conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Object of analysis</td>
<td>• Resources (material, human, information, financial ones); business processes; company reputation, etc.</td>
</tr>
<tr>
<td>Subject of analysis</td>
<td>• Company management, specially created structural divisions (security service, risk management)</td>
</tr>
<tr>
<td>Threat factors</td>
<td>• Counterparties, suppliers, lenders, buyers and borrowers, competitors, personnel</td>
</tr>
<tr>
<td>Key areas of decision-making based on the results of the analysis</td>
<td>• Ensuring the continuity and efficiency of the company's operation</td>
</tr>
<tr>
<td>Key competencies as a result of the analysis</td>
<td>• The ability to protect the company from risks and ensure the safety of its assets, maintaining the competitive advantages of the business</td>
</tr>
<tr>
<td>Analysis functionality</td>
<td>• Compilation and processing of information on changes in the external and internal environment, risk factors for strategic analysis</td>
</tr>
<tr>
<td>Areas of activity for the analysis implementation</td>
<td>• Development and implementation of a set of measures aimed at neutralizing risk factors</td>
</tr>
</tbody>
</table>

**Fig. 5.** The components of the risk management strategy. *The figure is prepared by the authors.*

The concept of strategic risk analysis presented in Figure 5 under conditions of uncertainty provides the company with special opportunities for rapid identification of risk factors in the economic, production, technological, information and staff spheres of the company's activities and the demonstration of negative trends in the use of its resources quickly respond to them.

The main attention should be paid to the following areas of work: analysis of risk factors for individual objects and the company as a whole; assessment of the probability of updating these risk factors; development of a mechanism for strategic risk analysis.

Business and financial risks are inherent in any current activity of the company, as they are associated with issues of economic security because of the loss of resources [15].
Thus, in the current market situation and the uncertainty caused by the pandemic, each element of the business community is likely to have an unplanned development model that falls under the definition of a «developing strategy» with a changing environment [16]. The company's environment, represented by internal and external content, is often undefined. In this case, it is not possible to use the calculation of future trends by extrapolation.

4 Conclusion

Systematic and high-quality risk management in the strategic perspective makes it possible to make timely management decisions in the company, which allows you to build a highly effective management system.

Thus, the results of the consideration of strategic analysis as a basic concept of strategic risk management, implemented by reducing the likelihood of negative consequences of entrepreneurial activity, provides development prospects and contributes to the achievement of competitive advantages by reducing the likelihood of an undesirable result of activity. Therefore, strategic analysis, if it integrated into the company's activities based on a logical and systematic process can be considered as a system for predicting risk situations in the company's activities.

In modern economic conditions, it is not enough to reduce the probability of negative consequences, so strategic risk analysis in conditions of uncertainty is a promising process that requires proactive thinking. The concept of strategic risk analysis through the relationship of risk, profitability, and variability of opportunities aimed at substantiating the relationship of risk, uncertainty, randomness of events, frequency, and probability. The key value of this concept is to prevent risky events, and the protection provided to it guarantees the management and owners of companies' timely, objective information about the state of its affairs in order to reduce the illegal or inefficient use of resources.

A detailed system strategic analysis of business risks allows companies to make a meaningful approach to the process of making managerial decisions in the field of business activity and to eliminate threats to business in time by reducing their risks. The main task of strategic risk analysis is to ensure financial balance and balance of cash flows by properly performing all its functions by the management.

References


