



# 1. БУХГАЛТЕРСЬКИЙ ОБЛІК ЯК СИСТЕМА ЗНАНЬ: ТЕОРІЯ ТА МЕТОДОЛОГІЯ

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## **FORMALIZATION OF THE RESULTING INDICATOR OF INFLUENCE OF INTERNAL AND EXTERNAL FACTORS ON THE ACTIVITY OF ECONOMIC ENTITY**

Strategic analysis in today's conditions is becoming more and more important as an instrument for achieving the best results of the activities of entities that operate in conditions of growing competition. Considering only the internal conditions and levers for increasing efficiency has a certain positional limit. In addition, such approach does not accurately identify the real possibilities of economic development.

This is due to the influence of a number of risks that actively affect the activities of the enterprise and belong to a group of factors that are determined by the external environment. Therefore, in order to solve the problem of the adequacy of the assessment of the existing conditions and the development of a strategy for the further development of the business entity, the concept of taking into account the factors of influence of the micro-and macro environment on the general results of the activity is necessary.

In recent years, scientists and practitioners have paid more attention to the study of this problem. In particular, I.V. Brodiuk, H.M. Davydov, S.L. Demydenko, T.I. Doloh, S.M. Zhukevych, O.A. Mahopets, V.M. Malakhov, I.M. Parasiy-Verhunenko, A.I. Sklabinska, I.D. Farion, T.R. Fetsovyh, R.K. Shurpenkova and others are engaged in various aspects of strategic analysis (from its positioning to the solution of applied methodological and organizational issues).

The analysis of scientific literature shows that the authors explore both general and specific issues of strategic analysis, including its role in the administration, the specific and stages of conducting. For example, S. L. Demydenko defines methodical approaches to the strategic analysis of the enterprise environment through clarification of its essence and role in the management of the enterprise.

On this basis, the scientist argues that the analysis of the enterprise environment is the process of determining the critical elements of the external and internal environment, influencing achievement of goals by the subject of activity.

According to this fact, it is proposed to distinguish functions, components of the enterprise environment and their factors, and also identify the conditions for assessing the significance of the influence of the latest on the strategic choice of the enterprise [3]. A number of scholars, in particular H.M. Davydov, V.M. Malakhov, O.A. Mahopets [2], R.K. Shurpenkova [5] investigate the essence and significance of strategic analysis in the management process, theoretical and practical aspects of its implementation, including the stages and sequence of the organization. D.O. Ruchaievskiy [4] and I.V. Brodiuk [1] describe the applied issues of strategic analysis to assess the economic potential, competitive advantages and the existing environment of the functioning of economic entities with an emphasis on sectoral features. These authors substantiate the expediency



of using the most appropriate methods for a particular industry and, on their basis determine the strengths and weaknesses of the strategic positions of the subjects of the study.

In this context D.O. Ruchaievskiy applies SWOT-analysis and strategic branch analysis of M. Porter and formalizes the strengths and weaknesses of the mining and metallurgical complex of Ukraine [4].

I.V. Brodiuk [1] generalizes the theoretical foundations of strategic analysis in general and in the field of investment. Applying the method of Space-analysis to assess the strategic position of the enterprise, the scientist characterizes the typical strategies that are defined by the matrix, as well as substantiates a list of indicators that should be evaluated.

However, despite the fact that the analysis of scientific publications indicates the actualization of the direction of research of the problems of strategic analysis, a number of issues remain unresolved. In particular, at the present moment there is no developed unified approach to solving the problem of substantiation and formalization of the general resultant indicator of strategic analysis.

In order to ensure the adequacy of the valuation, it should take into account the probabilistic and specifically identified impacts of existing external and internal factors (factors) on the results of the business entities, and in the future serve as a basis for a detailed analysis that take into account sector specificity and baseline output conditions.

In other words, the particular conditions of the entity, which belong to the internal data, should be taken into account along with the general integrated index of the influence of external factors. The last are produced by the accounting system and can be converted into calculated values through calculations carried out in accordance with the developed methods of analysis. Such approach is consistent with the concept of strategic analysis, since it is positioned in modern scientific thought as a predictive and regulatory management function aimed at introducing managerial decisions to improve activities, taking into account internal and external factors (indicators) of influence.

The result of using such analysis by a management system is the transformation of the opportunities of the entity into its competitive advantages. From the position of visualization, the scheme of application of the general resultant indicator of strategic analysis will look like: «the resulting indicator of the analysis of the existing conditions (generalized index of internal factors)» + «the resulting index of external factors».

In both cases, the choice (development) of the system of indicators and their indicators will be preceded to the calculation of the resulting indicators. As the first one, it is accepted to take indicators characterizing the financial condition of the entity. As for others, thoughts of scholars are different as overwhelmingly proposed to consider the influence of environmental factors of specific industry, but not common for all subjects of external action and effects. Moreover, it is necessary to choose the priority indicators correctly, even when conducting a financial analysis, since today there are more than 100 completely different approaches to its identification.

The calculation of all known indicators that characterize the financial position is not always effective, especially if we take into account the size of the entity (for example, a small private enterprise).

Therefore, there is a problem for substantiation of the choice of one or another indicator, which can be solved by taking into account the weight of each of them as a factor of influence on the results of the enterprise. For this purpose, it is expedient to apply a questionnaire and a score rating that is proposed to be conducted among the employees of the management personnel (the director (head) of the enterprise, its deputy (deputies), heads of structural units).

Despite the introduction into the system of evaluation through the use of such method of a certain destiny of subjectivism, its overall effectiveness will generally have an adequate meaning. The fact of the professional business sense of the subjects of management is the explanation for this. Because it is known that this professional business sense is an important driver for economic



development. It is advisable to use the empirical approach and adjust the choice with the help of existing scientific recommendations for the reference the objectivity of the assessment. In particular, it is advisable to take the position of 10-20 scholars on the weight of this or that indicator of the financial state to develop a strategy for the successful development of activities. Indicators that are most often considered to be the most objective from the position of the basis of strategic planning should be assigned a maximum number of points (for example, in the range of the chosen number of thoughts of scientists, that is 10, 15 or 20, etc.), and the rest in descending order.

According to these points, for each indicator, a correction factor can be established (according to the principle: if 20 scientific positions (authors) are chosen for the empirical assessment – 20 we assign to a coefficient 2; 19 – a coefficient 1.9; 18 – a coefficient 1.8 etc.; if 10 scientific positions are selected for empirical evaluation, the coefficients will be respectively: 10 – a coefficient 1; 9 – a coefficient 0.9; 8 – a coefficient 0.8 etc.).

After multiplying the number of points placed by the employees of the managerial units to the correction factors, we will determine the weight of each of them in ensuring the effective functioning of the enterprise. On this basis, it is necessary to select the most influential indicators and abstract from the ones having the minimum value. In the formalized form, the proposed model of the integrated indicator of strategic analysis of enterprises ( $K_s$ ) is presented as the sum of internal and external factors:

$$K_s = \sum_{n=1}^N R_{imikro} \times K_{iemp} + \sum_{k=1}^K R_{kmakro} \quad (1)$$

where  $R_{imikro}$  – internal potential of the enterprise (defined as an integral indicator of the financial state (the sum of the actual values of the indicators selected by the method described above),  $K_{iemp}$  – correction coefficient established on the basis of empirical assessment,  $R_{kmakro}$  – the indicator of influence of the environment,  $n, k$  – respectively, the factors of the internal and external environment (the range depends on the results of the choice).

In order to establish the limitations of the values of the results according to  $R_{imikro}$ , it is necessary to use the sum of the limit values of indicators of the financial state (minimum and maximum limits) multiplied by the maximum correction coefficient (from a range from 1 up to 2 (see the methodology of the questionnaire score). Concerning  $R_{kmakro}$  (the indicator of the influence of the environment) used in the evaluation system, then for its digital expression, you must first select the indicators that maximally characterize the external environment and relate to the activities of enterprises in general.

In the future, it is expedient to distinguish and take into account sector specifics and strategic objectives of the activities of particular enterprises, in order to achieve the higher level of adequacy of the assessment. In our opinion, the following factors are common to all economic entities: the state of economic development in the country (high, medium, low) ( $ER_i$ ); tax pressure (significant, favorable); ( $FN_i$ ); the level of technical and technological development (high, low) ( $TR_i$ ); the level for promotion of development (high, low) ( $IK_i$ ); the level of concentration of similar industries (maximum high, high, medium, low, extremely low) ( $KP_i$ ) etc.

The formalization of these factors requires more detailed their consideration from the position of the respective components. For example, to substantiate the positioning of the state of economic development and its classification into the above mentioned categories you should take into account the volume of GDP, the average wage in the country, the purchasing power of the population (or instead of the two previous components – the standard of living of the population), etc.



Each of the following components of the list of factors can also be detailed. That is, the indicator  $R_{kmacro}$  in the formula 1 is also complex and its simplest formalized expression has the form:

$$R_{kmacro} = f(ER_i, FN_i, TR_i, IK_i, KP_i, \dots, n) \quad (2)$$

The total impact of external factors can be not only positive but also negative because it will be more correct to use the sign « $\pm$ » before of the sign of the second sum in the Formula 1. Further formalization of external factors in the future will make it possible to their quantitative assessment, and therefore the implementation of such studies is rather relevant area for scientific researches.

Also, it is necessary to form the principles for constructing a multi-level and multi-criterial mathematical model in order to provide the possibility of individual application of the developed approach to a particular enterprise. This, in turn, requires the development of a classification of individual factors of influence, the substantiation for choosing their optimal amount and the method of such choice. In addition, the application of developed approach should also provide a multiplier effect (including social).

Outlined direction of scientific researches will help achieve adequate assessment of the strategic position of the entity subject to development and contribute to the development of effective management decisions.

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## CHANGES IN STOCK MARKET VOLATILITY: LESSONS FROM THE GREAT RECESSION

The Great Recession of 2007-08 was the worst economic downturn experienced by the United States since the Great Depression of 1930s. Even though this recession originated in the U.S. housing and financial markets, it resulted in large declines in output, trade, foreign direct investment and prices of financial assets in the rest of the world.

In this paper I focus on the effects of the Great Recession on changes in the patterns of stock market volatility. During the recession, and in the years that followed, there were several major changes in the patters of stock market volatility: (1) There was a large increase in overall market volatility as well as volatility of individual stocks; (2) Correlation among stocks increased during