2.11. ASSESSMENT OF THE EFFICIENCY OF STRATEGIC BANK MANAGEMENT: THEORETICAL AND METHODICAL ASPECTS

The methodology for measuring and evaluating the effectiveness of strategic bank management is largely driven by a theoretical position and a specific system of views, both in terms of understanding the concept of "efficiency" (ambiguous because of the difference between the criteria for evaluating efficiency) and management approaches.

Thus, modern scholars consider the following criteria for assessing the effectiveness of organizations as the degree of resource use; quality of system elements; performance (goal achievement); the ability to adapt; competitiveness; development; stability; organization; productivity; innovation, etc. At the same time, the most commonly used criterion for evaluating efficiency is the degree of use of resources or costs to achieve results, which is a generic characteristic, which includes such criteria as productivity, economy, optimality, and rational use of resources. The profitability criterion can also be considered as a component of the level of resource use (cost) because it reflects the result of the entity's functioning. An efficiency assessment approach based on resource utilization is used in single-criteria approaches where the content of efficiency is treated by purely economic metrics.

The process of evolution of the concept of "efficiency", which occurred due to the change in the meaning of the concept of "result" or "economic effect", as well as understanding the heterogeneity of costs to achieve this effect, contributed to the emergence of the concept of efficiency beyond purely economic boundaries and the emergence of multicriteria approaches to the definition and evaluation of efficiency. The modern scientists determine effectiveness as organizational, social, political and other factors. This process has led to a complication of the criterion basis for determining performance, which remains debatable. Specifically, the selection and use of specific criteria for evaluating performance depends on the stages of development or life cycle of the organization; time (short, medium, long); ways of expression (quantitative, qualitative); number of components (criteria) (one criterion (monocriteria), more than one criterion (multicriteria)); economic boundaries.

Since efficiency is a complex, multilevel and multidimensional characteristic, which is determined by different criteria, it is considered appropriate to take them into account when differentiating the types of efficiency (Fig. 1)[1], which are interrelated by changing the intense and extensive environmental factors that cause them.
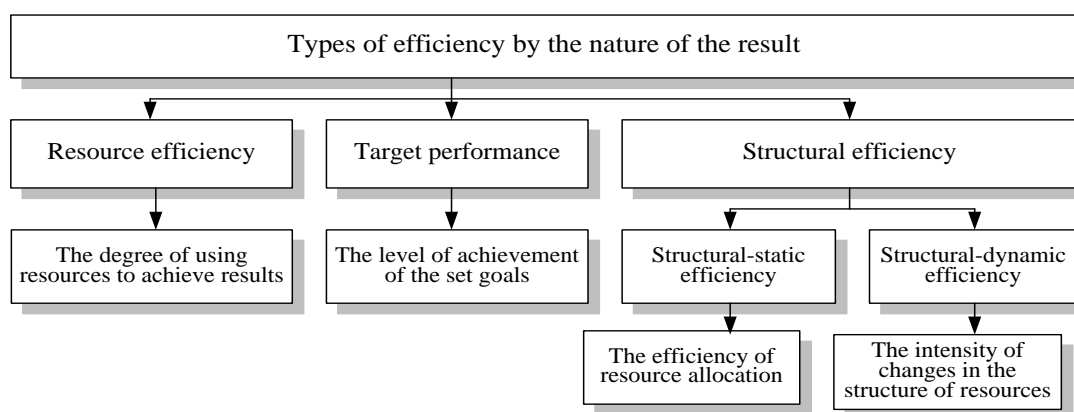

Fig.1. Types of efficiency by the nature of the result

So, the ratio of the effect and the resources spent on achieving it determine the level of resource efficiency. Resource efficiency characterizes the degree of use of resources to achieve the results of operation and shows the productivity, economy, optimality, rationality of their use. The

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[1] Rats, O. M. (2008): Viznachennya sutnosti ponyattya "efektivnist' funktsionuvannya pidpriємstva" [Defining the essence of the concept of "efficiency of functioning of the enterprise"]. Ekonomichnii prostir - Economic space, No 15, pp. 275-285.

defining characteristic of resource efficiency is the ratio of effect and cost, which is determined by the profitability indicators of its individual functional subsystems and the organization as a whole. The performance of an economic entity depends not only on the extent of resources spent, but also on the achievement of the set goals. Goal performance reflects your ability to reach or the level of achievement of the goals.

Achieving a certain level of sustainability of functioning in the form of a positive result that allows to neutralize the negative impact of factors of the external and internal environment and further ensure economic development, allows to distinguish this kind of efficiency as "structural efficiency". The definition of this type of performance is due to the fact that stability in the most general sense is an external manifestation of the internal structure of the object. Economic stability is determined by the level of sustainability of the elements that form the structure of the organization, and therefore the kind of efficiency that characterizes the presence, balance, coherence of individual elements, the optimal integration of structural elements, their acquisition of new features, determine the structural efficiency. Since the stability of the organization contains static and dynamic components that characterize the equilibrium of the state and the quality of functioning, therefore, structural efficiency is determined by its static component, that is, the efficiency of resource allocation and dynamic component, that is, qualitative changes in the functioning of the organization. With this in mind, to clearly differentiate the components of structural efficiency of an organization, its types are defined as structural-static efficiency and structural-dynamic efficiency. This distribution of structural efficiency allows us to determine efficiency not only from the point of view of possible equilibrium and the combination of resources in space, but also from the standpoint of the possible development of constituents of the organization, that is, changes of states over time.

Taking into account the considered criteria for evaluating efficiency and its types, and also taking into account that the efficiency of management reflects the performance of managed and managing systems[1] (in particular, shows to what extent the managing body realizes the goals, achieves the planned results, ie reflects the trajectory of the system movement to its goals), within the scope of this study, it is determined the feasibility of assessing the effectiveness of strategic management by the criterion of achieving the target parameters, ie considered in the context of goal effectiveness. In turn, the Balanced Scorecard (BSC) is envisaged for assessing the effectiveness of strategic management.

The authors of the BSC concept are American researchers D. Norton and R. Kaplan[2], and its provisions are reflected in the evaluation systems in the work of many other researchers, including C. Adams and P. Roberts[3], A. Atkinson and M. Epstein[4], L.Maisel[5], H. Rampersad[6] and other scholars. The basic ideas behind the BSC are, first, through a balanced combination of financial and non-financial indicators (KPIs), grouped across four subsystems (finance, customers, internal business processes, staff development and training) to conduct a comprehensive assessment of the bank's activities; second, to formulate strategic goals that are linked by cause and effect, based on the results of the assessment; third, to identify and formalize the overall development strategy, monitor the implementation of the strategy and evaluate its effectiveness. On this basis, BSC can be considered as an analytical system separately, and as a technology of strategic management in general, which covers all its stages through (Fig.2).

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[1] Gibson, J.; et al (2012): Organizations - Behavior, Structure, Processes. Mc McGraw-Hill, 662 p.

[2] Kaplan, R. S.; Norton, D. P. (1992): The Balanced Scorecard – Measures then drive Performance. Harvard Business Review, Vol. 70, No 1, pp. 71-79.

[3] Adams, C.; Roberts, P. (1993): You Are What You Measure. Manufacturing Europe, Sterling Publications Ltd, pp. 504-507.

[4] Atkinson, A.; Epstein, M. (2000): Measure for measure: Realizing the power of the balanced scorecard. CMA Management, pp. 23-28.

[5] Maisel, L. S. (1992): Performance Management: The Balanced Scorecard Approach. Journal of Cost Management, Vol. 6, No. 2, pp. 47-52.

[6] Rampersad, H.K. (2003): Total Performance Scorecard; Redefining Management to Achieve Performance with Integrity, Butterworth-Heinemann Business Books, Massachusetts, 330 p.

At the first stage of strategic management of the bank to assess its activities it is formed indicators taking into account the relevant criteria and requirements for building a BSC, which in turn will allow to determine the further strategic direction of the bank's operation in the future (overall strategy).
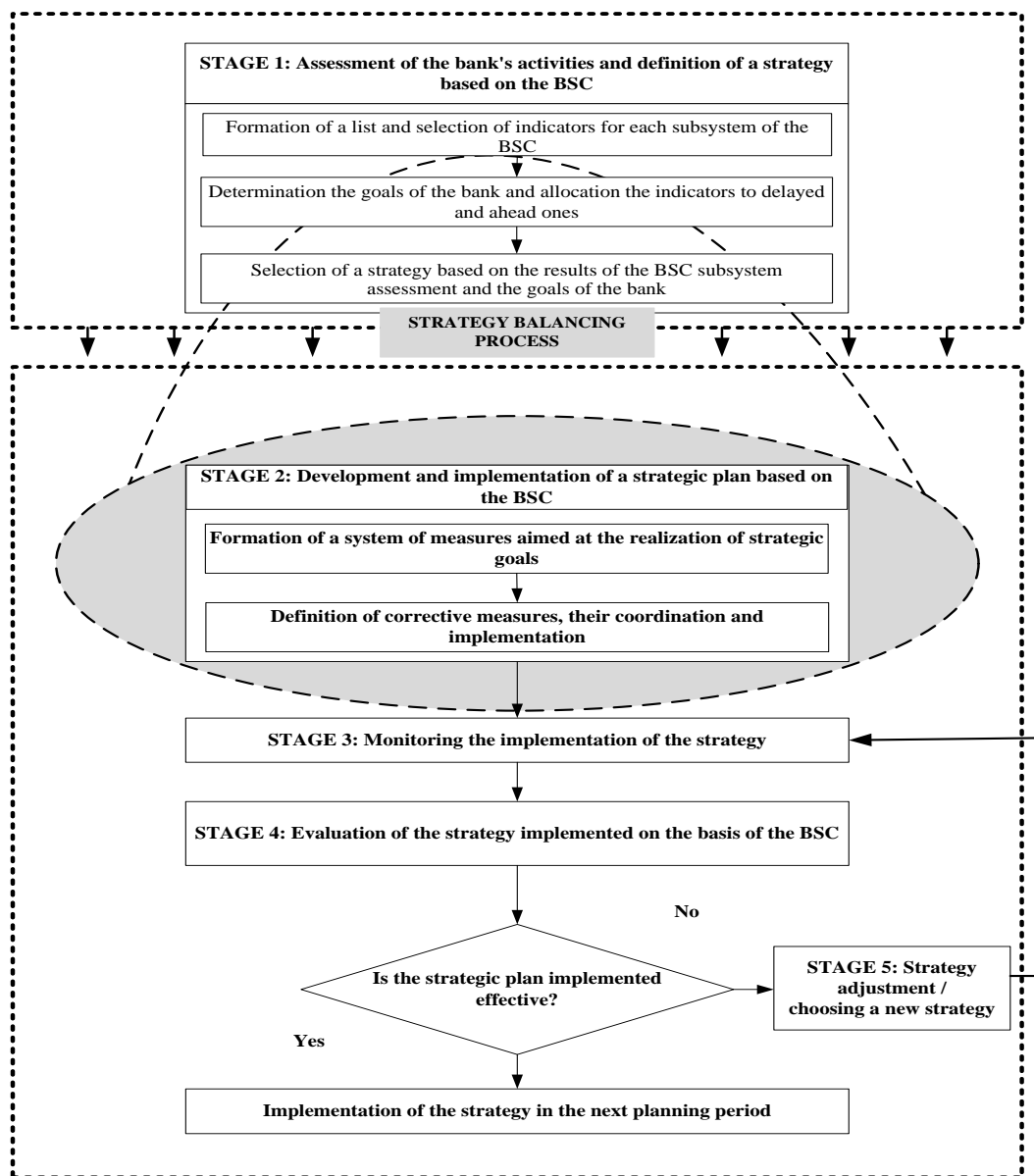
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┊  ┌──────────────────────────────────────────┐  ┊
┊  │ STAGE 1: Assessment of the bank's         │  ┊
┊  │ activities and definition of a strategy   │  ┊
┊  │ based on the BSC                          │  ┊
┊  │ ┌──────────────────────────────────────┐ │  ┊
┊  │ │ Formation of a list and selection of │ │  ┊
┊  │ │ indicators for each subsystem of the │ │  ┊
┊  │ │ BSC                                  │ │  ┊
┊  │ ├──────────────────────────────────────┤ │  ┊
┊  │ │ Determination the goals of the bank  │ │  ┊
┊  │ │ and allocation the indicators to     │ │  ┊
┊  │ │ delayed and ahead ones               │ │  ┊
┊  │ ├──────────────────────────────────────┤ │  ┊
┊  │ │ Selection of a strategy based on the │ │  ┊
┊  │ │ results of the BSC subsystem         │ │  ┊
┊  │ │ assessment and the goals of the bank │ │  ┊
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┊          STRATEGY BALANCING PROCESS             ┊
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*Fig.2.*The scheme of stages of strategic management of the bank on the basis BSC

The second stage is the development and implementation of the strategic plan. The priority is to develop a system of strategic measures aimed at achieving the goals, which will be determined on the basis of the BSC analysis. It should be emphasized that this technology does not cover a large number of aspects of the environment. This necessitates the use of additional tools to analyze the bank's position in the market and its competitive advantages. It should be borne in mind that the assessment of the BSC subsystems will help to identify problematic aspects in the functioning of the bank. To overcome them, it is necessary to identify the factors that provoked the emergence of identified problems. Therefore, in order to increase the effectiveness of the BSC-based strategy implementation, it is considered necessary to introduce corrective measures within the two identified areas and to coordinate them.

The third and fourth stages involve monitoring the implementation of the strategy and evaluating its effectiveness.

If the implemented strategic plan ensures the efficient functioning of the bank, it is advisable

to use it for implementation in the next planning period. Otherwise, there are two possible developments: choosing a new strategy or adjusting an existing one (Stage 5).

In the context of increased volatility of the environment in which modern banks operate, in most cases there is a need to adjust the implemented development strategy. This is due to the rapidly changing processes taking place, changing customer needs, increasing competition in the banking market, which in turn necessitates a reorientation of operational priorities and the introduction of corrective measures (implementation of new policies, programs or projects). The strategy is adjusted as long as the adjusted option does not satisfy all the requirements. It is understood that this procedure is iterative and repeated periodically.

As the results of evaluating the effectiveness of strategy implementation allow us to determine the further course of action, adjust the existing and form a new strategy, the implementation of the presented stages of strategic management of the bank based on BSC is cyclical.

To ensure the efficiency and quality of implementation of BSC in the practical activities of the bank at the stage of goal setting (carried out on the basis of the results of evaluation of activities on the BSC subsystems) and implementation of its overall development strategy, it is proposed to comply with the criteria of its balance (balance of goals and financial resources, interests of stakeholders, between goals of all levels of management, general goals of the bank and personal goals of employees, their responsibilities and responsibilities)[1], which will ensure the harmonization of atheistic goals and measures to achieve them.

It should be noted that among the established criteria for evaluating the balance of the bank's development strategy, the criterion for balancing the goals and financial resources of the bank becomes priority. This is due to the fact that the efficiency of using the financial resources of the bank in the context of managing its financial activities is one of the main tasks as an intermediary in the financial market. Therefore, the other criteria considered are those that directly cover organizational aspects (balance of goals at all levels of bank management), personnel management (balance of general goals of the bank and personal goals of employees, their responsibilities and responsibilities) and interaction with stakeholders (balance of interests of stakeholders), are in this case factors that directly or indirectly affect the balance of goals and financial resources of the bank. However, in addition to influencing this criterion of the other four, it is also necessary to note that there are links between the individual criteria for determining the balance of the bank's strategy, which are presented in Fig. 3.
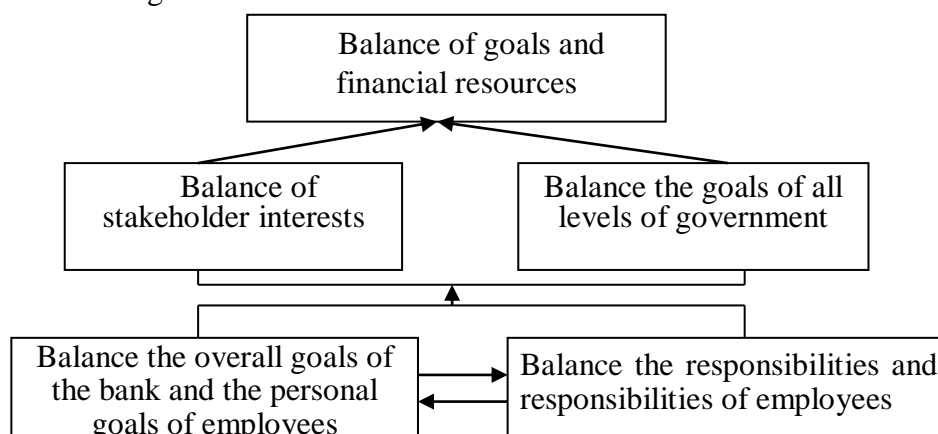

*Fig.3.*The relationship between the proposed criteria for determining the balance of the overall development strategy of the bank

The relationship between the proposed criteria for balancing the bank's strategy can be explained as follows. The criteria related to the management of the bank's personnel, namely the balance of the general goals of the bank and the personal goals of the employees, their duties and

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[1] Kolodiziev, O.M.; Bezrodna, O.S. (2012): Viznachennya kriteriyiv zbalansovanosti strategiyi rozvitku banku [Determination of balancing criteria the bank's development strategy]. Bankivska sprava - Banking, Vol. 5, pp.3-12.

responsibilities, are interrelated. Consistency and coherence between the overall objectives and goals of the bank employees enhances their satisfaction with working conditions. This, in turn, will contribute to honest liability in the framework of their assigned responsibilities. On the other hand, the balance of duties and responsibilities of employees enhances the quality of work and ensures the fulfillment of the tasks assigned to them, which are aimed at achieving the overall goals of the bank and its overall performance. This will provide material incentives for staff and thus help balance the overall goals of the bank and its employees. As the Bank's staff is one of its stakeholders, the fulfillment of the criteria considered has a significant impact on the satisfaction of its interests. The effectiveness of staffing also ensures that the goals of all levels of management are balanced, because it is the employees who fulfill the tasks aimed at achieving the strategic goals. In turn, the coherence of the goals of all levels of management makes it possible to optimally allocate financial resources in the respective areas. The link between the criteria of "balance of stakeholder interests" and "balance of goals and financial resources of the bank" is conditioned by the fact that financial resources are formed to a greater extent at the expense of attracted funds of clients of the bank and borrowed from other financial institutions. Therefore, taking into account their interests in the process of forming strategic goals is an important task of the bank and will help to expand its resource base. This, in turn, will provide a sufficient level of financial resources to meet the stated strategic goals.

Thus, BSC can be defined as a powerful technology of strategic management and has the following positive qualities:

1) it provides the bank management with complete information about the financial activities of the bank and the factors that influence it;

2) it promotes concentration of efforts on strategically important areas of activity of the bank;

3) it provides broad, training-oriented communication at all levels of bank management and facilitates involvement of all employees in strategy implementation;

4) it allows to check the current strategy for completeness, consistency and relevance;

5) it is aimed at optimizing banking business processes and innovation;

6) it provides strategic efficiency and growth of the Bank's performance;

7) it successfully integrates with the controlling system and integrates management methods aimed at increasing the value of banking business;

8) it allows forecasting of problems and timely response to risks.

Considering the content of the presented stages of strategic management of the bank using BSC (Fig. 2), it is proposed to evaluate the effectiveness of management in two directions. The first area involves evaluating the effectiveness of implementing the overall development strategy (by generalizing information to determine the approximation of the actual values of financial and non-financial performance of the bank to the desired target priorities). The second direction is to evaluate the balance of the implemented strategy. Accordingly, the methodology for assessing the effectiveness of strategic management of the bank includes three blocks: within the first and second blocks, quantitative and qualitative evaluation is conducted in the identified relevant areas, within the third block summarizes the results of evaluation and forming an overall conclusion about the effectiveness of strategic management of the bank.

Within the first block of the proposed methodology for assessing the effectiveness of strategic bank management, it is envisaged: first, to construct a generic measure of the effectiveness of implementing the overall strategy of the bank's development by converting the transformation functions (desirability functions) of financial and non-financial indicators that are combined within the BSC subsystems; second, providing a qualitative interpretation of the quantitative assessment using the Harrington verbal-numerical scale.

It is advisable to consider proposals for the use of conversion functions for signs with two-sided (symmetric or asymmetric) and one-sided change tendencies (formulas 1-5) in order to construct a generic measure of measuring the effectiveness of the Bank's development strategy

implementation[1] [2]. Thus, for two-way asymmetric tendencies of development of a feature of the system, the following transformation functions are used:

$$y_{ij} = e^{-3(\frac{x_{ij} - a_i}{b_i - a_i})^2}, \qquad x_{ij} \leq a_i, \; b_i < a_i \qquad (1)$$

$$y_{ij} = e^{-3(\frac{x_{ij} - a_i}{c_i - a_i})^2}, \qquad x_{ij} \geq a_i, \; c_i > a_i, \qquad (2)$$

a_i, b_i, c_i – точки phase changes: a_i - the best (desired) value of x_{ij} at which the conversion function reaches the highest value 1 (100 %);

b_i, c_i ($b_i < c_i$) – unsatisfactory value of x_{iy} (on the other side of the best) at which the conversion function acquires a value of no more than 0,05 (5 %).

Given the symmetric tendencies of the development of features, the transformation function becomes 1 (100%) at $a_i = \dfrac{b_i + c_i}{2}$. The look of the feature is simplified:

$$y_{ij} = e^{-3(\frac{x_{ij} - a_i}{b_i - a_i})^2} \qquad (3)$$

or (equivalent):

$$y_{ij} = e^{-3(\frac{x_{ij} - a_i}{c_i - a_i})^2} \qquad (4)$$

For unilateral types of character development in the works of V. S. Ponomarenko and L. M. Malyarets, monotone functions of transformation of the type of logistic function are recommended:

$$y_{ij} = \frac{1}{1 + e^{\frac{x_{ij} - p_i}{q_i - p_i}}}, \qquad (5)$$

q_i – the value of x_{iy} at which the conversion function acquires a value of not less than 0,95 (95 %);

p_i – the value of the indicator at which the conversion function acquires value 0,5 (50 %).

Using the above formulas (depending on the trends of changes of the analyzed characteristics), the indicators within the BSC subsystems are converted to a single numerical scale (from 0 to 1) and a generic indicator of measuring the efficiency of the implementation of the overall development strategy of the bank is formed. In accordance with the logic of the methodology developed, the calculated value of the corresponding generalized indicator is distinguished as follows: [0; 0.37] is a low level, (0.37; 0.63] is an average level and (0.63; 1] is a high level of efficiency of implementation of the Bank's overall development strategy, respectively.

The second block of the proposed methodology for assessing the effectiveness of strategic bank management it is determined the balance of the overall strategy of the bank's development. To solve this problem, the application of G. Rush model, which allows to evaluate the adherence to the criteria on the basis of a dichotomous scale, in which the dimension is represented by two possible states – 0 and 1[3].

The assessment of the balance of the overall development strategy of the bank on the basis

[1] Ponomarenko, V. S.; Malyarets, L. M. (2009): Analiz danih u doslidzhennyah socialno-ekonomichnih sistem [Data analysis in socio-economic systems studies], Kharkiv, «INZhEK», 432 p.

[2] Ponomarenko, V. S.; Malyarets, L. M. (2009): Bagatovimirnij analiz socialno-ekonomichnih sistem [Multivariate analysis of socio-economic systems], Kharkiv, HNEU, 384 p.

[3] Dubina, I. N. (2006): Matematicheskie osnovy jempiricheskih social'no-jekonomicheskih issledovanij [Mathematical foundations of empirical social and economic research], Barnaul: Alt. un-ta, 263 p.

of defined criteria (Fig. 3) is based on the expert survey of the heads of functional units of the bank, who participated in the formation and implementation of the strategic plan. The results of evaluating the balance of the bank's strategy depend on the number of positive reviews (responses) of experts on the proposed criteria and their total number. Since the positive response of the respondent (yes answer) is coded as 1, and the negative (no answer) as 0, larger values for the respondent on the Rush scale will correspond to his more positive (favorable) attitude towards the phenomenon (object) under study. The unit of the Rush scale is the logit:

$$D = \ln(\frac{P}{1-P})$$, (6)

P – frequency or likelihood of a positive response (defined as the ratio of the total number of positive reviews by criterion to their maximum number).

When analyzing the results obtained, it should be borne in mind that a score of 0 logit indicates that only 50% of experts gave a positive response, and a value of 2.94 logit – as 95% positive and 5% negative. Thus, the interpretation of the results according to the model of Rush involves determining the levels of balance of the overall development strategy of the bank: low level – D $\in$ [0; 1.1]; middle level – D $\in$ [1.11; 2.19]; high level – D $\in$ [2.2; 2.94].

At the last final stage (the third block) of the approach to assessing the effectiveness of strategic bank management, the results of certain qualitative levels of implementation efficiency and balance of the overall development strategy of the bank are synthesized. As a result of this stage, it is possible to conclude on the effectiveness of the strategic management of the bank, to provide recommendations for its improvement and to determine further prospects and priorities of the strategic development of the bank.

References:

1. Rats, O. M. (2008): Viznachennya sutnosti ponyattya "efektivnist' funktsionuvannya pidpriєmstva" [Defining the essence of the concept of "efficiency of functioning of the enterprise"]. Ekonomichnii prostir - Economic space, No 15, pp. 275-285.

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9. Ponomarenko, V. S.; Malyarets, L. M. (2009): Analiz danih u doslidzhennyah socialno-ekonomichnih sistem [Data analysis in socio-economic systems studies], Kharkiv, «INZhEK», 432 p.

10. Ponomarenko, V. S.; Malyarets, L. M. (2009): Bagatovimirnij analiz socialno-ekonomichnih sistem [Multivariate analysis of socio-economic systems], Kharkiv, HNEU, 384 p.

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