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Baranovskyi O.*Doctor of Economics, Professor,
Vice-Rector of Banking University, Ukraine;
e-mail: bai@ubs.gov.ua***Boiarko I.***Doctor of Economics, Associate Professor,
Chief of Scientific Research Department
of Banking University, Ukraine;
e-mail: boyarko@ukr.net***Zlunitsyna T.***Head of the sector of Scientific Research Department
of Banking University, Ukraine;
e-mail: zlunitsyna@ubs.gov.ua*

METHODICAL APPROACHES TO THE ASSESSMENT OF THE IMPACT OF THE QUALITY OF TRANSFORMATION PROCESSES ON THE DEVELOPMENT OF THE FINANCIAL SECTOR

Abstract. The existing methods of separate central banks, regulators of financial markets, international financial and credit institutions, rating agencies and consulting companies, which can be used partially to assess the quality of transformational processes taking place in the financial sector, are analyzed. An adequate methodical toolkit is proposed, which will allow to assess the potential of the domestic financial sector, to identify the patterns of transformation processes, and also to assess the impact of their quality on the functioning of financial intermediaries and to propose appropriate mechanisms for ensuring their further development. The structural-logical scheme of formation of criteria and system of indicators of the quality of transformational processes in the financial sector of the country's economy is developed.

Investigated general approaches are considered to be useful for developing a methodology for the integral assessment of the quality of transformation processes in the financial sector of the economy by specifying the content of the main stages and methodological approaches to the goals and object of the research. Assessment of the quality of transformation processes in the financial sector of the national economy is an ambiguous process. This is due to the fact that, firstly, in this regard it can be considered as the impact of transformations on the quality of objects, and as the quality of the transformations in particular. Secondly, transformation processes in the financial sector of the national economy can be positive and negative; general and specific; large-scale and minor; systematic and dotted; intensive and extensive; priority and non-priority; stimulating and moderating; divergent; resource, technological, institutional, organizational, quality, behavioral; timely and spatial; painful, conflict and non-conflict; and also they are made with different expenses. Thirdly, both expected and actual results of transformation processes in the financial sector should be assessed.

Keywords: financial sector, transformation, transformation processes, indicators of the quality of transformation processes, methodology for assessing the quality of transformational processes.

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Барановський О. І.*доктор економічних наук, професор,
проректор Університету банківської справи, Україна;
e-mail: bai@ubs.gov.ua***Боярко І. М.***доктор економічних наук, доцент,*

*начальник науково-дослідної частини
Університету банківської справи, Україна;
e-mail: boyarko@ukr.net*

Злуніцина Т. В.
*завідувач сектору науково-дослідної частини
Університету банківської справи, Україна;
e-mail: zlunitsyna@ubs.gov.ua*

МЕТОДИЧНІ ПІДХОДИ ДО ОЦІНЮВАННЯ ВПЛИВУ ЯКОСТІ ТРАНСФОРМАЦІЙНИХ ПРОЦЕСІВ НА РОЗВИТОК ФІНАНСОВОГО СЕКТОРУ

Анотація. Проаналізовано наявні методики окремих центральних банків, регуляторів фінансових ринків, міжнародних фінансово-кредитних установ, рейтингових агенцій і консалтингових компаній, які частково можна використати для оцінки якості трансформаційних процесів, що відбуваються у фінансовому секторі. Запропоновано адекватний методичний інструментарій, що дозволить оцінити потенціал вітчизняного фінансового сектору, виявити закономірності трансформаційних процесів, а також оцінити вплив їхньої якості на функціонування фінансових посередників і запропонувати відповідні механізми забезпечення їхнього подальшого розвитку. Розроблено структурно-логічну схему формування критеріїв і системи показників якості трансформаційних процесів у фінансовому секторі економіки країни.

Розглянуті загальні підходи доцільно використовувати для розроблення методики інтегральної оцінки якості трансформаційних процесів у фінансовому секторі економіки шляхом конкретизації змісту основних етапів і методичних прийомів стосовно цілей та об'єкта дослідження. Оцінювання якості трансформаційних процесів у фінансовому секторі національної економіки – процес неоднозначний, оскільки, по-перше, у цьому плані його можна розглядати як вплив здійснених трансформацій на якісний стан об'єктів, що піддаються їхньому впливові, так і як якість трансформацій як таких. По-друге, трансформаційні процеси у фінансовому секторі національної економіки можуть бути позитивними і негативними; загальними, конкретними і специфічними; масштабними і незначними; системними і точковими; інтенсивними й екстенсивними; пріоритетними і другорядними; стимульованими і стримуваними; різноспрямованими; ресурсними, технологічними, інституціональними, організаційними, ціннісними, поведінковими; у часі і просторовими; болісними, конфліктними і неконфліктними, а також відбуватися з різними витратами. По-третє, оцінці мають підлягати як очікувані, так і фактичні результати трансформаційних процесів у фінансовому секторі.

Ключові слова: фінансовий сектор, трансформація, трансформаційні процеси, показники якості трансформаційних процесів, методика оцінки якості трансформаційних процесів.

Формул: 6; рис.: 1; табл.: 0; бібл.: 15.

Introduction. Current development trends of the domestic financial intermediaries are determined by the efforts of foreign financial institutions, as well as changes in the quality of transformation processes in the financial sector (FS). Thus, the issue of improving its financial stability, competitiveness, institutional efficiency and functional safety is currently of great interest. To consider this problem, it's necessary to develop adequate methodical toolkit for assessing the domestic financial sector potential, identifying the patterns of transformation processes, assessing the impact of their quality on the financial intermediaries functioning and proposing the appropriate mechanisms for their further development.

Literature Review and Problem Statement. The theoretical and methodological basis for assessing the quality of transformation processes of financial security of national economy is complex, multidimensional and interdisciplinary. The issue of assessment of the quality of transformation processes in general and in the FS of the national economy, its segments and

financial institutions in particular, is considered by the following Ukrainian and foreign researchers: V. Arkhipova, L. Bertalanffy, Z. Bodie, O. Brizhak, O. Getman, I. Goloshchapova, O. Ermolenko, S. Erokhin, A. Ize, E. Karpunina, N. Korneva, L. Kryukov, K. Lazarchuk, S. Lyubimtseva, A. Maksimov, R. Merton, A. de la Torre, E. Feyen, S. Huntington, A. Tsarkov, V. Shimov and others.

In the scientific literature various methodological approaches, which are mainly concerned with the issues of assessing the functioning of the banking system as a component of the financial sector, as well as the activities of banking institutions and other financial intermediaries on micro-level, are considered. These works are specifically based on an assessment of banks financial position, stability and reliability. They differ in the sources of information, coverage of the financial and credit activities areas, the environment of its implementation, types of used indicators, toolkit, assessing technologies etc. However, nowadays there is no single approach to assessing the impact of quality of the transformational processes on the development of the financial sector and the appropriate system of indicators.

The purpose of the research is to determine the complex of theoretical, methodological and practical issues of assessing the quality of transformation processes in the FS of the national economy.

Results of the Research. Financial sector functioning is currently assessed by individual central banks and financial market regulators, as well as by international financial institutions, credit rating agencies and consulting firms. However, their techniques, for instance, the IMF methodology, are generally focused on assessment the financial stability indicators (adequacy and structure of capital, asset quality, liability structure, profitability, risk, liquidity). Non-financial indicators and experts' evaluation for reflecting the quantitative and qualitative characteristics of transformational changes in the FS adequately, are practically not used. There are also integral indicators of competitiveness (financial market development index, level of financial development), which are calculated according to the methodology of the World Economic Forum (WEF) and International Institute for Management Development (IMD). However, they are more relevant to the financial markets and do not give a full understanding of the impact of transformation processes on the FS functioning.

Furthermore, they cannot be fully used to assess the quality of transformation processes of the FS of different countries. Due to their objectives, they cover certain aspects of the functioning of the FS, primarily financial ones, and contain lists of indicators that is not fully relevant to the objectives of our research [2].

Also, the above-mentioned techniques have specific disadvantages. Firstly, they consider a limited number of factors. Only the impact of internal information is covered according to available techniques. Secondly, insufficient presentativity of indicators is given, as a number of techniques involve the use mainly quantitative characteristics of FS. Thirdly, if there are qualitative non-financial indicators, their values are got from experts' evaluation, that makes them subjective. Also it's similar to calculating the integral indicators, where experts' evaluation is used to determine the weight of partial indicators in the integral one. Fourthly, the techniques are static, as only one period data is used. This allows to estimate the current state of the object of study, but it does not reflect its dynamics. Fifth, the methods are not-transparency. This makes the principle of calculating the results of the assessment incomprehensible. Sixth, the limitations of the techniques with regard to the use of confidential information makes their using impossible for all interested party.

Due to the large number and diversity of available indicators that characterize the functioning of the financial sector, analyzing the impact of the quality of transformation processes on its state requires their prior systematization to ensure comprehensive consideration and assessment of such impact.

The techniques used by rating agencies and consulting companies typically include not only financial indicators (capital adequacy, liquidity, asset quality, liability structure, risks and profitability), but also non-financial indicators of the bank's market position (indicators of financial transparency, access to financial services etc.). Therefore, indicators are divided to rating and

scoring according to the method of formation, that allows to calculate integral indicators. Scoring indicators can be presented in the form of partial indicators composition. Therefore, according to the coverage, indicators can be classified as general and partial. At the same time, using the partial indicators allows to find out both dominant and critical positions of the FS in certain areas of its functioning, which is necessary for the formation of a mechanism for improving the quality of transformation processes.

The final integral assessment should consider the key factors and criteria that shape the quality of transformation processes in the financial sector, and also it should reflect the assessment of the major aggregated parameter groups.

In turn, these criteria can be expressed by a number of quantitative and qualitative indicators. In addition, qualitative indicators should reflect the quantitative and qualitative characteristics of the FS most accurately and completely, as the results of the assessment depend on the ability of indicators express the essence of the investigated phenomena adequately.

Thus, the system of indicators of the quality of transformation processes in the financial sector of the country's economy is ordered by the appropriate criteria. Each indicator according to relevant criteria gives a quantitative or qualitative description of the financial sector, that has reporting and divisional properties, linked to other indicators but doesn't duplicate them.

Each indicator should be calculated on the basis of statistics using the appropriate formulas. The number of indicators for assessing the quality of transformation processes in the financial sector should be minimum, so the system still be not too cumbersome. Also it allows to make relevant comparisons between different countries.

In general, the scheme of formation of criteria and indicators of quality of transformation processes in the FS of the country's economy is given in *Fig.*

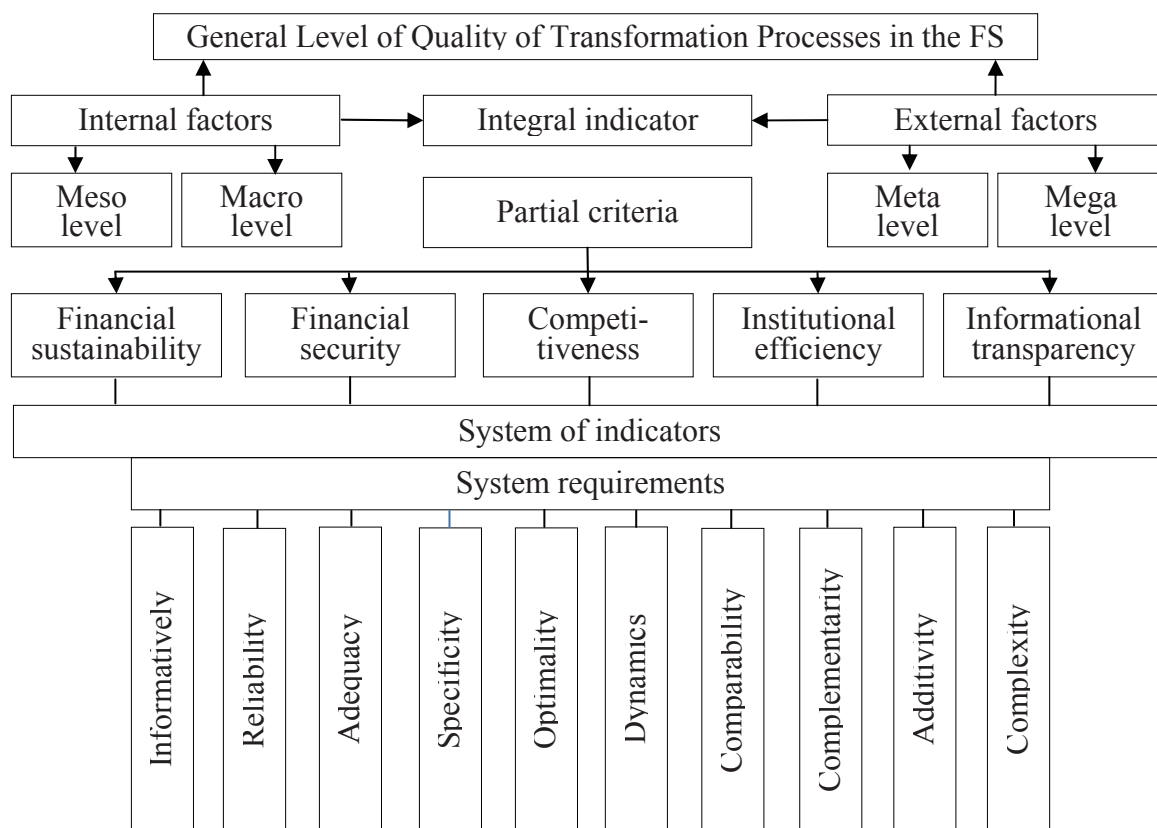


Fig. The structural-logical scheme of formation of criteria and indicators of quality of transformation processes in the financial sector of the country's economy

Source: [3, p. 129].

Such system of indicators includes: fractional and partial indicators, that characterize the transformation processes in the FS with regard to the level of its financial stability, competitiveness, institutional efficiency, information transparency and security of operation; general (integral) indicator of the quality of transformation processes in the FS of the country's economy.

The last indicator characterizes the ability of the FS of the country's economy to maintain its position currently and to a long-term perspective. Two methods are mainly used to determine it: Euclidean distance method and method of calculating the sum of weighted partial indicators of quality of transformation processes in the FS. The first method gives an illustrative analogy between the quality of transformation processes and the relative distances in the Euclidean space. This method is appropriate to use in conditions of low variation of all estimated indicators values. The second method permits to make a comparison in each group of indicators and determine their contribution to the formation of a general indicator of quality of transformation processes in the FS of the country's economy. The disadvantage of these methods is the complexity of interpreting the change in the integral indicator. Also interconnection between partial and integral indicators is the most possible to identify by the construction of regression dependence. It enables to identify the level of impact of the individual components on the general assessment and determine the most important components or factors of impact.

An important point is to make all indicators compared. It can be possible by converting them into qualitative analogues and aligning to a common basis that is determined according to the given levels of the quality of transformation processes in the FS economy. The formula for qualitative analogues calculation can be written as:

$$u_i = \frac{(X_i - X_{\min}) \cdot (N - 1)}{X_{\max} - X_{\min}} + 1, \quad (1)$$

where u_i — the value of qualitative analogue of the i -th indicator of the quality of transformation processes; X_i — the value of the i -th indicator of the quality of transformation processes; X_{\min} , X_{\max} — minimum and maximum value of the i -th indicator of the quality of transformation processes, respectively; N — number of levels of the quality of transformation processes.

The number of given levels of quality of transformation processes is determined by the nature of the problem considered. According to the objectives of our research, 5 levels of the quality of transformation processes in the FS are distinguished: low; level below average; average; level above average; high [4]. Converting indicators into qualitative analogues is realized by decomposing the range of each indicator values into a certain number of intervals. The indicator of the quality of transformation processes belongs to the interval corresponding to the limits of a certain level in the accepted scale.

The integral indicator is calculated by the formula:

$$Q_q = \sum_i (u_i \cdot d_i), \quad (2)$$

where Q_q — summary weighted assessment of the quality of transformation processes in the FS; d_i — coefficient of significance of the i -th indicator.

Grouping indicators by their degree of dependence on impact of internal or external factors of the FS, integral assessment of the quality of transformation processes is calculated by the formula:

$$Q_q = \sum_i (u_i \cdot d_{ex}) + \sum_j (u_j \cdot d_{in}), \quad (3)$$

where u_i — the value of indicators that reflects the impact of internal factors on the quality of transformation processes; u_j — the value of indicators that reflects the impact of external factors on the quality of transformation processes; d_{ex} , d_{in} — coefficients of significance of external and internal factors, respectively.

Grouping indicators characterizing the partial criteria of the quality of transformation processes in the FS, the formula of calculating the integral indicator can be written as:

$$Q_q = Q_{fin} + Q_{comp} + Q_{inst} + Q_{inf} + Q_{sec}, \quad (4)$$

where Q_{fin} — the value of financial stability criteria; Q_{comp} — the value of criteria of competitiveness; Q_{inst} — the value of institutional effectiveness criteria; Q_{inf} — the value of information transparency criteria; Q_{sec} — the value of criteria of financial security of the financial sector, respectively.

As each of the partial criteria for the quality of transformation processes in the FS can be expressed by a number of indicators, the value of the partial criterion is, in turn, calculated as the sum of the values of the indicators that characterize it, weighted with regard to their significance. In this case, the integral indicator is calculated using the following formula:

$$Q_q = \sum(u_{fin} \cdot d_{fin}) + \sum(u_{comp} \cdot d_{comp}) + \sum(u_{inst} \cdot d_{inst}) + \sum(u_{inf} \cdot d_{inf}) + \sum(u_{sec} \cdot d_{sec}), \quad (5)$$

where u_{fin} , u_{comp} , u_{inst} , u_{inf} , u_{sec} — the values of indicators characterizing the criteria of financial stability, competitiveness, institutional efficiency, information transparency, financial security of the FS, respectively; d_{fin} , d_{comp} , d_{inst} , d_{inf} , d_{sec} — coefficients of significance of indicators characterizing the criteria of financial stability, competitiveness, institutional efficiency, information transparency, financial security of the FS, respectively.

One of the important conditions for the integral assessment correctness is the choice of the ways of indicators aggregating, which are included to the basis of its calculation. If weighted indicators are determined arbitrarily, without sufficient theoretical or empirical justification, the results of the integral assessment can be incorrect. The method of experts' evaluation, that is often used to determine weighted indicators, is related to significant time-consuming. It also depends on the experts' competence and, as it was mentioned, is subjective. To minimize the risk of subjective and incorrect estimates, we propose to use a methodical technique, based on the application of the information entropy formula by KE Shannon to determine the significance of indicators of the quality of transformation processes in the FS [5]:

$$H = \sum_{kj} p_k \log \frac{1}{p_k}, \quad (6)$$

where H — amount of information; p_k — probability of the k -th event.

The formula can be used to determine the distribution of values for each indicator, if the relative frequency of random value (assessment) occurrence for each indicator is used instead of probability. Thus, all the characteristics have their value. As a result, this approach is used to reflect occurring changes adequately according to changes of characteristics over time and, accordingly, changes of their significance.

Conclusion. Investigated general approaches are considered to be useful for developing a methodology for the integral assessment of the quality of transformation processes in the FS of the economy by specifying the content of the main stages and methodological approaches to the goals and object of the research. Assessment of the quality of transformation processes in the FS of the national economy is an ambiguous process. This is due to the fact that, firstly, in this regard it can be considered as the impact of transformations on the quality of objects, and as the quality of the transformations in particular. Secondly, transformation processes in the FS of the national economy can be positive and negative; general and specific; large-scale and minor; systematic and dotted; intensive and extensive; priority and non-priority; stimulating and moderating; divergent; resource, technological, institutional, organizational, quality, behavioral; timely and spatial; painful, conflict and non-conflict; and also they are made with different expenses. Thirdly, both expected and actual results of transformation processes in the FS should be assessed.

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