



NAUKA I STUDIA

ISSN 1561-6894

**EKONOMICZNE NAUKI
PAŃSTWOWY ZARZĄD**

2 (70) 2013



Nauka i Studia

Wydawca: Sp. z o.o. «Nauka i studia»

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Druk i oprawa:

Sp. z o.o. «Nauka i studia»

Cena

54,90 zł (w tym VAT 22%)

Wszelkie prawa zastrzeżone.

Żadna część ani całość tej publikacji nie może być bez zgody

Wydawcy – Wydawnictwa Sp. z o.o. «Nauka i studia» – reprodukowana,

Użyta do innej publikacji.

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IMPROVING OF THE BANK SUPERVISION FUNCTIONS WITH THE HELP OF THE STRUCTURE-FUNCTIONAL ANALYSIS METHODS

Annotation. The financial analysis of the banks and analysis of risk management systems' effectiveness occupies a significant place in the system of banking supervision. With the purpose to provide an adequate control it is necessary to improve the approaches, to orient them on the most significant issues which require urgent regulatory action. It was proposed to use a differentiated approach to individual structural and functional groups of banks.

Keywords: banking supervision, the financial indicators of banks, the cluster analysis.

I. Introduction

According to the Ukrainian legislation the aim of the bank supervision is the banking system stability, protection of the depositors' interests, safety ensuring of the savings on bank accounts.

To achieve this task we need the adequate methodological approaches to the evaluation of the financial stability of the banks, abilities of the management to fulfill the standard requirements, to control the key processes of the bank development. Supervision bodies are demanded grounded and in good time intervention in the case of the abnormally high risks of the bank activities. Standard documents of the National bank of Ukraine produce a great arsenal of the adequate means of influence and supporting of the bank financial stability.

Analysis methods of the bank financial stability must be enough clear and grounded. The task of the supervision is to evaluate the banks financial stability and adequacy of the banks risk-management instruments. To get this we need definition of the specific structural and functional characteristics of the individual banks and elaboration of the adequate analysis methods. Effective systems of the financial stability evaluation must be based on the scientific researches of the risk spheres of the bank activities, suitable statistic and economic-mathematical models.

II. Definition of the task

The peculiarity of the Ukrainian banking system is the great quantity of banks, which is approaching to 200, and also considerable differences of their scale characteristics and risk profiles. Distribution of the bank service market testifies about stable specialization of the greater part of the banks, though almost all of them have the formal status «universal» banks. In the course of time concentration of means in the largest banks is increasing.

It is observed the same reaction on external shocks for the homogeneous groups of banks with the same structural characteristics of assets, liabilities, incomes and expenses. It means that bank supervision needs to develop differential approaches to the different structural and functional groups of banks.

We suggest a clear and formalized approach to the problem of the bank classification and investigation of the financial stability of the homogeneous structural and functional groups using the neural networks – Kohonen Self-Organizing Maps [2]. The methods handling of large amounts of data, grouping of the close objects and map construction, interpretation of the banks trajectory, investigation of the current situation change causes, comparison of the development dynamics of the different banks of the system.

III. Results

Since 2004 in the system of the bank supervision the methods of risk evaluation are established, which supplement the traditional evaluation of the financial state according to the system CAMELS. Specialists of the bank supervision evaluate not only current financial state and the observance of legislation standards by the bank but the future influence of the risks, which were revealed during the process of the supervisory activities.

The modern regulative politics propose the solving of the following questions:

- I. elaboration of the bank supervision standards taking into consideration risk profiles of the banks,
- II. giving of the corresponding recommendations to the evaluation of the internal bank control systems, directional to the definition of their risk integral level,
- III. taking the concrete measures of influence to the banks in the case of the excessive accumulation of the risks, which can lead to the stability lowering of the individual bank and banking system.

Banking supervision approaches must be formed by the risks profile of the banks, for the evaluation of which we need the analysis of the balance structure, correlation of assets and liabilities, incomes and expenses. Such structure characteristics simultaneously determine the functional peculiarities of each bank, its place in the banking service market. Unification of the banks into the homogeneous structural and functional groups with the help of the Kohonen maps makes it possible to transit to the differential methods of the bank supervision. These methods ensure formalization of the grouping of banks with the homogeneous risks profile.

Considerable quantities of the Ukrainian banks with small assets serve business of the chief shareholders. Small captive banks easily fulfill the obligatory economic standards. Structure characteristics of their balances are changing when conducting of some considerable operations, which influence the account indexes. The risk profile of small captive banks is essentially different from the classic risks of the large banks with the branchy net of departments and developed client base. Functions and possibilities of such banks are limited, and parameters of their percentage and tariff politics can differ greatly from the market indexes. Peculiarities of the captive banks testify about necessity of the intensified control of their operating risks.

Specific approaches of the supervision are necessary for the group of banks, which are developing of the consumer crediting and have corresponding structure misbalance. Characteristics of the large banks with foreign shareholders, which are depended on resources support of the maternal companies, also need the adequate control instruments from the banking supervision positions. For the banks with foreign capital we need the individual politics of the regulative influence on the separate directions of their activities, ensuring protection of the state interests, agreement requirements of the foreign shareholders and the native consumers of the bank services.

Different structural and functional groups of the banks influence in different ways on the whole financial state of the system. Application of the differential supervision further forming of the identification concept of the most considerable risks for the each concrete period of the banking system development.

Evaluation of the bank risks must be held in the direction from general, system tendencies to individual, habitual to some banks or groups of banks. For all this it is necessary to raise demands to the evaluation of the current state of the banking system, carrying out the systematic structure analysis and financial stability diagnostics of the individual groups of banks.

Each bank, as a complex economic system is developing in the competitive environment under influences of different inner and outward factors, is characterized with its own structure specification and risk profile. Aggravation of some aspects of its activities affects the corresponding indexes and has influence on the whole characteristics. Clustering model appears as an original dynamic system of co-ordinates for the interpretation of the bank indexes changes.

Research of the each bank position on the banking products market, analysis of the structure balance of indexes, results of the ways to consolidation of financial stability and strategic purposes achievements let the supervisory bodies evaluate its risk profile. Financial indexes of the concrete bank get a new qualitative evaluation considering its place in the dynamic system of the all banks indexes.

IV. Conclusions

Evaluation of the banks' financial stability using classification of the structural and functional groups outlines approaches and priorities of the bank supervision. Kohonen maps appear as a logical grounded instrument of banks classification and

analysis of the banking system structure, characteristics research of its segments, their risks profile peculiarities, as a base for construction of the effective bank activities control model. Availability of the clear, mathematically grounded methods of the banks distribution into the specialized groups allow to formalize approach to the market distribution on any part of the system development.

From the positions of the banking regulation and supervision, suggested neural networks device allows not only to explain the modern state of the banking system and evaluate financial condition of each of its objects, but to establish measures of influence for the analysis and consolidation of any bank financial stability.

Differential methods of bank supervision on the risks base will allow ensuring distribution of the system into homogeneous groups, further to reveal bonds between them, the place of every group in the whole system development. Instruments of analysis and regulatory impact on the structural and functional groups of banks must be perfected and developed simultaneously with application of modern international approaches and principles.

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