

*Section 12. Finances, insurance and stock market: diversification of strategic portfolio.*

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## **CHOICE OF THE PRIORITY METHOD OF BANKS' CREDIT RISK ASSESSMENT**

Management of the bank provides an objective assessment of its financial condition, implementation of coordinated management, adoption of administrative decisions that will help to increase the banks profit according to the acceptable level of credit risk. It is necessary to adjust the management of bank lending process to the specific economic conditions in which the bank operates. There is a need to improve monitoring of banking activities, including credit risk of the bank, according to the deterioration of the main indicators of Ukrainian banks. Thus, the loan portfolio has the largest share in the assets of the bank, so credit risk monitoring is one of the most important components of risk management at the bank. It is necessary to update the appropriate methodological basis to monitor credit risk in banking. This leads necessity of the improvement of appropriate organizational and methodological approaches, including techniques for assessing credit risk.

The problems of analysis, evaluation and choice of methods of monitoring of banking credit process are studied by V. Buriak [Ошибка! Неизвестный аргумент ключа.], O. Vasyurenko [Ошибка! Неизвестный аргумент ключа.], V. Vitlinsky [Ошибка! Неизвестный аргумент ключа.]etc. However, the current

theoretical and methodological framework for monitoring of the banks' credit risk is not investigated, which determines the relevance and choice of research topic.

Monitoring of credit risk is a component of bank risk management and an important element in the whole process of lending. Systematic observation of the dynamics of changes in the borrower or the quality of the bank' loan portfolio allows to timely intervention and effective management of credit process in case of adverse events for the bank. To prevent the possibility of bad debts in the future management of banking institutions advisable to arrange on-site monitoring of the credit process and ability to perform customer contractual obligations to the creditor.

The main objectives of the financial monitoring of bank credit process are: collection and accumulation of information that characterizes the current dynamics of the economy in the context of the actual situation in the banking sector; create a database that reflects the credit risk of separate banks; professional analysis and forecasting of the dynamics of the credit risk of the banking system as a whole; comprehensive study of banking sector credit risk; identification and evaluation of the impact of key factors that form the basis of stable development of the banking system; evaluation of the effectiveness of preventive measures, which take place within the system of state regulation of the banking sector.

Choice of the priority technique of bank' credit risk assessment is an important step in monitoring credit risk of the bank. Methods of assessing credit risk of the bank [4, p. 354-355; 5; 6, p. 160-165] are shown in the table 1.

Table 1

Methods of banks' credit risk assessment

Method	Essence of the method	Indicators for assessment
1. Expert methods	Processing and analysis of interviews with experts, specialists in banking regarding of the potential credit risk	Judgments of experts

2. Statistical methods	Processing and analysis of statistical information	Indicators of the borrower, the bank
3. Analytical methods - of stress-testing	Evaluation of the impact of adverse events on the financial condition	Indicators of risk of the loan portfolio

As shown in the table 1, there are a sufficient number of methods for assessing credit risk, each of which has certain advantages and disadvantages. Thus, expert methods involve studying the estimates made by experts, summarizing and drawing up expert assessments. Statistical methods are based on analysis of statistical data related to the borrowers' financial condition over time. Analytical method is an estimate of possible losses from shock situations.

Methods of assessing banks' credit risk are difficult to compare to each other, because each method uses different indicators, which do not coincide with others and can have different units. It is necessary to choose the method of hierarchy analysis (MHA) by T. Saaty for justification the choice of preferred method for assessing banks' credit risk. This method allows considering different views and coming to their agreement. MHA includes several stages [Ошибка! Неизвестный аргумент ключа., p. 20-43]: construction of the hierarchy, formation the matrix of pair wise comparisons, receiving vectors of priorities, assessment of consistency. Scale of scores for T. Saaty [7, p. 53] method is determined by an odd numbers from 1 to 9 inclusive.

Justification of the choice preferred method for assessing the credit risk of the bank proposed to make by next criteria: 1) simplicity of the method; 2) necessity of using special software; 3) completeness of the obtained results; 4) universality of use; 5) sufficiency of information necessary for calculations. These criteria define main advantages one of methods compared to other. Evaluation of the components of priority vector of comparison criteria is shown in the table 2.

Table 2

Evaluation the components of priority vector of comparison criteria

Criteria	1	2	3	4	5	The share of criterion
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1	1,00	5,00	0,20	3,00	0,20	0,14
2	0,20	1,00	0,33	0,33	0,20	0,05
3	5,00	3,00	1,00	3,00	1,00	0,33
4	0,33	3,00	0,33	1,00	0,33	0,10
5	5,00	5,00	1,00	3,00	1,00	0,37

As shown in the table 2, the fifth criterion (sufficiency of information necessary for calculations) has the greatest significance to justify the selection of priority method for assessing the banks' credit risk (37% of the significance). Less importance is the criterion of completeness of the obtained results (33% of the significance), the lowest – the criterion of universality of use (10% of the significance).

Calculation of the vectors of local priorities for the analyzed methods for assessing credit risk of the bank is shown in the table 3.

Table 3

Definition of the vectors of local priorities for the analyzed methods for assessing credit risk of the bank

Method	Expert methods	Statistical methods	Analytical methods	Vector of priorities
1. Simplicity of the method				
Expert methods	1,00	0,33	5,00	0,30
Statistical methods	3,00	1,00	5,00	0,62
Analytical methods	0,20	0,20	1,00	0,09
2. Necessity of using special software				
Expert methods	1,00	5,00	7,00	0,73
Statistical methods	0,20	1,00	3,00	0,19
Analytical methods	0,14	0,33	1,00	0,08
3. Completeness of the obtained results				
Expert methods	1,00	0,33	0,33	0,14
Statistical methods	3,00	1,00	3,00	0,58
Analytical methods	3,00	0,33	1,00	0,28
4. Universality of use				
Expert methods	1,00	5,00	3,00	0,65
Statistical methods	0,20	1,00	3,00	0,22
Analytical methods	0,33	0,33	1,00	0,13
5. Sufficiency of information necessary for calculations				
Expert methods	1,00	0,33	3,00	0,28
Statistical methods	3,00	1,00	3,00	0,58
Analytical methods	0,33	0,33	1,00	0,14

As shown in the table 3, statistical methods are most appropriate to apply for assessment the credit risk of the bank for the first, third and fifth criteria.

Calculation of the weight of each of the analyzed methods for assessing credit risk of the bank is shown in the table 4.

Table 4

Identification of the most preferred method for assessing the credit risk of the bank

Method	Criteria					Priority of method
	1	2	3	4	5	
	0,14	0,05	0,33	0,10	0,37	
Expert methods	0,30	0,73	0,14	0,65	0,28	0,30
Statistical methods	0,62	0,19	0,58	0,22	0,58	0,53
Analytical methods	0,09	0,08	0,28	0,13	0,14	0,17

Results in the table 4 demonstrate that statistical methods are most appropriate to apply for assessment the credit risk of the bank for the analyzed criteria. Using of these methods will allow timely management decisions, provide a more stable, and secure functioning of the banking system of Ukraine.

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