

ECONOMETRIC ASSESSMENT OF MONITORING RISKS ARISING IN THE ACTIVITIES OF COMMERCIAL BANKS

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Abstract: This article econometrically assesses the current state of monitoring risks arising in the activities of commercial banks. The results of scientific studies of bank crossbars and their monitoring are reflected. The elements of effective management and monitoring of liquidity risk in commercial banks and the results of their expert evaluation are considered. Based on the results of the study and analysis, proposals are developed for monitoring risks in banking.

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1. INTRODUCTION

In the conditions of the global change of the world financial system, the need to increase the financial stability of banks, which are considered an important component of the financial services market in Uzbekistan, is increasing. In the report entitled "The COVID-19 crisis and the stability of the banking system" published by the Organization for Economic Cooperation and Development (OECD), the following was highlighted: "...in three years, the risks that have come to light as a result of the widespread coronavirus pandemic have had a direct impact on the financial stability of banks. The economic impact of this pandemic has led to a sharp increase in corporate and household debt defaults, which has led to a decline in banks' asset quality and a significant increase in non-performing loans (NPLs). Such deterioration in bank asset quality and profitability may limit banks' ability to reduce banking risks over time [1]".

This, in turn, involves monitoring bank risks, improving the regulation of their effective management system, developing and implementing development scenarios by constantly analyzing the financial stability indicators of the banking sector in the rapidly changing economic situation, and ensuring the stability of the entire banking system, development of modern monitoring approaches is of urgent importance.

According to international practice, deficiencies in the system of bank risk management and their monitoring can cause not only the escalation of the crisis of the country's banking system but also the emergence of systemic risks at the national level due to the transformation of the financial market into other segments. In particular, in one of the developed countries, as a result of allowing an unreasonable increase in the weight of non-performing loans (NPLs) in the structure of loans allocated by US commercial banks and mortgage organizations, led to a sharp increase in cases of non-repayment of loans among unreliable borrowers, a sharp decrease in the investment attractiveness of mortgage securities in the financial market, and ultimately, this led to the global expansion of the Global Financial and Economic Crisis.

2. MATERIALS AND METHODS

Verbal interpretation of bank risk monitoring, statistical observations, and analysis of their dynamic changes, induction, and deduction were used in this research work.

3. LITERATURE ANALYSIS

Scientists in our country have also conducted several scientific studies on risks, their management, and risks that arise in the activities of banks. In particular, Professor N.Khashimova, one of the scientists who conducted scientific research in the field of financial risks, emphasized that financial risks are risks that arise during the implementation of financial operations and need to be

eliminated by financial institutions [2].

According to Professor Sh.Abdullaeva, one of the leading economists in the field of risks and "bank risks", "bank risk is the possibility (risk) of banks not effectively benefiting from financial resources during the implementation of their financial activities. It is defined as carrying out banking operations in the hope of a positive outcome [3].

In addition, B.Razzakova who conducted effective scientific research on the problems of obtaining financial profits in the process of financial operations by commercial banks and the banking risks that arise in this regard, emphasizes that in the process of obtaining profit in banks, special attention should be paid to the following in terms of financial risk management, monitoring, and their quantitative reduction:

- commercial banks in the course of their financial operations should not carry out high-risk financial operations based on high risk [4];
- it is necessary to continuously reduce their level of risk through the mechanism of high and medium-level risk management and monitor them;
- it is possible to keep and monitor financial risks on the balance sheet of commercial bank qualified specialists (risk managers) of commercial banks [5].

In modern banking and management theory, there are several approaches to considering the composition of risk monitoring, including:

- monitoring as an information-analysis system;
- monitoring as a form of control;
- monitoring as a complex integrative-indicative system for diagnosing the risk situation based on its interpreted parameters.

Based on the first two approaches, many local studies have been conducted to study the nature of risk monitoring. In order to prove this point, we make several points on the interpretation of the concept of "risk monitoring".

In particular, according to T.V.Osipenko, risk monitoring consists of the systematic collection and targeted processing of management data following the requirements of approved methods of risk assessment, the current assessment (reassessment) of risks based on the determination of the dynamics of risk assessment (identification of negative dynamics) and the degree of impact on banking activities[6], [7].

According to O.I.Lavrushin, and N.I.Valentseva, risk monitoring is a process of systematic analysis of risk indicators by their types and decision-making aimed at minimizing risk while maintaining the necessary profitability [8].

There is no clear interpretation of the concept of "bank risk monitoring" in the modern banking practice of Uzbekistan. For example, this term is not interpreted at all in economic dictionaries and encyclopedias, in banking legislation, in textbooks on "Money, Credit and Banks", and "Organization of Central Bank Activities".

In short, bank risk monitoring is a functional form of control (in practice, it means risk management in the form of a continuous diagnostic process for monitoring, evaluating, and forecasting the state of bank risks using the

interpreter of measurable indicator parameters) and a system for countering threats of the emergence and development of risks in socially significant areas of financial activity (a system aimed at maintaining the necessary control environment and minimizing risks and their consequences), as well as a form of independent activity at all levels of banking system management (the form of activity of commercial banks, their specialists and special units, organized using tools and methodological techniques).

4. RESULTS

Currently, in ensuring the financial stability of financial institutions, including commercial banks, the main attention is paid to risk analysis, systematization of these risks based on the results of risk monitoring, and elimination of the factors that cause them.

In the world, there are cases of the financial system facing a crisis at a certain time. But, "even in the absence of a crisis, the extraordinary growth of loans over the past 20 years has led to an increase in non-performing loans (NPLs). This can put the economy at risk. If the problem is not solved, the growth of problem assets can even reach critical levels, which in turn can reduce the rate of economic growth and increase unemployment»1. According to the World Bank, "problem assets in 2019 were 9.3 percent in the Russian Federation, 0.9 percent in the United States, 5 percent in Turkey, 1.1 percent in Great Britain, 1.3 percent in Germany, 1.9 percent in China, 9.5 percent in Kazakhstan percent, in Ukraine it was 48.4 percent." As can be seen from these data, accounting and auditing of problem assets in the banking system in the world today is of particular importance and is considered one of the most urgent issues [9].

The purpose of risk management and monitoring in the bank is defined as the creation of appropriate conditions for the conscious acceptance of risks and the elimination of risks arising during banking activities by legal requirements, and the expectations of bank shareholders and investors. The bank sequentially implements risk appetite management measures based on the structure of risk appetite determination and discussion, risk profile indicators, and risk reduction decision-making, which consists of interrelated stages [10], [11].

Based on the above, it can be said that liquidity risk management and monitoring, considered important by commercial banks, consists of the following elements (Figure 1).

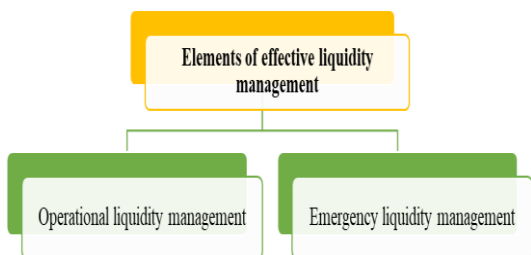


Figure 1. Elements of effective liquidity risk management

and monitoring in commercial banks

Operational liquidity management is a continuous assessment of the bank's current and expected demand for funds and taking measures to ensure that sufficient funds or such funds can be obtained to meet these requirements when necessary.

Emergency liquidity management is to create a sufficient "cushion" to meet unexpected cash flow requirements arising from the occurrence of low-probability and high-impact events that may occur in day-to-day operations and, in rare cases, significantly reduce the safety and resilience of the bank.

Of course, the above structure is not considered to have a general standard appearance. Each commercial bank uses its approaches to risk management and monitoring. In particular, every commercial bank revises strategies and policies for risk management and monitoring, develops and implements policies for managing risks such as liquidity, operational, and market, taking into account transformational processes.



Figure 2. Risk management system in the bank

Special attention is paid to the following:

- 1) taking appropriate measures to identify, prevent and eliminate factors affecting the decline of the bank's financial position by regularly conducting a stress test of the bank's liquidity positions based on a single method;
- 2) Implementation of the new recommendations of the Basel Committee, which envisages wide use of SWOT, GAP analyses, strengthening of requirements for capital adequacy, and formation of reserves for possible losses based on the model of expected losses [12], [13].

Based on the above, according to the results of risk monitoring in the activity of commercial banks, it is possible to assess the exposure of various risks by them in the order below. According to the level of occurrence and significance of several risks, the experts involved can be evaluated in categories such as "probability of occurrence", "amount of damage that can be caused", and "level of elimination".

The results of the expert assessment of the significance level of the risks arising in the activity of commercial banks, which are presented below, show that the risks that occur as a result of financial activities related to credit risks, operational risks, and currency risks are considered to be of high importance in the activity of commercial banks. Also, the results of the expert assessment show the liquidity risk as a moderate risk.

Table 1. Results of expert assessment of the level of significance of the risks encountered in the activity of commercial banks

Expert assessment categories	Types of risks						
	Credit risk	Operationon risk	Liquidity risk	Risk of foreign exchange transactions	Political risks	Legislative risks	Ricks by image and rating
Probability of occurrence	95	90	60	88	75	60	65
Which can be delivered amount of damage	95	80	75	90	95	65	80
Elimination rate (possibility)	65	60	75	60	50	50	85
Total average weight	255	230	210	238	220	175	230
	1548 (total weight)						
Total average weight (100%):	16,4	14,8	13,5	15,3	14,1	11,2	14,8
High importance (80-100 points), (14-20%)	+	+		+	+		+
Medium significant (59-79 points), (12-13,9%)			+				
Low significance (1-59 points), (0,1-11,9%)						+	

According to the results of the expert assessment of the level of significance of the risks encountered in the activity of commercial banks, it is correct to say that credit risks are one of the main problems in the activity of commercial banks of Uzbekistan today.

The analysis of the total loans and non-performing loans allocated by commercial banks in 2017-2021 shows that in 2017 commercial banks provided a total of 110,698.8 billion soums (UZS) to individuals and legal entities, in 2018, 167,400 billion soums, in 2019, 211,580.5 billion soums, in 2020, more than 270,716.5 billion soums were allocated, and in 2021, more than 326,385 billion soums were allocated. That is the loans allocated in 2021 increased by almost 3 times compared to 2017.

On the other hand, the increase of non-performing (problem) loans in the volume of these allocated loans also causes an increase in credit risk in this financial activity. In 2017, the volume of non-performing loans of commercial banks made up 1.2 percent of the total allocated loans and amounted to 1,320 billion soums, and this indicator has increased significantly by 2020. That is, 2.4% of the total loans allocated by commercial banks are recorded as

problem loans.

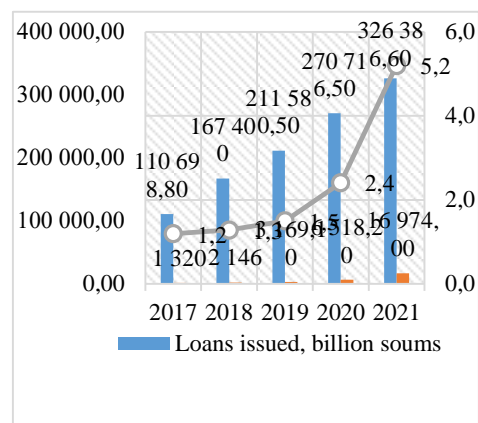


Figure 3. Information on allocated and problem loans by commercial banks [14]

Also, in 2021, this indicator increased by 44%, and the total problem loans of commercial banks in the total allocated loans exceeded 16,974 billion soums. It is appropriate to explain this situation by the fact that the number of allocated loans increased by 94% in 2021 compared to 2017, and that the allocated loans were allocated "insufficient supply and without purpose" for state-targeted programs and sectors. In this regard, the fact that the main share of problem loans corresponds to the contribution of state commercial banks proves these points.

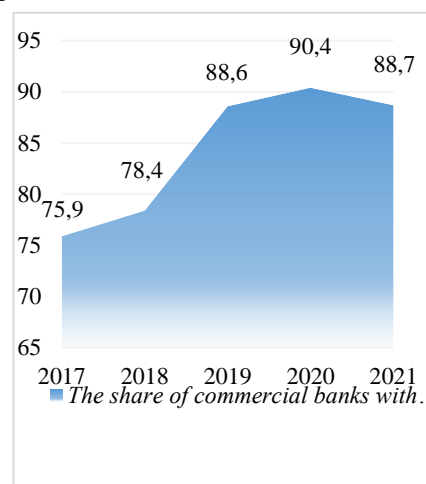


Figure 4. Information on the share of commercial banks in

which there is a state share in the composition of problematic loans of commercial banks [14]

The above results of the analysis of the volume of problem loans corresponding to the share of commercial banks with a state share in the composition of problem loans of commercial banks in 2017-2021 indicate that the main share in the institutional structure of problem loans is occupied by state commercial banks. That is, in 2017, 75.9 percent of the total problem loans of commercial banks belonged to commercial banks with a state share. This indicator was 78.4 percent in 2018, 88.6 percent in 2019, and 90.4 percent in 2020, while this indicator decreased by 1.7 percent in 2021 compared to 2020.

By analyzing these analytical data in the section on commercial banks, it is possible to determine the share of which commercial banks in the volume of problem loans and the state of working with problem loans.

Table 2. Non-performing loans (NPL) of commercial banks as of January 1, 2022 (billion Uzbek soums) [14]

№	Name of banks	Loan portfolio	Problem loans (NPL)	Problem loans total share in their loan portfolio, %
Total		326386	16974	5,2%
Banks with state share		280074	15069	5,4%
1	National Bank	74033	3305	4,5%
2	Uzsanoatqurilishbank	43148	1630	3,8%
3	Asaka Bank	37685	1819	4,8%
4	Agrobank	32258	1495	4,6%
5	Ipoteka Bank	29046	972	3,3%
6	People's Bank	19596	3857	19,7%
7	Rural Construction Bank	17496	749	4,3%
8	Mikrokreditbank	10816	642	5,9%
9	Turon Bank	8129	266	3,3%
10	Aloqa Bank	7754	314	4,1%
11	Poytaxt Bank	80	2	2,2%
12	Uzagroeksport Bank	30	17	55,5%
Other banks		46312	1 905	4,1%
13	Khamkor Bank	9334	105	1,1%
14	Kapital Bank	8030	235	2,9%
15	Silk road Bank	6422	223	3,5%
16	Invest Finance Bank	3774	57	1,5%
17	Orient Finance Bank	3627	29	0,8%
18	Trust Bank	2744	51	1,8%
19	Davr Bank	2157	22	1,0%
20	Asia Alians Bank	1903	144	7,6%
21	Tenge Bank	1725	121	7,0%
22	KDB Bank	1557	0	0,0%
23	Savdogar Bank	859	90	10,5%
24	Ziraat Bank	858	21	2,5%
25	Universal Bank	767	6	0,8%
26	Turkistan Bank	686	480	69,9%
27	Anor Bank	612	6	0,9%
28	Ravnak Bank	567	132	23,2%
29	TBC Bank	345	17	4,8%

30	Madad Invest Bank	169	20	11,8%
31	Hi-Tech Bank	160	148	92,7%
32	Soderot Iran Bank	14	0,1	0,6%
33	Apelsin Bank	0,0	0,0	0,0%

As of January 1, 2022, the volume of non-performing (problem) loans of commercial banks amounted to 16,974 billion soums. The analysis of problem loans in the section of banks shows that Xalq bank (19.7%), Mikrokreditbank (5.9%), and Uzagroexportbank (55.5%) are leading the share of problem loans in their loan portfolio. Also, as of January 1, 2021, the total loan portfolio of Uzsanoatqurilishbank, which is considered an object of research, is 43,148 billion soums, of which 3.8 percent or 1,630 billion soums are non-performing loans.

By analyzing the total assets of Uzsanoatqurilishbank, one of the banks with a state share, and the level of exposure to the risk of these assets, it is possible to analyze the credit risk monitoring activities of this commercial bank.

The analysis of the level of exposure to the risk of the total assets of Uzsanoatqurilishbank, which is the object of the study, in 2017-2021 shows that in 2017, during the implementation of risk monitoring in the bank's activities, more than 57 percent of the total bank assets were the part exposed to risk, and in 2018, this indicator was 66.6 percent.

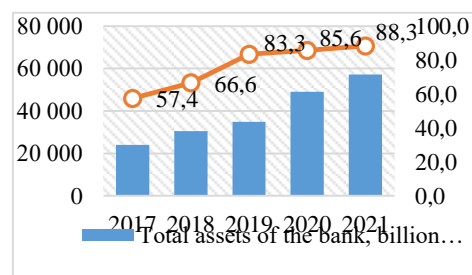


Figure 5. The risk level of total assets of "Uzsanoatqurilishbank" ADB [14]

Also, the level of exposure of bank assets to risk was 83.3% in 2019, 85.6% in 2020, and 88.3% in 2021. In 2021, the risk exposure of assets increased by 30.9 percent. An increase in this indicator, in turn, means an increase in credit risk. At the same time, calculating the risk level of assets is one of the important elements of bank risk monitoring.

5. CONCLUSION

The object of this research "Uzsanoatqurilish" ADB during the scientific study of the main problems in monitoring bank risks proposed to develop an advanced method of Advanced Measurement Approaches in assessing bank capital to compensate for unexpected losses resulting from

operational risks calculated by bank risks. The proposal is reflected in the "Instructions on the organization of risk management activities at Uzsanoatqurilishbank" approved by decree No. 152/6 dated December 20, 2021. As a result of the implementation of this proposal, the operational risk assessment criterion for bank risk monitoring has been improved based on advanced foreign experiences.

Advanced Measurement Approaches (AMA) – is one of three important operational risk methods that can be used by a bank or other financial institution under Basel II. The first approach is the approach of analyzing the main indicators of the bank and the second approach is the standardized approach. Under the AMA, banks are allowed to develop their empirical model to determine the amount of capital required for operational risk. Banks can use this approach only with the approval of local regulatory authorities.

Based on the above, it can be said that it is important to analyze and monitor risks in the activities of commercial banks. Currently, the contribution of commercial banks with a state share in the number of total loans allocated by commercial banks is high, it is necessary to monitor the risks in the activities of these banks and take immediate measures to reduce these risks based on the monitoring results.

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