



STATISTICAL ANALYSIS OF PROBLEMS RELATED TO ENSURING THE STABILITY OF THE BANKING SYSTEM



Urunov Ravchanbek Sadullayevich

E-mail: ravshanbekurunov071@gmail.com

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Аннотация: Банк тизимининг барқарорлигини таъминлаш уларнинг тўловга қобиллигини таъминлашнинг муҳим омили бўлгани ҳолда, мамлакат иқтисодиётида амалга ошириладиган тўловларнинг узлуксизлигини таъминлашнинг зарур шarti ҳисобланади. Шу сабабли, банк тизимининг барқарорлигини таъминлаш банк назоратининг асосий объектларидан бири ҳисобланади. Мақолада Ўзбекистон Республикаси банк тизимининг барқарорлигини таъминлаш билан боғлиқ бўлган муаммоларни долзарб муаммолар аниқланган ва уларни ҳал қилишга қаратилган илмий таклифлар ишлаб чиқилган.

Аннотация: Обеспечение устойчивости банковской системы, будучи важным фактором их стабильной платежеспособности, является необходимым условием обеспечения непрерывности платежей, осуществляемых в экономике страны. Поэтому формирование устойчивости банковской системы является одной из основных задач банковского надзора. В статье выявлены актуальные проблемы, связанные с обеспечением устойчивости банковской системы Республики Узбекистан и разработаны научные предложения, направленные на их решение.

Abstract: Ensuring the stability of the banking system, as an important factor in ensuring their solvency, is a necessary condition for ensuring the continuity of payments made in the country's economy. Therefore, forming the stability of the banking system is one of the main tasks of banking supervision. The article identifies urgent problems related to ensuring the stability of the banking system of the Republic of Uzbekistan and develops scientific proposals aimed at solving them.

Калит сўзлар: Марказий банк, пул-кредит сиёсати, тижорат банклари, кредит, депозит, молиявий барқарорлиги.

Ключевые слова: Центральный банк, денежно-кредитная политика, коммерческие банки, кредит, депозит, финансовая устойчивость.

Key words: Tsentralnyy bank, denejno-kreditnaya policy, commercial bank, credit, deposit, financial stability.

Introduction. Today, a number of activities are being carried out in our country to improve the efficiency of the banking system, which are specified in the Decree of the President of the Republic of Uzbekistan dated January 28, 2022 "On the Development Strategy

of New Uzbekistan for 2022-2026" No. PF-60. In particular, issues such as "ensuring that the growth rate of credit investments in the economy (16-18 percent) is proportional to the growth rate of the nominal size of the gross domestic product, in particular, attracting foreign bank loans of 486.0 million dollars within the framework of 13 investment projects by the end of 2022" placed[1].

Therefore, ensuring the stability of the banking system is one of the main objects of prudential banking supervision. In any economy where market mechanisms are introduced, the activity and financial stability of commercial banks is controlled and regulated by the Central Bank of the country. At the same time, in some developed countries, independent mega-regulators are engaged in the implementation of appropriate control over the activities of banks, strengthening of solvency and regulation.

Of course, the Central Bank and mega-regulators in foreign countries have great experience and positive results in ensuring the financial stability of banks and strengthening their solvency. However, as a result of the increasing globalization of the world economy and the deepening of the division of labor between countries, financial and economic crises of various levels do not affect the financial stability and solvency of foreign banks. In particular, this can be observed in the socio-economic processes and conflict situations that occurred as a result of the global financial and economic crisis that occurred in the United States in recent years.

The ultimate goal of any country in the field of economy is to ensure stable economic growth, high employment, stable domestic prices. This goal is achieved in the process of development and implementation of economic policy. Monetary policy, budget policy, price policy, wage and employment policy are important components of economic policy.

Banking activities are strictly regulated and controlled in all countries. After all, banks actively participate in the country's financial system by mobilizing capital in the country and providing loans. And of course, the main purpose of control is to protect the interests of the country as well as its population.

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actively participate in the country's financial system by mobilizing capital in the country and providing loans. And of course, the main purpose of control is to protect the interests of the country as well as its population. Of course, it is very important for a financially stable bank to recover quickly and remain strong in the market in case of any difficult, big losses.

V.G. In his research, Artemenko connects stability with solvency and provides an assessment of their financial stability on the basis of absolute and several indicators. Solvency of economic entities puts forward the conclusions that the timely fulfillment of payment obligations, as well as financial stability is evaluated based on the analysis of cash flows[2]. At the same time, it seems that there is no connection between the stability of banks and their reliability in this system of indicators.

O.V. Efimova recommends that it is necessary to use other indicators of financial stability in her research. In the scientist's opinion, this system of generalized indicators should include the capital profitability indicator, which shows the increase in banks' capital, as the second indicator, the share of capital in the volume of gross liabilities, as well as by comparing the asset structure, capital turnover, profitability, fixed and variable costs when assessing financial stability. gives conclusions[3].

It should be noted that using the system of indicators listed above, we believe that it is possible to assess the financial stability of banks through the level of capital adequacy and profitability, the share of capital in assets.

Although the scientists studied from the above studies did not distinguish reliability with separate indicators in their research, they consider it as a conclusion that it is interrelated with the indicator of financial stability.

In our opinion, it is appropriate to assess the financial stability of commercial banks through the system of capital adequacy, its profitability and ratio to assets, as well as liquidity, solvency, profitability and reliability indicators, which have a positive effect on financial stability.

Studying the methodology of ensuring the financial stability of commercial banks of international financial organizations, forming relevant conclusions from these methodologies is one of the urgent issues. Therefore, we will first of all consider the indicators recommended by the International Monetary Fund and their important aspects. The International Monetary Fund has been publishing Financial Soundness Indicators (FSI) of a basic and advisory nature. 12 of the indicators of financial stability are the main indicators, while 26 are indicators of a recommendatory nature. Among the main indicators of financial stability are: capital adequacy indicators, asset quality, profit and profitability, liquidity, market risk sensitivity, among the indicators of a recommendatory nature are banks, as well as other financial institutions, corporate companies, households, the market liquidity, intended for the real estate market[4].

Results. Systematic work was also continued in the direction of ensuring the stability of the banking system, which was defined as one of the main goals of the Central Bank . In this direction, the main attention was focused on satisfying the economy's demand for financial resources within the framework of real growth rates and ensuring that the indicators of financial stability in the banking system are at an acceptable level.

166.7 trillion for the purposes of financial support for the population and business entities . Soums or 1.3 times more loans compared to 2020 .

As part of the measures to mitigate the negative effects of the pandemic on the economy, activities have not been fully restored in 2021 21.4 trillion of 14,647 economic entities . repayment periods of potentially problematic loans of soums were repeatedly extended by 3-6 months. 4.1 trillion of banks in 2021 in order to prevent the increase of credit risks in the banking system . Soum revenues were directed to the formation of reserves against possible losses.

Table 1 _**Non-performing loans (NPL) of commercial banks [5] , billion soums**

The date	Credits			Non-performing loans (NPLs)		
	Total	from which:		Total	from which:	
		banks with state share	other banks		banks with state share	other banks
1	2	3	4	5	6	7
01.01.2021	276 974.8	244 483.9	32 490.9	5 784.8	5 167.6	617.2
01.02.2021	277 754.6	245 001.2	32,753.4	7 487.0	6 858.1	628.9
01.03.2021	280 214.7	246 631.5	33 583.1	7 844.3	7 226.1	618.2
01.04.2021	283 485.1	249 302.8	34 182.2	10 177.9	8 440.9	1 737.0
01.05.2021	292,029.0	256,648.7	35 380.3	12,932.7	11 188.0	1 744.7
01.06.2021	297 777.9	261 488.6	36 289.3	14,006.7	12 214.4	1 792.3
01.07.2021	300 459.4	261 194.7	39 264.7	16,793.7	14 718.1	2 075.6
01.08.2021	302 692.8	262 384.6	40 308.2	18,888.5	16,715.1	2 173.4
01.09.2021	307 204.2	265 479.2	41 725.1	18 474.2	16 310.8	2 163.5
01.10.2021	311 590.6	268,938.8	42,651.8	18 126.0	15,844.9	2 281.0
01.11.2021	316 200.2	272 401.6	43,798.6	18,017.0	15,670.4	2 346.6
01.12.2021	320 812.5	275 757.2	45,055.3	18 392.1	16 117.8	2 274.2
01.01.2022	326 385.6	280,073.6	46 311.9	16,974.0	15,068.8	1 905.2

It should be noted that the high level of lending growth rate serves to support economic growth, but also leads to an increase in problem loans in the banking system. In this regard, banks and the government are taking appropriate measures to prevent the negative impact of problematic loans in the credit portfolio of the banking system on the financial stability of banks. As a result, the return of loans rate increased from 59 percent to 71 percent in 2021 . The resource base of banks is 66 trillion compared to 2020. increased to soums or 22 percent. In particular, the volume of long-term deposits in national currency increased by 1.8 times as part of the banking system's resources . As part of the active implementation of macroprudential policy instruments and ensuring financial stability, the practice of regularly monitoring the population's debt burden on bank loans has been established.

Table 2 _**Composition of resources of commercial banks [6] , billion soums**

Indicator name	01.01.2020		01.01.2021		01.01.2022	
	billion soum	share, in percent	billion soum	share, in percent	billion soum	share, in percent
1	2	3	4	5	6	7
Obligations						

Deposits	91 009.0	41.1	114,746. 9	37.3	156 189.8	41.8
Accounts of the Central Bank	1 686.6	0.8	1 089.2	0.4	708.8	0.2
Funds of other banks - residents	9 869.4	4.5	13 001.4	4.2	13 288.6	3.6
Funds of other banks - non-residents	922.3	0.4	3 175.4	1.0	4 670.8	1.2
Loans and leasing	105 252.2	47.5	151 704.0	49.3	173 750.3	46.5
Securities issued	2 872.7	1.3	9 523.0	3.1	10,612.7	2.8
Subordinated debts	3 978.3	1.8	3 999.5	1.3	4 248.5	1.1
Accrued interest payable	2 331.2	1.1	3 714.8	1.2	3 960.0	1.1
Other obligations	3 774.5	1.7	6 815.6	2.2	6 575.4	1.8
Total liabilities	221 696.0	100.0	307 769.9	100.0	374 004.9	100.0
Capital						
Authorized capital	41,877.0	82.1	44 655.8	76.5	54,760.0	77.2
Additional capital	142.7	0.3	434.6	0.7	675.5	1.0
Reserve capital	3 844.5	7.5	5 205.9	8.9	8 452.2	11.9
Retained earnings	5 166.4	10.1	8 055.0	13.8	7,029.9	9.9
Total capital	51 030.7	100.0	58 351.3	100.0	70,917. 6	100.0

for the formation of a capital buffer in the amount of 1.5-2 times the amount of loans allocated at high interest rates and which have become a problem have been put into practice. The activities of commercial banks have been subjected to stress tests in various scenarios, and measures to reduce risks that will negatively affect their capital and liquidity in the future. is being considered. By the end of 2021, the capital adequacy ratio in the banking system will be 17.5 percent, which is higher than the minimum requirement (13 percent).

Debate. When implementing the financial stability of the banking system, it is necessary to pay attention to the bank rating, and the bank rating directly affects the financial stability. Without a rating, neither the whole practical life nor personal life can be imagined.

Rating is a final assessment of a specific object or entity and is an extremely important decision-making tool. Because, let's say, he shows the banker the direction of the bank's development, the revival of business, and therefore the possibilities of profit. Also, the rating system:

- banks activities international in practice acceptance done norms based on comparative analysis doing ;
- this of the bank financial in the market position , prestige , as well as problematic banks in determining ;
- banks in development trends _ _ _ _ observation , summarizing and private of indicators dynamics analysis doing ;
- It is very important in evaluating the efficiency of banks.

With the help of the rating method, which takes into account the wishes and desires of all interested parties, it is possible to get answers to such questions as where the savings of the population are more, in which banks are placed at what interest rates, what is the situation regarding deposits, and to what extent certificates and shares are purchased.

In international practice, there are many types of assessment of bank ratings. Among them, the following two methods are most common:

- evaluation through quantitative indicators;
- evaluation through quality indicators.

Quantitative indicators The evaluation method is mainly used to analyze the development of banks' activities, which include:

- amount of assets;
- deposits;
- loans;
- the amount of equity capital;
- amount of income.

Banks' activities are publicized through these indicators.

The second type of evaluation with the help of mass media is qualitative indicators, which represent the level of reliability of the bank. These indicators include: adequacy of capital, quality of assets, level of profitability, bank liquidity.

Bank reliability in foreign countries is controlled by the government. Compliance with a number of regulatory documents to ensure the reliability of banks is monitored. There are several systems for evaluating the activity of commercial banks in world practice. For example, several countries use several systems for risk assessment and diagnosis. Some of them identify existing problems, while others provide information on possible future approaches based on current risks.

In general, such systems solve the following tasks:

- official evaluation of credit institutions in the framework of inspection and remote monitoring in a unified system;
- identification of banks and areas where problems exist or may arise;
- determining the priorities of inspections for the optimal distribution of the resources of control agencies;
- to organize the timely start of work of the control body.

below, we present the systems used in various developed countries.

Table 3
Early diagnosis and risk assessment systems[7]

Country	Control organ	System	The year the system was introduced	System category
France	Bank commission	ORAP	1997	Remote Monitoring (UM)
Germany	Federal control organ	BAKES	1997	Financial ratios and group analysis system

Italy	Bank of Italy	PATROL	1933	UM, rating system of assessment
The Netherlands	Bank of the Netherlands	TRUE	1999	A comprehensive system of risk assessment
England	Management of financial services	RATE	1998	A comprehensive system of risk assessment
USA	All control organs	CAMELS	1978	On-the-spot rating based on inspection results.

The systems differ from each other in the following characteristics: the depth and periodicity of inspections, the nature of reports, the availability of access to other authentic sources, statistical information about past recessions and bankruptcies, the level of technical support, money and human factors.

According to a study conducted by the Bank of International Settlements, the diagnostic system can be divided into four broad categories based on its formal features:

- rating system of banks;
- financial ratios and group analysis systems;
- gross banking risk assessment systems;
- statistical models.

Using multiple systems increases the likelihood that at least one of them will identify a problem bank. Quality assessment of systems is mainly carried out with the help of a computer. In some of them, expert judgments take the main place, while in others, calculations of computer programs prevail.

The rating is given mainly based on the results of the bank's annual activity. One of the methods of bank evaluation (audit) that has taken place in international practice today is the "CAMEL" rating system. In 1978, the experts of "Sheshunoff Bank", one of the US banks, developed a method of analyzing and evaluating the bank's activity based on the following 7 groups of factors : the growth of the bank (development), the category of the bank (entering the bank's activity into a certain group), investments in areas with a high level of risk, the reliability of the bank (its "capital" position), the amount and trends of problematic loans, sources of income, general profitability compared to other banks, large "unstable" liabilities level of the bank. Considering all these factors as important, bank experts pay special attention to the last 5 of them (4th, 7th) and their initials have been combined into "CAMEL" - factors. CAMEL" rating system was founded. According to this evaluation method, the factors are described as follows. Once these five components are determined, it becomes possible to determine the final overall rating of the bank. The main aspects of the CAMEL rating system can be seen in the following:

Table 4

Description of "CAMEL" factors [8]

No	Factors	Explanation
1.	"C" (Capital adequate en cy)	• Capital adequacy , that is, the amount of private capital required by the bank to guarantee its customers. Banks with sufficient capital will not allow customers to part with their money even in the face of serious losses.

2.	"A" (Asset quality)	• Asset quality. This factor determines the financial impact of problem debts based on the level of assets and off-balance sheet items, as well as the classification of doubtful assets and losses.
3.	"M" (Management quality)	• Quality of bank management. With the help of the analysis of this indicator, the level of compliance with work efficiency, bank policies, laws and guidelines is evaluated. And on this basis, it is determined to what extent the bank's policy has been formulated in accordance with the purpose, whether it is documented in a written manner, and whether it is followed. Therefore, the analysis of management quality is done at the end.
4.	"E" (Earning records)	• Bank profitability. This is a factor that describes the bank's income or profit from the point of view of being sufficient for future growth.
5.	"L" (Liquidity)	• Liquidity level of the bank. This is an indicator that describes whether the bank is provided with sufficient funds to meet normal and unexpected obligations without losses.

The CAMEL system is particularly useful for external audits of banks, as it is based on on-site inspections, as opposed to the European method, which relies more on remote monitoring.

Summary.

1. On the one hand, the financial stability of commercial banks is focused on expanding and increasing the bank's financial activities, on the other hand, investment in various industries and sectors for the development of the economy requires strict attention to issues such as assessing the liquidity of commercial banks. Determining the ways and methods of ensuring the financial stability of the bank is of particular importance, and the bank should carry out its activities smoothly, and its activities should be closely aligned with the goals of achieving long-term positive results.

2. The main purpose of bank supervision is to protect the interests of bank customers and creditors. Adequacy and effectiveness of control over the activity of banks is the main factor for ensuring the stability of the banking system and strengthening confidence in banks. Due to the increased risk of bank failure in recent years, it is necessary to continuously monitor the banking activity. By the 80s of the 20th century, the banking supervision system began to take shape at the international level, and at the same time, the Basel Committee on Banking Supervision was formed. Considering the high-speed development and integration of the banking system, the requirements of this committee are increasing year by year.

3. Rating is a final assessment of a specific object or subject, and is considered an extremely important decision-making tool. Because, let's say, he shows the banker the direction of the bank's development, the revival of business, and therefore the possibilities of profit.

4. The rating is given based on the results of the bank's annual activity. "CAMEL" rating system is one of the methods of bank assessment (audit) that has taken place in international practice today.

References:



1. [https://lex.en/docs/5841063\](https://lex.en/docs/5841063)
2. Artemenko V.G., Belendir M.V. Financial analysis. - M.: DIS, 1999. - p. 2 27.
3. Efimova O.V. Financial analysis. - M.: Bukhgaltersky uchët, 1999 - p. 341 .
4. <https://www.imf.org/external/pubs/ft/fsi/guide/2006/pdf/rus/guide.pdf>
5. www.cbu.uz - information of the Central Bank of the Republic of Uzbekistan
6. www.cbu.uz - information of the Central Bank of the Republic of Uzbekistan
7. " Bozor , money, credit" magazine, 2001, issue 12, page 14 .
8. "Banking", T. Koraliev, Yo. Abdullaev. Tashkent, 2009.
9. Rakhmanov, M. . (2023). Economic-Mathematical Modeling of the Activity of Commercial Banks. Web of Semantic: Universal Journal on Innovative Education, 2(4), 339–342. Retrieved from <http://univerpubl.com/index.php/semantic/article/view/1342>
10. Rakhmanov, M. . (2023). Economic-Mathematical Modeling of the Activity of Commercial Banks. Web of Semantic: Universal Journal on Innovative Education, 2(4), 339–342. Retrieved from <http://univerpubl.com/index.php/semantic/article/view/1342>
11. Turaeva, Z. T. (2022). EVALUATION OF UZBEKISTAN'S INDUSTRIAL PRODUCTION POTENTIAL. Central Asian Academic Journal of Scientific Research, 2(6), 68-73.
12. Turaeva, Z. T. (2021). STATISTICAL ANALYSIS OF EFFICIENCY IN THE FIELD OF SMALL BUSINESS AND PRIVATE ENTREPRENEURSHIP. Scientific progress, 2(6), 1458-1462.
13. Urunov Ravshanbek Sadullaevich. (2022). DESCRIPTIVE STATISTICS IN THE EVALUATION OF SUSTAINABLE DEVELOPMENT OF REGIONS. Galaxy International Interdisciplinary Research Journal, 10(6), 243–247. Retrieved from <https://giirj.com/index.php/giirj/article/view/3616>
14. Urunov , R. S. . . (2022). STATISTICAL ANALYSIS OF SUSTAINABLE DEVELOPMENT OF TERRITORIES IN THE DIGITAL ECONOMY (ON THE EXAMPLE OF KHOREZM REGION) . Евразийский журнал права, финансов и прикладных наук, 2(4), 60–66. извлечено от <https://in-academy.uz/index.php/EJLFAS/article/view/1353>