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Indicators Descriptive of the Stability of the Banking System and their Comparative Analysis

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Abstract: This article describes the researches conducted on ways to ensure the stability and security of the banking system in the conditions of digitization. While intensive reforms are being carried out to ensure the stability and security of the banking system in the context of digitization, issues of regulating relations between its participants are emerging as an important direction. Also, in the banking system of the Republic of Uzbekistan, a lot of work is being done by the Central Bank to increase the stability of the banking system and improve its economic security. The concept of bank security, the concept of stability of the banking system, its essence and functions, their classification, the possibilities and prospects of using foreign experiences in the regulation of financial security by banks are presented.

Key words: banking system, banking stability, economic security, indicators of the level of economic security of the banking system, level of competition in the banking market, regulation and control of banking activities by the Central Bank.

Introduction

Particular attention is being paid to current issues such as attracting foreign investors by ensuring and increasing the stability of the banking system in the world, ensuring the entry of banks into the international financial and banking markets, achieving the ratings of internationally recognized companies, and improving the methodology of financial stability. According to the report of the International Monetary Fund, 4 commercial banks in the United States (Silicon Valley Bank, Signature Bank, First Republic Bank, Heartland Tri-State Bank) will go bankrupt in 2023, their total assets are 548.6 billion US dollars, the amount of deposits is 367, It amounted to 6 billion US dollars. Credit Suisse, one of Switzerland's largest banks, has seen net asset outflows of $68.6 billion. The Swiss National Bank (SNB) Credit Suisse provided 54 billion US dollars for emergency short-term liquidity support of the bank. As a result, UBS bank bought Credit Suisse for $3.2 billion. It is necessary to increase confidence in the banking system by ensuring the stability of the banking system, establishing its clear norms, accelerating the integration of the banking system into the world financial system, and increasing its financial stability.

Today, in the conditions of digitization of the banking system in the world, achieving economic growth by ensuring the stability of the banking system, increasing the profitability of the banking system by reducing banking risks, improving the methodology of financial stability coefficients, ensuring the growth of profitability indicators of banks, in banking activities special attention is paid to scientific research aimed at improving the efficiency of the banking system by reducing problem loans . To determine the stability of the banking system, use of modern models, stress tests, to ensure the financial stability of the bank, the amount of the reserve formed on the allocated loans does not exceed the specified limit of the allocated loans, classification of highly liquid assets by the share of total assets in order to increase the efficiency of liquidity risk management, scientific research is being conducted in areas such as the use of methods widely used in international practice to determine the stability of the banking system.

Literature review

Financial stability of commercial banks and the methodological bases of its provision were scientifically studied by foreign and local economists and reasonable scientific conclusions were formed.

According to the conclusion of Professor F. Mishkin of the Columbia University of the USA, it is necessary to pay attention to financial innovations in order to ensure the stability of commercial banks. A significant fluctuation of interest rates is an important economic factor that directly and strongly affects the change in demand for financial products‖8. These thoughts of the scientist bring up issues that are extremely relevant today. In particular, banks must offer innovative banking products and services to achieve financial stability in the face of fierce competition. In our opinion, an important source of financial stability today is a wide network and quality of innovative banking services and products (F. Mishkin, 2013).

Prof. O. Lavrushin's monograph entitled Stability of the Banking System and Development of Banking Policy offers the following methods of ensuring the stability of the banking system:

- development of complex arrangements for regulation and control of systemic risks in the banking system;
- development of qualitative and quantitative indicators of financial stability;
- benefit from scenario modeling of systemic risks;
- development of stress-testing practice of commercial banks (O. Lavrush, 2016).

According to him, in ensuring the financial stability of commercial banks, the main focus should be on the regulation and control of bank risks, the establishment of minimum requirements and regulations for financial stability, and the need to focus on the use of various modern models in banks. asked. It also focuses on conducting stress tests in banks, which are widely used in recent years.

This conclusion of O. Lavrushin fully covered the stability and management of banks, but as an addition, the effective use of quantitative analysis methods in determining and comparing the financial situation of banks, and comparing them by dividing them into groups would have filled it.

According to F. Mishkin, "financial stability is the ability of the financial system, in particular, the system of financial markets and financial institutions to perform its basic functions in unstable economic conditions (F. Mishkin, 2013).

In this view, the need to pay attention not only to the financial sector, but also to the policy related to the regulation and promotion of the banking system by the state was not taken into account.

According to economists L. Laven and G. Maunoni, "banks that make sufficient reserves to strengthen financial stability in the period of economic growth can minimize the negative consequences of economic recession and keep credit supply at a high level (Laeven, L., & Majnoni, G. (2003))). These comments are reasonable, and the formation of reserves for the crisis situation by the banks and the reduction of losses at their expense serves to maintain the stability of the banks. However, it did not always serve to maintain the high level of loan offers by banks. Because, in the era of globalization, the crisis-related situations of one entity, especially commercial banks, affect the activities of entities in various sectors and sectors of the economy. For this reason, it would be appropriate to interpret the above view in a relative manner.

In K. Surovneva's scientific research, the financial condition of the bank affects its activity in all other areas, as well as financial stability. The bank's financial stability depends on its liquidity, he said. Stability of commercial banks Reforms in the banking sector in the country and decisions related to the management of the banking system can affect the financial stability of commercial banks (Surovneva K., 2018).

A. Abdullayev, one of the local economists, described the mechanism of assessing the level of liquidity of commercial banks as necessary to ensure financial stability of the banking system based on systematic methods. The idea put forward by this scientist envisages the use of systematic methods in assessing the liquidity and financial stability of commercial banks. However, the order and sequence of taking into account Aunan Causian criteria as evaluation mechanisms have not been clearly revealed (A.Abdullayev, 2019).

According to Professor O. Lavrushin, "when evaluating the financial stability of commercial banks, the main attention should be focused on grouping and composition and analysis, only then it is possible to make a realistic assessment of the level and stability of the funds obtained from each group of operations." The aspects mentioned by the scientist are noteworthy. Of course, by grouping the influencing factors in the assessment of financial stability, it helps to determine their composition and structure, to reveal the systematized state of the activity in general, and to create an idea about them (O. Lavrush, 2016).

Research methodology

Economic research methods were used to systematically analyze the data using a systematic approach to studying the problem.

The methodological basis of the research is formal logic, statistical and comparative analysis methods, systematization, classification and effort assessment, grouping, comparative method and content analysis, graphical interpretation methods, etc.

Analysis and results

In this paragraph, we consider the basic financial stability indicators (MBK) for commercial banks and how they are calculated. In international practice, most financial institutions recommend obtaining sustainability indicators from network financial reports.

Many financial sustainability indicators are determined by the ratio of two key indicators. In the calculation, it is necessary to use data with the same periodicity for the rate and the denominator, depending on the ratio being calculated, they should be the flows recognized during the period, the end of the period or the average period positions. Countries may differ in the selection of indicators and in the normative setting.

17 basic criteria and 12 additional criteria for commercial banks, which are the minimum set covering the most important indicators of the International Monetary Fund 's stability . m o liuaviu recommends compiling k o 'indicators. However, in order to assess the sustainability of the financial sector more broadly, it is necessary to fill them with additional indicators of financial stability .

Ratio of regulatory capital to risk assets

This indicator measured the ability of commercial banks to withstand various adverse situations and adverse shocks and to cover unexpected losses .

Companies rely on national regulatory definitions of capital structure and components and specifications of risk factors . The metadata should identify the following:

(1) the jurisdictional version of the Basel Capital Accord has been revised ;

(2) use the various elements of freedom granted to the state in the Basel standards, if any

(3) any deviations from the applicable Basel standard (other than those elements of State discretion).

This indicator is a coefficient, where the multiplier is total regulatory capital (regulatory capital), and the denominator is risk-weighted on-balance sheet and off-balance sheet assets.

Regulatory capital refers to the regulatory definition of capital developed by the Basel Committee on Banking Supervision and differs from accounting capital and reserves. Undisclosed reserves and valuation adjustments may be included in additional capital subject to certain limits.

Indirect balance goodwill included in the capital is deducted from the regulatory capital. In addition, the definition includes several types of subordinated debt instruments that meet specified limits, as well as general reserves up to specified limits. Control deductions are applied to various components and parts of regulatory capital, subtracted from its total amount.

Risk-weighted assets refer to the bank's risk-weighted assets (credit, market and operational risks) and off-balance sheet risks. The adopted regulatory framework (Basel I, II or III) defines a specific method of calculating assets at risk. Basel I adopted a simple and straightforward method of weighting assets with five predefined factors for credit risk. Basel II introduced additional factors and some qualitative risk assessment in standardized risk assessment, as well as advanced risk measures based on internal models. Basel III introduced a detailed comparison of the risk level (weight) and external rating alternatives in the standardized assessment.

The Basel Committee has set a minimum regulatory capital of 8 percent of risk-adjusted assets for all internationally active banks. Basel III effectively raised this minimum to 10.5 percent by introducing a 2.5 percent capital buffer. National regulators may require higher ratios and have the freedom to set specific standards for their economies.

on the National Bank, the National Bank of Switzerland contributes to the stability of the financial system. It performs this task by analyzing sources of risk to the financial system and identifying areas where action is needed. The Swiss National Bank is less involved in the international arena, particularly in connection with the efforts of the Basel Committee to establish and implement the regulatory and legal framework for the financial center. In addition, Swiss National Bank designates banks of systemic importance and performs tasks in the field. It also oversees structured fixed-income market infrastructures that may pose risks to financial stability. In times of crisis, Swiss National Bank fulfills its mandate as a lender of last resort when necessary. However, Swiss National Bank is not responsible for bank supervision. This authority belongs to the supervisory authority of the Swiss Finance market.

Table 1

Indicators of financial stability of the Swiss banking system

Banking system stability indicators	2017	2018	2019	2020	2021
Total assets of the top 5 banks, %	84.3	84.4	84.3	84.0	84.2
Ratio of bank capital to total assets (%)	8.0	8.3	8.6	8.1	8.2
Bank concentration (%)	67.1	66.8	66.7	65.7	65.6
The ratio of bank expenses to income (%)	82.1	81.0	118.2	75.8	94.5
Bank Net Interest Margin (%)	0.9	0.7	0.8	0.8	0.8
Share of non-interest income of the bank in total income (%)	66.3	69.8	68.6	71.3	71.0
Share of problem loans in total loans (%)	0.6	0.7	0.6	0.7	
The ratio of the bank's total expenses to total assets (%)	1.9	1.7	2.4	1.7	2.0
The ratio of bank regulatory capital to risk assets (%)	18.6	18.6	19.3	19.7	
Return on Bank Assets (%)	0.4	0.4	-0.2	0.4	0.1
Bank return on capital (%)	4.6	4.1	-2.4	5.9	1.3

Source: Compiled by the author.

From this table 1, which analyzes the level of stability of the Swiss banking system, we can see that the stability has decreased in the last five years. In particular, the profitability of bank assets decreased by 0.3 percentage points to 0.1 percent, and the profitability of capital decreased by 4.6 percentage points to 1.3 percent. In turn, bank expenses have increased.

The horrors of the US banking system reached Europe with the acquisition of one of the leading Swiss banks by its traditional rival, UBS. The reasons for Credit Suisse's failure are different from those of Silicon Valley Bank, but may have more implications for bank management in the future. Credit Suisse's failure was one of the biggest after the global financial crisis of 2007-2009. The collapse of the bank was a test of the ability of the Swiss authorities to cope with such an event. Credit Suisse's merger with UBS raises questions about the sustainability of regulatory reforms and the structure of the Swiss banking sector going forward.

At its peak in 2007, Credit Suisse was worth 100 billion Swiss francs. On March 19, 2023, it agreed to buy UBS for a total of 3 billion francs. It was a sad state of affairs for an institution that has been in operation since 1850 and is seen as one of the cornerstones of the Swiss economy. Bank failures often result from miscalculation of risks.

Credit concentration (aggregation) by economic activity

Credit concentration by economic activity is aimed at measuring the credit risk associated with excessive concentration of credit in a certain domestic sector or activity. A large concentration of total credit exposure for an economic sector or activity may indicate the vulnerability of commercial banks to the level of activity, prices and profitability in that sector or sector. If banks find themselves in sectors with excessive credit concentration, the quality of their loan portfolio will deteriorate and their financial stability will have negative consequences.

Data on loans include total loans (ie, before special provisions for loan losses) and non-performing loans. The availability of information on economic activity loans may differ depending on the control practice. If the International Standard Industrial Classification (ISIC) data for all economic activities is not available, use the equivalent national classification of the economic activity.

Assets (ROA)

The next indicator of financial stability is return on assets (ROA), which provides information on the profitability of commercial banks in relation to total assets and shows how effectively banks manage their assets to generate income.

This indicator is the coefficient of net assets and total (liquid and non-liquid) assets. The most appropriate definition of net profit is the definition of net profit before taxes (pre-tax profit), because it is not affected by differences in different tax rates between countries and therefore facilitates cross-country comparisons.

Return on assets is the ratio of net profit to total assets for a given period, and this indicator is calculated according to various calculation methods.

Equity (ROE)

The return on capital (ROE) indicator is designed to measure the efficiency of commercial banks' use of capital. It also provides information on the ability of banks to raise capital internally through unallocated funds and the attractiveness of the sector for further investments.

Since this financial stability indicator is a ratio of net income and total capital and reserves, it depends on different methods of calculation that give different results. The International Monetary Fund recommends taking net profit after taxes because it shows the net operating income available for capitalization and distribution of profit.

Conclusion

Based on the opinions, judgments of economists, experts and our researches, we can conclude that it is appropriate to take measures to ensure the stability and security of the banking system in the conditions of digitization. In this case, analyzing the composition of assets and liabilities from the point of inconsistency in terms of volume and repayment periods, carrying out appropriate asset and liability operations in order to bring assets and liabilities into conformity in terms of amount and repayment periods can give positive results.

the stability and security of the banking system in the context of digitization, it is necessary to strengthen cyber security, data encryption, introduce risk management systems, inform customers and improve the regulatory environment. By using modern technologies such as blockchain and constantly updating security standards, banks can achieve stability and security in the digital financial environment.

The following suggestions can be made to ensure the stability and security of the banking system in the context of digitization:

Strengthen cyber security measures. In the process of digitalization of the banking system, cyber security remains one of the most important priorities. It is necessary to take measures to protect bank data, protect customers' personal and financial data from cyber attacks. Therefore, banks should implement modern protection systems against cyber attacks, regularly perform security audits and analyses.

Encrypt data and ensure secure transactions. Since the banking system is involved in digital transactions, it is important to implement data encryption technologies and secure protocols. Protecting all transactions between customers and the bank, expanding systems for detecting illegal transactions is a necessary measure to ensure the digital security of banks.

Risk management and technological audit. While digitalization creates new opportunities for banks, it also creates technological risks. To manage these risks, it is necessary to strengthen technological audit systems and conduct regular inspections. Using artificial intelligence and automated analysis tools, early identification of risk factors and implementation of countermeasures will increase efficiency.

Informing customers and increasing their confidence. Educating and informing customers about cyber security is important in a digitalized banking environment. It educates customers on how to safely transact online, and ensures that they are on guard against fraud and phishing attacks. Building trust between customers and banks is an important component of security.

Use of blockchain technology. Blockchain technology is an effective tool in making digital transactions transparent and reliable. With this technology, it is possible to track transactions, process and store data intact. The implementation of blockchain technology in the banking system of Uzbekistan can be an important factor in increasing security and ensuring data reliability.

Improving the regulatory environment. A clear and stable regulatory environment is essential for digital banking to thrive. It is necessary to develop and monitor regulatory documents aimed at ensuring the safety of digital technologies by the Central Bank and other regulatory bodies. The introduction of rules for digital transactions in line with international standards will increase the security of the banking system.

Flexibility of technological solutions. Banks must be able to adapt their infrastructure to rapid changes. The introduction of innovative technologies makes the banking system stable and competitive. In this process, the risks associated with any technological update should be monitored and security measures should be taken.

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