

## Improving the Liquidity Analysis of Commercial Banks by the Ratio Method

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**Abstract:** The article mentions that the bank's liquidity for the most developed banking systems is its ability to meet its obligations to creditors on time, in full and at minimal cost, and to be ready to meet the cash needs of borrowers. It is also researched that the study of the main stages of the analysis of liquidity of commercial banks helps to see the system of relations between liquidity and other indicators of bank activity.

**Key words:** liquidity, bank, client, credit, cost, price, competition, state.

### INTRODUCTION

In the practice of international banking, commercial banks are becoming an important socio-economic category that directly affects the regulation of liquidity. It is precisely because of the liquidity problem of commercial banks that "562 banks went bankrupt in the first three years of the global financial and economic crisis" in the USA itself <sup>1</sup>. In addition, in the People's Republic of China, which is considered an economically developed country in recent years, "due to the lack of effective management of liquidity risk by commercial banks, the country's GDP fell from 12% in 2007 to 7% in 2015, the state's reserves in gold and international currencies decreased from 3.9 trillion US dollars in August 2014 In August 2015, it decreased to 3.5 trillion US dollars, or about 11%, banks' problem loans amounted to 1.0% in the 2nd quarter of 2013, and reached 1.5% by the 2nd quarter of 2015 <sup>2</sup>. This, in turn, shows that increasing the efficiency of banks' liquidity regulation is an urgent issue in international practice.

In practice, the World Bank has carried out scientific studies aimed at improving a number of requirements, standards and principles for regulating the liquidity of commercial banks. In these studies, issues such as reducing the risk associated with the liquidity of commercial banks, regulation and provision of liquidity, its determination and unexpected fulfillment of requirements in the regulation of liquidity of commercial banks in the digital economy, provision of highly liquid and stable funds are discussed. has not found a scientific solution. In particular, issues such as the imbalance between banks' risky assets and term funds, banks' failure to immediately satisfy their demand for liquid funds, and the lack of use of market instruments to regulate liquidity remain one of the main directions of scientific research.

In Uzbekistan, the financial stability of commercial banks, meeting the demand for credit from the population and the real sector, and the full and uninterrupted fulfillment of obligations to customers, "...based on the requirements of the Basel Committee on Banking Supervision, the task of supporting the level of funds adequacy and liquidity of commercial banks" <sup>3</sup> is set. However, the main share of deposits is open-ended deposits, highly liquid assets of the government and the Central Bank are almost not formed among the assets, the scientific justification and development of scientific

<sup>1</sup> Source: <https://www.fdic.gov/bank/statistical/> ( FDIC: Industry Analysis - Bank Data & Statistics)

<sup>2</sup> Liquidity Risk Challenges faced by Chinese Banks ( <http://en.finance.sia-partners.com/liquidity-risk-challenges-faced-chinese-banks> ).

<sup>3</sup> Decree of the President of the Republic of Uzbekistan dated February 7, 2017 No. PF-4947 " On the strategy of actions for the further development of the Republic of Uzbekistan " Decree.

recommendations for the ineffectiveness of the bank's deposit, credit, and interest policies is an urgent issue for the banking system of our republic.

Decree of the President of the Republic of Uzbekistan dated September 2, 2017 No. PF-5177 "On the primary measures to liberalize the currency policy", dated November 21, 2018 "On the development of digital infrastructure in order to develop the digital economy" on further modernization measures", on September 12, 2017 "On measures to further develop and increase the stability of the banking system of the Republic" and on March 23, 2018 "On the popularity of banking services This dissertation research serves to a certain extent the implementation of the tasks defined in the Resolutions "On additional measures to increase

### Literature review

As a result of studies and research, it is known that the term "bank liquidity" was first used in 1995 by Don Tapscott in his book "The Digital Economy: Network Intelligence and Risk". According to Don Tapscott, all processes in the digital economy. Economic and social processes in society, business, financial and credit services and other activities are carried out on the basis of electronic technologies that serve to implement the Internet (web) and digital communications <sup>4</sup>.

, B.Johansson, C.Carlson, R.Stoular <sup>5</sup> developed the concept of transforming all sectors of the economy into a digital economy under the influence of information and computer technologies (ICT) <sup>6</sup>.

E.Brinolfsson and B.Kakhin include software as part of the digital economy, as well as electronic commerce and services offered with the help of ICT, digital technologies, and the liquidity of banks that process information.

B. Karlsson developed the influence of ICT on the process of transformation of the economy with the help of the ideas presented above, and by combining digital technologies and the Internet, the digital economy plays an important role in the development of not only the production sector, but also the service system. He explained that he could keep it <sup>7</sup>.

The level of study of the problem. Some theoretical aspects of strengthening the solvency of banks are discussed by foreign economists Dj. Sinki, P. Rose, E. Dj. Dolan, Chris Dj. Barltrop, D. Mc Naughton, O. Lavrushin, I. Larionova, V. Usoskin, V. It can be observed in the scientific works of Kolesnikov, G. Panova, Christa HS Bouwman, Óscar Jordà, Björn Richter, Moritz Schularick, Alan M. Taylor, Javier Bianchi, Saki Bigio, Natacha Valla, Béatrice Saes-Escorbiac, Muriel Tiesset <sup>8</sup>.

<sup>4</sup> Don Tapscott . Evolving towards a Homogenous Society: The Risk of the New Digital Economy. 1995. <https://www.fortinet.com/blog/industry-trends/evolving-towards-a-homogenous-society-the-risk-of-the-new-digital-economy.html>

<sup>5</sup>Johansson B., Karlsson Ch., Stough R. The Emerging Digital Economy: Entrepreneurship, Clusters, and Policy. Berlin: Springer Science & Business Media, 2006. 352 p.

<sup>6</sup>Brynolfsson E., Kabin B. Understanding the Digital Economy: Data, Tools, and Research. Massachusetts, and London, England: The MIT Press, 2000. 408 p.

<sup>7</sup>Carlsson B. The Digital Economy: What is new and what is not? //Structural Change and Economic Dynamics. 2004/ # 15 (3). P. 245-264.

<sup>8</sup>Financial management in commercial banks and industrial financial methods, per. English - Dj. Sinki, - M. : Altana Biznes buks, 2007-1018 pp.; Rose P.S. Bankovsky management. - M.: Delo-LTD. 1995.-743 p. Philip Davis , E. (2009); Dolan E. Dengi, banking business and monetary and credit policy. Per.s Engl. - M.: Campbell, 1996-448 p.; Kolesnikov V. i dr. Bankovkoe delo. - M. : "Financial and statistics". 1995-480 p. Panova G. Kreditnaya politika kommercheskogo banka. - M. : MKTs, 1997-464 p. Usoskin V. modern commercial bank: management and operations . - M. : Antidar , 1998-320 p. Larionova I. Management of assets and liabilities in the commercial bank. - M. : " Konsaltbankir ", 2003-272 p. Lavrushin O. Banking case. Textbook. 2-e izdanie. - M. : Finance and statistics, 2005-672 p. Christa H. S. Bowman . Liquidity: How Banks Create It and How It Should Be Regulated . Forthcoming in The Oxford Handbook of Banking (2nd edition; AN Berger, P. Molyneux, and JOS Wilson (eds.)) Case Western Reserve University and Wharton Financial Institutions Center October 2013 . P. 29-31 . Óscar Jordan, Björn Richter, Moritz Schularick , Alan M. Taylor . Bank Capital Redux: Solvency, Liquidity, and Crisis . Federal Reserve Bank of San Francisco working paper series . March 2017. P. 33 -3 5. Javier Bianchi Saki Bigio . Banks, liquidity management and monetary policy . National Bureau of Economic Research 1050 Massachusetts Avenue Cambridge, MA 02138

In the researches and works of Sh.Z.Abdullaeva, TIBobokulov, TMQoraliev, AAOmonov, OBSattarov, among the economists of Uzbekistan, issues such as liquidity management of commercial banks, formation of resources, effective management of bank assets and liabilities have been thoroughly researched.<sup>9</sup>

#### Analysis and results

In our article, the theoretical foundations of the regulation of liquidity of commercial banks, as well as the experience gained in this regard in the banking system of Uzbekistan and the issues of their practical application were thoroughly researched and studied. As a result of them, it became known that unprecedented positive results were achieved in the regulation of the liquidity of commercial banks of our country in the next two years, and reforms aimed at the effective operation of a number of effective monetary policy instruments were introduced.

However, despite the above, a number of urgent issues and problems regarding the regulation of the liquidity of commercial banks remain. It will not be possible to organize activities as the main financial institution providing. In particular, they, that is, urgent issues and problems, in our opinion, consist of the following:

- The fact that the independent status of the Central Bank in the implementation of monetary policy is not legally ensured and it is not implemented in practice. IMF Executive Director Christina Lagarde noted this issue during her visit to Uzbekistan. It is worth noting that the Chairman of the Central Bank M. Nurmuratov paid special attention to this issue, and at the same time (May 2019) a new version of the draft Law "On the Central Bank of the Republic of Uzbekistan" was adopted. It is noted that these issues are reflected in this law;
- the share of highly liquid securities in the assets of commercial banks is imperceptible, which limits the possibilities of operational regulation of their liquidity;
- the fact that the main share of the capital of commercial banks is accounted for by the state is one of the difficulties in regulating their liquidity;
- the main share of risky assets of commercial banks (more than 95 percent) is long-term assets, and the fact that 60 percent of them are given on the basis of preferential interest rates has a negative effect on the efficiency of banks' liquidity regulation;
- the fact that the funds attracted by commercial banks are the main valuable and unstable financial sources in terms of stability does not give an opportunity to increase the efficiency of the liquidity of commercial banks of our country;
- the very low volume of emission transactions related to securities by banks has a negative effect on their operational regulation of liquidity, and some other issues require the further acceleration of the work of regulating the liquidity of commercial banks and strategic measures based on relevant measures in this regard creating the need to develop plans.

It is worth noting that the President of the Republic of Uzbekistan, the government, the Central Bank and commercial banks are making serious efforts in this regard and they are giving results.

Decisions of the President of the Republic of Uzbekistan regarding the financial stability, capitalization level and liquidity of banks have been adopted. In particular, the last decision of the

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September 2014. Working Paper 20490 <http://www.nber.org/papers/w20490> P. 21-25. Natacha Valla, Béatrice Saes-Escorbiac and Muriel Tiesset. Bank liquidity and financial stability, / Irving Fisher Committee on Central Bank Statistics / IFC Bulletin No. 28. August 2008 P. 41-42.

<sup>9</sup>Abdullaeva Sh.Z. Diversification of the credit portfolio of commercial banks in conditions of banking risks. *ifd science. degree. charge to get dis. author -T.: 2000, BMA, 46 p.*, Bobakulov TI Problems of ensuring the stability of the national currency rate in the Republic of Uzbekistan and ways to solve them. *ifd science. degree. charge to get dis. author -T.: 2008, BMA, 36 p.*, Karaliev TM Sattarov OB and others. Analysis of the activity of commercial banks. Study guide. - T.: "Economy-Finance", 2013. 192 p. Omonov AA Issues of effective management of resources of commercial banks. *ifd science. degree. charge to get dis. author -T.: 2008, BMA, 36 p.*

President of the Republic of Uzbekistan, directly related to the financial activity of commercial banks, dated December 21, 2018, "On measures to ensure the financial stability of commercial banks, increase the efficiency of their activities and improve the credit policy" Decision No. PQ-4071 was adopted. In this decision, the problems related to the liquidity of commercial banks are indicated. In particular, the work of lending and diversification of the loan portfolio in commercial banks is not effectively organized, and the liquidity and financial condition of borrowers, which leads to the deterioration of the quality of the loan portfolio, are among them.

Based on this decision, the Central Bank of our country was entrusted with serious tasks to ensure the financial stability of commercial banks, increase the efficiency of their activities and improve the credit policy. In particular, in this decision, the following are specifically related to the liquidity of commercial banks:

- when insufficient measures are taken to ensure the standard level of liquidity and the continuity of payments - to take measures to restrict lending within the returned part of previously allocated loans;
- ensure balance of assets and liabilities;
- in order to expand the sources of stable formation of the financial and resource base, the tasks of issuing corporate bonds not secured by property were assigned.

As we know, the Regulation "On Requirements for Liquidity Management of Commercial Banks" of 2015, developed by the Central Bank and transferred from the Ministry of Justice on August 13, 2015, registered with No. 2709 It has been put into practice since November 13. According to the requirements of this regulation, banks are obliged to ensure liquidity coverage starting from January 1, 2016.

Liquidity coverage ratio (LQMK) was calculated by the following equation.

$$LQMK = \text{YuLA} : K30k. \text{ LLC (4)}$$

Requirements for LQMK:

From January 1, 2016 - min. 30 percent,

From January 1, 2017 - min. 90 percent and

From January 1, 2018 - min. It was set at 100 percent.

K30k in Eq. JSC is the total net output for the next 30 days, the recalculation coefficient of input and output is set by the Central Bank and depends on the type and duration of obligations.

At the same time, according to this Regulation, commercial banks are required to ensure net stable funding ratio from January 1, 2018. Since the procedure for determining this is given in paragraph 1.3 of the thesis, we did not find it necessary to repeat it in this paragraph.

The liquidity management policy of commercial banks of Uzbekistan is an important document in regulating liquidity and solving related problems. The policy of liquidity management in commercial banks is based on the Laws of the Republic of Uzbekistan "On the Central Bank of the Republic of Uzbekistan", "On Banks and Banking Activities" and "On Bank Secrecy", as well as It is developed every calendar year based on the requirements of the Regulation of the Central Bank of the Republic of Uzbekistan "On Requirements for Liquidity Management of Commercial Banks", registered on August 13, 2015 at the Ministry of Justice.

The main goal of the liquidity management policy of commercial banks is to regulate issues related to the duration, volume and risks of the bank's assets and liabilities, to systematically maximize the difference between interest income and expenses, and priority attention is paid to the following issues:

- to increase the amount of risky assets in the composition of assets, that is, income-generating assets;

- attracting cheap financial resources and then attracting them at higher interest rates increases the positive difference between income and expenses, i.e. increasing the bank margin or spread, it is worth noting that the commercial banks of our country are doing a lot of work on this issue, and their attraction the level of transformational risk is increasing as a result of not ensuring the balance between the funds made and placed, this process itself causes a number of problems in regulating the liquidity of commercial banks;
- investing funds in highly liquid government and Central Bank securities, but commercial banks still have a number of problematic situations in this regard;
- placement of credit resources according to their level of risk, the form of provision for repayment and the level of usefulness, if we pay attention to the practice of commercial banks, there are a number of problems in this regard, and the total number of loans issued by commercial banks of our country (160 trillion soums) 60 percent of which are preferential loans, and more than 50 percent of these loans still show signs of problematic situations;
- diversification of bank assets and liabilities, if we pay attention to the composition of the assets of commercial banks, 95% of them are long-term loans, which indicates the high concentration of risky assets in banks, as well as the attracted funds of banks the share of unstable funds, i.e., financial resources kept until demand is very high (50-55 percent), which creates the basis for an increase in the level of transformational risk in commercial banks and the emergence of serious liquidity problems;
- increasing the ratio between assets and liabilities sensitive to changes in interest rates, if we pay attention to the practice of this issue, we can see that it is practically not used in practice, because the interest rates of banks in most cases are in the market is formed based on the refinancing rate of the Central Bank, not on the basis of supply and demand.

Therefore, above, the liquidity management policy of commercial banks is weak in terms of effective aspects in practice, many issues and tasks defined in it are not compatible with practice.

In our opinion, for the solution of these issues, that is, for the effective operation of the policy of managing the liquidity of commercial banks, the following environment should be created in the national economy:

- application of market principles and mechanisms of determining the market value of assets;
- if there is a need to sell the bank's assets at the market value, it should be possible to find buyers for their purchase in a short period of time;
- such as the permanent guarantee of the ability to sell and buy assets.

Based on the results of theoretical and practical analysis, the higher the share of the above assets in the assets of commercial banks, the lower their liquidity level. This situation is a natural situation for commercial banks, and the higher the percentage of liquid funds in their assets, the higher it will have a negative impact on profitability. However, the second aspect of the issue has a positive effect on the regulation of the liquidity of commercial banks, because if they meet the above-mentioned requirements, there will be no problems with bank liquidity.

It is related to the practical implementation of the tasks set above on regulating the liquidity of commercial banks, as well as the liquidity policy of JSC "Aloqbank", which is the largest commercial bank of our country, and the requirements placed on it, as well as the implementation of the economic regulations of the Central Bank on the liquidity of commercial banks. We will analyze the fulfillment of these cases by these banks.

As a result of the analysis of the composition of the bank's assets, liabilities and capital in 2015-2018 based on the information in the table below, it is known that there are a number of problematic situations regarding the regulation of their liquidity.



Table 1 Assets of JSC "Alokabank" in 2020-2023 , share and dynamics of liabilities and capital<sup>10</sup>  
(as of January 1, as a percentage of the total)

| Substances                                       | 01.01.2020   | 01.01.2021   | 01.01.2022   | 01.01.2023   |
|--|--------------|--------------|--------------|--------------|
| <b>Assets</b>                                    |              |              |              |              |
| At the checkout cash money                       | 1.5          | 1.4          | 3.5          | 1.7          |
| Central from the bank removable funds            | 11.8         | 14.2         | 22.2         | 7.9          |
| Other from banks removable funds                 | 1.6          | 8.6          | 9.6          | 6.5          |
| Investments and another valuable pieces of paper | 1.0          | 0.9          | 0.3          | 0.4          |
| Credit 'o' smiles                                | 77.8         | 70.0         | 58.3         | 81.1         |
| Main tools                                       | 4.9          | 4.3          | 2.3          | 1.4          |
| Assets according to calculated percentages       | 0.4          | 0.1          | 0.1          | 0.2          |
| Bank another properties                          | 0.2          | 0.2          | 0.0          | 0.0          |
| Other assets                                     | 0.8          | 0.4          | 3.6          | 0.8          |
| <b>Total assets</b>                              | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> |
| <b>Obligations</b>                               |              |              |              |              |
| Deposits   | 62.6         | 67.7         | 81.0         | 74.6         |
| Central to the bank payable funds                | 0.0          | 0.0          | 0.0          | 0.0          |
| Other to banks payable funds-resident            | 25.8         | 17.0         | 13.5         | 19.5         |
| Other to banks payable funds - non-resident      | 0.0          | 0.0          | 0.0          | 0.0          |
| Payable credit and lease                         | 1.4          | 2.1          | 4.9          | 4.8          |
| To deal with released valuable pieces of paper   | 0.0          | 0.0          | 0.0          | 0.0          |
| Payable calculated percentages                   | 0.1          | 0.1          | 0.1          | 0.1          |
| Other obligations                                | 10.2         | 13.1         | 0.5          | 1.0          |
| <b>Total obligations</b>                         | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> |
| <b>Capital</b>                                   |              |              |              |              |
| Constitution capital                             | 57.0         | 54.5         | 59.9         | 76.0         |
| Added capital                                    | 2.1          | 1.8          | 1.0          | 0.3          |
| Reserve capital                                  | 14.6         | 26.1         | 26.3         | 10.0         |
| Not distributed benefit                          | 26.3         | 17.6         | 12.8         | 13.7         |
| <b>Total capital</b>                             | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> |

Based on the analysis of the assets, liabilities and capital structure of JSC "Aloqabank" in the years 20-2023 in the data of Table 1, a conclusion is formed that a number of problematic situations remain in terms of assets and liabilities in terms of their liquidity regulation. In particular, the following considerations affecting their liquidity in terms of assets, liabilities and capital structure remain:

- the bank's credit inflows have a tendency of continuous growth, and in 2020, the share of this indicator in the total assets was 77.8 percent, and by 2023, this indicator reached 81.1 percent, or analysis increased by 3.3 points during the period. Of course, the increase in the share of the bank's risky assets is a positive thing, because it is this asset that forms the main share of the bank's income. However, there is also the other side of the problem, the increase in the share of risky assets of the bank causes a decrease in its level of liquidity and the emergence of problems related to its regulation. Using the data of Table 2.3, if we look at the source of

<sup>10</sup>AT was compiled by the author on the basis of the balance sheets of Alokabank.

deposits used as the main source of the bank's risky assets, the bank's deposits had a sharp fluctuation during the analyzed period.

For example, the bank's deposits made up 62.6% of total liabilities in 2020, reached 81% in 2018, or increased by 18.4 points during the same period, but by 2019, it was 74.6%, and this indicator will decrease in 2022. decreased by 6.4 points compared to the year;

- as we noted in the relevant paragraphs of our dissertation, the government and the Central Bank, as well as foreign bonds are an important financial instrument in regulating the liquidity of commercial banks as highly liquid assets. However, the share of investments in "investments and other securities" in the assets of JSC "Alokabank", which we are analyzing, was 1.0% in 2021, and by 2023 it decreased to 0.4% or 0.6 points. . At this point, we should note that in the international banking practice, the share of this source in the composition of the assets of commercial banks is from 10 to 20 percent, and it is considered an important financial instrument in regulating the liquidity of banks;
- we can see from the data of table 2.4 that the source of the bank's financial resources formed at the expense of the issued securities is not available. In order to regulate the liquidity of commercial banks, their financial resources, formed at the expense of securities, serve to increase the image of the bank in the financial market, being firstly long-term and stable, and secondly, cheap financial resources of the bank. In addition, this source of financial resources of commercial banks is an active financial instrument in regulating their liquidity;
- along with the high share of deposits in the bank's liabilities, the share of funds paid to other banks is also significant, and the increase in the size of this source during the analyzed period leads to an increase in the bank's liquidity obligations. In our opinion, the share of interbank loans in the bank's liabilities is also low, and on the one hand, this source is an important and stable source in regulating the bank's liquidity, in this regard, it is appropriate to focus on increasing the volume of this source in the future;
- according to the data in the above table, the bank's capital sources have a tendency to increase, if this source was 57.0% in 2020, this source reached 76.0% in 2023 or within this period increased by 19.0 points. Judging from this situation from the point of view of the bank's liquidity, the share of stable but expensive funds in the structure of the bank's funds is increasing. We can also see that the influence of bank shares in the financial market is not high from the fact that its source of added capital is almost a load, this source was 2.1 percent in 2022 and decreased to 0.3 percent or 1.8 points by 2019. .

As we know, GEP analysis is widely used in international practice in the management of assets and liabilities of commercial banks from the point of view of riskiness and liquidity. Therefore, based on the following table, we analyze the assets and liabilities of JSC "Aloqabank" using the GEP analysis method. .

**Table 2 Assets and liabilities of AT "Alokabank". analysis of liquidity by term<sup>11</sup>**

(as of December 31 , in million soums and interest)

| Indicators                           | Assets    | Passives  | Liquidity difference (+;-) | Liquidity the difference (+;-) in percent |
|--------------------------------------|-----------|-----------|----------------------------|---|
| 01.01.20 21 to the state of the year |           |           |                            |   |
| Term past                            | -         | -         | x                          | x   |
| 1 day to 30 days                     | 180517807 | 83013312  | 97504495                   | 45.3                                      |
| 31 days to 180 days                  | 210922354 | 260298961 | -49376607                  | -22.9                                     |
| 181 days to 1 year                   | 206901419 | 332451518 | -125550099                 | -58.3                                     |

<sup>11</sup> AT was compiled by the author on the basis of the balance sheets of Alokabank.

|                                       |                |              |             |        |
|---------------------------------------|----------------|--------------|-------------|--------|
| From 1 year more than                 | 760979694      | 98526735     | 662452959   | 307.5  |
| Demand by doing until received        | 214899680      | 584510078    | -369610398  | -171.6 |
| Total                                 | 1574220954     | 1358800604   | x           | x      |
| 01.01.20 22 to the state of the year  |                |              |             |        |
| Term past                             | -              | -            | x           | x      |
| 1 day to 30 days                      | 161842328      | 367792723    | -205950395  | -51.7  |
| 31 days to 180 days                   | 272716976      | 381566252    | -108849276  | -27.3  |
| 181 days to 1 year                    | 338247785      | 39621043     | 298626742   | 75.0   |
| From 1 year more than                 | 1075959116     | 244104615    | 831854501   | 208.8  |
| Demand by doing until received        | 943477259      | 1360774712   | -417297453  | -104.7 |
| Total                                 | 2792243464     | 2393859345   | x           | x      |
| 0 1.01.20 23 to the state of the year |                |              |             |        |
| Term past                             | 1824           | 0            | x           | x      |
| 1 days to 30 days                     | 310357289      | 278010876    | 32346413    | 2.8    |
| 31 days to 90 days                    | 452321451      | 236972384    | 215349067   | 18.4   |
| 91 days to 180 days                   | 487124495      | 191067681    | 296056814   | 25.2   |
| 181 days to 1 year                    | 556115212      | 194377519    | 361737693   | 30.8   |
| 1 to 3 years                          | 521333558      | 1796218993   | -1274885435 | -108.6 |
| From 3 years more than                | 2855542821     | 852961602    | 2002581219  | 170.7  |
| Demand by doing until received        | 683831665      | 1143548667   | -459717002  | -39.2  |
| Total                                 | 5 866628 315.0 | 4693157722.0 | x           | x      |

Based on the data in Table 2, the following conclusions can be drawn regarding the results of the GEP analysis of the assets and liabilities of JSC "Alokabank".

- a) to ensure the liquidity of the bank's assets and liabilities by maturity, the funds kept until demand as of January 1, 2023 amounted to 1143.5 billion soums in liabilities, and 0.6 billion soums in assets or this fund made up 59 percent of the funds kept until demand, and this situation was almost the same level as of January 1, 2021 and 2022, which are being analyzed. From this it can be concluded that it is advisable for the bank to conduct a strong and serious liquidity policy in fulfilling its obligations, otherwise a problematic situation may arise regarding the regulation of the bank's liquidity;
- b) there are some problems regarding the placement of the bank's attracted term funds, as of January 1, 2023, the funds attracted from 1 day to 30 days, from 31 days to 90 days, from 91 days to 180 days, and from 181 days to 1 year in comparison, the amount of placing them in assets for these periods was a higher amount. For example, as of January 1, 2023, the funds raised from 181 days to 1 year amounted to 194.4 billion soums, while the funds invested in assets amounted to 556.1 billion soums, or the lack of liquidity funds It was equal to 2.8 times.

Based on the GEP analysis of the assets and liabilities of AT "Aloqabank", we can conclude that the bank has a number of problems in this regard, and as a solution to these problems, increasing the volume of investments in highly liquid securities around the bank's assets, it is desirable to make wider use of opportunities to attract funds from the received loans and issuance.

The amount of interest income from risky assets, interest-free income from other types of bank services, as well as interest expenses on time deposits and loans, interest and operating expenses are important in regulating the liquidity of commercial banks. From this point of view, in this paragraph of our thesis, we will analyze the composition and dynamics of income and expenses of JSC "Alokabank" and JSC "Mikkreditbank".



**Table 3 Income of JSC "Alokabank " in 2020-2023 and information on costs and dynamics<sup>12</sup>**  
( as of December 31 )

| Indicators             | 20 20s .               |            | 20 21- y.              |            | 20 22- y.              |            | 20 23- y.              |            |
|------------------------|------------------------|------------|------------------------|------------|------------------------|------------|------------------------|------------|
|                        | <i>a thousand soum</i> | %          | <i>a thousand soum</i> | %          | <i>a thousand soum</i> | %          | <i>a thousand soum</i> | %          |
| With interest revenues | 150 770 999            | 72.3       | 178 385 385            | 70.9       | 218 076 991            | 60.8       | 619 834 433            | 80.8       |
| Interest free revenues | 57 712 220             | 27.7       | 73 078 798             | 29.1       | 140 742 041            | 39.2       | 147 243 365            | 19.2       |
| <i>Total revenues</i>  | <i>208 483 219</i>     | <i>100</i> | <i>251 464 183</i>     | <i>100</i> | <i>358 819 032</i>     | <i>100</i> | <i>767 077 798</i>     | <i>100</i> |
| With interest expenses | 92 740 229             | 54.9       | 105 139 281            | 51.9       | 127 914 402            | 48.4       | 355 581 394            | 60.2       |
| Interest free expenses | 7,893,496              | 4.7        | 9,847,275              | 4.9        | 23 394 456             | 8.8        | 47 593 196             | 8.1        |
| Operation expenses     | 68 366 162             | 40.5       | 87 739 174             | 43.3       | 113 225 782            | 42.8       | 187 382 551            | 31.7       |
| <i>Total expenses</i>  | <i>168,999,8 87</i>    | <i>100</i> | <i>202,725,73 0</i>    | <i>100</i> | <i>264 534 640</i>     | <i>100</i> | <i>590 557 141</i>     | <i>100</i> |

Based on the data of the above table, the total amount and dynamics of interest and non-interest income and expenses of JSC "Alokabank" in 2020-2023 were created on the basis of mutual balance. Of course, the bank's interest income in 2020 was imperceptibly lower than its non-interest income, but this trend moderated by the end of 2020. That is, the fact that 80.8 percent of the bank's income at the end of 2020 is based on interest income indicates that the bank's main activity, risky assets, is working effectively. Of course, this creates a problem related to increasing the level of risk from the point of view of liquidity regulation, in our opinion, the bank should make wider use of the opportunities to eliminate this problem by increasing the volume of investments in highly liquid securities within the bank's assets.

We can conclude that the balance between the bank's interest expenses and non-interest expenses has also been maintained, because according to the data of Table 2.5, the bank's interest expenses during the analyzed period amounted to 60.2 percent in 2020, while its non-interest expenses were 39.8 percent.

To sum up, the commercial banks of our country do not use enough the available opportunities for liquidity regulation, in particular, investment in highly liquid securities, issuance of securities.

#### Summary

Improving the analysis of the liquidity of commercial banks using the method of coefficients plays a decisive role in supporting the development of science and knowledge in several ways :

- the main difference of commercial banks from other economic entities is that they indirectly participate in the process of creating additional value and provide it with financial resources, not through the creation of additional value;
- since 1997, since 1997, the market-based mechanisms of liquidity regulation in commercial banks of our country, i.e., since the introduction of international standards of the plan of accounting accounts in commercial banks, have made it possible to place the obligations and assets of commercial banks in terms of maturity and liquidity;

<sup>12</sup> AT was compiled by the author on the basis of the balance sheets of Alokabank.

- According to the regulatory documents of the Central Bank, the assets of commercial banks are grouped into liquid and highly liquid assets from the point of view of liquidity;
- the high amount of highly liquid assets in the assets of commercial banks serves to ensure their solvency, but this reduces their ability to earn, and on the contrary, the increase in their risky assets increases their income, but reduces the level of liquidity;
- one of the biggest problems in regulating the liquidity of commercial banks is that the primary and secondary securities market in the national economy is very weak and underdeveloped;
- changes in the composition of not only their active funds, but also their passive funds have a direct impact on regulating the liquidity of commercial banks;
- it is not possible to quickly regulate and manipulate the liquidity of the commercial banks of our country, because some of the highly liquid assets in their assets do not exist at all, and the share of the existing ones is very low;
- there is a problem of forming financial resources at the expense of issued securities as part of the obligations of commercial banks;

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