MINISTRY OF EDUCATION OF AZERBAIJAN REPUBLIC

AZERBAIJAN STATE UNIVERSITY OF ECONOMICS

INTERNATIONAL GRADUATE AND DOCTORAL CENTER

On the right of manuscript

Aslanova Gulnar Ramız

MASTER DISSERTATION

On the topic of

“Key problems of bank lıquıdıty ın Azerbaıjan and cıs countrıes”

Specialty code and name: 060403 - “Finance”

Specialization: “Financial management”

Supervisor

Ph.D. Anar Mammadov

Head of Master program

Assistant professor

Head of department

Professor

Baku – 2018

CONTENTS

INTRODUCTION

The relevance of the research topic. In the context of modern globalization, the development of the world economy has been observed with a number of events and inclinations. First, after the collapse of the world socialist system and the USSR, most of the countries have joined the world economic relations. Secondly, liberalization of foreign economic relations covers many countries. Third, the broad introduction of uniform standards. Common criteria for macroeconomic policy are emerging. The characteristics characterizing the globalization of the entire world economy are reflected at the level of separate economic associations.

One of the priorities of Azerbaijan's foreign economic policy strategy is its joining modern world economy processes. The deepening and deepening of integration processes are also due to the transition to a market economy of dozens of countries that develop on a totalitarian economy. This resulted in many new structural changes in transition economies: mass privatization of private property, liberalization of foreign trade and financial services, abolition of administrative methods of management.

The relevance of the issue is explained by the fact that in today's crisis, foreign investment banks need more. Commercial banks, along with their own funds, should try to increase the funds involved. Today, 23 of the commercial banks operating in Azerbaijan have foreign capital participation. The share of foreign capital in 7 (seven) of them is 50-100%, and in 14 (fourteen) - up to 50%. There are 2 (two) foreign branches in the country, representing 5 (five) foreign banks. The ongoing crisis in the world economy and the unstable economy as a whole keep the interest of foreign banks and investors on the financial and banking market of developing countries. As it is known, the Azerbaijani economy continues its stable growth rate under such crisis conditions.

The purpose of the research is to provide an internationally comparative and country-based assessment of the current financial stability of the banking sector in Azerbaijan and MB countries.

The object of the study is to carry out a thorough analysis of the bank interest rates, their types, deposit interest issues in the country's banking sector, and to optimize them by taking into account the interest of foreign investors.

Normative documents of the Central Bank of the Republic of Azerbaijan, reports of commercial banks, as well as monthly and annual reports of the Banks Association of the Republic of Azerbaijan.

The devaluation (depreciation) of the national currency in manat in 2015 has made the new approach to the country's banking sector inevitable. The key is to achieve consolidated consolidation in the banking system and gradual elimination of vulnerable banks.

It should be noted that commercial banks of Azerbaijan operate in foreign countries as well. The International Bank of Azerbaijan (IBA) is a good example of this. The bank has offices in Azerbaijan and Georgia, Saint Petersburg, Yekaterinburg, London, Frankfurt, New York, Dubai and Luxemburg.

In the research, the scientific innovation is to analyze the current situation in the banking sector, to learn banking relationships and to make recommendations for improving their application in banking legislation.

Changes in the banking system in the context of globalization;

- study rates, currency exchange rates, and commodity prices to be comparable;
- Importance of production and transparency of the transaction, the role of information technology for foreign investment banks;
- Increasing the level of capitalization, fighting for customer, expectation of risk rates, and other factors should play a key role in the activity of foreign-owned banks.

Innovations on financial services should be continued, inter-bank competition should be strengthened, electronic banking should be improved in foreign capital banks. Work to further increase the number of international rating banks should be continued.

The practical significance of the research is that the proposals proposed in the master's thesis are studied by the Central Bank and commercial banks, which can lead to the strengthening of inter-bank competition in the country by improving the participation of foreign investors in the country's banking sector and strengthening the banks' relationships with the real sector.

Theoretical and methodological basis of the research work is the theory of regional economic integration, the results of research by local and foreign economist scientists, international treaties and national legislation.

Existing economic literature, internet and periodicals related to the subject were used as reports from international organizations, including CIS Interstate Statistical Committee, as well as reports from the State Statistics Committee and the Ministry of Economic Development.

CHAPTER I. THEORETICAL BASIS OF THE BANKING SYSTEM FORMATION IN AZERBAIJAN

1.1. The history of the banking system formation in Azerbaijan

The banking system is an important element of the financial system of Azerbaijan. Today, banks in terms of assets and capital, by regional coverage, are far ahead of other financial intermediaries.

Currently, the republic has a developed two-stage banking system based on market principles (the National Bank of Azerbaijan Republic is on the first level, commercial and other non-bank credit institutions are on the second level).

At the first stage of the reforms, measures were taken to restructure and revitalize state banks, and the institutional formation of the private banking system was ensured. At this stage, low capital requirements, extremely liberal terms of entry into the system, and soft instruments for regulating banking activities were identified. As a result, there was an institutional expansion of the banking system, and the number of private banks increased.

At the next stage of the banking reform, since 2000, the implementation of measures for the intensive rehabilitation of private banks, which created the conditions for strengthening the stability of the banking system and improving the function of the financial intermediary [52].

The consistent increase in the requirements of the National Bank on the minimum amount of capital of private banks and the encouragement of the consolidation process ensured the strengthening of the capital base of the private banking system and the promotion of the banking system as a whole.

Various researchers, official government officials, and others have stated that banks are related to multilateral activities among economic entities.

From ancient times people were considered as a place where money was deposited. The activity of banks is so diverse that it is not easy to disclose its essence and to fully explain its economic point of view. At the moment, banks have carried out excessive operations, which include financing separate projects in different sectors of the economy, credit operations, securitization, purchase and sale of securities, brokerage operations, property management, consulting services, etc. . is related. The banks perform their own management functions as independent economic entities.

On July 1, 1992, the Azerbaijann government ceased to automatically lend to central banks, the other union members of the Azerbaijann Central Bank, causing the contraction of the economic realm that Ruble had covered. With this process, cash-strapping problems began to appear in the former Soviet countries. This decision of Azerbaijan accelerated the process of accepting a new currency belonging to Azerbaijan itself. On August 15, 1992, the President of the Republic of Azerbaijan was invited to the 'Azerbaijani decree' for the first time on Dec. 5, 1992, concerning the issue of "Freedom of the national currency of Azerbaijan" manat, which was put on the market for the first time, became the only currency in circulation in Azerbaijan on 1 January 1994. According to the ruby, which was in the circulation, 10 rubles were changed to 1 manat. Because of the high inflation and the lack of rubles and the lack of money on the market, which meant that there was not enough rubles on the market, the majority of the money in circulation until March 1993 was manning. [1, p. 55]

The removal of Rubl from the market was done in 2 stages. In July and August of 1993, high-value notes were removed from large amounts of money. Later, in 1993, the bank notes issued by the Azerbaijan and CİS's Council of Ministers and the low-value notes of a ruble were removed from circulation in December 1993. On January 1, 1994, ruble bank accounts were changed managely. In 1993, an increase in the volume of money and a noticeable increase in credit was observed. But in 1994 inflation increased by 18 times, manat lost 12 times. [18, p. 78]

On December 14, 1994, the National Bank of the Republic of Azerbaijan designated the currency of the national currency, taking into account the value of the currency exchange between the "Central Bank" and the banks in Baku. This attempt led to unexpected consequences in a very short time.[2] Logically, in this case, the dollar had to fall down. But that did not happen. Consequently, the manat reserve collected in the Monetary Fund of the Republic of Azerbaijan National Bank was physically unable to meet the foreign exchange demand. This situation has left exporters in difficult conditions in an environment where inflation is rising. Since the authority to manage the gold reserves was not fully given to the National Bank of Azerbaijan Republic, a fruitful foreign exchange policy was not passed on.

On February 28, 1995, the President of Azerbaijan adopted the decree of "Managing and Liberalization of Foreign Currency in Azerbaijan Republic". Based on this Decision, the country's "Monetary Fund of the Country" was abolished. The removal of this fund, thus giving the National Bank of the Republic of Azerbaijan the task of managing gold reserves, was a necessary step taken in the development phase of the Azerbaijani monetary system. [4]

In 1994, a century-old agreement was signed on the processing of oil deposits in Hazard. With the help of international financial institutions at the beginning of 1995, this program, which achieved the stabilization of the social and economic situation in 1996, doubled the volume of foreign investments. From 1995 to 1998, with the increases in foreign investments, the country's economy developed, depending on the developments in the oil field. [6, p.125]

From 1994 until the year 2000, Azerbaijan's official money reserve increased by 23.9 percent. In the middle of 1997, the volume of the money reserve went up to 565 million US dollars. According to international standards, when the import amount of the reserve amount is 3 months, it is accepted to be sufficient. The official money reserve in Azerbaijan was at this level in 1997.

At the beginning of 1999, official money reserves fell by as much as US $ 448.7 million. However, in 1999, this reserve increased by 50.6% to US $ 675 million in 2000. However, the import coverage rate rose from 2.6 months to 4.2 months, and reached the highest level during this period.

Since 2002, the most important stage of the restructuring of the banking system has begun. As a logical result of a successful oil strategy, the flow of oil revenues to the country began. Taking into account this fact and the need for readiness to efficiently transfer financial resources of banks, a new development strategy, designed for 2002-2005, was prepared.

The main objective of the strategy is to ensure the effective and safe transformation of oil revenues into the non-oil sector, improve the access of the population and regions to banking services, and develop on this basis the financial intermediary function of the banking system to reduce poverty, strengthen the stability and reliability of the banking system, create conditions for free and healthy competition in the banking services market. The financial and banking system plays an exceptional role in the development of the economy, diversified on the basis of growing economic power and financial capabilities, and towards the capitalization of the non-oil sector.

To achieve certain strategic goals, specific tasks were set, such as improving the banking legislation and bringing it in line with international standards, increasing the reliability and stability of the banking system, expanding access to banking services, increasing the transparency of the banking system and strengthening market discipline, control.

In order to attract deposits from the population and increase confidence in the sector, a deposit insurance system was established in 2007, in 2009 the amount of deposits held in the Deposit Insurance Fund increased six-fold and reached 30,000 manats.

Thanks to a successful development and modernization strategy, as well as pre-crisis preventive management and "financial immunization" measures, the banking and financial sector was able to withstand and not lose its balance in the fight against the global economic crisis that began in 2008. And the holding of timely measures allowed to maintain financial stability in the country in the period of aggravation of the crisis. Thus, the banking system of Azerbaijan has met a global crisis with a high level of capitalization, financial reserves and liquidity indicators. Unlike most countries of the world, there was no special stress in the banking sector of the republic, i.e. the sector retained its volumes and stability.

One of the important works for the development of the Republic of Azerbaijan in the field of money was the change of the nominal value of the national banknotes. On February 7, 2005, the President changed the value of manat based on the "Change of the nominal value of the money and the measure of the values in the Republic of Azerbaijan" from 1 January 2006. So with the new law 5000 old manat, new 1 manat was made equal.

Azerbaijan's banking system has passed through three developmental stages since the beginning of the 1990's: [12, p.247]

1) 1990-1992 period of establishment of National Bank system;
2) 1992-1994 The rapid increase in the number of private trading banks in the period of high inflation;
3) Macroeconomic stability and the period of structural measures for both state-owned and private banks.

The necessity of modernizing the Azerbaijani banking system was seen in mid-2004. In this context, laws were enacted on December 10, 2004 for the national bank and on January 16, 2004 for the banks.

Azerbaijan is a Turkish Republic that is in the former Soviet Union countries and has also begun preparations to move to a free market economy with its independence within these countries. Market economy and other countries' institutions and activities in the country continues to work on the subject.

The most important place in these studies is regulation in banking and financial institutions. Because the main elements of the market economy system, which is tried to be integrated, are banks and financial institutions. It is not possible to make a healthy transition to the market system without realizing the free banking system and forming the financial institutions. The Azerbaijani authorities have adopted these considerations and made the first innovations in the field of banking and central banking. They started to form a central bank in a modern sense with the laws that they put in force in succession and they stepped into a two-sector bank system from a single-sector bank system by facilitating the establishment of private banks. [3]

The activity of the banking system of the Republic of Azerbaijan was regulated by the Law "About Banks". According to the law, the banking system of the country is two-tiered - from the Central Bank of the Republic of Azerbaijan and the credit institutions. [5] The main step is the Central Bank and its activity is regulated by the Constitution of the Republic of Azerbaijan, the Law on the Central Bank of the Republic of Azerbaijan, the Civil Code and other normative acts. According to the legislation, the Central Bank licenses and regulates the activities of the bank and performs supervision on the activities of the bank as stipulated by law. The second line of the banking system is credit institutions. The activities of the credit institutions include the Constitution of the Republic, the Law on the Banks, the Civil Code, the "About the Central Bank of the Republic of Azerbaijan", "About Non-Bank Loan Institutions" and "Credit Unions" regulated by normative law regulations. The level of development of the bank sector is measured by the ratio of total assets to GDP. According to the calculations of experts, in countries with low levels of economic development, the bank sector's total assets are not more than 5% of GNP. The share of total assets of the bank sector in GDP equals 32% in Azerbaijan.

In order to increase the population's access to financial and banking services, Azerpocht LLC, which owns more than 1,200 regional postal branches and offices, has received a corresponding license to provide financial services in addition to rendering traditional postal services.

Today, banks provide a wide range of banking services, and retail banking services are rapidly developing. For customers, banking products are offered through Internet banks, mobile banks, automated banking points.

Rapidly expanding the regional banking system and access to financial services, banks are beginning to active in the international financial markets. Thus, by April 1, 2010, the number of financial institutions of banks abroad was 9. In addition, the activities of three representative offices of influential global financial structures were allowed, which will allow introducing advanced banking technologies in Azerbaijan.

As of April 1, 2010, 47 banks and 631 bank branches operate in Azerbaijan. Of the existing banks, one was established with the participation of state capital, and 23 foreign.

As of April 1, 2010, along with banks, 98 non-bank credit institutions operate.

Growth of real money incomes of the population, increase of confidence in the banking system, improvement of the legal framework for protecting the interests of creditors and investors, in particular, the launch of the "Deposit Insurance Fund" have caused a rapid increase in household deposits.

As of April 1, 2010, household deposits in the country's banks amounted to 2.4 billion manat, with 33.3% of them coming from long-term (more than 1 year) deposits.

The deposits of corporate customers in banks also grew substantially. As of April 1, 2010, corporate clients' deposits totaled AZN 2.1 bn.

Dynamic growth of own and attracted funds created favorable conditions for expansion of operations with assets. As of April 1, 2010, the volume of bank assets was 12 billion manat.

In the structure of banking assets, a large proportion of credit investments. As of April 1, 2010, banks issued loans to customers amounting to 8.5 billion manat, which is 70.5% of banking assets. In the structure of credit investments, the share of the private sector is 82% (7 billion manats).

1.2. Application of Basel III Standard in the banking sector of Azerbaijan

Banking sector; is located at the center of the financial sector and fulfills its financial intermediation requirements in accordance with its main function. The development of financial products, the acceleration of technology and the emerging trends are leading to some changes in the structure of the banking sector. These changes affect the credit portfolios of the banks, direct their position on the market and diversify their activities. In this sense; the risks to which banks are exposed are increasing. Successful execution of the bank's activities is closely related to the successful management of these risks to which they are exposed. Also; various crises showed that the banks that were inadequate in the management of their risks were negatively affected by these risks and even most of them were destroyed without overcoming the crises.

At the point of healthy management of the risks in the banking and sufficient amount of capital, the Basel Committee submitted various proposals in various times and these proposals, which are recommended to the banking sector, have been updated from time to time. Different crises in different periods have influenced the updating of these proposals and the risk definitions in the banking sector have been renewed and come up to date. In the recent period; After Basel I and Basel II, Basel III work began to take its place on the agenda.

Risk in banking; "The probability of a reduction in economic benefit in the event of a monetary loss related to a transaction or activity, or an expense or loss". **[8]** So; the risk of devaluation of bank investments is related to the risks it has. Banks have a bilateral view of the risks involved. Healthy management of risks means healthy management of the balance. For this reason, the banks are in need of successful asset - liability management and their risks are related to their successful management. However, this may sometimes be inadequate, and since off-balance sheet transactions and activities also carry a risk factor, these transactions and activities may also cause damage to the bank. Non-cash credit instruments such as a letter of guarantee and a letter of credit, which do not reflect on the bank's first meaning in the first sense, can make various losses to the bank.

Types of risks in banking; It can be evaluated in 3 main groups, titled in the direction of Basel studies. [7]

- Credit Risk
- Market Risk
- Operational Risk

The Basel III agreement was approved at the recent G20 summit in Seoul. The summit participants also approved long transition periods for the full implementation of Basel III's capital and liquidity proposals.

Despite the fact that one of the goals of the G20 was to establish equal conditions for banks, in reality regulators in different jurisdictions use different approaches to such key issues as management and reward system, taxes and fees, the approach to system-forming institutions, the so-called "wills" ("Living wills"), the boundaries of supervision and even accounting and disclosure. [47]

Although this is partly due to differences in starting positions and the different impact of the financial crisis on these countries, a certain influence is also posed by the trade-off between the stability of the financial system and its ability to support economic growth.

The principles of the introduction of Basel II and Basel III in Azerbaijann supervisory practice have not yet been finalized. Unlike European financial institutions that have been consistently implementing these standards for more than 10 years, the participants of the Azerbaijann banking sector face the challenge of simultaneously applying the standards of the three normative documents that make up the Basel Accord (Basel II, Basel II.5 and Basel III). The requirements of the Bank of Azerbaijan are more stringent than the requirements of the Basel Committee in a number of areas. In particular, the current capital adequacy ratios established by the Bank of Azerbaijan are 25% higher than those adopted by the Basel Committee. The Azerbaijann regulator also makes more stringent requirements for accounting for subordinated loans. At the same time, the Bank of Azerbaijan has not yet defined the requirements for the buffer of capital preservation and countercyclic buffer. It is also worth noting that unlike Basel III, which excludes preferred shares based on the value of the base capital (CET1), Azerbaijann regulations allow the inclusion of certain types of preferred shares in the calculation of this indicator.

Azerbaijan has very stringent liquidity requirements in the form of three mandatory ratios, which are to some extent comparable to the similar requirements of Basel III. The Bank of Azerbaijan has already adopted a number of elements of Basel II, in particular a simplified standardized approach to credit risk assessment, a simplified approach to assessing market risk, and a basic indicative approach to assessing operational risk. The implementation of regulatory requirements related to the second and third components of Basel II is expected not earlier than 2014 and 2013, respectively [53].

The new approaches to risk and regulation that Basel III offers, should also be considered in terms of a global return to financial stability in general. A set of recommendations is needed that support the stability of the tax stability of the economies in which financial institutions operate.

The central component of initiatives to strengthen the banking sector's risk-absorbing capacity is the Basel III regulatory framework. Basel III toughened capital requirements and set new liquidity risk management tools. At the same time, the requirements for the creation of a counter-cyclical capital buffer and differential regulatory requirements for systemic banks have been identified in order to manage system risks and mitigate their impacts.

In the process of improving the financial institutions, a framework for the recovery and restructuring of financial institutions has been developed to minimize the use of public funds, and the introduction of more effective instruments has been started.

There is a widespread application of the principles of consolidated and risk-based approach to the regulation of the financial sector. Meanwhile, the supervisory authorities take a closer look at the business models and strategies of financial institutions and take precautionary measures. The legal framework for the personal responsibility of bank managers and shareholders has been initiated by banks for losing their solvency.

By 2025, the banking sector will fully comply with the Basel III standards. Credit risk assessment mechanisms, scoring models, corporate governance structures and risk management processes to international standards will enhance risk management capabilities in financial institutions. The existence of a credit bureau that meets the Basel III standards and providing high quality information will enable financial institutions to pre-evaluate potential losses on non-performing loans and overdue loans, improve underwriting and monitoring systems. As a result, the volume of a healthy loan portfolio will increase significantly and the share of non-performing loans will decrease. [23, p.250]

Financial institutions will continue to boost productivity and digitize until 2025. During this period, as a result of changes in the regulation and technological advancement, banks will further digitize their processes and operations. With a view to achieving high results, optimizing time and labor, a number of functions will be integrated into a single structural unit, and more than 90 percent of banking operations will be carried out through alternative service channels. Branches will create new and deeper customer relationships by creating value added.

According to the materials, in 2018-2021 the country's authorities plan to carry out a set of measures to improve the banking system and ensure financial stability of the sector.

In particular, in this period it is planned to develop a roadmap for the banking sector and improve the mechanism for regulating the backbone banks; restructuring of banks that failed to restore the stability of capital; expansion of liquidity instruments; Establishment of a legal mechanism to encourage the sale of non-performing assets; application in banks of a more healthy risk management system.

In addition, in the medium term, it is planned to improve access to financial resources, create a new framework for banking regulation based on risk assessment (phased implementation of the Basel II and III standards).

The plans also include encouraging the participation of the banking sector in the securities market, developing the interbank money market, and increasing the transparency of the banks' financial statements.

In addition, medium-term plans include the improvement of the deposit insurance mechanism, the establishment of credit bureaus and other measures.

With banks, the relevant work is carried out, and I am confident that we will be able to switch to IFRS-9 standards from next year.

It should be noted that the International Financial Reporting Standards (IFRS) regulate the principles of relations between banks and their legal entities, defining their basic principles. The national rules for reporting are mandatory.

1.3. Liquidity criteria management of in Azerbaijan's banks

With the aim of strengthening liquidity risk management on a global scale, new regulations have been made under Basel III and a basis for strong liquidity risk management has been laid. It is estimated that the adoption of new Basel standards and the implementation of new liquidity risk management approaches in Azerbaijan, which is rapidly integrated with the world economy, will be a long and difficult process. Therefore, this research in the Azerbaijani banking sector is thought to help the financial sector of the country adapt to these changes and speed up the restructuring process.

Regulations on the liquidity management of banks are developed in accordance with the laws of the Republic of Azerbaijan "On Central Bank of the Republic of Azerbaijan", other legislative acts of the Republic of Azerbaijan, normative acts of the Central Bank of the Republic of Azerbaijan (hereinafter - the Central Bank), as well as international practice. [5]

The obligations of the bank can be real and conditional.

Real liabilities are reflected in the balance sheet of the bank in the form of demand deposits, time deposits, interbank resources involved, and creditors' funds. Potential or off-balance-sheet liabilities are expressed in guarantees issued by the bank, open credit lines to customers, etc.

Real liabilities are those that are reflected in the respective balance sheet accounts in the form of deposits, interbank loans, issued securities (bills of exchange, deposit and savings certificates).

Contingent liabilities are liabilities of the bank, reflected on off-balance accounts. These are obligations that can arise in certain circumstances, for example, guarantees, guarantees issued by the bank.

According to the terminology established by IFRS, real and contingent liabilities are monetary and other liabilities arising from transactions involving the use of financial instruments, i.e. any contract that entails the emergence of a monetary asset of one enterprise and a monetary obligation or instrument of capital of another enterprise.

These Rules define the minimum requirements for domestic policies, rules and procedures of liquidity risk and liquidity management banks of local commercial banks and local branches of foreign banks (hereinafter referred to as banks).

Each bank should develop a policy of identifying, measuring and managing liquidity in accordance with the nature and nature of its operations and the relevant internal rules and procedures. Credit, market, operational and other risks affecting liquidity during policy, rules and procedures should be taken into account.

Factors determining the liquidity of a commercial bank can be internal and external.

- Internal factors include:
- the quality of the bank's assets;
- quality of borrowed funds;
- conjugation of assets and liabilities by maturity;
- management and image of the bank.

A strong capital base means the presence of a significant absolute value of equity. The core of its capital is the statutory fund and other funds of the bank, intended for various purposes, including to ensure financial stability of the bank. The larger the bank's own capital, the higher its liquidity.

Another factor affecting the bank's liquidity is the quality of its assets. When calculating the ratios, the assets of a commercial bank are divided into five risk groups, taking into account the degree of risk of investment of funds and, accordingly, the possible loss of part of the value of these funds in an unfavorable situation. At the same time, an appropriate risk adjustment factor (from 0 to

100%) is assigned to the separate categories of assets included in each of the five groups, which shows how much of the value of this asset category can be lost, or otherwise, to what extent the investment of funds into gu or other category of bank assets.

- External factors include:
- general political and economic situation in the country;
- development of the securities market and the interbank market;
- the Bank of Azerbaijan refinancing system of commercial banks;
- effectiveness of supervisory functions of the Bank of Azerbaijan.

The overall political and economic situation in the country creates prerequisites for the development of banking operations and the success of the banking system, ensures the stability of the economic basis of banks' activities, strengthens the confidence of domestic and foreign investors in banks. Without these conditions, banks are not able to create a stable deposit base, achieve profitability of operations, improve the management system, improve the quality of assets.

The development of the securities market makes it possible to provide an optimal system of liquid assets without loss of profitability, since the fastest way of transforming the bank's assets into cash in most foreign countries is connected with the functioning of the stock market.

An asset's liquidity indicator is determined based on the amount of time spent on turning it into a highly liquid asset and the resulting loss. Assets are classified under the following liquidity categories: [22, p.98]

Highly liquid assets include cash in national and freely convertible foreign currencies, securities issued by the Government of Azerbaijan and the Central Bank, guaranteed securities issued by the Azerbaijan Mortgage Fund under the Central Bank, over-mandatory reserves kept by the Central Bank, correspondent accounts in all local banks and foreign banks with a high rating and "overnight" deposits.

Medium Liquid assets - these assets include short-term financial instruments of interbank market, deposits placed in domestic and foreign banks, other financial institutions, bank metals, local banks, securities issued by governments and central banks of the Organization for Economic Co-operation and Development (OECD) Securities purchased under repurchase agreements with investment grade and up to 30 days maturity.

The liquidity indicator of a liability is determined by the probability of fulfillment of liabilities and the right of the holder to demand bank funds. The higher the likelihood and the greater the likelihood of the recall of the funds attracted by the Bank, the higher the liquidity of the liabilities. Liabilities are classified under the following liquidity categories:

High Liquidity (Current) Liabilities - All current accounts, including correspondent accounts of banks and overnight placements; demand deposits, term liabilities with a maturity date of 30 days or less (including securities issued by the bank), expiration date, non-recurring credit lines that are not limited to the date when the contract expires.

Borrowings drawn from the Central Bank do not relate to high liquidity (current) liabilities. When the performance of an expired obligation is considered to be extended to the same term on the basis of the terms of the agreement between the parties, that obligation does not refer to high liquidity (current) liabilities.

Liquidated Liabilities - These commitments comprise from 30 days to 365 days (including the securities issued by the bank) overdue liabilities, which have a maturity of more than one year, but give the creditor the right to demand early repayment of the obligation.

In the liquidity management policy, the composition, duration and management methods of the bank's assets and liabilities, the diversity and stability of funding sources, the approach to liquidity management in various currencies, the types of banking products, the assumptions about the sale of assets and so on. must be reflected. [26, p.87]

In the liquidity management policy, the Bank's subsidiary, subsidiary and affiliated banks may be entitled to manage their liquidity within the limits set by management.

Given the nature and complexity of the operations carried out at each bank, internal rules for liquidity management should be developed. These guidelines should be thoroughly regulated by the Bank's liquidity risk and liquidity management processes and should be guided by the Bank's liquidity policy.

Intrinsic liquidity management should be determined by a structural subdivision or responsible person that carries out centralized control over the consolidated liquidity position of the bank, its authority and subordination, as well as the reporting procedures and other relationships with the bank.

The Bank should establish a liquidity management process that covers, at least, the following aspects of managing and controlling various areas of its activities:

Asset Management: [10, p178]

- monitoring of balances in correspondent accounts;
- Monitoring of lending volume;
- monitoring of loan portfolio quality;
- interest rate monitoring on loans;
- monitoring of the bank's securities portfolio;
- monitoring of securities purchased under repurchase agreements;
- monitoring of assets that can be used as collateral;
- monitoring of key and other non-liquid assets available for liquidity adequate protection.

Commitments Management: [21,p.89]

- monitor the amount of funds attracted by the bank, taking into account recent trends, seasonal factors, sensitivity to changing interest rates and other macroeconomic factors;
- deposit volume monitoring (including deposits of banks and other legal entities, "overnight" operations);

- monitoring of maturity and other maturity payments;
- regular monitoring of the principal liabilities of the bank's creditors and supporting them;
- monitoring of concentration on liability sources, including type of liability, creditor commitments and the area of its location;
- monitoring of balance sheet liabilities.

Intra-bank liquidity analysis of liquidity. Considering the characteristics, structure and composition of assets and liabilities of the Bank, historical trends in their dynamics, and seasonal and other factors, the intra-bank liquidity analysis of liquidity should be at least once a month, as follows:

The intrinsic "crude" maturity analyzes are at least annually 1-7, 8-15, 15-30, 30 days per year, plus 1-2, 2-3, 3-5 years and 5 more than one year. The allocation of the above payment periods may, if necessary, be settled by the bank for a shorter period of time.

Liquidity relief plan. In order to ensure sustainable operation of the Bank, the Bank should have a plan reflecting the involvement of liquid assets in emergencies and the liquidation of assets into minimal losses (hereinafter referred to as the "extraordinary plan").[46,p.89]

This plan should be determined in accordance with the bank's structure, performance characteristics, risk profile, volume of operations and the region in which it operates. Potential sources of funding should be clearly identified during the unexpected liquidity shortfall in an extraordinary way, taking into account the Bank's liquidity requirements, as well as significant payments to the bank and priorities for their implementation, and the timing and expenditure required by the bank.

The emergency plan should be prepared and approved by the Supervisory Board with the involvement of many related structural divisions of the bank (Risk Management Committee, Treasury, Asset and Liability Management Committee, Information Technology, Payment Systems and Financial Services). The plan should include emergency response procedures and, in this case, a clear division of responsibilities and responsibilities within the bank.

In terms of compliance with the current situation, the emergency plan should be reviewed and approved at least once a quarter. Assumptions reflected in the plan to confirm the relevance of the plan should be stress-tested.

The liquidity of the bank is closely related to the liquidity of the balance sheet. In order to maintain the liquidity of the balance sheet, the bank must constantly maintain the necessary and sufficient level of funds on correspondent accounts, cash on hand, quick-sell assets, i.e. manage liquidity.

The main elements of liquidity management are[38,p.258]:

- analysis of the state of instant, current and long-term liquidity;
- preparation of a short-term liquidity forecast;
- conducting a liquidity analysis and using negative events for the bank (market conditions, the situation of borrowers and creditors);
- determination of the bank's need for liquidity;
- determination of liquidity surplus / deficit and its maximum permissible values;
- assessment of the effect on liquidity of transactions in foreign currency;
- determination of the limiting values of the liquidity ratios for each currency and for all currencies in general.

Evaluation of the liquidity of the bank is one of the most difficult tasks, allowing to get an answer to the most important question: is the bank able to meet its obligations. The ability of the bank to respond to obligations is affected by the characteristics of the state and changes in the resource base, the recoverability of assets, the financial result of the activity, the size of the bank's own funds (capital), and the quality of bank management, management, which at certain points can play and play a decisive role.

To control the state of liquidity of the bank, three liquidity norms (instantaneous, current and long-term) were established. They are defined as the ratio between assets and liabilities, taking into account the terms, amounts and types of assets, as well as other factors.

The instant liquidity ratio (H2) regulates (limits) the risk of liquidity loss by the bank during one business day and determines the minimum ratio of the amount of highly liquid assets of the bank to the amount of the bank's liabilities on demand accounts.

The standard is calculated by the formula[37, p.147]:

$$H2 = \frac{Л_{а.м}}{О_{в.м}} \times 100 \geq 15\%,$$

- La.m. - highly liquid assets, i.e. financial assets that must be received within the next day and can be immediately demanded by the bank and, if necessary, implemented by the bank in order to immediately receive cash, including funds on the correspondent accounts of the bank with the Bank of Azerbaijan, in banks of countries from the "developed countries ", the bank's cash department. The indicator La.m. is calculated as the sum of the balances on the accounts of the cash desk, correspondent accounts, receipts according to the deadlines;
- Ov.m - liabilities (liabilities) on demand, on which the depositor or creditor may be required to immediately repay. The Ovm value is calculated as the sum of the balances on demand accounts, with certain adjustments. Lam and Ovm calculations are made in accordance with the instructions of the Bank of Azerbaijan. The minimum permissible value of the norm of H2 is set at 15%.

The current liquidity ratio of the bank limits the risk of liquidity loss by the bank during the nearest 30 days to the settlement date and determines the minimum ratio of the amount of the bank's liquid assets to the amount of the bank's liabilities on demand accounts and for up to 30 calendar days.

The current liquidity ratio (H3) is calculated by the formula:

$$H3 = \frac{Л_{а.т}}{О_{в.т}} \times 100 \geq 50\%,$$

- LAT - liquid assets, i.e. financial assets that must be received by the bank or may be claimed within the next 30 calendar days in order to receive cash within the specified time. The indicator La.t is calculated as the sum of highly liquid assets (indicator La.m.) and balances on certain balance-sheet accounts;
- Ovt - liabilities (liabilities) on demand, for which the depositor or creditor may be required to pay them promptly, and the bank's obligations to creditors (investors) for a period of 30 calendar days. Ov.t is calculated as the sum of balances on certain BPS accounts.

The calculations of La.t and O.t. are made in accordance with the instructions of the Bank of Russia. The minimum permissible value of the H3 standard is set at 50%.

Highly liquid and liquid assets include only those financial assets of the bank that, in accordance with the regulations of the Bank of Russia, fall into the first quality category (risk group 1) and the second quality category (risk group 2). In addition to the above assets, the balances on the balance sheet accounts for which there are no requirements for the formation of reserves are included in the calculation of the Lam and La.t indicators, if the assets on the relevant balance sheet accounts are planned by the bank for receipt within the next 30 calendar days in A form that allows them to be classified as highly liquid and liquid assets.

CHAPTER II. ANALYSIS OF LIQUIDITY MANAGEMENT METHODS IN BANKS OF AZERBAIJAN AND CIS

2.1. Managing banking liquidity: international experience

In foreign practice, liquidity is measured on the basis of: [44, p.356]

1) financial ratios, calculated on the balance sheets and reflecting the liquidity of the balance sheet;

2) determining the need for liquid funds, taking into account the analysis of turnover on assets and liabilities of the bank's balance sheet in the relevant periods.

The coefficient method assumes that there are no quantitative relationships between the balance sheet items. In some countries these relationships are prescribed by the authorities, in others, as in the US, banks themselves introduce.

The experience accumulated by banks determined the most frequent application of certain indicators.

When determining the ratio of liquid assets to de-positives, two indicators are used:

1) [Primary reserves (Cashier + Correspondent account
in the central bank)]: Deposits;

2) [Primary + Secondary reserves (state
securities)]: Deposits.

Through these indicators, a direct link is established between liquid assets and liabilities in the form of deposits to be executed. The level of the first indicator to ensure the liquidity of the bank is adopted in the amount of not less than 5-10%; the level of the second - not less than 15-25%. The second indicator is used in Japan (as mandatory for all banks), where its level should not be less than 30%.

In the United States, the ratio of loans and deposits is used for assessing liquidity (the more they exceed 1, the bank's liquidity is lower) and the share of loans in total assets as reflected in the diversification of assets (this figure is considered optimal at 65-70% level).

To assess liquidity, an indicator is used that reflects the ability of an asset to be quickly exchanged for cash. It is calculated as a ratio of liquid assets to total assets. The liquid assets include only balances in the cash desk, cash in transit, on foreign currency accounts, balances on NOSTRO accounts with the central bank

and in other banks. The higher this indicator, the higher the liquidity and the higher the yield. The management objective in the field of liquidity management is the optimal ratio of liquidity and profitability.

Particular attention is paid to the analysis of the structure of attracted resources, the stability of the deposit base. From the point of view of stability, deposits are divided into main (stable) and "volatile". The main (stable) deposits are deposits that are fixed to the bank and do not leave it.

In late 2005, the International Finance Corporation (IIF) created the Liquidity Risk Appropriation Committee. This Special Committee, which is headed by Merrill Lynch Vice President and Administrative Affairs Director Ahmass Fakahany, and Vice President of Barclays UK Commercial Banking President Chris Grigg, has about 40 representatives from the world's largest global financial institutions. The function and purpose of the Special Committee is to develop a perspective on the measurement, monitoring, management and governance aspects of liquidity risk in financial institutions and to present them in recommendations. The focus of the Special Committee on this issue has been a timely step because it is a turning point that industrial and regulatory bodies and lawmakers are dealing with more and more other issues and moreover the liquidity characteristics of international markets are undergoing significant changes. The Special Committee is pleased to see that the level of development of firms' approach to liquidity risk management is constantly increasing and does not see any immediate danger or cause that may lead to a particular concern or concern. Despite all this, the increasing level of globalization of firms and the financial system; an increasing number of companies that provide market volume and liquidity; the need for collateralized financing and funds and the lack of harmonization with global liquidity standards have shown that this issue needs to be looked at closely. [29, p.126]

In most foreign countries, there is no uniform measure of the liquidity of the bank. The set of indicators and methods of liquidity management vary from bank to bank. The management of the bank's assets and liabilities in foreign countries relies on the use of one of four theories of liquidity management: the theory of commercial loans, the theory of displacement, the theory of expected income, the theory of liability management. In accordance with the basic principles of the theory of commercial loans, the bank> to ensure liquidity, it is necessary to link the lending process with the successive stages of the product's movement from production to consumption. It is in the tightening of bank resources in short-term loans, rather than in investment securities or real estate, that creates certain guarantees for the speed of conversion assets in cash.

The theory of movement broadly interprets the liquidity conditions of a commercial bank, linking them with the placement of assets not only in short-term loans, but also in securities and so-called ones that can quickly turn into money. The liquidity of a commercial bank, according to this theory, is a certain proportion of the total assets and the structure of quick assets. On the basis of liquidity (the speed of the transformation of assets into cash), all assets in foreign practice are divided into: primary reserves, secondary reserves, loans, other securities , buildings and constructions. [28, p.178]

Primary reserves include cash and funds on a correspondent account with the Central Bank. The secondary reserves are highly liquid securities that are intended for sale. This type of asset complements the primary liquidity reserve in the event of a failure of the latter. Liquidity of loans, other securities, investment investments (buildings and structures) is lower.

In the last two decades, emerging countries have experienced capital inflows in two serious waves. The first of these waves was the wave that ended with the Asian crisis of 1997-1998 and the second was the wave that has been observed since 2002. Especially in the post-2002 period in some developing countries where capital inflows including Turkey, capital outflows and current account deficit remains high enough to cover the deficit. IMF (2007) study according to GDP ratio of the cumulative capital that entered Turkey between 2003 -2007 is around 25.7%. This figure was calculated as 4.4% for the years 1992-93 and 15.3% for the years 1995-2000. On the second wave, it is noteworthy that direct investments are more dominant than portfolio investments and more countries are affected.

According to Gray (2006), central banks do not need strong reserves in countries that adopt a floating exchange rate regime. Therefore, the excess liquidity problem due to foreign exchange inflows may not occur. However, especially in countries that adopt a fixed exchange rate regime, central banks must hold strong foreign exchange reserves to be affected at a minimum level by the sudden depreciation of the currency. [15]

Possible effects of capital inflows on internal markets Buscaglia (2003) suggested that capital inflows would increase domestic consumption and thus worsen current account balance and real exchange rate. As a result, the balance of payments crises may be seen as the economic vulnerability of the countries may increase. [11]

In countries with intensive capital inflows, controls against capital inflows can be introduced. While capital controls seem to have been largely abolished in emerging European countries, emerging Asian countries seem to be more conservative in their capital controls. In studies conducted on the control of capital inflows, it has been found that capital controls are only effective in the short term and that the amount of capital entered does not change but concentrates on long term fluctuations. Moreover, when tight controls were applied, it was observed that current account deficits and private and direct investments were lower and inflation was higher. There are also studies in which the countries where capital controls are applied are more open to crises. On the other hand, capital controls have high microeconomic costs. These costs include reduced foreign trade, increased cost of capital, increased cost of capital increase of small firms in controlled countries, and inefficient use of economic resources due to controls. [17]

In the past, governments borrowed money from central banks. Although it can be said that monetization is not a major cause of liquidity surplus as a result of the independence of the central banks in recent years, the effects of monetization in the previous period can be seen in many central bankers' balances. [15]

Commercial banks may avoid lending to each other in the liquidity squeeze they will experience in the event of a crisis. In this case, the central bank could enter the banking system to provide liquidity to the bank in a difficult situation or to save some of the financial sector. This will increase the liability of the central bank to the financially good bank, while its assets in the financially poor banks will also increase.

The privatization proceeds, which are the result of international economic integration, have a great impact on the monetary policy, especially in the developing countries. The most important feature of privatization revenues is that the economy can create a high volume entry and be variable. The share of privatization revenues reached an average annual GDP of 1.75% for about 20 developing countries in the mid-1990s. The standard deviation of the ratio of privatization revenues to GDP is on average about 0.5% per annum. Since the end of the 1990s, when the privatization process accelerated, the ratio of privatization revenues to GDP increased even more prominently with the purchase of commercial banks and non-bank financial institutions by foreign investors in many developing countries. [27]

To see the liquidity surplus reflected to the central bank's balance, the central bank's balance can be considered as net domestic assets and net foreign assets on the asset side and money base on the passive side.

Table 2.1.

Central Bank Analytical Balance Sheet

ASSETS	LIABILITIES
1 - Net Foreign Assets	**Base Money**
Net International Reserves	Emission
Medium Term Foreign Loans	azn Required Reserves
Other	Free Deposits
1 - Net Domestic Assets	
Treasury Debts	
Minor Deposits of the Public	
Deposits Followed as Foreign Currency	
funds	
Deposits of Non-Bankable Slaughter	
Cash Loans Opened to Banking Sector	
Open Market Operations	
Other Items	
Valuation Account	
IMF Emergency Assistance	
Tracking Account	
Bank Deposits	

Source: CBT, IMF Stand By Balance Sheet

Accordingly, the change in the monetary base is equal to the sum of net foreign assets and net domestic assets. When arithmetically expressed: [33, p.]

$$\Delta PT = \Delta NDV + \Delta N\dot{I}V \quad (1.1)$$

Equation (1.1) shows us that the increase in Net Foreign Assets broadens or broadens monetary policy if it is not suppressed by Net Domestic Assets, while if Net Domestic Assets is reduced, the monetary base remains unchanged.

The change in Net Foreign Assets can also be opened by the balance of payments approach as follows:

Δ NDV = Current Account + Direct Investments + Portfolio Investments + Other Investments + Net Errors and Omissions (1.2)

Thus, the increase in official reserves composed of foreign exchange assets and securities is a result of foreign investments entering foreign countries and net current account deficit and deficit.

2.2. Banking liquidity regulation: Azerbaijan experience

The survey included 43 commercial banks operating in Azerbaijan during the period 2007-2015. Three-month (quarterly) data for this bank were available. Only the following restrictions have been used to include sampling in eligible banks: [9]

- Banks with zero deposits are excluded from analysis.
- Non-lending banks are excluded from the analysis.
- Banks with zero or negative equity capital are excluded from the analysis.

The liquidity risk of the Azerbaijani financial sector is measured by the methods developed by Berger and Bouwman (2009) and Deep and Schaefer (2004). Using these methods, two separate ratios representing the dependent variable for the liquidity risk are calculated. [14]

There are two objectives of this work. The first is to measure the liquidity risk in the Azerbaijani financial sector by the methods developed by Berger and Bouwman (2009) and Deep and Schaefer (2004). The other is to investigate the relationship between the liquidity transformation ratios and other factors considered to be important. These factors are bank-specific factors and macroeconomic variables. Different variables such as bank size, equity return, capital adequacy, oil prices, exchange rate are included in the analysis to determine the possible effects of external factors on liquidity production.

The Deep and Schaefer liquidity transformation measures the difference between liquid liabilities and liquid assets by total assets and calls this indicator the Liquidity Transformation Coefficient (LDK). LDK shows how much of the asset is financed by liquid liabilities and varies between +1 and -1. Equivalent to or close to +1 the value of the ration means that the bank has turned all deposits into illiquid assets. The fact that the LDK value is close to 0 indicates that the bank can not perform the maturity transformation, that is, it forms liquid assets with one deposit. Rationing negativity means that the bank has less deposits and more liquid assets. LDK is calculated using the following equation and the values obtained vary in the range of -1 and +1.

LDK=Total Deposits - Liquid Assets/Total Assets

Table 2.2.

Balance Sheet Items Used in Calculation of Liquidity Conversion Factor

Liquid Assets	Cash and similar, deposits institutions, securities, short-term credits (up to 1 quadrant)
Liquid Liabilities	Time deposits, trade, demand deposits (less than 1 year), debts less than 1 year

Source: Deep and Schaefer (2004)

Table 3 shows LDK statistics for all banks. According to these indicators, the liquidity transformation level of financial institutions is determined to be high. Based on the Berger and Bouwman method, financial institutions are classified as large, medium and small according to their gross total assets. Banks with total assets up to 80 million Manat small banks, banks with a total assets of between 80-100 million Manat and medium size banks with a total assets of more than 100 million Manat are classified as big banks. The LDK average and the median for large banks were 0.41 and 0.40, respectively. The mean LDK and median grades of the central banks were 0.49 and 0.39, respectively. The average for all banks is calculated to be 0.39 This means that 39% of liquid deposits for each of the assets of the six Manatts held by the banks are converted into illiquid assets.

For large and medium-sized banks, values close to +1, which is the full liquidity transformation, have been obtained. As can be understood from these figures, Azerbaijani banks are financed with large liquid deposits and hold illiquid loans. Thus, the banks have made important transfers of liquidity in the economy.

Table 2.33

Statistics on Liquidity Transformation Emptiness

	MEAN	**MEDIAN**	**STANDARD DEVIATION**
Big Banks	0.41	0.40	0.27
Central Banks	0.49	0.39	0.40
All Banks	0.39	0.36	0.33

Source: Akkaya M., Azimli T. (2017). Liquidity Risk Management Azerbaijan Banking Sector. Khazar Üniversitesi

The other method of measuring liquidity risk is developed by Berger and Bouwman (2009). In the model created by Berger and Bouwman, US banks are measuring how effectively they manage the liquidity risk in pre-crisis, crisis period and post-crisis period. With this approach, liquidity production is measured in three stages. At the first stage, assets, equity and off-balance sheet liabilities are classified as liquid, illiquid and semi-liquid. In the second step, weights are given to the items classified in the first step. In the third stage, these items are combined to measure the total liquidity. Liquidity formation is measured by maturity and categorization. Credits are classified according to the first method in the category and the second method in terms of the maturity structure. The results obtained with the two different methods do not vary much.

Figure 2.1:

Bank Liquidity Production Stages

All items are classified as liquid, → All items are weighted with → The liquidity formation in the banking system is measured.

Source: Akkaya M., Azimli T. (2017). Liquidity Risk Management Azerbaijan Banking Sector. Khazar Üniversitesi

In the first stage according to Figure 1, all balance sheet and off-balance sheet items are categorized as liquid, non-liquid and semi-liquid. Asset classification is based on the ease, cost and speed of debit bank obligations to obtain liquid funds. On the other hand, the classification of liabilities and equity is based on the customers' ability to obtain liquid funds from banks, cost and speed. The weighting of assets, liabilities and off-balance sheet items is determined in accordance with the liquidity creation theory. According to this theory, when the bank transforms its illiquid liabilities into liquid assets, it generates liquidity in the balance sheet. If illiquid liabilities are used for the financing of liquid assets, they are withdrawn from the market.

The LDK statistics of Azerbaijan banks calculated by Berger and Bouwman method are given in Table 4. These indicators show that the liquidity transformation of financial institutions is on average high.

Table 2.4.

2007-2015 period Azerbaijan Banking Sector liquidity production

Year	**Liquidity volume**	**Ratio of total liquidity to**	**The ratio of total liquidity**

		gross total assets	to equity
2007	330.472	0.02	0.49
2008	665.082	0.1357	0.65
2009	841.312	0.0951	0.51
2010	1.240.523	0.1390	0.61
2011	1.765.767	0.1647	0.73
2012	1.512.397	0.0826	0.45
2013	2.393.901	0.1472	1.01
2014	2.932.942	0.1511	0.97
2015	5.353.770	0.2478	1.51
2016	4.955.664	0.2141	1.42
	5.015.047	0.2145	1.37

Source: Akkaya M., Azimli T. (2017). Liquidity Risk Management Azerbaijan Banking Sector. Khazar Üniversitesi

Liquidity production, calculated using the Berger and Bouwman method, has increased since 2011. After 2011, they have transferred considerable liquidity to the banking market. It is noteworthy that the liquidity produced during the crisis period is negative. Negative figures mean that banks hold liquid liabilities and liquid assets in their balance sheets.

Since Azerbaijan is the first research on risk management in the banking sector, it is thought that this study will contribute greatly and be beneficial. Deep and Schaefer and Berger and Bouwman methodologies were used to measure liquidity risk in this study.

According to the results obtained from the econometric analyzes made, statistically significant results were not obtained in all the models established for the liquidity rally developed by the Berger and Bouwman methodology in Azerbaijan banking sector. It is observed that the liquidity indicator developed using the Berger and Bowman methodology is negative for the liquidity production in Azerbaijan banking sector during the financial crisis period.

2.3. Methods of state regulation of liquidity in commercial banks under modern conditions

In modern conditions, effective liquidity management creates prerequisites for the sustainable development of the banking sector, and also has a positive impact on the real sector of the economy, which largely depends on the functioning of banks.

All theoretical approaches to liquidity management in commercial banks can be divided into two large-static groups, serving mainly for liquidity risk assessment and dynamic, allowing to predict the state of liquidity for a specific period of time in the future.

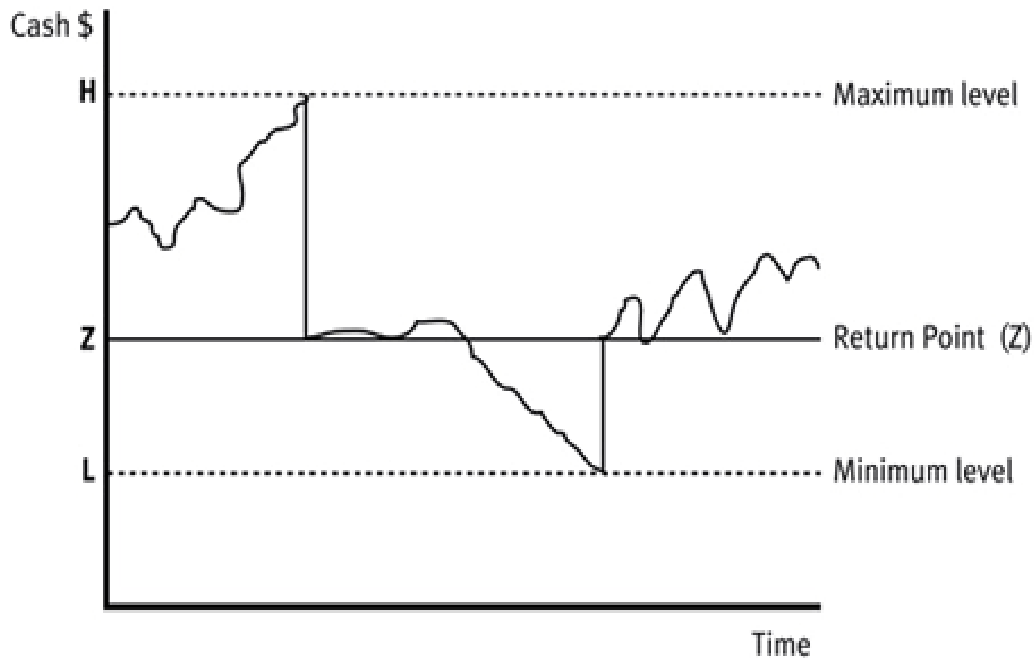
As part of the study of sources of information, an approach based on the management of liquidity reserves was also discovered. Within the framework of this approach, it is proposed to establish liquidity reserves at a level sufficient to meet the requirements for mandatory reserve requirements and peak periods of deposit growth. Within the framework of the approach, there are a number of models: [38, p.12]

1. The Baumol model is used in the conditions of assuming a high degree of certainty for the future need for a reserve of the first order, the value of which is at a constant level, that is, the reserve of order I = const, and the size of the reserve of order II and bank loans will be determined on the basis of the parameters of the term and the rate of bank resources.

2. The Miller-Orr model, which takes into account the uncertainty factor of the future need for a reserve of the 1st order. The main assumption of this model is the approximately normal distribution of the balance of daily cash flow. At the same time, random fluctuations in the balance have no definite tendency. The graphic representation of Miller Orr's model is given below:

Figure 2.2

The Miller-Orr model



Source: Cash Management/. http://kfknowledgebank.kaplan.co.uk/KFKB/Wiki%20Pages/Working%20Capital%20Cash%20Management.aspx

According to the Miller-Orr model, the target volume of the reserve of the first order (Z) is reached due to the following mechanism for controlling the volume of the reserve of the second order when the established limits of oscillations (H, L) are exceeded: [42, p,26]

- in the case when the volume of the reserve of the first order at the expense of money-capital receipts moves to point A, then the amount of the reserve of II order increases by the value (H-Z) of the bank;
- in the case when the volume of the reserve of the first order at the expense of writing off the money capital moves to point B, then by the amount (Z-L) the bank reduces the volume of the second order.

3. The Stone model develops the Miller-Orr model by improving the mechanism of reserve management of I and II orders due to the additional introduction of internal limit oscillations (H-x, L + x). [34, p.936]

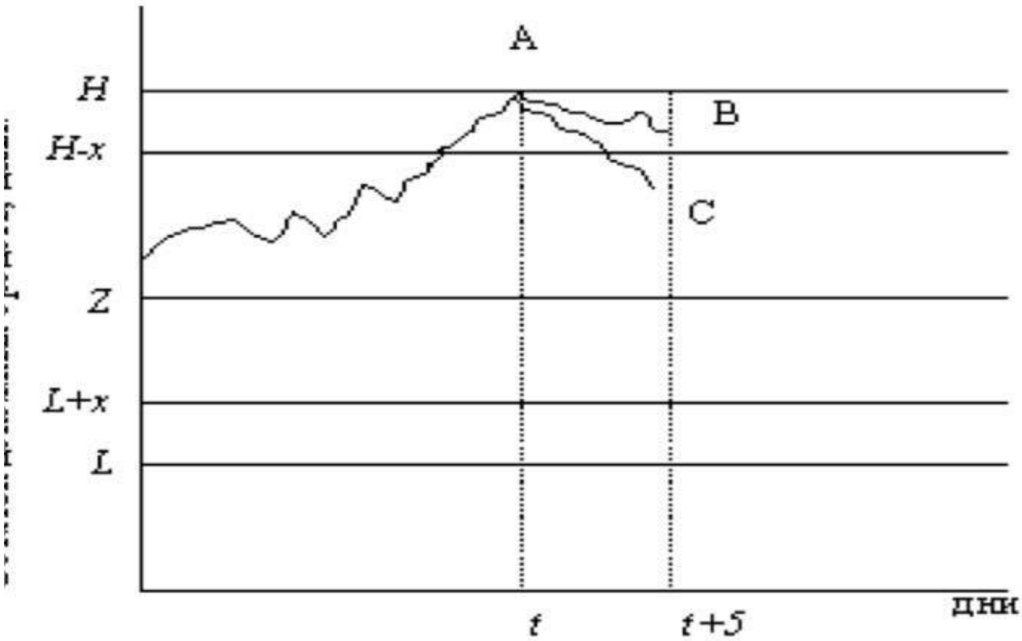
The effect of a more perfect reserve management mechanism of I and II orders is manifested in the following way: the achievement of external limits (H, L) is not always a signal to change the volume of the reserve of order II, that is, to increase the reserve of order II by the amount (BZ): [30]

1. The reserve of the first order at the time t is at point A and its value exceeds the established external limit H;

2. The reserve of order I during the time interval t + 5 will move from point A to point B, which is higher than the internal limit of H-x. The graphic representation of the Stone model is presented below: [17, p.126]

Figure 2.3.

Model of Stone.



Source: Cash Management.
http://kfknowledgebank.kaplan.co.uk/KFKB/Wiki%20Pages/Working%20Capital%20Cash%20Management.aspx

Dynamic approaches to the liquidity assessment are represented by the "time lag" methods and cash flow forecasting. The method of "ladder of terms" is classical. A detailed description of this method is provided by the Bank of Azerbaijan in recommendations on the liquidity analysis of a commercial bank. In accordance with this method, certain items of the aggregate balance are grouped according to the terms remaining until maturity of the assets and liabilities that make up the item.

If the bank has overdue obligations, then in the calculations this amount is fully accounted for in demand liabilities. The recommendations of the Bank of Azerbaijan state that "in order to minimize the risk associated with loss of liquidity, the balance between liquid assets and deposits" on demand ", as well as between short-term and long-term assets and short-term and long-term obligations should be observed." [13]

Realizing this statement literally, it can be concluded that the liquidity risk is minimal when the size of the liquidity deficit in terms of each of the terms is zero. However, in practice, bank managers have to find a balance between liquidity and profitability. Therefore, for most banks, the optimal value of the liquidity deficit is a negative value.

According to this document, each commercial bank assumes the existence of a special body responsible for developing and implementing a liquidity management policy. The document should also describe the procedures for determining the bank's rational need for liquid funds, the procedure for analyzing the state of instant, current and long-term liquidity, decision-making procedures in the event of a conflict of interest between liquidity and profitability of the bank, liquidity recovery procedures of a commercial bank.

Operations with the use of monetary policy instruments have a direct impact on the liquidity of the banking system. Thus, the liquidity indicators of a commercial bank depend on the operation of monetary policy instruments: refinancing rates, mandatory reserve requirements, open market operations and foreign exchange interventions, etc. [44, p.543] Monetary policy instruments influence the amount of money supply, which in turn affects the indicators of banks' liquidity. Effective organization of liquidity management within a commercial bank is the key to its successful functioning.

2.4. Analysis of factors that condition liquidity in modern Azerbaijan and CIS banks and main ways of managing banking liquidity

The impact of the crisis on the banking sector in the CIS is also heterogeneous, in small CIS countries it was moderate, which is explained by the low level of development of financial markets, the absence of a bubble in the real estate / credit market, and a small dependence on the outside world. In large countries (Azerbaijan, Kazakhstan, Ukraine) it turned out to be more significant. The most affected was Kazakhstan, where the crisis began back in 2007: it was due to the bubble in the lending market and the orientation towards external financing. [39, p.132]

The crisis had a strong negative impact on the Ukrainian banking system, which is explained, firstly, by the grave consequences of the crisis for the entire economy as a whole (GDP fall by 15% in 2009), secondly, the high level of dollarization of the economy and the dependence of banks on external financing , access to which ceased after the crisis. However, in general, Ukraine can be called an exception to the above description of the general features, since its banking system is much more like a portrait of BE with the exception of only the ratio of the level of loans to deposits.

Monetary banking systems of other countries in this region have less painfully suffered a crisis "fever". This is partly explained by the underdevelopment of their financial institutions (banks, insurance companies, etc.), the low influence of the conjuncture on stock exchanges on the real sector of the economy, the lack of a developed infrastructure of the stock market.

Such a differentiated reaction to the global financial and economic crisis has a certain historical background. In this connection, the characteristic of the development potential of the leading international currencies, as well as the dynamics of their interaction for determining the vectors and principles for the integration of the national currencies of the CEA countries into the global financial system, is of undoubted interest.

The study of the theoretical foundations of the development of the national banking system in the context of globalization enabled us to conclude that, in modern conditions, the banking systems of many countries are developing under the influence of globalization processes. At the same time, the intensity of these processes is different depending on the national factors of the development of banking systems. [37, p.240]

The current stage of the development of the banking system of Azerbaijan, covering the period from 2005 to the present, is characterized, along with significant quantitative achievements, by significant qualitative changes. The reforms carried out in recent years began to give tangible positive results to the banking sector. According to the results of the fourth quarter of 2014, 43 banks operated in Azerbaijan: 42 commercial banks and one state bank. Banks with foreign capital are 22 units. In seven of them, the share of foreign capital is 50 to 100 percent, in 13 banks to 50 percent, and two local branches of foreign banks.

Among the main events on the financial market of Azerbaijan should be the development of mortgage lending, a record level of the country's gold and currency reserves, the beginning of the flow of petrodollars and the activation of integration projects of the leaders of the banking community of the republic with international financial institutions against the background of increasing CBA requirements to the minimum amount of total capital. [41, p.400]

The main achievement was a significant increase in the financialization of the country's economy. The potential of lending to the banking system has increased more than 2 times, the financial depth of the banking sector of the Azerbaijani economy has increased. The ratio of bank assets to GDP of Azerbaijan increased from 29% to 42%. All this had a positive impact on consumers of banking services. Relatively easier access to banking services, the cost of the services themselves has decreased, and the quality has improved. All this had a positive impact on the development of the Azerbaijani economy. [19]

At present, the new requirement for capitalization is the responsibility of banks, which form 99% of the assets of the banking sector. In June 2014, the capitalization of the banking sector of Azerbaijan in relation to the same period of 2013 increased by 27.9 percent, making 5.521 billion manat as of 01.06.2015. At present, the capital adequacy of the sector is 18 percent, which exceeds the CBA norm by 6 percentage points, and by 2.25 times the requirements of the Basel Committee. This shows the financial stability of the banking sector, which expands the capacity of banks to lend.

Table 2.5

Macroeconomic characteristics of the banking sector of Azerbaijan

The indicator characterizing the role of the banking sector in the economy	01.01.09	01.01.10	01.01.12	01.01.2015
The ratio of bank assets to GDP,%	25	27	39	42
Ratio of loan portfolio to GDP,%	17	22	28	30
Ratio of customer deposits to GDP,%	5	5	14	29

Compiled according to the Central Bank of Azerbaijan

It is obvious that at this stage of historical development the economy of Azerbaijan needs an efficient and capitalized banking system, especially in the light of accession to the WTO. To achieve this strategic goal, it is necessary not only to conduct a competent policy to create conditions for the development of the financial system on the part of the state, but also efforts on the part of the credit organizations themselves aimed at forming and raising the level of capitalization of the country's banking system. [40, p.332]

Among the systemic factors that determine the low competitiveness of the banking sector, and at the same time, the low level of its capitalization should be considered as the main reserve for raising the latter. This is a serious obstacle to the development of banks, minimizing their chances for attracting investments, participating in financing of large economic projects and long-term needs of their clients.

During the crisis, lending volumes were falling, blowing bubbles, a sharp devaluation of the national currency and a drop in real GDP. On average, for the group of countries under consideration, this fall was 6.3%. In most cases, the volume of lending decreased as a percentage of GDP, and in the absence of high inflation - and in nominal terms. The reason for the decrease is the problems of liquidity and the growth of the volume of "bad" debts on the banks' balance sheets.

The current crisis, which faced the global financial system, is one of the most serious and large-scale in recent years. It differs from all previous ones both in depth and in scale, and, perhaps, for the first time after the Great Depression embraced the whole world. Features of the current financial crisis is manifested in various aspects. First of all, we should emphasize its global nature: it began in the US, it quickly spread to most countries and became a global crisis, which distinguishes it from the above-mentioned crises. It is equally important to highlight the comprehensive nature of the crisis: it encompasses all spheres of the economy, and by no means its separate segments - financial, exchange, housing, etc.

The manat rate will remain a significant factor in maintaining macroeconomic stability in managing financial stability, as well as in ensuring the international competitiveness of the non-oil sector. The growth of foreign exchange earnings in the country will be the main macroeconomic factor affecting the rate of manat.

Thus, in the current conditions of the development of the market mechanism of economic management in Azerbaijan, the importance of a stable and efficient banking system is substantially growing, and it is becoming one of the most important components of the successful functioning of the entire economy of the state.

Taking into account all of the above, we believe that the main prerequisites for the effective functioning of the banking system of Azerbaijan today are the strengthening and improvement of the resource base, maintaining a balanced growth in the loan portfolio with the pace of capitalization, providing economic conditions for increasing the share of long-term investment lending in the banks' assets, banking system to external and internal factors of destabilization, ensuring its reliability, and Consequently, the increase of its role in the processes of economic transformation. The above factors directly affect the competitiveness of the national banking system. Therefore, they should be taken into account when developing and implementing domestic monetary and financial policies in Azerbaijan with the aim of strengthening its competitive positions in the global economic space.

According to the Central Bank of Azerbaijan, as of early 2013, 176 financial organizations have a license of the CBA for conducting banking operations, and the number of banks is 43 (Table 6). The data in Table 6 show a slight change in the number of banks operating in Azerbaijan over the past nine years. So, if at the beginning of 2005 their total number was 44, then at the beginning of 2013 43. A positive trend is an increase in the number of financial organizations that have a CBA license to conduct banking operations: from 114 in 2005 to 176 in 2013. During the analyzed period, there is a tendency to increase foreign capital in the domestic banking system: the number of banks with foreign capital increased by 46.7% - from 15 to 22. [24, p.416]

Table 2.6

Indicators of the development of the banking sector of Azerbaijan in 2005-2013, as of the beginning of the period

Indicators	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Number of financial institutions licensed to conduct banking operations	114	129	138	142	140	142	146	169	176
Number of banks - total	44	44	44	46	46	46	45	44	43
Including: public	2	2	2	2	1	1	1	1	1
private	42	42	42	44	45	45	44	43	42
Number of banks with foreign capital:	15	18	20	21	23	23	22	23	22
including those with an authorized capital of 50% to 100%	5	5	5	6	7	7	7	7	6

Statistical Bulletin of the National Bank of the Republic of Azerbaijan. 2013, No. 1 (155). C. 50.

Thus, a sufficient level of bank capitalization serves as a basis for strengthening the banking system of Azerbaijan, increasing its reliability and resilience to crises.

CHAPTER III. LIQUIDITY PROBLEMS IN UP-TO-DATE AZERBAIJAN AND CIS BANKS

3.1 Main reasons and issues of liquidity problems in Azerbaijan banks (case of selected banks)

Liquidity is understood as the bank's ability to ensure timely and complete fulfillment of its monetary and other liabilities arising from transactions involving the use of financial instruments. In other words, the bank's liquidity means the ability to transform spoil assets into cash or other means of payment to pay the obligations incurred to it. The degree of possible losses is determined by the level of asset risk.

Means for this can accumulate in advance or be acquired by selling certain assets or purchasing arrays.

The liquidity of the bank can be determined, firstly, as a reserve of its money, compared with the needs in them, which is a rather narrow approach, and secondly, as a flow, in the calculation of which are accepted:

of prominent assets into more liquid and the inflow of additional funds in the form of loans and received income from the operating activities of the bank.

At the same time, the notion of "liquidity of the bank" (both as a stock and as a flow) is much narrower (as it is more an internal characteristic of the bank) of the concept of "solvency".

Solvency is understood as the relationship between the bank and its counterparties and represents the bank's ability to fulfill its obligations to customers in full and in due time. Liquidity is a prerequisite for solvency.

Liquidity allows the bank to perform its activities to: maintain the bank's reputation as a reliable counterparty; attracting resources for a longer period and under a low interest rate; timely and full execution of obligations on attracted funds; provision of funds in the priority areas for the bank; avoid unprofitable sale of assets. The main functions of bank liquidity are: meeting the demand for loans; satisfaction of depositors' wishes to withdraw deposits; ensuring confidence in the bank among existing and potential customers.

In relation to the balance sheet of the bank, liquidity means the ability of assets to turn into cash. A bank is considered liquid if its cash and other liquid assets, as well as the ability to quickly mobilize funds from other sources, are sufficient for a timely repayment of debt and financial obligations. The articles of assets of a commercial bank are located in the balance sheet in order of decreasing liquidity, i.e. the possibility of their circulation into cash for making payments. The ability to timely and fully discharge the obligations of a commercial bank depends on its liquid assets. Liquidity of assets is the ability of assets without losses to be transformed into cash to repay relevant liabilities. The liabilities of the bank are made up of real and conditional. Real liabilities are reflected in the balance sheet of the bank in the form of demand deposits, time deposits, interbank loans attracted, and creditors' funds. Contingent liabilities are expressed by off-balance sheet passive instruments (guarantees and guarantees issued by the bank) and off-balance sheet active transactions (unused credit lines and letters of credit issued).

The commercial bank fulfills its obligations with the use of the following liquid funds: cash in cash and in correspondent accounts in the Russian Bike and other commercial banks; assets that can be quickly converted into cash; interbank loans, which, if necessary, can be obtained from the interbank market or from the Bank of Azerbaijan; other raised funds, for example, the issue of certificates of deposit and bank bills.

One of the main characteristics of the state of liquidity is the liquidity risk, which is understood as the possibility of the bailor failing to pay its obligations in connection with the mismatch in the streams of receipts and deductions of funds in terms and in terms of currencies. In practice, the liquidity risk is subdivided into the following components: the risk of liquidated liquidity - the possibility of a shortfall in income or a decrease in the value of the bank's assets, arising from the inability of the bank to meet cash requirements on time and at the lowest cost; risk of loss of solvency - the possibility of the bank failing to meet its current obligations arising from unbalanced passives on demand and highly liquid assets; risk of excess liquidity - the possibility of reducing the return on assets due to the excess of highly liquid assets concentrated in low-yielding and non-profit-making instruments.

The general transaction volume of the assets of the banks in the country has approached 12,350 billion dollars according to the data of 1 October 2010, the annual increase is 15%. The ratio of customer loans in total assets has increased to 70%. According to the October 1, 2010 data in this context, the overall volume of loans granted to non-financial sectors has been AZN 8,754 billion.

Table 7.

Indicators Concerning the Financial Depth of Azerbaijan Banking Sector

Demonstrators	**01.10.2010**
Assets of banks	12350.5 (mln azn)
Credits	8754.2 (mln azn)
Deposit	2798.3 (mln azn)

Capital of Banks	1876.5 (mln azn)

Country	**Assets / GNP**	**Loan / GNP**	**Capital / GNP**	**Deposits / GNP**
Azerbaijan	34	24.3	5	8

Source: Мамедов З.Ф. Банковская система в условиях глобального финансового кризиса// Финансы и кредит.- 2010.- № 48.с. 8-15.

Purpose and Duties of the Central Bank of Azerbaijan in the Monetary Policy

In line with the "Act on the Azerbaijan MB," the aims of the Central Bank of the Republic of Azerbaijan are listed as follows: [16]

1) (1) to preserve the stability of the national currency of Azerbaijan;

1. (2) to continue the activity of the payment - accounting system on an uninterrupted and regular basis;

2) (3) To ensure the development and strengthening of the Azerbaijani banking system.

3) MB fulfills the following activities to achieve its objectives: [25]

(1) To maintain and determine the state's monetary and foreign exchange policy;

(2) To organize the payment of money in a manner of being charged and discharged in accordance with paragraph 19 of Article 19 of the Constitution of the Republic of Azerbaijan;

(3) To regularly appoint and announce the official exchange rate of the manat in accordance with exchange rates;

(4) To arrange and control the exchange rate of money in accordance with the law;

(5) To safeguard and manage international exchange-gold reserves under its control;

(6) To establish the balance of payments in accordance with the law and participate in the preparation of the government's estimated payments;

(7) To authorize and regulate the execution of bank operations in accordance with the norms of the Treaty of the Republic of Azerbaijan and the normative treaties adopted in its law; controlling banking activities;

(8) To organize the activities of the payment system, to provide control in accordance with the law;

(9) To perform other duties envisaged in the present and other laws.

It is possible to consider the monetary policy implemented in Azerbaijan since 1994 in four stages: [26, p.153]

Stage 1 (1994-1996). It is characterized by the adoption of principles and tight monetary policy to ensure macroeconomic stability between 1992-1994. This mandatory activity led to objective facts that appeared between 1992 and 1994. According to world experience; moving from a centralized system to a market economy, falling production figures and rising inflation, the rapid depreciation of the national currency and the worsening of the social situation of the people. This process has accelerated the long-standing relationship between the Soviet countries and the political and military conflicts in different regions. The threat to the tension recorded above was characteristic for Azerbaijan. [31, p.80]

The average inflation in the years 1992-1994 was around 1600-1800% in the country. The national currency was worth a few times more than the dollar. At the same time, the imposition of inflationary boundaries depended on monetary and non-monetary considerations. Another reason for this was that the deficits in the state budget were met from the Central Bank loans. It should also be noted that a large portion of the credit portfolio of commercial banks is problematic.

With the deterioration of the parameters of the state finances system, the level of development of the state has also gone down very low. There was no money market in the country that responded to the contemporary market economy.

II. Stage: In the second period of 1997-1998, some of the hard currency and foreign exchange policies that are appropriate for the institutional structure of the economy have been softened.

III. Stage: In July 1999, the third phase of the monetary and foreign exchange policy of the Central Bank started. The Central Bank strengthened its "soft" monetary and foreign exchange policy, paying due attention to the economic growth situation resulting from the increase in the demand for money and the acceleration of the restructuring of the institutions. In the end, the interest rates applied to loans and reserve funds were lowered. Measures such as preventing the inefficiency of the currency in circulation and improving the economy's need for the currency have created a favorable environment for increasing exchange reserves, regulating exports, and strengthening macroeconomic stability. As a result of the macroeconomic stability, due to the reasons that adversely affect the national economy, the value of oil in the world market fell down in 1998 and the need to rid itself of the effects of the Azerbaijann economic crisis emerged. In the next period of 1998 in general, the national currency and the stability of the banks were maintained and the economic development started to come alive.

IV. Stage: In 2003, in principle, the fourth period of the monetary policy of the new macroeconomic events began. The increase in the per capita income, the increase in economic activity in the territories of the country and the increase in income from oil finally brought new and qualitatively complex functions and objectives to the Azerbaijani banking system.

According to the world experience, the preservation of macroeconomic stability in the rapid economic development and the misunderstanding of balanced macroeconomic management are a complex question. In the last two or three years this issue is on the agenda of Azerbaijan with its own update. This is about living in the country at a certain point.

Undoubtedly, the following conditions are necessary to achieve these strategic goals: [32, p.28]

1) Fixed macroeconomic stability,

2) Strong transaction of the banking sector, as well as an increase in the production power of oil revenues, to maintain the rapid development of the real sector.

Nowadays, the Central Bank of Azerbaijan has begun to partly forget the new standards of the calculation and control system of the Basel Committee. At present, a new control system has been established in the Central Bank of Azerbaijan. An 18-month period has been set for each bank. During this period, the bank is subject to the "total volume of the bank" to be checked once in its entirety. There is an external control system that performs financial analysis according to certain international norms.

Among the antichrists measures announced by President Ilham Aliyev on January 16, 2009, it is important to support the national banking system and to improve and strengthen the Azerbaijani financial system. In particular, it has been envisaged that a certain amount of foreign exchange reserves abroad will be able to use additional public funds of domestic commercial banks that are reliable, provided that they are directed only by the real economy.

The government and the Central Bank were quick to implement the anti-crisis program to minimize the impact of the global financial crisis on the economy. Buying measures contributed to the crisis by entering a much more balanced state budget, low foreign and domestic debt, and significant foreign exchange reserve assets. [6, p.56]

On July 9, 2009, additions and amendments made by the President of the Republic of Azerbaijan to the "Central Bank Law" of the Republic of Azerbaijan entered into force in order to increase the flexibility of the Central Bank's monetary policy and the regulatory policies of the banking system. On the basis of these amendments lies the fact that the Central Bank can provide loans for a longer period, including various monetary and subordinated loans. At the same time, the Central Bank was authorized to lend to the bank with a state guarantee in order to protect the real sector.

The results of the realization of the sources of liquidity risk are the following indicators: lost revenue due to the preservation of cash reserves in low-yield highly liquid assets: an increase in costs associated with attracting purchased liquidity to close the resulting liquidity shortages: a decrease in the bank's own funds arising from fixing losses in connection with the forced the implementation of a portion of assets at a lower price to close the resulting liquidity shortages.

As actions to restore liquidity in the event of unforeseen events, banks can consider the following operations: increase in the authorized capital of the credit institution: obtaining subordinated loans; restructuring of obligations; attraction of short-term credits (deposits); attraction of long-term credit (deposits); limitation (termination) of loans for a certain period; asset restructuring, including the sale of part of assets: reduction or suspension of spending, including management, including (partially) staff salaries.

Maintenance of liquidity at the required level should be carried out by the credit institution through the implementation of a sound policy in the field of active and passive operations, developed taking into account the specific conditions of the money market, the specifics of the client base, the development of banking services. In order to properly regulate liquidity risk in a credit institution, an optimal balance sheet structure must be formed, in which, as demand for liabilities increases, assets can be converted into cash in a timely manner without losing their value.

Thus, each commercial bank faces a liquidity problem at least twice: first, as a technical performer, its role in the money market, making payments to market participants; secondly, as an independent subject of the financial and credit sphere, which receives profits or losses from its activities, the bank faces liquidity of its own goods - banking services. Consequently, the liquidity of a commercial bank is connected, on the one hand, with the provision of cash and non-cash money circulation on the accounts of its customers, and hence with maintaining the correspondence between active and passive operations in terms of the end of obligations, and on the other hand, with a stable minimum of profitability.

3.2. Ways of solving liquidity problems and process of liquidity management in Azerbaijan banks

An objective assessment of the liquidity level of the bank and its effective management are among the most important aspects of the business of a commercial bank. In order to timely make payments, return funds from deposit accounts, meet other obligations, the bank should pay great attention to maintaining liquidity. This problem occupies one of the leading places in banking management.

Every day, the bank's management faces the following questions: what financial instruments, for how long and with what risk can it place the funds at its disposal in the market, or what inflow of borrowed funds is needed to ensure, on the one hand, an acceptable level of return on investments, and on the other hand - do not feel the lack of liquid funds to respond to obligations in the present and future.

At the same time, when forming a liquidity management strategy, the bank faces a dilemma: either to increase the reliability of operations or increase the profitability of operations.

Each bank should develop and then apply in practice a whole set of measures to maintain an optimal level of liquidity that would ensure satisfaction of the bank's customers' demand for cash and at the same time not reduce the return on assets and the profit of the bank. A set of measures and methods aimed at maintaining the bank's liquidity can be defined as a methodology for managing liquidity. Depending on the specialization, the characteristics of the client base, operations performed and many other factors, liquidity management in various banks varies significantly. Of course, in the process of the bank's operation, under the impact of changing operating conditions, the liquidity management methodology should be constantly updated, improved and modified in time to adequately respond to market changes.

There are two valuation methods used to measure liquidity in modern Azerbaijan: the coefficient and the cash flow. The basis of the risk method is the liquidity valuation indicators determined by the National Bank. At present the number of these indicators is three: [49]

N2 - the standard liquidity of the bank. This regulates the bank's risk of loss during a normal transaction day. The final price is ≥ 15%;

N3 - the current liquidity of the bank. Regulates the bank's risk of loss within 30 calendar days of the date of settlement. The final price is ≥ 50%;

N4 - the bank's long-term liquidity. Regulates the risk of loss of liquidity of the Bank as a result of the allocation of funds in long-term assets. Last price ≤ 120%

In addition to state regulation of banks' liquidity through economic norms, the liquidity position assessed in Azerbaijan is also evolving: total and foreign exchange. This method is understood as a liquidity flow (coefficient method - reserve).

The liquidity position of the Bank reflects the relative proportion of its cash and cash equivalents. If requirements (assets) to customers over a certain period of time (over a certain period) exceed the liabilities, there will be an excess of liquidity, which means cash inflows. This exceeds the requirements (liquidity). [31, p.85]

The current liquidity position and the next dates are three for the perspective. A restructured balance sheet is disclosed to determine the position of the liquidity, where assets and liabilities are classified at the time of repayment and demand.

Foreign experience of liquidity assessment of commercial banks

In foreign practice, liquidity is measured on the following bases: [31]

1) financial ratios reflected on balances and reflecting liquidity of the balance sheet;

2) Determining the demand for liquid funds, taking into account the analysis of the turnover on assets and liabilities of the bank at the relevant times.

The expense method involves setting quantitative ratios between the items in the balance sheet. In some countries these rates are applied by governments themselves, others in the United States, for example in the United States.

The experience gained by banks has led to more frequent use of certain indicators.

Liquid assets use two indicators to determine the deposit ratio: [50]

1) [Initial Reserves (Cashier + correspondent account in central bank)] / Deposits.

2) [Initial reserves + Secondary reserves (government securities)] / Deposits.

These indicators provide a direct relationship between liquid assets and liabilities that are expected to be repaid. The level of the first indicator was not less than 5-10% for the liquidity of the bank, and the level of the second was not less than 15-25%. The second indicator is used in Japan (mandatory for all banks) where its level should be not less than 30%.

In the United States, the ratio of the amount of loans for liquidity assessment to deposits (less than one, the bank's liquidity is low) and the share of loans in total assets is an expression of asset diversification (this is considered optimally at 65-70%).

To measure liquidity, an indicator is also used to reflect an asset's ability to convert to cash. This indicator is calculated as the ratio of liquid assets to total assets. Liquid assets include cash on hand, cash on hand, foreign currency accounts, balances on NOSTRO accounts in central bank and other banks. While this figure is high, liquidity will be high, and revenue will be lower. The purpose of management in liquidity management is the optimal ratio of liquidity and profitability. [51]

Great attention is paid to the structure of the attracted resources, the stability of the deposit base. In terms of stability, deposits are divided into basic (fixed) and "flying" deposits. Basic (fixed) deposits are deposits deposited into the bank and are not forfeited. As they are very high, the bank's liquidity is also high. Deposits can be placed between deposits, urgent and savings accounts until the basic deposits are required. The fixed part of the deposit is higher than deposits. The higher the interest rate is than the savings, until demand is made on urgent and savings deposits. The payment for urgent and savings deposits is different in different banks, they are on the move and have been called flying.

The indicator that characterizes the stability of deposits is calculated as the ratio of the amount of the basic deposit to their total amount. If the share of basic deposits is less than 75% of the total amount of deposits, then the bank is considered to be liquid.

Another indicator reflecting the stability of the deposit base is the ratio of urgent and savings deposits to the total amount of deposits. Urgent and savings deposits are the bank's resources and are more sensitive to interest rate fluctuations. Increasing their share increases the volume of "flying" deposits and reduces bank liquidity.

The quality of the Bank's resource base is also assessed by the proof that the commercial bank is open for external sources (interbank credit - Kvi): **[50]**

KVI = Sb / Sps,

where Sb - loans from other banks, including the Central Bank;

Sps is the amount of funds attracted.

The ability to attract resources quickly from the interbank market and the central bank, as well as to eliminate the temporary shortfall of liquidity, is a sign of high liquidity of the bank, while the external debt is considered as low liquidity of the bank. Therefore, the following is also analyzed: [36, p.200]

1. the frequency of debt;
2. terms of debts (without collateral and collateral);
3. reasons for the involvement of funds;
4. interest on debt.

In many countries, liquidity of commercial banks is calculated on the basis of the ratio of assets and liabilities grouped over the life of the balance sheet. In France, for a period of three months, this indicator is less than 60%, with a liquidity ratio of less than 12.5% in the UK. In Germany, commercial banks report on their liquidity balance to the German Federal Bank every month. The required level of 100% of the transaction involves partial coverage of long-term deposits with shorter-term resources. In addition to the methodology used, the Bank has developed a liquidity assessment based on cash flows in Japan, the United States and many European countries. Greater significance is attached to limiting credit risks to ensure liquidity of banks in foreign countries.

In the process of the evolution of banking, as well as the development of the financial market, many theories of liquidity management were created and improved. To date, there are the following basic methods of liquidity management:

- Asset management - the bank determines the ways of placing its own and attracted funds in such a way that at the minimum risk to obtain the maximum possible income, while remaining liquid;

- liability management - the bank determines the policy of managing the size of equity and raised funds, determining their optimal structure for the purpose of further effective use in active operations. In a narrow sense, liquidity management through liability management is often reduced to actions aimed at finding borrowed funds as the need for them to maintain liquidity;

- balanced management of assets and liabilities - this method is the application of a portfolio approach to liquidity management through the coordinated management of the bank's assets and liabilities.

Thus, in the field of asset management, the following amendments must be introduced:

- when forming a stock of highly liquid and liquid assets, one should take into account both the present moment and the perspective, taking into account the change (inflow or outflow) of the bank's liabilities;

- the placement of assets in credit and investment investments should be carried out at the initial moment in accordance with the terms of attracting liabilities, and then be transformed as the urgent structure of liabilities changes.

In the area of liability management, the following points should be additionally taken into account:

- attraction of liabilities should be carried out taking into account the possibility of their income placement in the assets of the relevant terms. This will contribute to a better balance of assets and liabilities by maturity;

- To maximize the effective use of available resources, a bank must have access to external resources and with their help regulate its liquidity in case of fluctuations in the structure of assets.

Of course, in order to apply these provisions in practice, their detailed detailing is necessary, which is the subject of a separate study. But it is quite clear that commercial banks that apply liquidity management practices in practice based on analysis and forecasting of cash flows are the least vulnerable to adverse effects of market fluctuations and the risk of imbalance in liquidity.

In conclusion, we note that this chapter covers a wide range of theoretical and practical aspects relating to one of the most pressing problems of modern banking - the liquidity problem of commercial banks. Due to many factors, the Russian banking system has not yet accumulated sufficient experience in this area. Therefore, banks that most quickly and effectively master the accumulated arsenal of liquidity management tools will strengthen their stability and increase competitiveness in the harsh conditions of the modern financial world.

3.3 Russian and Azerbaijan banking sector: comparison of liquidity problems

According to the World Bank's surveys, full or partial financial supervision agencies operated in 30% of the member states of this international financial organization. In 2004, there were 29 unified financial control bodies in the world, about half of them: [37, p.240]

- It was in the European country. In some countries, including the control of the functioning of the financial markets in Azerbaijan, the Central Bank implements control over the activities of financial market participants in the other countries, including the United States, which is closely interacting with each other.

The Bank's risk management system means that if the bank's performance is uncertain, the amount of money directed to the positive financial performance of the bank's personnel will be reduced. The Bank's risk-protection mechanism covers current risk-adjusting and mitigation measures. The risk management process is the identification, assessment of risks inherent to the Bank's operations, preparation of reports on them, controlling them by identifying acceptable risk limits, and reducing risks.

The risk management policy addresses the following objectives: [43, p.416]

1) Establishing and maintaining a bank image that does not have any risk beyond the reasonable level;
2) Ensure unconditional execution of obligations undertaken by the Bank;
3) ensuring that the Bank is solely responsible and adequate to its existing business volume;
4) Forming the Bank's adequate assets and liabilities portfolio. [46, p.367]

The risk management policy implements the following tasks:

1) Ensure implementation of the Bank's development strategy;
2) Ensure that the responsible persons comply with the relevant limits and authority divisions;
3) Providing the normal functioning of the Bank in a crisis situation;
4) Avoidance of excessive risks for the Bank over a long period of time;
5) Creating an effective asset management system.

Russian President Dmitry Medvedev signed a Declaration of the Twin Towers Summit on November 12, 2010, rather than just understanding the necessity of the economic situation in 2011, the implementation of initiatives on the establishment of a macro-prudential regulation system as part of the newly established Department of Financial Stability in the Bank of Russian began to be held. Implementation of macro prudential regulation system in Azerbaijan only started in 2011 with the restructuring of the Financial Stability Department at the Bank of Azerbaijan. On 01/09/2013, the Rusian Federation introduced the amendments and additions to the Law on Central Bank - "The development of the RF financial market, ensuring the stability of the RF financial market", and thus the Russian Central Bank implements full control and regulation of the RF financial markets. [45]

The Chamber of Control of the Financial Markets of the Republic of Azerbaijan - licensing, regulation and supervision of the activity of the securities market, investment funds, insurance, credit organizations (banking, non-bank credit organizations and postal communication operator) and payment systems, as well as money laundering and to improve the control system in the field of legalization of other property and prevention of terrorist financing, as well as transparency and flexibility of the control system in these areas. The Chamber will also co-ordinate activities on the legalization of criminal funds or other property and the prevention of terrorist financing.

The main ways to increase the capitalization of Azerbaijani banking institutions, as it seems to us, are: an increase in capital through the placement of shares of its own issue, an increase in capital due to profits, and the consolidation of the country's banking system. [37, p.240]

Particular attention in modern conditions should be given to the merger of commercial banks, the creation of banking associations, which will strengthen the resource base of commercial banks. Increasing the level of capitalization of domestic banks will increase their competitiveness in the world financial market and ensure the financial stability of the entire Azerbaijani economy on the way to its integration into the world economy.

The stability of the banking system can be defined as its ability to overcome crisis phenomena at the expense of internal forces and continue to function, avoiding the massive bankruptcy of financial institutions, in order to fulfill its functions of redistributing resources in the economy in the amount not less than before the impact of these factors. It is clear that the stability of the entire banking system is impossible without its achievement in individual banking institutions. The stability of a commercial bank is seen as its ability to function, to realize its goals and objectives even under the conditions of destabilizing factors . Thus, to ensure the stability of the domestic banking system, it is necessary to ensure the reliability and sustainability of commercial banks. [32, p.28]

Among the factors affecting the stability of the banking system of Azerbaijan and making it vulnerable to risks, we can distinguish the following: the state of regulatory and legal support for banking activities, the degree of asymmetry in the system, and the profitability of banks and the level of capitalization of the banking system and the stability of general macroeconomic conditions in the country. The stability of the domestic banking system can also be adversely affected by the entry of weak and unreliable foreign banks, the spread of crisis phenomena from countries with banking institutions whose domestic financial institutions and companies have economic ties, and the weakening of the possibility of state regulation of the functioning of the banking system, the functioning of problem banks, presence of problem assets in total banking assets. Thus, the functioning of troubled banks within the banking system of Azerbaijan can lead to such consequences as a decrease in confidence in the domestic banking system and the national monetary unit and, as a result, an increase in the level of dollarization and cash foreign exchange savings. As is known, the main prerequisites for the existence of these problems are the low level of bank management and the low efficiency of the banking supervision system, a high concentration of the loan portfolio and poor quality control over the state of the portfolio of assets. Among the most important measures aimed at preventing this problem, in our opinion, can be called the increase in the effectiveness of supervision within individual banks (first of all, the early response units), as well as the strengthening of supervision by the CBA in the areas of reporting, disclosure, affiliated persons , the quality of assets and equity capital at the level of the entire banking system. [43, p.420]

The reliability of the banking system is closely linked to its stability. Reliability, in our opinion, expresses the qualitative state of the banking system in its acceptance by society. A reliable banking system evokes public confidence, ensures the interests of clients and investors, is guided by the principles of partnership, mutually beneficial relations, pursues a policy for the development of the whole society. With dynamic changes in modern socio-economic systems, it is the stability and reliability of the banking system that can ensure the financial security of the state.

The leading role in ensuring the reliability of the banking system belongs to the central bank of the country. After the appearance of banking, the instability caused by the bankruptcies of individual banks, the massive withdrawal of deposits, various types of banking risks objectively pushed the state to introduce and expand the practice of regulating the activities of commercial banks. With the help of regulation, the state is trying to protect depositors from financial losses and avoid destructive for the economy consequences of bank failures. The most important directions by which the state tries to ensure the reliability and stability of the banking system include: conducting bank audits, centralized banking operations and creating a deposit insurance system. It should be noted that the creation of a special fund that guarantees deposits is one of the most important factors for ensuring the reliability of the banking system and increasing the confidence of depositors in it.

It was revealed that in almost all countries there is one or another form of deposit insurance, through which depositors are guaranteed return of their invested funds. Deposit insurance is a set of measures aimed at protecting deposits and ensuring their guaranteed return in full or in part in case of bankruptcy of a banking institution. This system increases the effectiveness of monitoring the activities of banking institutions, protects depositors from possible losses, and, consequently, ensures the population's confidence in the domestic banking system. So, in the USA, the Federal Deposit Insurance Corporation enjoys unquestioned authority among the population. Investors are convinced that the corporation keeps under control the state of affairs in each and every financial and credit institution and, if necessary, applies appropriate measures. In Azerbaijan, an important role in ensuring the reliability of the banking system is played by the Deposit Insurance Fund, which was created under the Presidential Decree of February 9, 2007 "On Approval and Enactment of the Law on Deposit Insurance" adopted by the Parliament of the country. [46]

Increase of population confidence in banking institutions was facilitated by an increase in the amount of guaranteed amount of reimbursement of funds from individuals' deposits from 8,000 manats to 30,000 manats. Since the creation of the Deposit Insurance Fund, the amount of compensation to individuals has been increased by 7.5 times. Particularly dynamic growth began in 2006, which was largely due to the growth of household incomes and, accordingly, the government's desire to stimulate the investment of free funds of citizens to deposit accounts in commercial banks. However, despite such significant changes in the amount of the maximum compensation amount, in our opinion, the deposit guarantee system requires further improvement. In particular, it is necessary to create a system of reimbursement of deposits of legal entities, which would facilitate the inflow of new capital and expand the opportunities for the formation of an appropriate resource base for commercial banks. The banking system plays a crucial role in the economic system of any country. Today in Azerbaijan the greatest development has been achieved by banking institutions, whose role in the domestic financial market is significant. This is due to the fact that the reform of the banking system was launched earlier than other sectors, in the future it determined the key role of banks in solving the problems of transition to a market economy. It is the banking institutions that play the main role today in the formation of an optimal environment for the mobilization and free flow of capital, the accumulation of funds for structural adjustment of the economy, privatization and development of entrepreneurship, ensuring effective demand and better meeting the needs of the population.

Despite the existing differences, we can identify some general provisions regarding the dilemma of liquidity - profitability:

1) excessive liquidity negatively affects the profitability of the bank, therefore, in the short term, it is advantageous for the bank to maintain liquid assets at a minimum level, working on the brink of minimum permissible values of liquidity ratios. As a consequence, the most efficient use of available resources is achieved, which, if certain management principles are followed, will ensure the profitability of ongoing operations;

2) in the long run, maintaining a relatively higher level of liquidity is the preferred option, which, however, contradicts the achievement of higher profitability, but will contribute to the consolidation of the financial state of the bank.

So, we found out that liquidity management is a complex complex problem. At the moment, there are several main directions and theories, according to which liquidity management is carried out, but before proceeding to their consideration, it is necessary to determine what obligations arise in the course of the bank's activity and from which sources they can be redeemed.

All obligations of the bank can be divided into two groups:

1) real obligations, that is, arising from the balance. They are represented by received interbank loans and deposits, funds on settlement and current accounts, demand deposits and urgent, as well as other attracted funds;

2) potential or off-balance sheet liabilities that may arise from open credit lines, guarantees issued by the bank, liabilities for fiduciary management, liabilities for cash and futures transactions.

Ensuring that the bank fulfills these obligations can be due to:

- the bank's own funds (the factor of the bank's own capital adequacy as a buffer in maintaining liquidity is of great importance here: its size provides the bank with the necessary funds to meet emerging requirements, as well as to replenish reserves to cover unforeseen expenses and losses);

- borrowed funds (interbank loans, raised funds of individuals and legal entities, etc.);

- and also as a result of mobilization of available money resources and sale of bank assets (precious metals, securities, etc., capital investments and property in extreme cases).

Thus, the bank can answer for its obligations at the expense of both liquid assets accumulated in its balance sheet, and attraction of additional funds, that is, liabilities of the financial market. From this it can be concluded that liquidity management is possible through the management of the bank's assets and liabilities.

CONCLUSION

The relevance of the research topic is emphasized by the following. Managing banking liquidity in a modern economy is not an easy process, and its quality is largely dependent on such indicators of banking activity as: profitability, profitability of the bank and, in general, its overall financial state.

In the Azerbaijan and CİS, in crisis conditions, the problem of shortage or excess of bank liquidity is quite urgent. A low level of liquidity acts as a source of internal instability throughout the banking system, while limiting the scope for expanding the size of financial banking operations and making the entire banking system of the state unstable to external negative factors.

The purpose of this study was to improve the management of liquidity risk of a commercial bank. To achieve this goal, the following tasks are set:

- study of the theoretical basis of risk management in a commercial bank;
- analysis of factors influencing liquidity;

- study of state and international regulation of banking liquidity in conditions of economic instability;
- analysis of existing methods for assessing liquidity risk;
- formation of a structural model of liquidity management of a commercial bank;
- estimation of liquidity risk by gap analysis within the framework of the developed model by example.
- study of special aspects of securing work in a commercial bank;

After the work has been completed, it can be said that all tasks have been completed and the goal has been achieved

In the first section of the thesis, the theoretical bases of liquidity management of a commercial bank were investigated. Different approaches to the definition of liquidity have been analyzed, and a new definition has been formulated as scientific novelty. The factors that have the greatest impact on the liquidity of a commercial bank were also investigated. Presented are state and international regulation of the liquidity of a commercial bank.

Also, mandatory bank liquidity ratios were considered as a method of liquidity management. This method has a number of shortcomings, which include not being able to identify the risk of excess liquidity, the methodology for calculating standards can not fully reflect the degree of balancing of the bank's assets and liabilities, since it does not take into account the quality and specifics of the movement of assets and liabilities of a commercial bank. In addition, mandatory liquidity management standards do not allow forecasting liquidity. Based on this, it was concluded that this method is a formal approach of the Central Bank, which is not able to fully assess the liquidity risk of a commercial bank.

In the second section, the main methods for assessing liquidity risk are analyzed, such as the VAR method, the duration method, and the gap analysis method. In order to determine which method of assessing liquidity risk is the most effective, a comparative analysis of liquidity management methods was conducted.

In order for a commercial bank to maintain liquidity at the required level, it should develop a sound policy for the use of resources. To this end, it is necessary to develop the possibilities for changing the credit and deposit policy, review the structure of liabilities in order to increase the resource base of the bank for urgent obligations, diversify assets for their rational use, and consider possible ways to reduce the excess liquidity in order to increase profitability.

With the implementation of the proposed activities, the commercial bank will be able to bring the level of riskiness of operations and its liquidity in line and to receive additional profit.

To maintain a stable level of liquidity, commercial banks should more carefully approach the choice of the liquidity management method, as well as the organization of liquidity management in general. Only with proper management will the bank be able to avoid the emergence of a liquidity risk.

LITERATURE

1. Abdullayev Sh.,(2001) Banking System and Resource Management in Azerbaijan. Baku 2001.

2. Abbasov I., Khankishiyev B. Commercial bank in conditions of transition to a market economy. Baku, 1998.

3. Akdish, Muhammad. "Banking and Financial Institutions in Azerbaijan", Istanbul, Journal of Turkish World Research, Issue: 99, December 1995.

4. “Azərbaycan Respublikasının Milli Bankı haqqında” Azərbaycan Respublikasının qanunu

5. Banklar haqqında, Azərbaycan Respublikasının qanunu

6. Bağırov M.Mbanklar və bank əməliyyatları. Bakı 2003.

7. Basel Committee On Banking Supervision, (2006), “International Convergence Of Capital Measurement And Capital Standards”.

8. Bessis, Joel, (2010), Risk Management in Banking, Third Edition, United Kingdom, John Wiley and Sons.

9. Berger, A. N. ve Bouwman, C. H. S. (2006). The Measurement of Bank Liquidity Creation and the Effect of Capital. US Federal Reserve System. Erişim Adresi: http://fic.wharton.upenn.edu/fic/papers/07/0702.

10. Bəşirov R.. Bank işi. Dərslik. Bakı, 2007

11. Buscaglia, M. (2003). Sterilization of Capital Inflows and Balance of Payments Crises. www.aaep.org.ar/espa/anales/PDF_03/Buscaglia.pdf

12. Cavadov AM, Assessment of commercial banks products and services. Baku 2002.

13. Danielyan A. Banking system of the Azerbaijan and CİS in conditions of preservation of sanctions in 2015. Journal Bank Review [electronic resource] URL: http://www.delprof.ru/press-center/articles/2647/

14. Deep, A. ve Schaefer, G. (2004). Are Banks Liquidity Transformers?, KSG Working Paper No. RWP04-022.

15. Gray, T. G. (2006). Central Bank Managament of Surplus Liquidity. Centre for Central Banking Studies Bank of England

16. Hacıyev D. F. (2008), Denejne-Bankovskoga Sistema i MBA.A: Finası i Statistika" . Основные тенденции развития денежно – кредитной системы Азербайджана // Финансы и кредит.- 2008.- № 4.

17. Holt RN Fundamentals of financial management / RN Holt. - M: Business, 1993. - 126s

17. IMF World Economic Outlook (2007). Managing Large Capital Inflows

18. Məmməov Z.F.Beynəlxalq valyuta kredit münasibətləri və xarici ölkələrin pul kreit sistemi. Bakı, 2003.

19. Mamedov Z.F. The banking sector of Azerbaijan: analysis and evaluation // Scientific works. Academy of Management under the President of the Republic of Belarus. 2014. - Part I.

20. Mamedov Z.F. (2008), Azerbaijan monetary sistem: main developments trends, Central Eurasia: National Currencies Stockholm: «CA and CC Press», s.133- 156.

21. Məmmədov Z.F.. Dövlət maliyyəsi normativ-hüquqi aktlar toplusu. Bakı, 2010

22. Məmmədov. M. Banklar haqqında normativ hüquqi aktlar toplusu. Bakı,2009

23. Mehmet Şahin, Bahattin Hamarat: G10 - Determination of Socio-Economic Similarities of European Union and OECD Countries by Fuzzy Clustering Analysis, 22.01.2008

24. Mehdiyev Ramiz. İctimai və humanitar elmlər: zaman kontekstində baxış - Bakı : OSKAR NPM, 2010. - 416 s.

25. Mehtiyev R.A., (2010), "Azerbaijani model: from fixed to modernization" Вестник актуальных прогнозов, Россия: Третье Тысячелетие ». № 23.

26. Məmmədov Z.F.və b. Bank fəaliyyətinin əsasları. Bakı, 2013

27. Mihaljek D. (2005). Local Complications of Global Economic Integration: Privatisation Receipts and Volatile Export Earnings. BIS Çalışma Tebliği No:23

28. Pearson, N.D. ve Smithson, C., 2002. VaR the State of Play, Review of Financial Economics, 175-189.

29. Rahl, L., 1999. Risk Management Framework, Measuring Financial Risk in the 21. Century, OCC Conference, Washington, DC., Active Bankacılık ve Finans Dergisi Ekim-Kasım sayısı

30. Reed E. Commercial banks / E.Rid, R.Kotter, E.Gill, R. Smith; пер.с англ. A.A. Kandaurov et al., Ed. V.M. Usokin - M .: Joint venture "Cosmopolis", 1993.

31. Rustamov. E.S. (2008), Major Trends in the Development of the Monetary and Credit System of Azerbaijan Central Eurasia: National Currencies. Stockholm: Ed. House "SA Press", 2008. - 79- 103.

32. Rustamov. E.S. (2010), Global Crisis and the Anti-Crisis Policy of the Central Bank of Azerbaijan // Money and Credit .- № 1.- 2010. c. 28-

33. Simons, K., 1996. Value at Risk – New Approaches to Risk Management, New England Economic Review.

34. Sinky J. Financial management in a commercial bank and in the financial services industry / J. Sinka. - Moscow: Alpina Business Books, 2007 - 936 p.

35. Tucker, A., 1994. Contemporary Portfolio Theory and Risk Management, Minneapolis

36. Аббасов А.М., Mameдов З. Ф. Цифровизация финансов. Баку.: БГУ, 2003. -200 с.

37. Гаджиев Д.Ф. Денежно-кредитная система и Международный банк Азербайджана. Москва: Финансы и статистика, 2008, 240 с.

38. Грибов А. Ф. Моделирование банковской деятельности: Учебно методическое пособие для дистанционной формы обучения. – М.: Изд-во Рос. экон. акад., 2013.

39. Исмаилов Э. Валюты стран Центральной Евразии в условиях финансовой глобализации. – Стокгольм: CA&CC Press, 2009. – 132 с.

40. Фролов А.В. Зарубежный опыт развития механизма денежной трансмиссии в контексте различных типов монетарной политики. Проблемы современной экономики. 2014. № 3 (51). С. 332-335.

41. Керимов А.Э. Рынок банковских услуг: теория и практика (на примере коммерческих банков Азербайджанской Республики). – Баку: «İqtisad Universiteti», 2010. – 400 с.

42. Коню

ховский П.В. Микроэкономическое моделирование банковской деятельности. – СПб: Питер, 2005.

43. Муршудли Ф.Ф. Банковское обслуживание внешнеэкономической деятельности Азербайджана в условиях финансовой глобализации. Баку: Sharq-Qarb, 2013, 416 с.

44. Романовский М.В., Врублевкая О.В. Финансы, денежное обращение и кредит: Учебник.– М.: Юрайт – Издат, 2007. – 543 с.

45. Рыбин Е.В. Пути повышения конкурентоспособности российских банков. Москва: Финансы и статистика, 2008.

46. Рустамов Э.С. Экономическая модернизация Азербайджана: вызовы и решения. Москва: Эконом-Информ, 2010, 367 с.

47. Базель III: вопросы внедрения https://assets.kpmg.com/content/dam/kpmg/ru/pdf/2011/ru-ru-basel-3-implementation-issues.pdf

48.Cash Management http://kfknowledgebank.kaplan.co.uk/KFKB/Wiki%20Pages/Working%20Capital%20Cash%20Management.aspx

49. Kommersiya bankının likvidliyi http://banker.az/kommersiya-bankinin-likvidliyi/

50. Likvidliyin idarə edilməsi əsasnamə https://www.banksilkway.az/az/about-us/managing-liquidity/

51. Rsiklərin idarəedilməsi - http://bmibaku.az/risklerinin-idaraedilmesi

52. http://azerbaijan.az/portal/Economy/BankSystem/bankSystem_r.html

53. http://www.ey.com/ru/ru/services/advisory/advisory-for-financial-services/implementing-basel-standards-in-Azerbaijan-2013