

## THE QUALITY OF LIQUIDITY RISK MANAGEMENT IN COOPERATIVE BANK UNIREA BRAȘOV

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**Abstract:** An integrated banking risk management system presupposes the existence and functionality of policies, procedures and tools designed to identify, assess and eliminate/assume the risk to which the banking institution is exposed. There is a set of specific operations and procedures that generate banking risk. In addition, banking companies have to deal with risks that are not specific to them. With the national and international expansion of electronic credit system, financial markets have become much more fragile, the degree of uncertainty has increased, adding to all this the multiplication of risks specific to the financial-banking system due to the pandemic crisis. Therefore, the most common cause of losses and insolvency of credit institutions is due to the difficulty of dealing with events that may occur but have not been foreseen, as is the case with the COVID-19 pandemic. In this paper, we conducted a research targeting banking companies in the current crisis circumstances, analysing the issue of risk management in credit institutions. This approach is the basic pillar of this paper, which, in addition to the traditional aspects of banking management, also considers how the challenges and critical issues during crises become a test of competence for managers in order to overcome less predictable situations. The scientific approach undertaken focuses on the liquidity risk in credit institutions derived from studying the activity of the Cooperative Bank UNIREA Brașov. This paper concludes that, in the context of the global financial crisis and the pandemic due to the SARS-CoV-2 coronavirus, there have been major changes in the operating environment of the credit institutions and indicates a reassessment of the techniques and methods applied in banking management.

**Keywords:** banking system, liquidity risk management, sustainability, COVID-19 pandemic

**JEL classification:** F65, G21

### 1. Introduction

The current period crossed by humanity is called by specialists the "era of risk management", considering the fact that the 21st century began with the onset of banking crises in many countries of the world.

In the period of 2019-2022, marked by the global COVID-19 pandemic caused by the SARS-CoV-2 coronavirus and the current economic contraction, multiple risks appeared on the banking market, among which, at present, the liquidity risk is prominent.

Banking risks, defined variously and complexly by specialists over time, are phenomena present in the sphere of activity of credit institutions, related to the uncertainty of achieving a certain level of profit or the probability of a certain loss.

Banking risks are interdependent, having common causes or causing other risks in the chain. Researching risks, especially bank liquidity risk, is a laborious activity, considering the fact that

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observation, data collection and the choice of investigation methods (quantitative and qualitative) are closely related to the professional qualification of bank employees, heads of departments, and bank managers.

The increase in the complexity of banking operations has led, over the years, to the adoption of a modern management, with strong prudential connotations, by central banks or financial institutions with the role of banking supervision.

The European banking companies supported by the European Central Bank and the national banks in the country of origin are well capitalized, with solid liquidity and showing financial stability and good resilience.

The global microeconomic and macroeconomic environment was affected by the context of the pandemic and the Russian-Ukrainian war, and bank management had to reevaluate their business models and adapt their techniques and methods to market vulnerabilities.

Within the national economies, liquidity risk management rests mainly on the trust that customers have in banking companies and the banking system.

Basel III introduces complex methods for calculating the size of risk-weighted assets compared to Basel I and Basel II. The prudential requirements requested by Basel III will strengthen bank capital in order to cover losses from non-performing assets and ensure the ability of banks to honor their obligations on the terms and under the established conditions.

Basel III introduced for the first time rules and standards for calculating liquidity indicators that involve two measurement methods:

- the liquidity coverage ratio requirement (LCR);
- the net stable financing indicator (NSFR)

The indicator liquidity coverage ratio (LCR) assumes that the stock of liquid assets should be available at all times to cover liquidity outflows. The Cooperative Bank Unirea Braşov, through the special relationships it has with associated and loyal cooperative members of the bank, does not face unforeseen liquidity outflows or that it cannot cope with, considering the fact that the CREDITCOOP network of which it is a part, continuously supports the 34 affiliated cooperative banks through loans for liquidity coverage.

The net stable indicator (NSFR) is a key component of the BASEL III reforms in promoting a sustainable banking sector. This net stable indicator particularly limits the excessive dependence on interbank financing on the short term and promotes the stability and financing of banks' activity.

In our opinion, in the current economic-financial context, we must pay more attention to liquidity management and especially to bank liquidity management, making it imperative to fully apply the Basel III Agreement, as we will demonstrate in the present work.

## **2. Considerations regarding the quality in the management of bank liquidity as reflected in the specialized literature and in banking practice.**

For the elaboration of this paper, we have identified more than 50 bibliographic references by foreign and Romanian authors with reference works in the field of bank liquidity risk management. We also considered the articles written, over the years, by the authors of this paper, which addressed the management of banking risks and especially the management of banking liquidity at Cooperative Bank Unirea Braşov.

The specialized literature classifies the risks specific to the banking activity in various ways, presented by the authors over the years. Currently we will focus on the following classification:

- financial risks;
- commercial risks;
- environmental or environmental risks;

Among the above risks, we will focus on the financial ones, and within this group we will analyze the liquidity risk and especially the banking liquidity risk with application to Cooperative Bank Unirea Braşov.

Financial risks (and especially bank liquidity risk) are very sensitive to imbalances that may appear in the structure of bank resources and investments, but they are the only risks that can be generated, amplified, managed or controlled and reduced by bank management.

Liquidity, over time, has been defined in various ways by specialists from our country and abroad. In our understanding, liquidity can be defined as the possession of money by the banking company when it needs it.

The scientific approach taken in this paper focuses on the case of credit institutions as defined by O.U.G. no: 99-2006 and Law no. 227-2007 with subsequent amendments and additions, with the case study at Cooperative Bank Unirea Braşov.

The specialized literature attributes numerous meanings to liquidity risk (Isărescu, 2008, Constantinescu, 2014, Marinescu, 2014, Rosen, 2014, Georgescu, 2015, Franklin, 2018, Constantinescu, 2020, 2021) among which we mention:

- liquidity risk represents the risk that a banking company will not be able to honor its commitments when they are due;
- the risk that the banking company's income and capital will be affected as a result of its inability to honor its obligations;
- non-correlation of maturities between cash flows and payments;
- the inability of the banking company to finance the portfolio of assets on maturities, at reasonable interest rates;

Liquidity risk is present daily in the activity of a credit institution, being the consequence of the imbalance between the maturity of assets and that of liabilities (non-synchronization of receipts with payments). Liquidity deficits require high costs for the banking company, and liquidity surplus additional management costs.

A banking company has optimal liquidity when it is able to obtain necessary funds at a reasonable cost. Liquidity planning of banking companies as well as liquidity risk management require the forecasting of events that may occur in the banking activity. A successful liquidity management of banking companies is reflected in the ability to easily transform assets into cash and to have access to various funding sources.

An effective liquidity risk management is based on the analysis of a series of indicators, among which we mention:

- effective liquidity;
- the necessary liquidity on maturity bands;
- global liquidity;

Another set of indicators that must be known, analyzed and managed correctly includes early warning indicators, among which we mention:

- immediate liquidity;
- LCR (liquidity coverage ratio);
- credits granted to clients at gross value / deposits attracted from clients;
- availabilities and sight deposits of the clients / sources drawn from the clients;
- the share of liquid assets in total assets;
- the share of liquid assets in the debt regarding the clients (other than credit institutions);
- the level of expenses with the interest paid to credit facilities;

The complexity of banking risks had and has an upward evolution due to the competition between credit institutions, due to the diversification and increase in the number of financial products and services and last but not least due to the pandemic crisis. The changes in the financial-banking markets - due in particular to the COVID-19 pandemic - have led to major changes in the perception of risks and especially of the risk of bank liquidity.

Economic growth and financial stability in Romanian society are extremely important, and the reevaluation of the techniques and methods applied in banking risk management is imperative due to the special importance of credit institutions in the economy.

The efficient management of credit institutions has as its main component the assurance of adequate liquidity. A credit institution is considered to have liquidity if it has immediate access (with reasonable costs) to the funds necessary to maintain customer confidence in the banking sector.

In our understanding, the concept of liquidity also refers to the ability of assets to be quickly transformed into currency in the form of cash or available in the account.

Managers believe that bank liquidity is a problem of efficient management of bank liabilities and assets with different degrees of liquidity.

According to the rules of the National Bank of Romania, drawn up in harmony with the European legislation, any credit institution in Romania must at all times ensure the fulfillment of its commitments.

Bank managers must effectively manage bank liquidity so that:

- to assure creditors about the bank's ability to honor its assumed obligations;
- to predict, for the future, a balance between assets and liabilities;
- to avoid potential losses due to forced operations on the market;
- to take into account the changes in technology and the continuously growing customer expectations;
- to quantify the emergence of new risks such as contagion risk, Cybersecurity risk, model risk and others;
- to take into account the fact that the regulations issued by the National Bank of Romania will continue to diversify and deepen, considering the fact that the lack of liquidity can even cause the credit institution to enter insolvency/merger;
- to develop efficient self-evaluation systems with an emphasis on ethics and human resources.

In order to maintain the banking companies in a permanent efficient state of operation and with sufficient liquidity, a management continuously adapted to the changes taking place on the banking market (strongly influenced by the COVID-19 pandemic and the Russian-Ukrainian war) is necessary, which must be based on the following elements:

- correct and constant identification of customer needs;
- digitization of banking products and services;
- achieving an increased quality of products and services in close connection with the needs of customers;

Sustainability has become a business strategy for banking companies as well as for shareholders because, according to the Regulations of the National Bank of Romania no. 5/2013 and 11/2020, with subsequent amendments and additions, they must apply sustainable strategies that represent a minimal risk to their viability.

### **3. The modern management of the liquidity risk at Cooperative Bank Unirea Braşov in the current period**

Cooperative Bank Unirea Braşov is "a credit institution established as an autonomous association of individuals united voluntarily in order to fulfill their common economic, social and cultural needs and aspirations, whose activity is carried out, mainly, on the principle of helping cooperative members," (Constitutive Act) and operating in accordance with:

- O.U.G. 99/2006 regarding credit institutions and capital adequacy;
- Law 227/2007 approving and supplementing O.U.G 99/2006;
- Law 31/1990 on commercial companies, republished, with subsequent amendments and additions;

Cooperative Bank Unirea Braşov is affiliated to Central Cooperative Bank CREDITCOOP for the purpose of managing their common interests, with the mission of ensuring the adequacy of capital to risks and liquidity at the level of the entire bank, carrying out specific activities, predominantly in the interest of cooperative members, and ensuring banking services needed by the bank's non-financial clientele, in general, and cooperative members, in particular. The central bank, CREDITCOOP, a credit

institution established by the association of 34 cooperative banks, guarantees the liquidity and adequacy of capital to the risks of the entire network as well as at the level of each organization.

Cooperative Bank Unirea Braşov, through the Central Cooperative Bank CREDITCOOP, is a full member of the European Association of Cooperative Banks (EACB).

Cooperative banks are part, according to the general and specific laws listed above, of the large family of credit institutions - with certain particularities, but in terms of bank liquidity risk management, they are all subject to the regulations of the National Bank of Romania. However, National Bank of Romania takes into account the fact that cooperative banks have a specific character of mutual aid, and have established lower limits both for variable capital and for the level of liquidity indicators. The cooperative members, shareholders of the cooperative credit organization are loyal to them and the risk of liquidity does not manifest itself as in the other banks.

With this paper we want to bring to the attention of specialists another approach to the management of bank liquidity risk in Cooperative Bank Unirea Braşov, representing the need for funds of this bank in the context of the COVID-19 pandemic and the current crisis we are facing. We note that this approach is different from the standard approach. In the presented case, we will use the analysis of the funds needs that could arise in the "worst case" scenario. Such scenarios include severe losses and crises of the banking system as a whole.

In each of the simulated cases, Cooperative Bank Unirea Braşov must examine the degree to which it can face alone (or in a group supported by CREDITCOOP) such crises and estimate the time interval during which the crisis will lead to a general shortage of funds.

Cooperative Bank Unirea Braşov, being assimilated to central banks, has a risk management department and a risk management committee made up of non-executive members of the bank's board of directors. During the meetings of the Risk Management Committee, the time interval in which the assets can be liquidated is analyzed, in order to be able to respond to a liquidity crisis using reports that indicate the speed with which the bank can secure immediate liquidity. All this information and reports are computerized under the strict administration of the IT department and risk management because they require access to the entire bank's database. The response strategy in cases of crisis includes estimates on the degree to which the bank's balance sheet will be affected regarding the sources of funds that will remain available in cases of crisis manifestation. The result of these simulations is expressed in exposure days or funds crisis days.

Cooperative Bank Unirea Braşov has developed a policy on bank liquidity which provides, among other things:

- compliance with obligations towards customers;
- compliance with payment and credit obligations;
- compliance with all cash requirements;

The delegated employees from the bank must follow certain technical aspects, among which we mention:

- cash flow;
- lending capacity;
- the volume of working capital, etc;

Cooperative Bank Unirea Braşov, through its own liquidity policy approved by the Board of Directors, aims not only to survive in special crisis conditions, but also to prevent the emergence of special crisis conditions.

The objectives of a bank liquidity policy must cover both monetary control and preventive control. Through preventive control, the management of Banca Cooperatista Unirea Braşov shows prudence and intelligence, wanting to continuously improve its banking management, studying the common principles expressed in the BASEL III agreement. Taking into account the market conditions and the manifestation of the COVID-19 pandemic, 12 of the 14 principles regarding liquidity risk management in credit institutions recommended by the BASEL Committee were implemented and

adapted (only 12 because Cooperative Bank Unirea Braşov does not operate with currencies and 2 measures refer to them) as follows:

- 1) Cooperative Bank Unirea Braşov approved a strategy, communicated to all employees, for the daily management of liquidity;
- 2) The bank's Board of Directors approved the strategy and methods regarding liquidity management and regularly requests information about the bank's liquidity situation;
- 3) Cooperative Bank Unirea Braşov has a management structure that controls the effective execution of the liquidity strategy;
- 4) The bank has an adequate information system (supported by CREDITCOOP) for the assessment, monitoring, control and reporting of liquidity risk. The reports are drawn up rigorously and the Board of Directors is informed whenever necessary;
- 5) The bank, through the operative management, established a process of evaluation and current monitoring of the net financing requirements;
- 6) The Risk Management Committee under the direct guidance of the risk management department (as technical support), analyzes the bank's liquidity using a variety of "what if" scenarios;
- 7) The bank periodically reviews its liquidity management assumptions to determine whether they continue to be valid;
- 8) The bank, periodically, reviews its efforts regarding maintaining the relationship with the holders of commitments;
- 9) The Bank's Board of Directors requests from the Risk Management Committee strategies and procedures for compensating cash flow deficits in emergency situations;
- 10) Cooperative Bank Unirea Braşov has an adequate control system of the liquidity risk management process;
- 11) The bank publishes information about the bank annually or as often as needed for a good perception of the bank and for the transparency of information regarding its "health".
- 12) Cooperative Bank Unirea Braşov is supervised annually by the Central Bank in order to ensure the existence and compliance of banking strategies, methods, procedures and practices related to the correct/adequate management of liquidity;

The Basel Committee, since 1992, has been focusing its attention on the way in which credit institutions manage their liquidity risk by elaborating relevant studies of great interest.

The management of Cooperative Bank Unirea Braşov, under the direct coordination of the management body with the supervisory function, permanently and efficiently manages the bank's liquidity and has taken care that the pandemic crisis COVID-19 does not affect the associated members of the bank.

The bank has an adequate bank liquidity management structure that effectively implements the banking strategy and permanently reviews liquidity decisions taking into account market conditions, the global pandemic crisis and the war in Ukraine.

The Board of Directors, under the direct guidance of the Risk Management Committee, issues assumptions regarding the bank's future financing needs, as well as regarding short-, medium- and long-term liquidity needs.

The permanent assurance of liquidity is an important objective in the bank's strategy because it gives extra security to the bank's customers and their trust increases when we talk about a profitable bank in the current conditions.

The senior management is analyzing, with maximum attention, the quantitative and qualitative indicators aimed at the liquidity management of Cooperative Bank Unirea Braşov, taking into account the conditions of the banking market starting from the spring of 2019.

The liquidity indicators, capital requirement and leverage indicators are quantitative indicators, mostly representing elements governed by the first pillar. Basel III introduced updates regarding the other two pillars in order to improve the internal governance framework, risk management, public reporting of information related to banking activities and the supervision process of credit institutions.

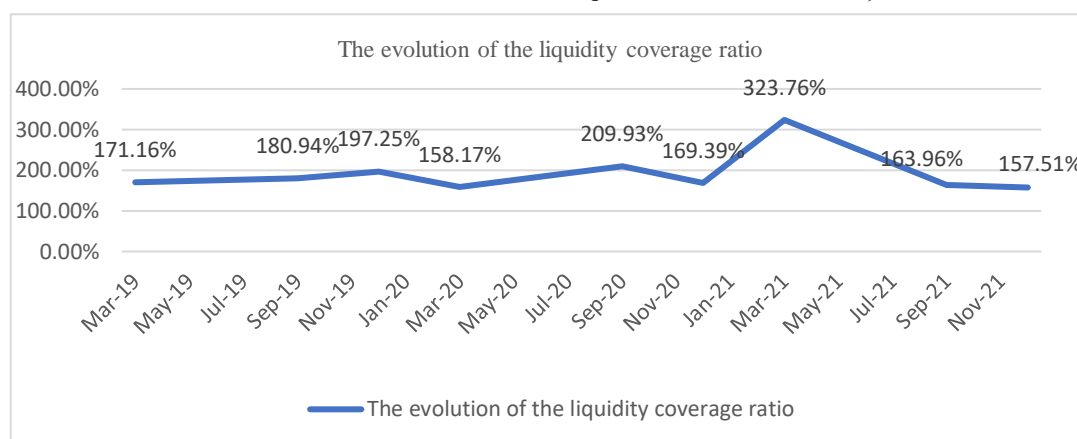
In order to successfully implement the new Basel III requirements (pillars 2 and 3), it is necessary to improve the knowledge of cooperative bank employees regarding the adequacy of internal capital and liquidity within the process of risk management used in Cooperative Bank Unirea Brasov. Cooperative banks, through their specific of mutual aid between its members, aim to develop an adequate infrastructure, manage risks efficiently and maintain financial stability.

Next, we would like to present some of the most important indicators and their evolution during the pandemic: the immediate liquidity, liquidity coverage ratio and share of liquid assets in total assets. The immediate liquidity reflects the ability of treasury assets (like intangible assets, tangible assets, financial assets) to face the liabilities. It is calculated as a percentage ratio between total treasury assets and total liabilities. The level of this indicator must not decrease below the limit of 27 % according to the requirements of the central bank.

The immediate liquidity during the pandemic crisis had achieved the following values which are shown in the figure below:

**Figure 1: Immediate liquidity at Cooperative Bank Unirea Braşov from March 2019 till December 2021**

Source: The archive of Cooperative Bank Unirea Braşov

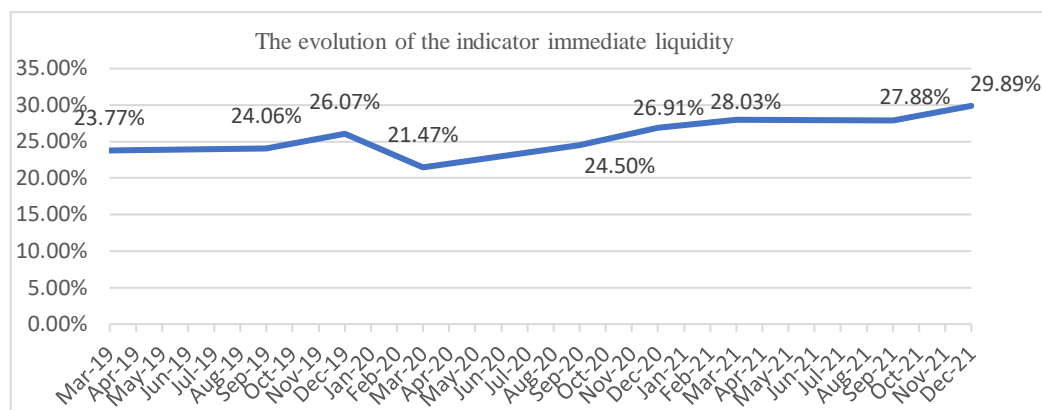


As presented in the figure above, the indicator immediate liquidity achieved an appropriate level, with the lowest percentage during the spring of 2020, respectively 21.47 % , then rebounding till 29.89 % in December 2021.

The liquidity coverage ratio has been approved as a minimum global regulatory standard for short-term liquidity measures in the banking sector. It is calculated as a ratio between high quality liquid assets and net cash outflows. The result of this, starting with 1th of January 2018, must be at least 100 %.

The liquidity coverage ratio of Cooperative Bank Unirea Braşov had achieved the following values, which are shown in the figure below:

**Figure 2: The evolution of the liquidity coverage ratio from March 2019 till December 2021.**

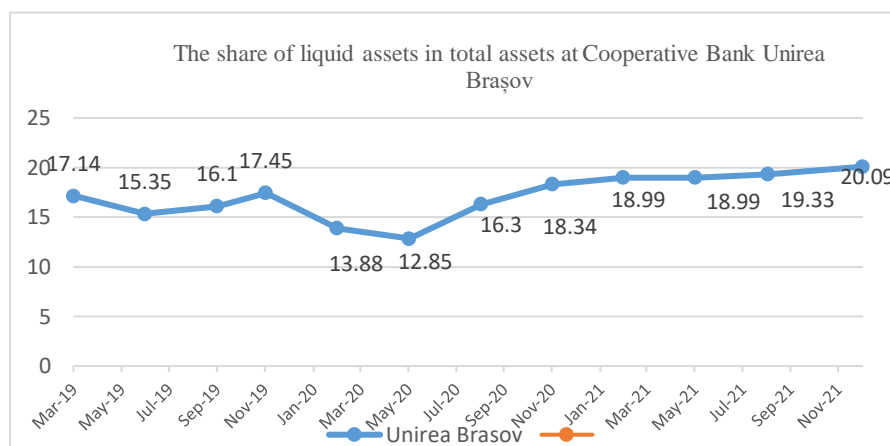


Source: The archive of Cooperative Bank Unirea Braşov

This indicator exceeded the minimum mandatory level of 100 % and achieved the lowest level, 158.17 %, on the spring of 2020 and the highest level, 323.76 %, in the spring of 2021.

Share of liquid assets in total assets highlights, from a percentage point of view, the assets that can be easily transformed into liquidity, so that a high level of this indicator demonstrates a good ability to react to possible problems generated by a liquidity crisis. At Cooperative Bank Unirea Braşov, this indicator achieved during the pandemic crisis, generated by the Covid-19 virus, the following values:

**Figure 3: The share of liquid assets in total assets at Cooperative Bank Unirea Braşov during the pandemic crisis.**



Source: The archive of Cooperative Bank Unirea Braşov

This indicator achieved an appropriate level, which corresponds to a medium-low risk.

We can say that there are few rules of universal character regarding the efficient management of liquidity in crisis conditions. Each manager/management team uses its science and art to effectively manage liquidity risk, preventing the negative effect generated by banking risks.

The managers of the Cooperative Bank Unirea Braşov act permanently to maintain the trust of the customers in the bank by permanent communication with the associated members as well as by practicing profitable performance management in crisis conditions.

#### 4. Conclusions

The analysis made over the years and the study of the specialized literature lead to the conclusion that there is no business without risk and that it is extremely important how the risk is managed. Risk



requires a crucial attention in management activities and strategies.

We consider relevant that the ability of managers to assume risks in the decision-making process is the key for the success of a business.

Analyzing the risks in banking companies in the current global crisis, taking into account the world effects of the war in Ukraine and the potential consequences, bank managers must adopt effective measures in order to change the perception and interest of the entire staff of the banking company for knowledge of business risk management and especially banking risk management.

Considering the fact that we are a multidisciplinary research team, using our professional experience in the banking field and taking into account recent scientific research, we can conclude that:

- in the current global COVID-19 pandemic caused by the SARS-CoV-2 coronavirus, the human factor (employee behavior, communication with customers) has a central role in the current events manifested on the market. We are of the opinion that it is imperative to implement additional measures aimed at professional training, remuneration/motivation and, last but not least, loyalty of bank employees. Cooperative Bank Unirea Braşov took additional measures to further train/inform employees, taking into account the changes on the banking market, the multitude and complexity of banking risks and banking services, as well as the fierce competition between banks;
- in carrying out the specific activity (digitalization of banking products and services), investments in advanced technologies are necessary to prevent money laundering and crime on the Internet;
- the digitization of the economy implies major consequences in the management of banking risk and especially in the management of banking liquidity, a fact that requires the modernization of analysis methods and techniques, and control of banking activity;
- in the banking activity of the current period (when the passive interest increases from one month to another - in October 2022, for example, we are witnessing passive interests of 8.75% to 10%), it is necessary to evaluate the risks for very short periods of time. At Cooperative Bank Unirea Braşov, in the context of the global economic and financial crisis, we analyze bank liquidity daily using effective/efficient methods and techniques. Among the methods used by the bank, we mention: daily analysis of bank assets and liabilities, risk value, rating, sensitivity analysis through stress-testing;
- considering that we are facing major changes in the global economic/banking system, we must reevaluate the risk management and especially liquidity management. From the analyzes carried out as well as from banking practice, we discover new elements that form the basis of the assessment of significant risks in crisis conditions and the elaboration of hypothetical crisis scenarios for short-term (1 year, 2022) and medium (3 years, 2022-2024) financial exercises). At Cooperative Bank Unirea Braşov, crisis scenarios are developed for credit risk, interest rate risk, liquidity risk, operational and reputational risk, strategic risk, as well as scenarios based on historical observations;
- banking performance indicators are a very important tool in banking risk management. The quantitative and qualitative indicators permanently analyzed by the management of credit institutions are relevant in the diagnostic analysis of a bank and they must be re-evaluated and modified periodically taking into account the deep current crisis;

The management of Cooperative Bank Unirea Braşov believes that in the future there will be changes in the banking sector, in the management of banking risks and in the bank-client relationship, which must lead to closer proximity to the client and not to distancing from the client (offering banking products and services on -line). We need to reorient banking policies towards the customer, improve/increase the quality of banking products and services, increase banking prudence, advise customers, increase customer confidence and turn them into loyal business partners.

Romania's entry into the great European family meant, due to the gaps that separate us, new challenges for the Romanian economy in general and for the banking sector in particular. Therefore, Romania had and must adapt to the European environmental conditions in order to be able to cope with

economic relations at the world level and maintain the financial stability of the Romanian economy in the current global crisis.

We can affirm that the liquidity of banking companies on the financial markets is the fundamental premise for their success, so we must effectively manage liquidity management, create minimum reserves for liquidity, reevaluate the loan/investment portfolio, identify new sustainable sources of financing, ensure the quality guarantees, etc.

From the current economic-financial crisis we have a lot to learn for the future because creativity is born out of necessity, and if we manage to overcome the crisis we will overcome ourselves.

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