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CONTENT

INTRODUCTION.....	3
PART 1. THEORETICAL ASPECTS OF ANTICRISIS MANAGEMENT IN THE BANK.....	7
RESEARCH OF THE BANKING ANTICRISIS MANAGEMENT PROCESS ..	17
2.1. Diagnostics of crises situations in JSC “Oschadbank”	17
2.2. Analysis of reactive and preventive anticrisis measures of JSC “Oschadbank”	33
PART 3. WAYS FOR IMPROVING THE CRISIS MANAGEMENT OF THE BANK.....	45
3.1. Global experience of anticrisis management of the bank.....	45
3.2. Improvement of the regulatory measures of anticrisis management of the bank	51
CONCLUSIONS AND RECCOMENDATIONS	58
LIST OF REFERENCES	61
APPENDIXES	67

INTRODUCTION

Relevance of the research topic. Increasing processes of globalization and financial integration in the modern world potentially may raise the higher likelihood of crisis occurrence, cause new challenges and threats in the national economics. The domestic banking sector is the most sensitive to external risk factors that affect the whole economic system. It can be clearly seen how crises in the banking field during 2007-2009 and 2014-2016 years can provide several negative consequences for domestic's economy, such as the growing amount of insolvent banks, their large-scale bankruptcy, and an increasingly large number of debt from international financial institutions, etc.

In recent years, many domestic banks have suffered significant losses caused not only because of the military and political situation, but also by the negative dynamics of the growth of overdue debt, liquidity deficits on the domestic interbank market, dollarization of loans, the necessity to form reserves for risky assets, to pay off liabilities etc. All of these reasons have led to an imbalance in the structure of assets and liabilities of Ukrainian banking institutions, and subsequently to a negative financial result. That's why it is essential to determine the urgency of creating and operating an effective crisis management system, timely identify risks and successfully solve the most complex problems by using preventive or reactive measures.

Conceptual provisions of the most acute issues of anti-crisis banking management were considered by such foreign and domestic scientists as: S. Manganelli [1], I. Kondrat [2], S. Manzhos [3], S. Ingves [6], C. Buch [7], H. Lidblad [8], O. Afanasyeva [11], P. Honohan [12], B. Pshyk [16], T. Turgut [19], O. Kot [34], O. Erkes [60] and others.

We commend the significant contribution of all scientists who studied this issue, but there is a growing urgency of in-depth researching of theoretical, methodical and practical aspects of anti-crisis management in the bank. The pressing issue is also the necessity to determine the most suitable measures (preventive and

reactive) for modern Ukrainian economic conditions in banks, especially it is important to find out new approaches for regulatory measures.

The urgency of these issues determined the theoretical and practical value of their application, have led to choose the topic of this study and determine its objective and task.

The objective of the article is research of the anti-crisis management process in the banking sector by highlighting theoretical application of certain elements of the anti-crisis management mechanism, its subjects, forms, preventive and reactive instruments, that have a huge impact on the banking activity in different economic conditions. One of the intermediate purpose is also to recommend ways for anti-crisis measures improvement both macro and micro levels.

To achieve this goal we were focused on the next **tasks**:

1. To carry out the review of the references and to substantiate the necessity, essence of the anti-crisis activity of the bank; to determine reactive and preventive anti-crisis instruments;
2. To run diagnostics of the crisis situations in JSC “Oschadbank”, determine the most problematic aspects in crisis management;
3. To provide coefficient analysis, calculate ratios of Cromonov’s index type model and observe its impact on the financial security of the bank, identify the greatest risks during the banking activity;
4. To explore the international experience in struggle against the banking crisis, results of its anti-crisis measures implementation;
5. To develop recommendations for the improvement of regulatory measures of the crisis management in banks.

The object of the study is the process of the occurrence of crisis phenomena in banking institutions and anti-crisis management. **The subject** is theoretical, methodical, practical basis of the anti-crisis management process of the bank. Economic relations that arise during diagnosis, prevention, neutralization and overcoming crisis phenomena in the banking sector both at the micro and macro levels were also observed.

Research methods. The theoretical and methodological basis of the research is scientific works, recommendations of the Basel Committee, regulatory documents of the NBU on issues of liquidity support, the introduction of a new standard and an increase of capital buffer indicators.

The following general and special methods of cognition were used for the set of tasks realization: abstractive-logical – for analysis of the professional literature; decomposition – for disclosing the purpose and object of research; analysis, synthesis, generalization – in specifying the nature, specifics, functions, types, stages of crisis management; tabular and graphical – to display the results of the diagnosis of assets, liabilities, equity of the bank etc.; comparison, generalization and systematization – evaluation indicators of diagnostics of the bank in order to predict crisis phenomena; methods of coefficient – to calculate the financial security and stability of the bank.

Informational basis of the study. Informational and methodical basis of researches are the laws of Ukraine, the resolutions of the National Bank of Ukraine; analytical reviews of the Basel Committee and the World Bank, other international financial institutions, rating agencies, such as Moody's, Fitch, the Bank's audit reports by PwC, Delloite; consolidated bank reports, monographs and scientific publications of domestic and foreign scientists on crisis management in the banking sector.

The scientific novelty of the work consists in improving of methodical issues of regulator anti-crisis measures application by development the mechanism of implementing anti-crisis regulatory measures during each stage of a crisis.

The practical value of the results obtained can be used by both the National Bank of Ukraine and banking institutions for early diagnosis of financial stability of banks, crisis prevention, in developing the strategy and tactics of crisis management in the banking sector.

Personal contribution of the author. The final qualifying paper is a self-completed study by the author.

Published work. Some research results are highlighted in a scientific article: S. Zadolynna Theoretical application of the mechanism of anti-crisis management in the banking sector // Management of the financial institution activities: stereotypes changes: coll. of stud. scien. art. / resp. ed. Shulga N.P. – K.: Kyiv: Kyiv nat. univ. of trad. and econ., 2019. - 295 p. (P.201 - 205).

Volume and the structure of work. The total volume of the paper is 79 pages, including 11 tables, 18 figures and 61 references, that were used as well.

PART 1. THEORETICAL ASPECTS OF ANTICRISIS MANAGEMENT IN THE BANK

The involving of financial integration into the world economic processes in the future may lead to new crisis phenomena and challenges to which banks have to be maximally prepared. At the current stage of domestic's economy development changes are increasingly observed in the banking sector.

In recent years, the Ukrainian economy has received a significant negative effect from the growing number of insolvent banks and their large-scale bankruptcy. This factor affects the development of not only the banking sector but also the economy as a whole. That is why the disclosure of the theoretical application of the anti-crisis management mechanism in the bank, highlighting effective management decisions for the prevention of crisis phenomena are extremely actual. The correct definition of the anti-crisis management tools, timely using appropriate methods during the crisis are crucial factors in stabilizing normal banking functioning. Thus, those steps may help for the local and global banking sector avoid the crisis occurrence and billions of losses.

For example, the decimation of the market value of banking shares during the global crisis in 2007-2009 periods was unprecedented: more than 3 trillion EUR were erased from the market capitalization of banks in Europe and the United States. This corresponds to a decrease of 82% in the stock market value of these banks between May 2007 and March 2009 [1, p.7].

Due to the unpredictable crises threats in the domestic economy, presence of many destabilizing factors affecting the financial condition and solvency of Ukrainian banking sector it is necessary primarily to reveal the essence of the term "anti-crisis management of the bank."

Thus, Kondrat I. considers anti-crisis management of the bank as a set of tools and measures of legal, organizational and financial matters, aimed at identifying and preventing crisis situations in the banking activities, restoring its liquidity, solvency,

competitive position in the market and ensuring long-term financial stability [2, p. 464].

In particular, Manzhos S. defines anti-crisis management of banking activity as a set of interconnected constraints, principles, processes, procedures and measures of state authorities, central bank and management of certain banking institutions aimed at achieving the effective functioning of the whole banking system and a separate banking institution [3, p. 16]. The main principles which researcher highlight in their works are shown in the table 1.1.

Table 1.1

Principles of anti-crisis management

Principles	Essence of the principle
Continuous readiness to respond	Due to the factors of external environment bank must constantly be prepared for misbalance
Preventiveness	Focus on prevention and early diagnosis of crisis phenomena
Planning and budgeting of activity	Preventive management allows developing crisis scenarios, budgeting and potential costs
Urgency to respond	Crises are characterized by high dynamics of development and require rapid response
Complexity	Only systematic measures may have a positive effect
Adaptability of management	Rapid adaptation to changes in the environment
Situational approach	Anti-crisis measures vary depending on the nature of the crisis
Control	Each anti-crisis stage should be accurately control
Effectiveness	Focus on getting the best results
Focus on long-term results	The results should only have a positive impact on the strategic perspective of the institution
Optimization of the remediation procedure	Management of the bank should choose the most effective form of remediation and its measures.
Legality	Crisis management should be based on the legal principles
Prioritize the use of own resources	Only in case of a lack of own resources the bank can count on attracted

*According to source [3]

Boldyrev O., in turn, notes that anti-crisis bank management is a set of economic relations arising from diagnostic, prevention, neutralization and overcoming of crisis phenomena both at macro and micro levels [4, p. 4].

So, summarizing the interpretation of this term by scientists, we make a conclusion that anti-crisis management of the bank is a system of measures aimed at detecting, preventing, minimizing and completely neutralizing potential and existing crisis phenomena, in order to ensure uninterrupted banks' functioning. It should be noted that this type of administration is implemented by using the mechanism of anti-crisis management, which consists of the appropriate forms, methods and tools that are used at micro and macro levels for specific crisis conditions (shown in app. A). Thanks to the mechanism of crisis management it is possible to stop crisis development in the early stages and minimize its negative effects in the future.

Anti-crisis control is carried out both at external and internal subjects. It should be noted that the subjects of management at the external level are: National Bank of Ukraine, Government of Ukraine, Supreme Council of Ukraine, Deposit Guarantee Fund.

These authorities provide the banking sector with the necessary legislative framework and also determine which banking institutions have become problematic [6, p.12]. In turn, anti-crisis management in the bank at the micro-level is carried out by internal subjects: a meeting of shareholders, the Board of the Bank, headed by the Chairman of the Board. As in recent years, deterioration of the financial situation of domestic banks has been observed in particular the low level of liquidity and capitalization, there is an objective need of using effective anti-crisis management instruments. Scientists divide them into preventive and reactive tools of anti-crisis management in the bank.

The first form involves a set of management decisions that are used for timely identifying potential threats and preventing the bank's livelihoods under certain economic and political conditions [4, p.4].

The most commonly used preventive and reactive instruments are shown in figure 1.1.

It should be admitted that nowadays there is a need to maintain financial stability. It can take the form of preventive measures to reduce the risk of a crisis occurring, and crisis management measures to limit the costs when one does.

Financial stability is needed for a well-functioning economy, but the financial system is inherently sensitive. Thus, banks globally have enhanced their resilience to future risks by substantially building up capital and liquidity buffers [7, p.2].

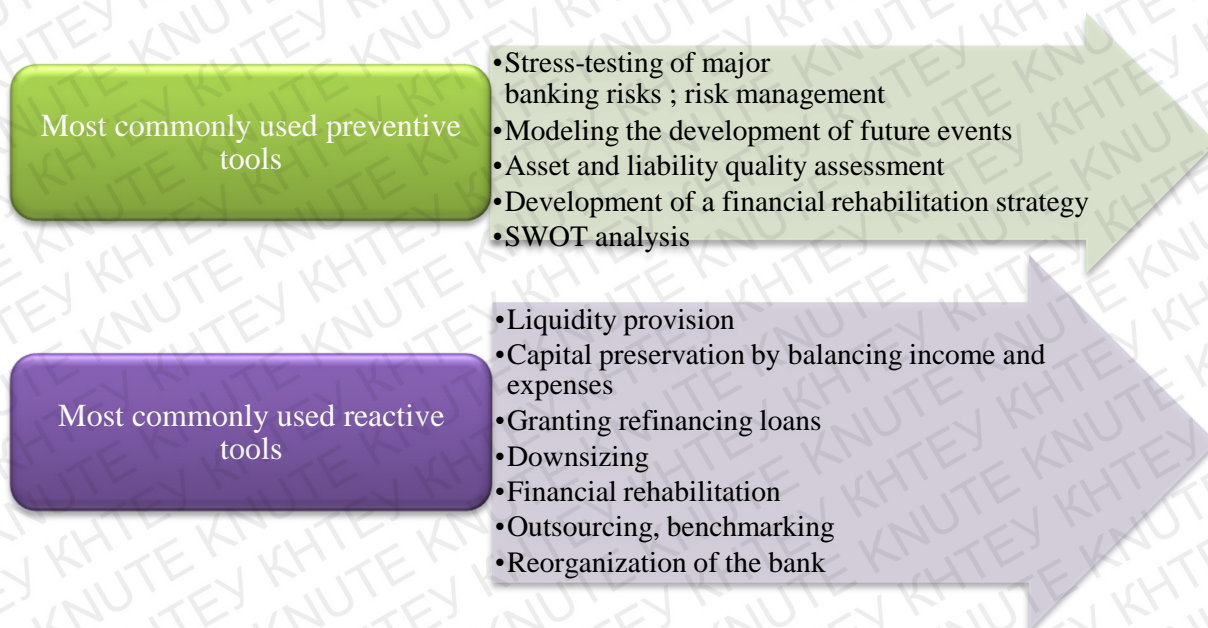


Figure 1.1 Most commonly used preventive and reactive instruments

*Developed by the author

Banks are vulnerable because they lend money over long periods (e.g. mortgages) and fund these loans by borrowing over short periods (e.g. deposits from the public). This often creates an imbalance between long-term assets, which are illiquid, and short-term liabilities [8, p.6]. So, it is needed to choose the right prudential toolkit at the aim of the perspective successful performance and minimizing possible losses during the global economic negative market environment.

The first macro-prudential measures were applied by the Central banks of Hong Kong in the 1990s, South Korea and Singapore in the 2000s in response to the influx of excess capital. Since the crisis of 2008-2009, the "macro-prudential concept" has become widespread. The Central banks began to create separate financial stability units, specialized in macro prudential analysis and regulation, to publish reports on financial stability [9, p.7].

But the idea should be to stabilize market confidence of individual banks, reduce the risk of a bank and prevent depositors from removing funds and thereby

draining a bank. The attempts to manage the crisis included a combination of private as well as public measures to contain the crisis and restore confidence in the markets. Examples of this include moves to recapitalize by a rights issue, and when this failed recapitalization by government means as the last option. These strategies have been used in efforts to restore the solvency of the banking system and enable banks to continue lending and return to profitability again [10, p.12].

Reactive anti-crisis management provides factors identification that has led to a sharp deterioration in the quality of a credit portfolio, an assessment of the bank's potential losses of non-performing loans, searching ways to minimize the negative consequences of non-repayment loan [3, p.16].

Thus, managers can respond quickly and prevent the emergence of crisis phenomena. The task of the bank's reactive anti-crisis management is to analyze the external environment and its competitive advantages to formulate a strategy for preventing and exiting the crisis in case of its occurrence. It is through reactive management financial recovery and banks' bailouts are carried out, as well as a system for eliminating negative consequences [11, p.235].

For example, the provision of liquidity helps to ensure that the economy's normal payments and short-term credit system continue to function smoothly. Public intervention is necessary to limit wider economic damage from bank failure [12, p.4].

In EU framework for financial crisis management there is point of view in the event that problems arise with a bank that is in breach of the prudential requirements, a harmonized set of early intervention measures (e.g. clear powers to prohibit payment of dividends, impose additional reporting requirements, require the replacement of managers or directors or require the cessation of certain risky activities, etc.) would be made available to supervisors. These steps would be taken before an institution's problems become severe, intending to return the bank to a normal state of health [13, p.90].

The introduction instruments in the framework of prevention (minimization) negative manifestations of the crisis in stable conditions of banking activity is based on the fact that anti-crisis management in the bank should occur not only when the

crisis has already come, but to have preventive nature. Consequently, the system of instruments in the part of the preventive anti-crisis management differentiates depending on the chosen methodical toolkit [5, p.187].

The target orientation of the measures is liquidity and solvency support, which are achieved through the detection of early problem manifestations, its prevention, and elimination. The main measures of preventive toolkit include monitoring, modeling the development of future events, stress-testing, asset and liability quality assessment, risk management, development of a financial rehabilitation strategy, technology scenario development, SWOT-analysis, etc. [5, p.189].

The quality of liabilities and assets are characterized by the stability of the resource base and fundraising, and sensitivity against interest rate fluctuations [14, p.881]. The example of possible SWOT-analysis in the banking institution we represent in the fig.1.2.



Figure 1.2 Example of SWOT-analysis in the bank

*Developed by the author

It can be seen that SWOT-analysis, strengths and weaknesses are affected by the internal factors (controllable) of the institution; opportunities and threats are affected by the external factors (uncontrollable) of the bank [15, p.202].

At the level of each bank, early diagnosis system should be developed and based on the use of methods for assessing financial stability, evaluating the quality of assets and liabilities, as well as monitoring risks and threats in the bank. It is good to use a variety of approaches due to applying ratios methods, rating methodologies, economic and mathematical models that allow identify risks and thus prevent the crisis in the bank [16].

Stress testing – is a method that is used for identifying credit risk, liquidity risk, foreign exchange risk, interest rate risk, and asset values. The goal of this method is to assess the risk and determine the ability to withstand shock in the financial market [17].

Foreign experience emphasizes the importance of this method, conducting quarterly testing in banks. Due to the increasing occurrence of emergency situations in banking activities, it is necessary for the domestic managers to use operative stress testing [16].

The risk identification process should include a comprehensive assessment of risks, which may include those deriving from on- and off-balance sheet exposures, earnings vulnerabilities, operational risks, and other factors that could affect the solvency or liquidity position of the bank [18, p.6].

The overall purpose of the risk management process is to evaluate the potential losses for the banks in the future and to take precautions to deal with these potential problems when they occur [19, p.3].

Because of the development and implementation of risk management managers are able to identify potential threats; causes of risk; to analyze the possible impact of negative consequences of these risks; to develop and improve measures for neutralizing such threats.

Benchmarking is a powerful tool in the modern competitive environment. This method allows bankers to compare analysis, successful experience from competitors and partners and also compares the technology of its own model with the reference model. As well as to borrow a better experience from partners, to gain competitive advantage in this niche [20, p.16].

Strategic benchmarking in the banking sector can be provided with the purpose of borrowing best practices in formulating a mission, goal, and objectives for the future [20, p.16]. The advantages of the use of benchmarking by Ukrainian banks include opportunities to compare the strengths and weaknesses of their activities with more successful banks, to realize the realistic achievable level of efficiency, to increase its competitiveness [21, p.75].

Anti-crisis banking monitoring is based on a system of elements, such as: observation; assessment of the financial banking activity in the current period by identification of crisis situations and existing risks; forecasting trends in the financial activities of banks in the near future; justification of the necessity of using anti-crisis management methods; adoption and implementation of managerial decisions [22].

The methodology of the reactive crisis management is based on the situational analysis, which considers any situation in the dynamics. Such management envisages monitoring both positive and negative trends that signal the emergence of deepening of the crisis, its localization or deployment using several methods of reactive anti-crisis management. It is carried out in conditions of external uncertainty and internal instability [23].

The instruments of reactive anti-crisis management are financial rehabilitation, flexible management of bank personnel, outsourcing, development of communications and public relations, personnel development, reorganization of the bank by merger or accession, reduction expenses, etc [23].

Financial rehabilitation as a component of anti-crisis management involves a complex of measures of a bank, aimed at improving its financial condition, providing by eliminating violations that have led to the deterioration of its competitive position. The plan of financial rehabilitation of the bank should include: analysis causes of deterioration of the financial conditions, measures for its improvement with the definition of quantitative and qualitative indicators of the bank's activities and terms of execution [24].

Outsourcing is a strategic solution aimed at the transfer of certain functions or business processes to third parties. It allows focusing on the core business, as well as to provide customers a wide range of high-quality services [25, p.56].

The main purpose of outsourcing is in effect to reduce costs and increase profit [26, p.55].

Sanitation and downsizing take place among the effective tools for implementing anti-crisis management. The work of the sanitation institution for working with problem assets is based on the German experience. It is the purchase of a bad repayment institution for bad loans, a mandatory repurchase by the bank of troubled assets in a sanitary institution (the possibility of adjusting the discount at reverse repurchase, depending on the effectiveness of collection) and the formation of part of the resource base of the rehabilitation institution at the expense of funds attracted on the market [27, p.26].

Downsizing includes a set of anti-crisis measures related to the optimization of the organizational structure in banking institutions and its affiliate network, reducing administrative and managerial costs associated with the release of staffing [5, p.190].

In turn, the restructuring process means changes in the structure of capital, assets and liabilities. This is an instrument for counteracting bankruptcy, a set of measures aimed at stabilizing, improving the financial condition (raising capitalization, liquidity, solvency, profitability, quality of the loan portfolio) to provide confidence, competitive advantages on the market and further growth [28, p.193]. Resulted in the restructuring process many benefits as a result of improved performance of the bank by controlling the cost of operations and the introduction of technology in the development of products and services offered to customers with lifting of quality to meet the challenges of competition [29, p.133].

It should be noted that anti-crisis measures should be comprehensive and contribute to the stability and credibility of the bank. In this case, crisis management will respond in a timely manner to the negative changes [30, p.146].

Banks should transform themselves by simultaneously redesigning their business models, operating models and legal structures. Each element needs to be considered through five distinct 'lenses': strategy, operations, legal entities, regulatory constraints and financial outcomes, with all parts of the puzzle being addressed simultaneously. The advantage of this approach is that it unites all parties and drafts a holistic roadmap for progress [31, p.11].

Thus, the functioning of the domestic banking sector in the current economic conditions requires, first of all, a clear theoretical formulation of the mechanism of anti-crisis management with the further practical application of effective methods and tools at macro and micro levels. The increasing probability of emerging crisis threats leads to more frequent preventive work in the financial activities of banks, using appropriate preventive tools.

In turn, neutralization and minimization of negative consequences of crisis phenomena can be obtained through the use of reactive tools of anti-crisis management. It should be noted that only through the complex nature of these measures we can achieve a reduction in the number of insolvent institutions and bankrupt banks.

We believe that because of paying attention to the theoretical application of anti-crisis management mechanism and by using reactive and preventive measures following effect can be achieved in practice: increasing capitalization and additional assets, obtaining an optimal balance between assets and liabilities, stopping outflows of clients' funds, positive tendencies in the repayment debts to creditors, no debt outstanding to counterparties, increasing profitability, exceedance of regulatory capital over the statute capital, closing unsuccessful business projects of banking institution.

RESEARCH OF THE BANKING ANTICRISIS MANAGEMENT PROCESS

2.1. Diagnosis of crises situations in JSC “Oschadbank”

The State Savings Bank of Ukraine, or JSC “Oschadbank”, is a public joint-stock company, headquarter of which is based in Kyiv. JSC “Oschadbank” is one of the largest financial institutions of Ukraine and systemically important bank nominated by the National Bank of Ukraine every year since 2015 when classification requirement came into force.

By the end of 2018, the bank had 2 640 branches and 3 150 ATMs throughout the country which carry out various functions, such as the disbursement of pensions, social aid, processing of utility payments and other banking transactions. Oschadbank is also one of the only three Ukrainian banks whose clients' time deposits are fully guaranteed by state law compared to the total of 200,000 in other banks in case of bank liquidation.

More than 45 thousand POS terminals are connected to the processing of the bank. Oschadbank issued more than 11,5 million cards (more than 6 million of which are active), including the Ukrainian payment system PROSTIR. The Bank also owns Internet banking and the Savings 24/7 payment system [32].

According to the financial portal MinFin, as of July 1, 2019, Savings Bank assets amounted to 218 190 million UAH, liabilities – 199 985 million UAH, loan portfolio – 66 390 million UAH, equity – 18 2014 million UAH, authorized capital – 49 473 million UAH, net profit – 122 million UAH [33].

The financial condition of the bank depends on the results of its activities and therefore every bank, regardless of its specialization and form of ownership, should not neglect the potential for increasing profits. On the other hand, timely assessment financial condition of the bank and identification of problems in its activities will help to prevent the banking crisis, or even to prevent its bankruptcy. Because of the financial non-stability situation in the country and in the world at all, every banking institution has to take measures against the possibility of crisis or even bankruptcy.

It should be noted that the development of diagnostics and forecasting system crisis phenomena in banking institution's activities is progressing at a considerable pace [34, p.390].

The consequences of the financial crisis in the domestic banking system can be observed in the 2014 – 2015 period. Thus, during these years, mostly due to the political and military factors, there was a sharp decline in the economy, currency devaluation, growth in public debt and permanent political and, as a result, economic instability.

However, the crisis was also caused by the internal factors and imbalances that have accumulated in the banking system: deficiencies in corporate governance, low quality of risk management, dollarization of banking operations, lending to related parties, money laundering operations, etc. [35, p.271].

Thus, the systemic nature of the crisis causes NBU to use such anti-crisis methods as refinancing.

The total volume of banks' refinancing in 2014 reached 222,3 billion UAH, which is 3,1 times more than in 2013 when this figure was equal to 71,5 billion UAH. At the same time, the volume of NBU loans to banks for more than 30 calendar days amounted to 115,6 billion UAH in 2014, which is a half part of the total refinancing [36, p.660]. Table 2.1 reflects the data of ten banks that received the largest amount of stabilization loans from the NBU during the period 01.01.2014 – 01.07.2015.

The provision of the loans by NBU to banks for more than 30 calendar days has become a forced anti-crisis measure in response to panic and fear, massive withdrawals of funds from bank accounts [36, p. 659].

On the example of JSC "Oschadbank", it researched on the bank's exit from the acute crisis. It was done thanks to the correct anti-crisis measures adopted by the management of the institution.

It is also noted that 95% of Oschadbank's assets were loans of large corporate businesses. Many credit decisions were politically motivated.

Table 2.1

10 banks that received the largest amounts of NBU stabilization loans during the most acute crisis period 01.01.2014 –01.07.2015.

№	Bank	The total amount of stabilization loans provided, thousand UAH	Number of stabilization loans provided
1	PJSC CB "PRIVATBANK"	19 589 140	9
2	JSC "OSCHADBANK"	6 000 000	2
3	PJSC CB "FINANCIAL INITIATIVE"	4 000 000	2
4	PJSC CB "Nadra"	2 500 000	2
5	JSC "BANK" FINANCES AND CREDIT "	2 177 500	5
6	PJSC "VAB Bank"	1 200 000	1
7	JSC "Delta Bank"	960 000	1
8	JSC "IMEXBANK"	795 000	2
9	PJSC "PLATINUM BANK"	640 000	3
10	JSB "Pivdennyi"	600 000	3
	Total	38 461 640	30

*According to source [35; 36]

The concentration of such a risk with the occurrence of the banking crisis, the Russian occupation of the Crimea and the fighting in the Donbas region, generated a surge in problem debt and losses. Over 1,000 branches were suspended in the occupied territories, 5,000 workers lost their job.

In particular, the resource base of JSC “Oschadbank” in the spring of 2014 daily lost 200 – 300 million UAH. In order to keep outflows of deposits and to survive, quick anti-crisis solutions were needed.

The first step was to ask the national regulator to check the actual financial condition of the bank, the analysis of which took about a year.

The second step of the board was trying to establish communication with customers, the interpretation of the consumer and services about the availability of a legally approved state guarantee for the safety of customers' funds, regardless of the amount and timing.

The third solution was the restructuring of Oschadbank's external liabilities. Reactive step-by-step process of anti-crises measures is shown in the fig. 2.1.



Figure 2.1 Step-by-step reactive process against crisis in 2014-2015

*Developed by the author according to source [32]

The third solution was the restructuring of Oschadbank's external liabilities.

To run a diagnostic of the state of the bank we evaluated the main indicators: liquidity ratios, ratios of capital adequacy, coefficient of reliability, debt to equity ratio, equity ratio, equity multiplier ratio, etc. Table 2.2 lists the liquidity ratios for the last 5 years.

The bank's liquidity is ensured by the balance of assets and liabilities and the maturity of the asset allocation with the time required to raise liabilities according to the bank balance sheet. In the case of banking panic, any bank may go bankrupt. Such insolvency of the bank will help to resist the high proportion of the liquid assets. It should be noted, that funds at the bank's cash desk, on NBU and other banks accounts, as well as assets that can be quickly converted into cash or non-cash funds, such as debt securities with a liquid secondary market, are considered with high liquidity [6, p. 767].

According to the data of liquidity standards over the past 5 years (shown in table 2.2), their compliance is observed with significant reserves: thus, the quick liquidity ratio 2018 shows a significant increase of 99, 92%, having exceeded the optimal rate by almost 5 times.

Table 2.2

Liquidity ratios of JSC "Oschadbank" during the period 2014-2018

Ratios	Liquidity standart	2014	2015	2016	2017	2018
Quick liquidity ratio (R4)	not less than 20%	33,1	35,51	60,53	80,23	99,92
Current liquidity ratio (R5)	not less than 40%	60,2	77,67	104,7	120,41	136,1
Short-term liquidity ratio (R6)	not less than 60%	62,5	68,31	95,29	90,42	85,55

*According to source [37; 38; 39]

The current liquidity ratio corresponds to an indicator of 136.1%, which is higher the norm more than tripled and doubled compared to 2014. In 2014 this indicator was equal to 60, 2%.

The standard of short-term liquidity even during the crisis processes in 2014 and 2015 was equal to the norm; its value corresponded to the benchmarks of 62.5% and 68%, 31% respectively. The highest level of R6 was recorded in 2016 due to the stabilization of the economic situation in the banking system.

It should be noted that in order to maintain financial stability and increase the stability of the banking system to possible liquidity shocks, the Board of NBU on February 15, 2018 approved a new prudential standard for Ukrainian banks – liquidity coverage ratio or LCR [37]. Thus, from September 2019 quick liquidity ratio was cancelled.

LCR is the liquidity ratio developed by the Basel Committee on Banking Supervision in response to the global financial crisis of 2007–2008. Today LCR is introduced in 45 countries of the world, including those that are not members of the Basel Committee on Banking Supervision.

According to the financial report of JSC “Oschadbank” of 1.10.2019, the actual LCR ratio in national currency corresponded to a level of 311, 29% with a standard benchmark figure (> 90%), in foreign currency LCR is equal to 146,57% [40].

The introduction of LCR will equalize the share of high-quality liquid assets in the assets structure of Ukrainian banks in the next years.

According to the bank's scenarios of stress-testing liquidity, on the horizon of 1 month and 1 year the bank had a significant reserve of liquidity. Taking into account the implementation of stress scenarios on the horizon of 1 month, the liquidity reserve amounted to 76,123 million UAH, and on the horizon of 1 year – 64,152 million UAH [39, p.40].

During 2018 the bank constantly maintained an adequate supply of primary (cash, correspondent accounts with the NBU and correspondent accounts with other banks) and secondary (the government bonds portfolio and deposit certificates of the National Bank of Ukraine) liquidity. As of December 31, 2018, the volume of primary and secondary liquidity amounted to 21,5 billion UAH (10,8% of coverage of liabilities with liquidity reserves) and 88,4 billion UAH (44,4% of coverage of liabilities with liquidity reserves), respectively [39, p. 40].

The functional aspect of anti-crisis measures of maintaining an adequate level of liquidity is manifested in the use of specific tools: prolongation of deposits, restructuring of debt to non-residents, etc. In order to in-depth analysis of the potential state of liquidity, it should be used – liquidity diagonal [28].

A special role during the operational activities aimed at overcoming the crisis belongs to the issue of ensuring an appropriate level of capitalization of the bank. The functional aspect of crisis management is manifested in the use of specific tools: increase in statutory capital, conversion of debt swaps into capital, etc [41].

Table 2.3 shows the ratios of regulatory capital (R1) and the ratio of sufficiency (adequacy) of regulatory capital (R2) of JSC "Oschadbank" for 2014 – 2018. According to table 2.3 in 2015 there was a sharp decline in regulatory capital as much as 10 111 507 thousand UAH. This is due to the consequences of the macroeconomic crisis, which began in 2014. Despite this, the bank adhered to the requirements of the National Bank of Ukraine regarding the adequacy ratio (adequacy) of regulatory capital (R2), the value of which at the end of the day on December 31, 2015 amounted to 11,47% with a normative value of at least 10%.

Table 2.3

Capital ratios of JSC "Oschadbank" during the period 2014-2018

Capital ratios	2013	2014	2015	2016	2017	2018
R1, Regulatory capital, UAH thousand	19 672 280	19 857 329	9 745 822	18 153 376	33 362 043	13 200 548
R2, Regulatory capital adequacy (sufficiency) ratio (no less than 10 %)	19,5	21,73	11,47	10,73	18,77	13,56
Absolute growth R1, UAH thousand	-	185 049	-10111507	8 407 554	15 208 667	-20161495
Relative growth R1	-	100,94%	49,08%	186,27%	183,78%	39,57%
Absolute growth R2, %	-	2,23	-10,26	-0,74	8,04	-5,21

*According to source [37; 38; 39]

The highest volume of regulatory capital is observed in 2017 – 33 362 043 thousand UAH, which is 15 208 667 thousand UAH or 83, 7 % more for the same period of 2016.

It should be noted that the lowest value of R2 is observed in 2016 – 10, 73 %, but this indicator is still greater than the optimal rate of 10%.

The development of the strategy adopted by the Cabinet of Ministers of Ukraine provides for additional capitalization of the bank in the amount of 16, 8 billion UAH. In December 2017, the banking capital was replenished by 5, 75 billion UAH. According to the Development strategy, there is a need for additional capitalizations to form a target business model, for building a modern centralized technology platform and scale the business, and also for protecting from stressful situations in the financial market.

It should be noted that in 2018, the main source of customer funds in JSC “Oschadbank” is attracted by customer funds (both individuals and legal entities). It is shown in table 2.4.

According to the Consolidated financial report for 2018, the share of attracted funds of the customers in 2018 is 77%, 62% of attracted funds were funds of individuals.

Table 2.4

Loans-to-deposit ratios

Period	Clients' money, billion, UAH	Credits and clients' indebtedness, billion, UAH	Loans-to-deposit ratios, %
2014	56 265 913	70 236 315	125
2015	94 269 726	65 462 189	69
2016	145 586 238	65 946 584	45
2017	150 151 178	74 502 538	50
2018	154 016 454	67 543 176	44

*According to source [38; 39]

Thus, the main directions of using funds by Bank were the repayment of refinancing loans provided by the NBU for 5 billion UAH, repayment occurred ahead of schedule, as well as an increase in the loan portfolio. The dynamics and loans-to-deposit ratio are shown in figure 2.2.

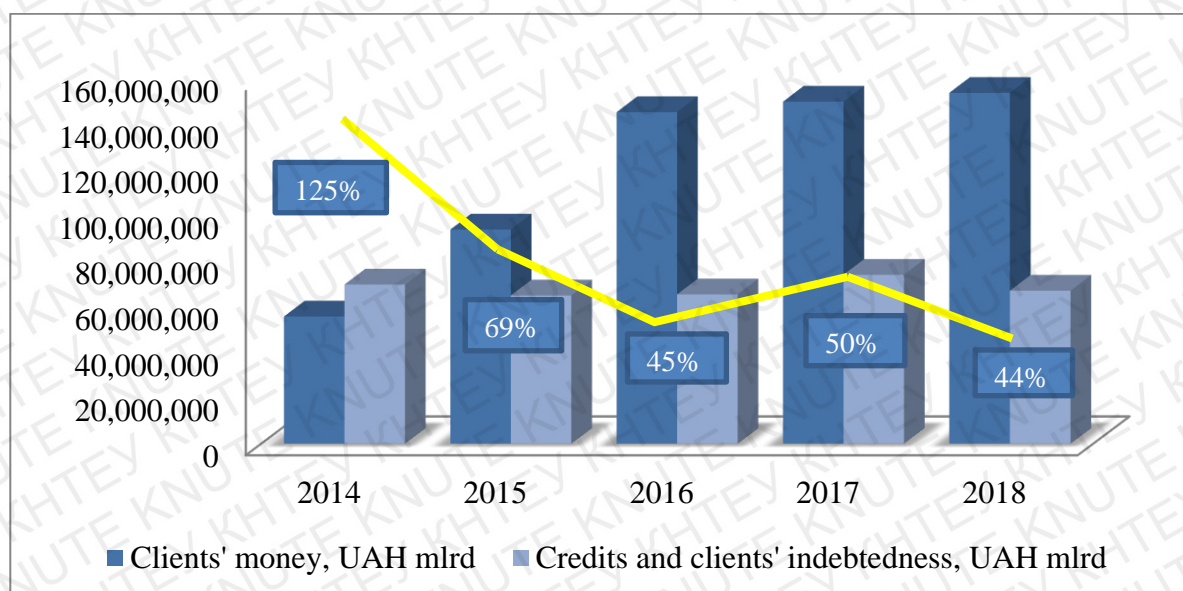


Figure 2.2 Loans-to-deposit diagram for the period of last 5 years

*Developed by the author according to source [42]

It is clearly seen the trend goes down, thus in 2014 loans-to-deposits ratio was 125% because of the higher level of clients' credits. But in 2018 we can see a rather different situations, the ratio was lower more than by 80% and deposits over the last 3

years significantly increased. The greatest amount of deposits can be observed in 2018 – 154 016 454 billion UAH, that is more than in 2014 by 2, 7 times. On the other hand, the number of loans is lower than in 2014 by 2 693 139 billion UAH as well. So, it is quite a positive trend which keeps the ratio not higher 50% over the last 3 years. One of the main planning directions of the bank is increasing deposits, so this positive trend still keeps to this point.

To assess the financial adequacy of JSC “Oschadbank” we will use coefficient analysis based on the calculation next ratios: reliability, debt-to-equity ratio, equity multiplier ratio, tier 1 capital ratio, equity ratio. The calculation of coefficients is based on the data in the table 2.5 and app. B, ratios are given in table 2.6.

Table 2.5

Balance sheets accounts during the period 2014-2018, thousands UAH

Balance sheets accounts, UAH thousands	2014	2015	2016	2017	2018
Authorized capital	18 302 000	29 901 000	34 857 000	43 723 000	49 473 000
Equity	22 749 000	7 340 000	14 933 000	31 578 000	18 430 000
Secured capital	3 374 835	3 945 643	6 536 022	7 614 753	8 953 669
Liquid assets	13 698 000	22 708 000	40 954 000	12 285 000	10 635 000
Working assets	58 123 835	63 894 643	97 280 022	95 200 753	87 491 669
Total liabilities	105 328 209	151 792 607	194 867 027	202 590 867	199 209 255

*Developed by the author according to source [37, 38, 39, 42]

Table 2.6 and fig. 2.3 show that in 2015 the reliability ratio reached its minimum – 5%. It happened mostly due to the equity decrease and increasing in liabilities. It should be noted that in 2017 the bank was able to increase its ratio to 16%, due to the increase of equity capital by 4, 3 times – to 31 578 000 thousand UAH.

The D/E ratio is an important metric used in finance. It is a measure of the degree to which institution is financing its operations through debt versus wholly-owned funds. More specifically, it reflects the ability of shareholder equity to cover all outstanding debts in the event of a banking business downturn.

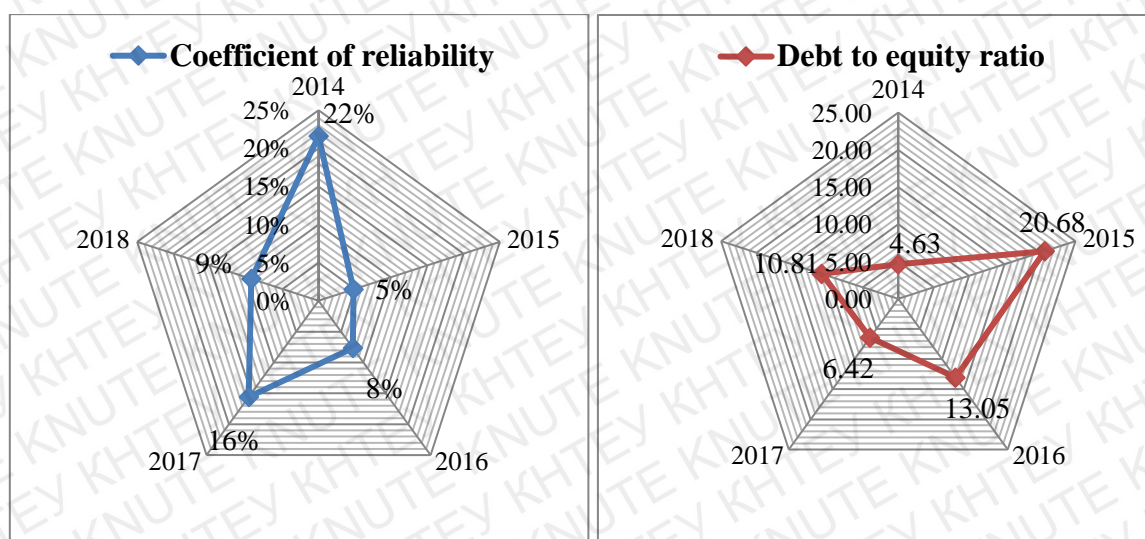


Figure 2.3 Coefficients of reliability and debt-to-equity ratio during 2014-2018

*Developed by the author according to calculations in the table 2.6

The debt-to-equity ratio at its maximum level all owed value equal to 1:20. In 2015 the indicator was higher optimal rate and equal to – 1:21. This also indicates that the bank increased its activity in attracting free money in the money market, even with high security of its own. The lowest benchmarks over last 5 years were also observed in 2014 and 2017 – 1:4,6 and 1:6,4 respectively, it is worth mentioning the value of debt-t-equity ratio improved. But during this period except 2015 year the admissible coefficient values were observed (fig 2.3).

Table 2.6

Group of capital adequacy ratios during the period 2014-2018

Ratios	Formula	2014	2015	2016	2017	2018
Coefficient of reliability (5%<)	Equity/Total liabilities	22	5	8	16	9
Debt to equity ratio (1/20)	Total liabilities/Equity	4,63	20,68	13,05	6,42	10,81
The ratio of equity participation in the formation of assets – adequacy ratio(10%<)	Equity/Total assets	18	5	7	14	8
Equity ratio (%)	Capitalized assets/Equity	15	54	44	24	49
Equity multiplier ratio (12.0-15.0)	Total assets/Equity	5,47	21,68	14,10	7,41	11,82

*Developed by the author according to app.B

It also clearly seen that the ratio of equity participation in the formation of assets is lower its normative value in 2015, 2016, 2018 years and is equal to 5%, 7%, 8% respectively (fig.2.4). It was caused due to the low amount of equity and larger amounts of liabilities.

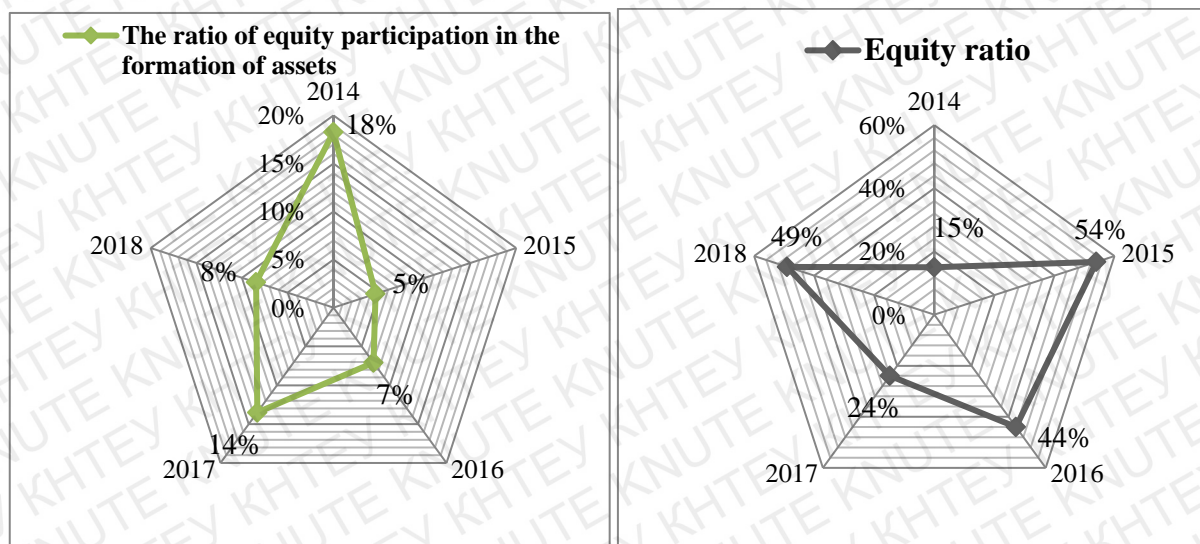


Figure 2.4. The ratio of equity participation in the formation of assets and equity ratio during 2014-2018

*Developed by the author according to calculations in the table 2.6

The high level of capitalized assets indicates that much of the capital is diverted from the turnover, does not participate in the formation of the portfolio of active operations of the bank and, therefore, does not generate income (fig.2.4). It can be seen in the crisis period 2015-2016 years, the ratio was equal to 54% and 44%, also this ratio has been increased to 49% in 2018. The decrease of this ratio should be evaluated positively, as it indicates a relative decrease in the share of abstract funds, which contributes to the growth of bank income. On the contrary, excessive diversion of equity into immobilized assets may lead to a decline in the bank's financial firmness, inability to repay its liabilities.

As for the capital multiplier coefficient, which characterizes the degree of coverage of assets by share capital, at the optimal ratio of 12,0-15,0, the normal ratio was 14,10 in 2016, and 11,82 in 2018 accordingly (fig.2.5). In 2014 the ratio was equal to 5,47, in 2017 – 7,41. The worse situation was in 2015, when the equity decreased by (-32%), total assets increased by 22%. This indicates, first of all, that

the growth rate of assets exceeds the growth rate of equity. It is already a signal of the necessity to improve equity management.

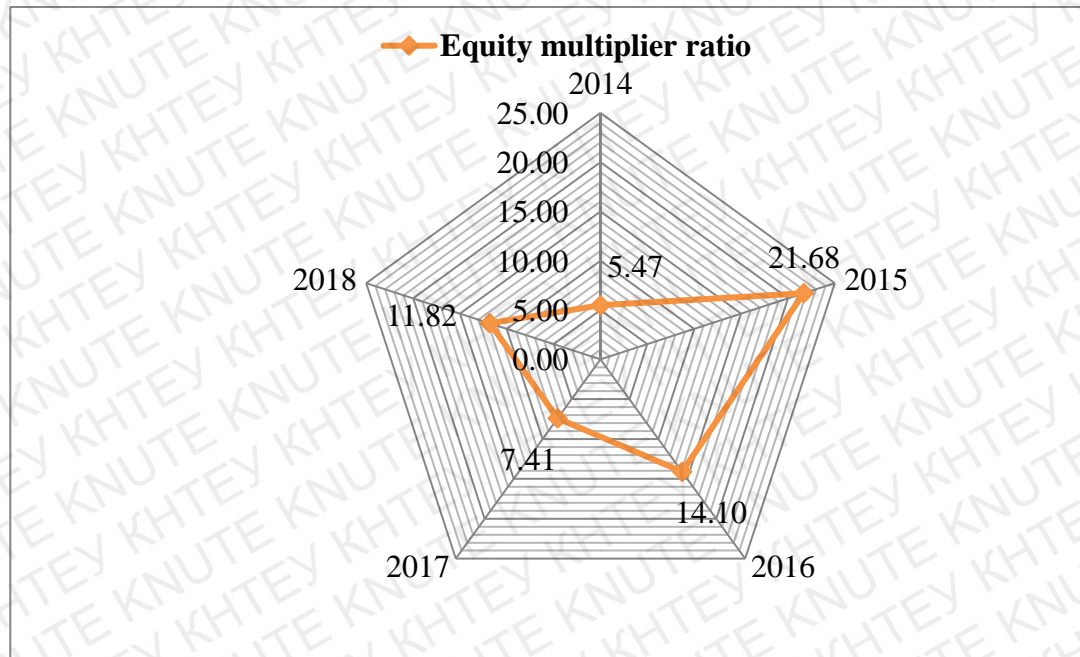


Figure 2.5. Equity multiplier ratio during 2014-2018

*Developed by the author according to calculations in the table 2.6

A bank's rating can be defined as an approval process decisions in which the rating is used for planning, organization, motivation and control of banking activity. Using ratings to evaluate banks' performance is more effective compared to traditional assessment schemes because it can save time, increase the objectivity of management processes as a result of reduction of subjective factors, ensure transparency of management mechanisms.

For the diagnosis of the crisis situation in Oschadbank, we used one of the most popular rating appraisal methods – the Cromonov method (index type) (is shown in the table 2.7). In order to evaluate the Oschadbank's performance and conduct rating of its status by reviewing rating techniques we identified the most commonly used metrics (is shown in app. C). Calculations were based on the data in the appendix B and table 2.5.

It is important to note about the estimation scale of the final rating of reliability according to the method of V. Cromonov:

90-100 –rating 1 –strong

- 70-89 –rating 2 –satisfying
 50-69 –rating 3 –middle level
 30-49– rating 4 –limited
 less than 30 –rating 5 –unsatisfying

Table 2.7

**Coefficient of Cromonov's model (index type) of the performance of JSC
 Oschadbank during 2014-2018 period**

Coefficient	2014	2015	2016	2017	2018
C1	0,27	0,08	0,14	0,30	0,20
C2	0,33	0,35	0,60	0,80	0,99
C3	1,26	1,69	1,79	1,91	2,19
C4	0,16	0,18	0,24	0,10	0,10
C5	0,15	0,54	0,44	0,24	0,49
C6	1,24	0,25	0,43	0,72	0,37
N	28	22	31	40	41

*Developed by the author

After calculating the basic coefficients of the Cromonov's model we deduced the integral indicator of the financial condition of the bank for each year by using the formula:

$$N = 45 \cdot C1 + 20 \cdot C2 + 10 \cdot C3/3 + 15 \cdot C4 + 5 \cdot C5 + 5 \cdot C6/3 \quad (2.1)$$

$$N_{2014} = 45 \cdot 0,27 + 20 \cdot 0,33 + 10 \cdot 1,26/3 + 15 \cdot 0,16 + 5 \cdot 0,15 + 5 \cdot 1,24/3 = 28$$

$$N_{2015} = 45 \cdot 0,08 + 20 \cdot 0,35 + 10 \cdot 1,69/3 + 15 \cdot 0,18 + 5 \cdot 0,54 + 5 \cdot 0,25/3 = 22$$

$$N_{2016} = 45 \cdot 0,14 + 20 \cdot 0,6 + 10 \cdot 1,79/3 + 15 \cdot 0,24 + 5 \cdot 0,44 + 5 \cdot 0,43/3 = 31$$

$$N_{2017} = 45 \cdot 0,3 + 20 \cdot 0,8 + 10 \cdot 1,91/3 + 15 \cdot 0,1 + 5 \cdot 0,24 + 5 \cdot 0,72/3 = 40$$

$$N_{2018} = 45 \cdot 0,2 + 20 \cdot 0,99 + 10 \cdot 2,19/3 + 15 \cdot 0,1 + 5 \cdot 0,49 + 5 \cdot 0,37/3 = 41$$

During the analysis of the absolute figures, we see an unstable trend with a typical decline in most indicators during 2014-2015 (fig. 2.6). This is a result of the general instability of the financial system of Ukraine in a view of the military threat and the resulting fluctuations of all economic indicators.

The coefficients were determined to calculate the complex rating.

It is clearly illustrated that the lowest indicators of the integrated reliability index were recorded in the crisis period of 2014-2015, – ratios were equal to 28 and 22 respectively. These indexes correspond to the rating 5, which is unsatisfactory for the banking institution.

The largest decrease is observed in the stock capitalization ratio C6, which indicates an increasing gap between equity and authorized capital.

In 2015, the bank's equity decreased by 32% compared to 2014 and by 58% in 2018 compared to 2017.

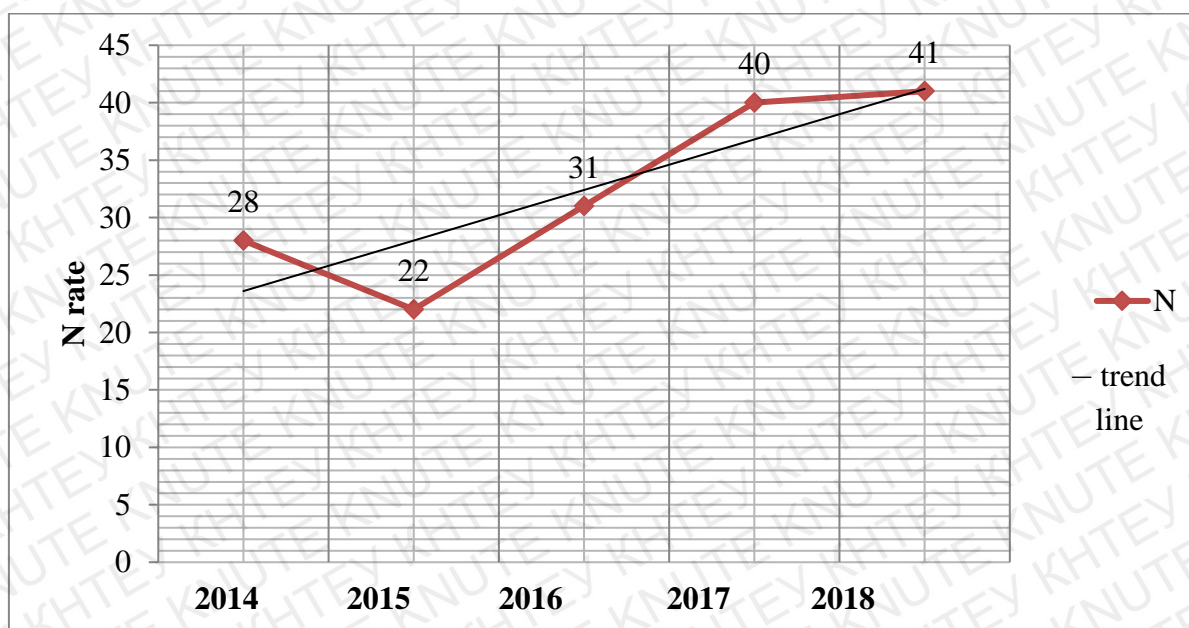


Figure 2.6 Dynamics of the general indicator of Cromonov's method of financial condition of Oschadbank during 2014-2018

*Developed by the author according to the table 2.7

Reduction of the general reliability coefficient, which shows the security level of risky investments by its capital, by 0,19 points in 2015 indicates that the banking equity is not sufficient to repay possible losses in case of non-return working assets. At the same time, the growth of the capital protection ratio indicates the correct policy of the bank of assets placement in real estate, values, equipment at the aim of reducing the threat of inflation. It is clearly shown by the increase in the bank's fixed assets by 570 808 thousand UAH in 2015.

In general over the last 5 years, the upward trend of the cross-ratio has been positive, and this indicates that the banking liabilities are secured by working assets.

Based on table 2.7 and app. B the indicator of business activity was calculated – the coefficient of the level of problematic credits. It is equal to the ratio of problematic loans to total assets. So, in 2017 the level of problematic loans was 34, 4%, in 2018, – 44, 9%. Such a great decreasing by 10, 5% is caused because of the increasing in NPL loans of both individuals and legal entities by 18% in 2018. It should be a signal for the management of Oschadbank to improve its credit portfolio. The higher the value of the level of problematic credits is – the more thorough and frequent the NBU inspections will be.

Thus, the National Bank of Ukraine developed principles that apply to the process of restructuring only large loans (more than 5% of the regulatory capital of the bank). The restructuring will lead to a strengthening of the rights of creditors, better reporting of the debtor and monitoring by the bank. In particular, strengthening the role of banks as lenders, avoiding restructuring models, according to which most of the payments on the loan body occur closer to the maturity date [46].

In 2018, state-owned banks reduced overdue debts by 5 billion UAH and carried out restructuring by 21 billion UAH.

The greatest success in restructuring was achieved by Oschadbank. Thanks to the restructuring, the corporate loan portfolio of state banks has improved markedly [46].

However, if we take a look at the data (fig. 2.7) separately from other banks, it can be seen a significant increase in the total NPL portfolio in 2018.

It is clearly seen that total NPL loans increased both individuals and legal entities by 17 417 653 thousand UAH.

It can be also clearly seen that the share of the total amount of NPL loans of individuals in the total amount of given loans only in 2017 was higher by 2%, and was equal to 49% compared to 47 % in 2018 (fig.2.6). The share of NPL loans of legal entities in the total amount of given loans was 5% points higher in 2018 and was equal to 69%, in 2017 – 64% respectively.

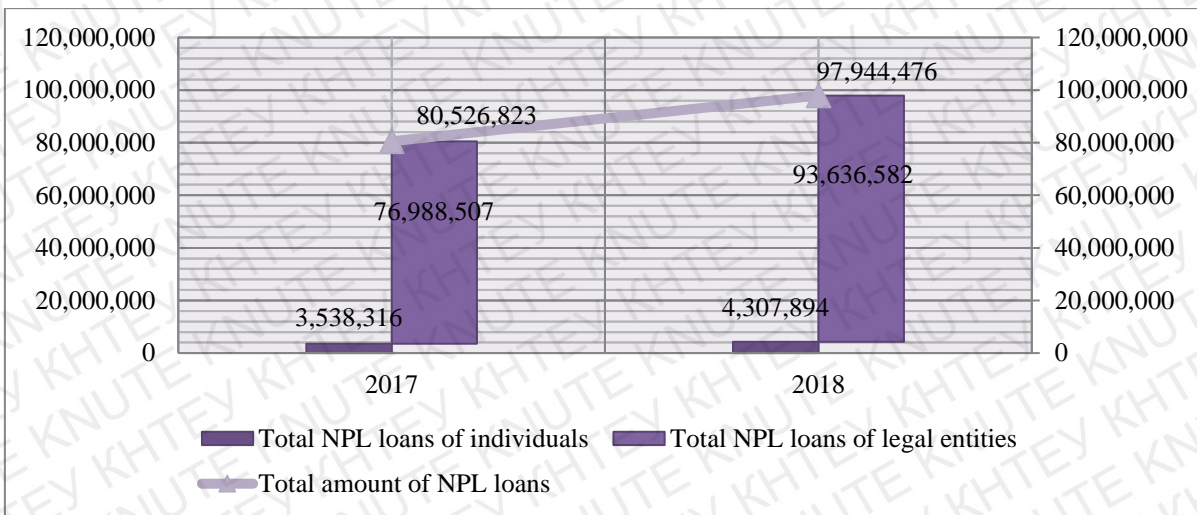


Figure 2.7. Total amount of NPL loans in JSC “Oschadbank” during 2017-2018 years

*Developed by the author according to source [47; 48]

If we compare the share of non-performing loans in the total loan portfolio, we can draw the following conclusion: the bank's lending activity is actually still highly risky. The overall number share of the total amount of NPL loans in total credit portfolio in 2018 is equal to 67%, in 2017 – 63%.

It should be noted that the presence of more than 60% problematic credits in the state banking institution acts as a factor of damage to the entire banking sector, especially in crisis processes. The return of such credits might not happen. In this case, state losses will negatively affect the growth of the economy and GDP.

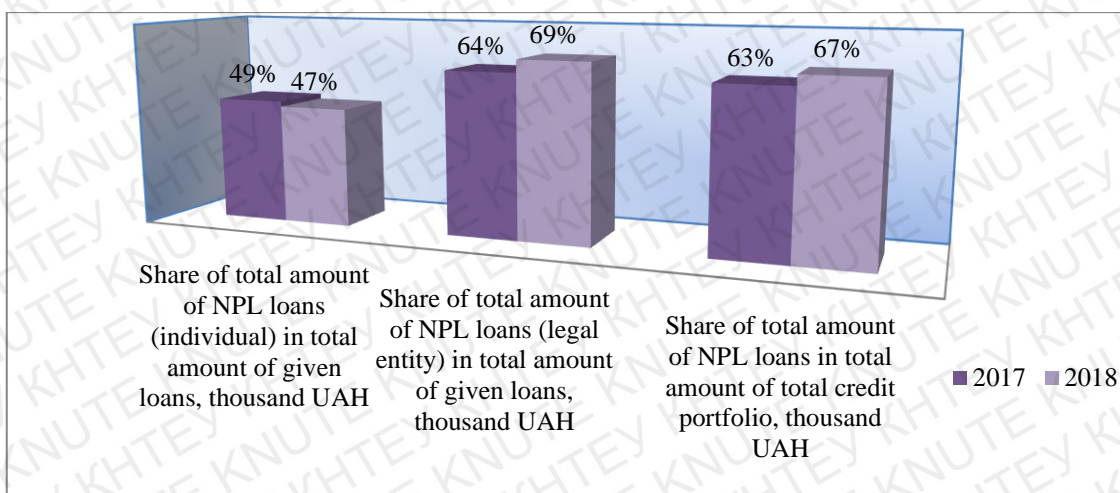


Figure 2.6. Share of NPL loans in Oschadbank in the total amount of credit portfolio during 2017-2018

*Developed by the author according to source [47; 48]

That's why the bank carries out a regular, at least annual, credit review of the borrowers by legal entities, conduct assessment of the credit risk of the borrower's debt. The main credit risk reports include:

- Credit risk stress test;
- Analytical notes on the loan portfolio of large corporate clients, clients of micro, small and medium-sized businesses, retail businesses (quarterly) [41, p.101].

Therefore, early diagnosis of bank crisis processes is extremely important. As it not only allows calculating indicators of financial stability, the business activity of the bank, to determine the rating of the institution, but also allows predict the possible levels of losses, quickly respond due to the right management decisions, by using most appropriate measures of crisis management in the bank.

In the case of Oschadbank, we calculated Cromonov's rating, determined financial ratios with the aim for revealing factors that affect the most on the bank during crisis and post-crisis period.

For timely prevention of the crisis occurrence it is necessary to make calculations regularly and diversify methods of its providing.

2.2. Analysis of reactive and preventive anticrisis measures of JSC “Oschadbank”

Bank crisis management is implemented in the context of dividing management forms into preventive and reactive.

Reactive crisis management is carried out at the stage of acute crisis in a time deficit, and aimed at restoring a sufficient level of liquidity and solvency of the bank. The purpose of reactive crisis management, as a rule, is the desire to restore the pre-crisis state of the bank.

The main content of the implementation of preventive anti-crisis management measures is the prevention of the emergence and development of crisis phenomena in a banking institution.

During the crisis period the board of Oschadbank used next reactive anti-crisis measures: refinancing, recapitalization, rebranding, downsizing, and in post-crisis period began to develop preventive anti-crisis toolkit by using internal analysis, stress-testing, modeling of future events, development of anti-crisis strategy, etc [2, p.7].

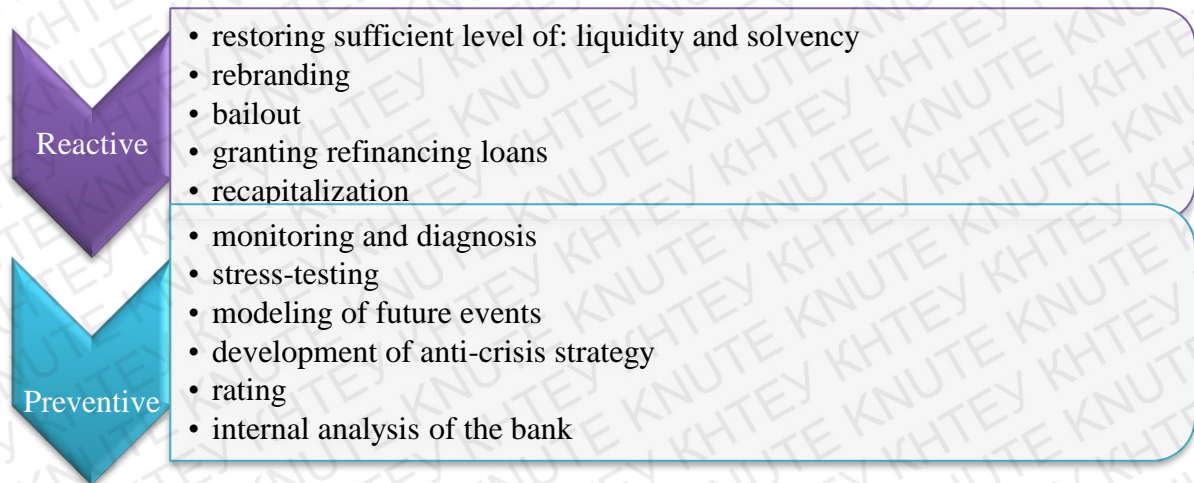


Figure 2.7 Preventive and reactive instruments which were used in Oschadbank

*Developed by the author according to source [32]

On the basis of generalization of theoretical researches, we divided existing instruments also into functional and institutional components of the crisis management of the bank (app. D).

One of the important preventive measures is monitoring. Previously, we were considering a new standard, the LCR, which came into force on December 1, 2019.

The LCR is designed to ensure that banks hold a sufficient reserve of high-quality liquid assets (HQLA) to allow them survive a period of significant liquidity stress lasting 30 calendar days [49].

The new regulation indicator should ensure that banks have enough liquidity to fully and timely fulfill their obligations within 30 days of a stressful period. Especially in case of crisis when there is a significant outflow of clients' funds and depositors refuse to extend their deposits [42]. LCRnc and LCRfc fluctuation during 01.01.2019-01.09.2019 are shown in the fig. 2.8 and app. E.

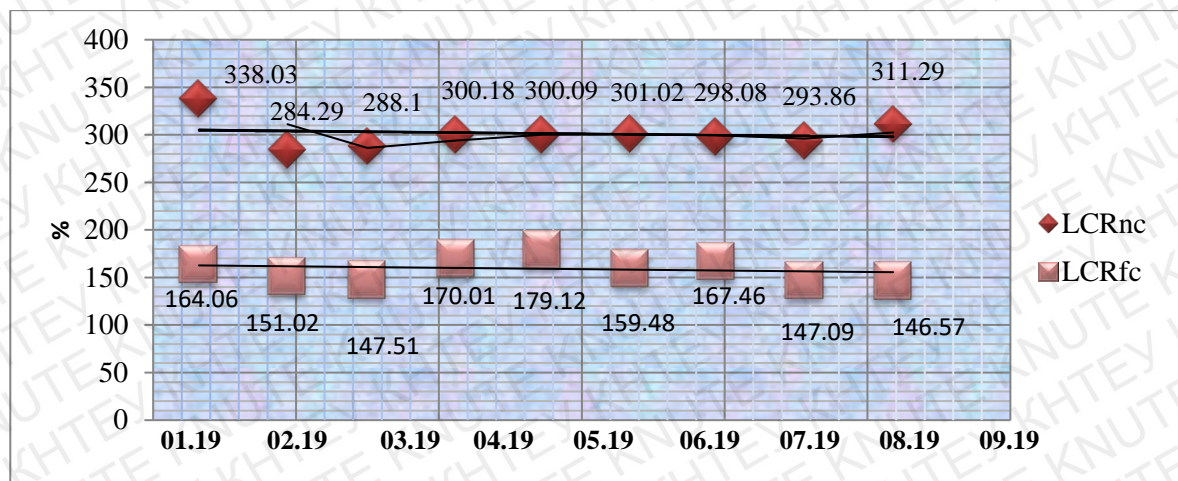


Figure 2.8 LCRnc and LCRfc fluctuation during 01.01.2019-01.09.2019

*Developed by the author according to source [40]

It is clearly seen that LCRnc and LCRfc are higher normative level of 90%, especially LCR in national currency – it is equal to 338, 03% and is more optimal level by 3 times. It means that high-quality assets (HQA) available in the bank significantly exceed the total net cash outflows (TNCO). Thus, Oschadbank is not enough secured by TNCO mostly because of the lack of funds at the request of individuals – 0 UAH on 01.09.2019, low level of demand deposits; operations with derivatives (swaps, forwards) – this item is equal to 0 UAH on 01.09.2019 as well. Only accounts payable make up the major part in calculation of TNCO according to the balance sheet of Oschadbank on 01.09.2019 [50].

Due to a high level of dollarization NBU took a decision to calculate LCR also in foreign currency. From the data in the fig.2.8 it is visible that the highest level of LCRfc was on 01.05.2019 – 179, 12%, the lowest rate is recordered on 01.09.2019 – 146,57%. It should be noted that is normal rate for European economics, due to the report of Basel Committee [51].

For example, at the reporting date of 2017 year, EU banks' average LCR was 145% and it aggregates gross shortfall amounted to 20,8 billion EUR corresponding to four banks that monetized their liquidity buffers during times of stress. A more in-depth analysis of potential currency mismatches in LCR levels, suggests that banks tend to hold lower liquidity buffers in some foreign currencies, in particular US dollar [51].

Before the implementation of new liquidity normative, stress-testing was provided. It was mainly focused on: liquidity evaluation; assessment of existing and potential losses in the credit and investment portfolio with extremely unfavorable consequences; assessment of the quality of its own risk management methodology.

The most important method of preventive anti-crisis regulation, which should be carried out regularly for positive banking activities, is internal analysis of the financial situation of the bank and its control (shown in the app. B and fig.2.9).

Over the last 5 years, respond to acute crisis in 2014–2015, it is possible to see changes in certain components of assets, capital and liabilities. Cash at banks from 2015 to 2016 almost doubled – by 13 375 360 thousand UAH, and in 2016 amounted to – 31 150 549 thousand UAH. However, in 2018, the cash at banks decreased to the amount of 10 910 047 thousand UAH.

Investments held for sale and investments held for maturity in the bank increased by 63% from 2014 to 2015, while from 2017 to 2018 investment growth was only 19 %. As Oschadbank has always been a systemically important bank for the government, during the failure in the banking system in 2014 - 2015 because of the large outflow of the deposit portfolio of customers, significant funds were sent there to keep it going. It is worth noting that over the last 5 years, the amount of the other assets has also increased significantly by as much as 1 461 880 thousand UAH, or by 3, 4 times.

After analyzing the data in the app. B, we concluded that the total assets over the past 5 years increased by 93 210 212 thousand UAH. Figure 2.9 shows that total assets have increased permanently during 2014 - 2017 year. Thus, the biggest increase of total assets was during the crisis period – +27, 8 % and +32, 3% in 2014 and 2015 accordingly. Not so rapidly increase of growing ratio to the previous year was in 2017 (+11%), but considerable reduction is observed in 2018 – (-6%).

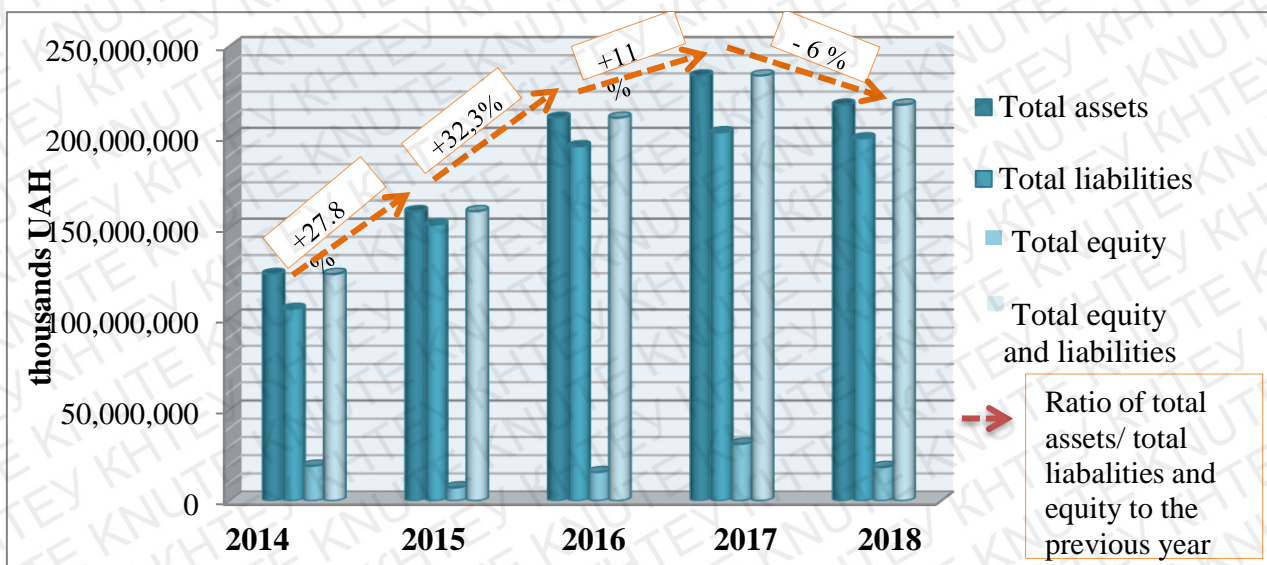


Figure 2.9 Total assets, equity and liabilities during 2014-2018

*Developed by the author according to source [38; 39; 43; 44]

There was also growth of the income of the bank. At the same time, the growth-rate of commission income outpaced the growth rate of interest income.

After analyzing the liabilities and capital over the past 5 years, the following conclusions can be drawn. As on 31 December 2017, the banking funds included loans received from the NBU in the amount of 5 billion UAH (78%), which represents a significant concentration. However, in 2018, 3 early repayment of refinancing loans from the NBU were provided.

Customer accounts, which consist of term deposits and accounts in 2018 increased by 2,7 times than in 2014 and amounted to 154 016 454 thousand UAH , mainly at the expense of individuals and state bodies and local self-government.

Besides, credits, received from international and other financial organizations, for the last 3 years cross the amount of 33 million UAH. The funds are provided by the European investment Bank, the German-Ukrainian Fund, and ODDO BHF, which provided a loan in 2018 in the amount of 244 162 thousands [52].

It should also be noted that the share capital increased by 65% and in 2018 amounted to 49 724 980 thousand UAH.

Total liabilities and equity in 2018 amounted to 217 751 969 thousand UAH.

We can also notice that for the 3 quarters of 2019 the following liabilities and equity items have increased: clients' accounts – by 5% and its value was equal to

161 937 467 thousands UAH, cash at banks – by 46% and this figure was represented to 78 973 thousands UAH, other indebtedness also grew up by more than 70% and is equal to 1 798 592 thousands UAH.

It is worth considering the analysis of total liabilities and equity items of the balance sheet by their shares in the total amount in 2019 (fig.2.10).

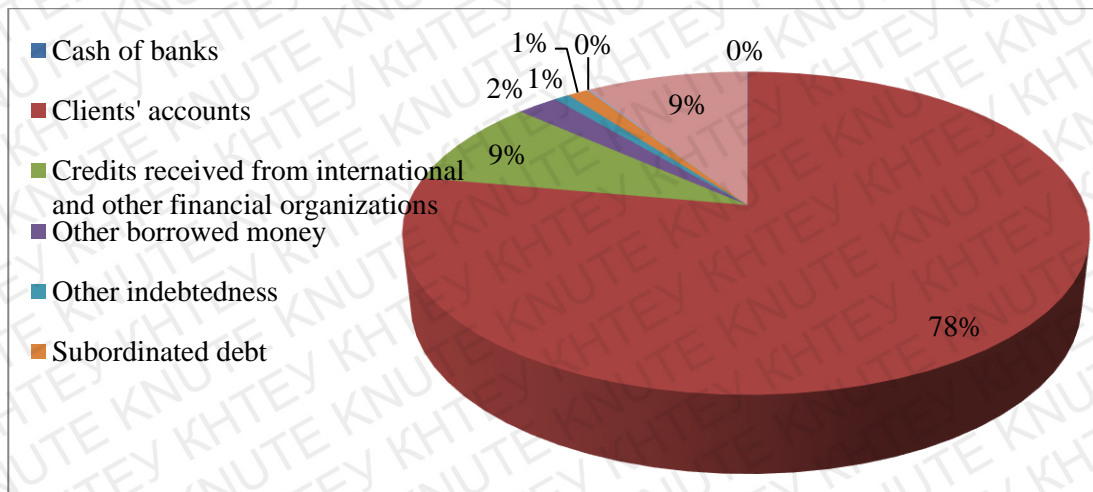


Figure 2.10 Share liabilities and equity items of the Oschadbank's balance sheet of 3 quarters of 2019

*Developed by the author according to the app. B

It is noticeable that clients' accounts take up most – 78 % of the total amount. Then credits received from international and other financial organizations and total equity – shares of these items are equal to 9%, other borrowed money, other indebtedness and subordinated debt account for only 2%, 1% and 1% accordingly.

For the 3 quarters of 2019 the following assets items show positive trend: cash and bank accounts in NBU – by 12% and its value was equal to 11 920 850 thousands UAH, cash at banks – by 40% and this figure was represented to 15 274 403 thousands UAH. It is worth considering the total assets items of the balance sheet by their shares in the total amount (fig.2.11).

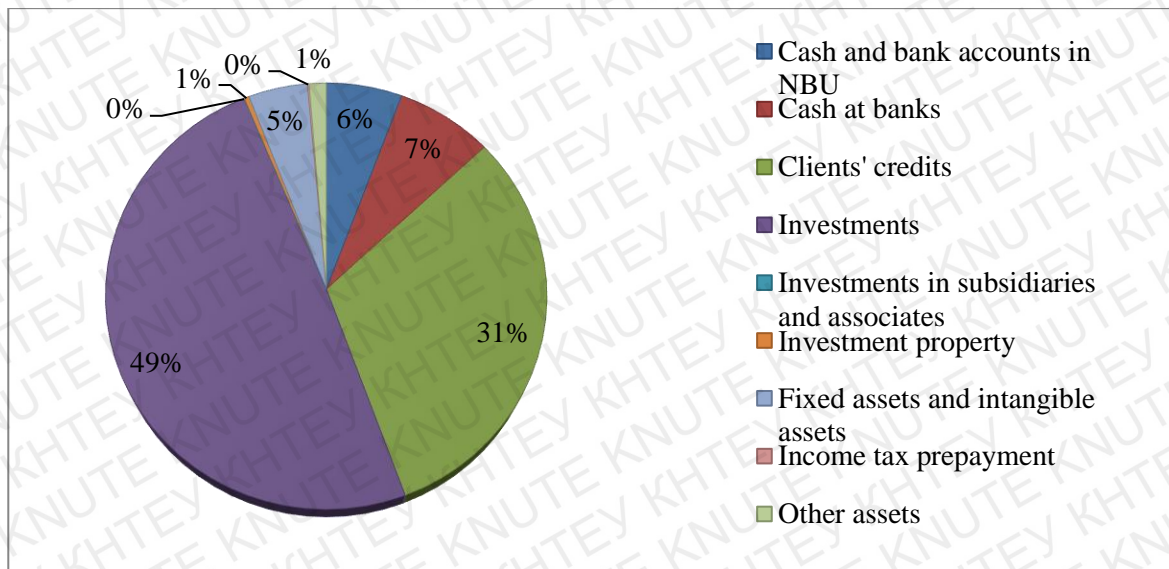


Figure 2.11 Share of assets' items of the Oschadbank's balance sheet of 3 quarters of 2019

*Developed by the author according to the app. B

Figure 2.11 shows that the biggest parts of the overall assets take items of investment and other assets – their shares are represented by 49% and 31% respectively. Shares of cash at banks, cash at bank accounts in NBU and fixed assets are equal to 7%, 6%, 5% accordingly. It is clear seen that most assets' items in balance sheet have got positive trend to increase, so we can even predict the exceedance of financial results of 2018 at the end of this period.

It should be admitted that JSC "Oschadbank" fully implemented the Strategy of modernization for 2015–2017 and because of this, bank has significantly increasing in the retail business: almost from scratch vertical working with clients MSMB (micro-, small and medium-sized business) was built, substantial progress in corporate business was provided, system of risk management improved.

Figure 2.12 reflects key strategic objectives until 2022, which are defined according to the development Strategy for 2018–2022.

The bank's management expects that the growth of loan portfolios in these areas will be more than 30%. To ensure the planned growth, management expects increase fund balances in all segments.

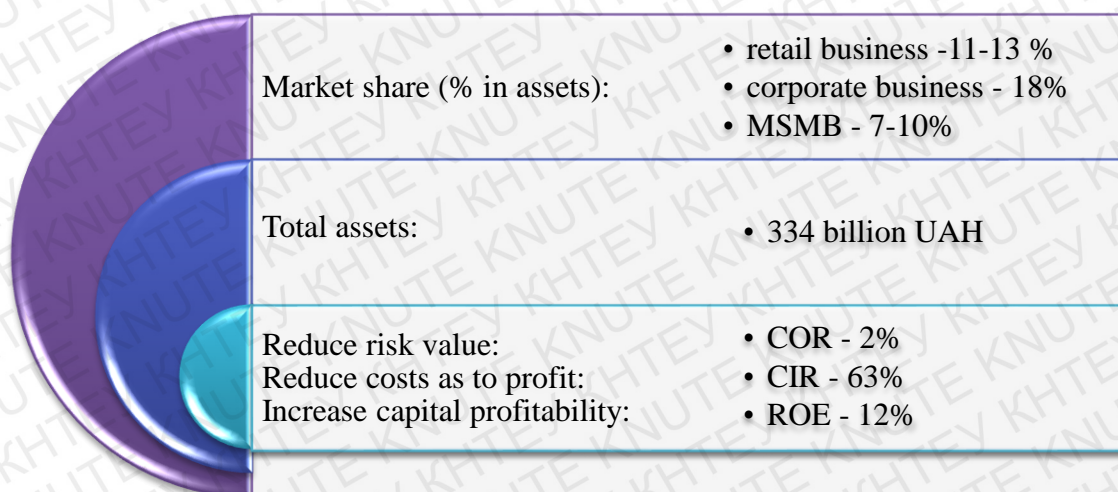


Figure 2.12 Key strategic objectives until 2022

*Developed by the author according to source [39]

It should be noted that international ratings such as Fitch Rating and Moody's regularly assesses the activities of the bank. Thus, the creditworthiness of JSC "Oschadbank" is assessed at a high level (shown in table 2.8).

Thus, on 24.09.2019 Fitch has increased the level of long-term foreign and local currency issuer default rating from B- to B which performs as positive point. The bank's Viability Rating ("b-") is also up for review (Rating Watch Positive - RWP). According to the agency, RWP "reflects Fitch's expectations that strengthening macroeconomic stability in Ukraine, good enough economic prospects, as well as further stabilization of the credit profile of the state, should have positive consequences for the creditworthiness of the bank as an independent unit. Short-term foreign currency savings rating is affirmed at B, national long-term rating is AA (ukr) with stable forecast.

Table 2.8

Indicators of JSC "Oschadbank" in Fitch rating on 24.09.2019

Long-term national scale rating	Aa (ukr)
Long-term foreign currency issuer default rating	B*
Short-term foreign currency issuer default rating	B*
Long-term local currency issuer default rating	B*
Viabilityrating	b-
Support rating	5

*According to source [53]

On December 21, 2018, the international rating agency Moody's upgraded Oschadbank's ratings – the long-term rating of deposits in national currency to Caa1, the rating of deposits in foreign currency to Caa2 and the BCA rating to Caa1 (table 2.9). The increase in ratings is associated with an increase in the sovereign rating of Ukraine, an improvement in the coverage of problem loans of Oschadbank with reserves and a high level of liquid assets [16].

Table 2.9

Indicators of JSC “Oschadbank” in Moody’s rating on 21.12.2018

Rating of the basic credit assessment	caa1
Rating of long-term deposits in national currency	Caa1
Rating of long-term deposits in foreign currency	Caa2
Rating of priority unsecured foreign currency liabilities	Caa1*
Rating of priority unsecured liabilities in national currency	Caa1

*According to source [54]

One of the most effective reactive tool during the crisis 2014-2016 was recapitalization of the banking equity. The dynamics of recapitalization during 2014-2022 is shown in the figure 2.13.

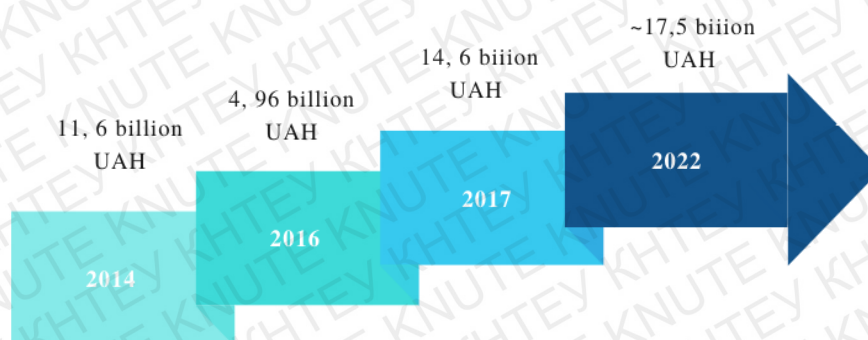


Figure 2.13 The dynamics of Oschadbank's recapitalization during 2014-2022

*Developed by the author according to source [38; 39; 44; 45]

In 2014-2017, the government invested 31, 1 billion UAH in the capital of the Oschadbank (through the issue of government bonds), which exceeds the amount of its losses during this period by 10 billion UAH. In July, the Chairman of the Board Andrey Pyshny spoke about the need for additional capital in the amount of 11 billion

UAH. Till the end of 2022 the board of the bank decided to recapitalize equity by 17, 5 billion UAH, but NBU doesn't see any reasons to do it. But the board insists on the capitalization only in the context of shocks coverage, stress due to the annexation of Crimea, occupation of Donbas, crisis, devaluation, etc.

During the crisis period top-management also used reactive bailout (fig.2.14). In order to reduce personnel costs and costs spending for functioning of banking institution, this reactive measure was intensively used. Thus, the greatest bailout was provided in 2017-2018 and 565 branches were eliminated.

The total amount of liquidated branches over the past 6 years is 2060 filial. It is worth noting that this reactive tool significantly optimize work.

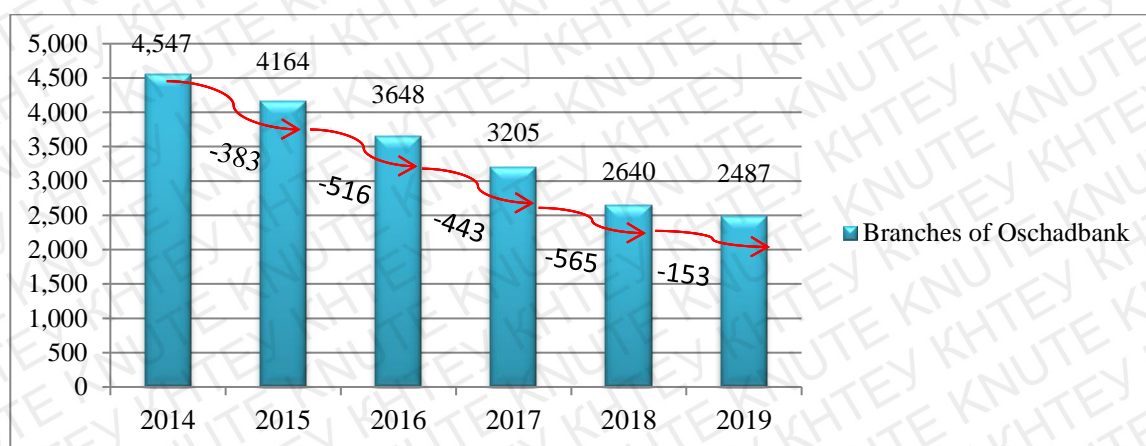


Figure 2.14 Bailout of Oschadbank's branches during 2014-2019

*Developed by the author according to source [16]

The next reactive tool which was used by the management of institution was the process of refinancing loans. According to the Annual financial reports 2014-2016 of Oshadbank, bank received 19 768 922, 8 thousand UAH. Next refinancing was provided by NBU in 2017 in the amount 5 000 000 thousand UAH [44; 45].

One of the important reactive tools during 2014-2015 was rebranding. We consider rebranding in the context of reactive anti-crisis measures due to the quick decision making. Thus, internal financial analysis forced the management of the institution to rebrand the bank. By the way, the rebranding of JSC "Oschadbank" was awarded one of the most prestigious in the world design award - "The Red Dot Design Award" [32].

The new positioning of “Oschadbank” was built on the strategic phrase ‘my bank is my country’. Accordingly, each contribution is an opportunity to create new enterprises, jobs, salaries and pensions.

The continuation of the idea was the strategic course “Oschad acts”. So, Oschadbank should not only implement changes, but also systematically inform the public about them.

It is noted that one of the most important reasons that caused the influx of ‘new money’ to the bank was the new approach for advertising. Live stories of real people instead of classical television advertising were shown. Consequently trust of depositors has increased: in 2015, the term resource base of “Oschadbank” increased by 8 billion UAH, including 5, 5 billion UAH— term funds of individuals [32]. On the current date all debt is repaid.

Thus, it can be seen from the example of “Oschadbank”, for early crisis overcoming and its possible withdrawal, it is advisable to use comprehensive anti-crisis tools – both reactive and preventive.

The most important preventive tools that “Oschadbank’s” management often uses are internal financial analysis, monitoring and diagnosis, development of anti-crisis strategies aimed at minimizing the crisis, stress-testing. Among the reactive tools during crisis period such instruments had a great impact on the recovery from the crisis: recapitalization, rehabilitation (bailout) of structural units, large-scale tranches of refinancing loans from the NBU, rebranding of the bank. For example, rebranding of the bank in the framework of changing marketing strategy caused an influx of additional funds from depositors

It is essential to note, bank was able to reach a competitive position in 2018 – 2019 and finish the financial years more profitable also thanks to the effectively using of such preventive tools, as internal analysis, stress-testing, risk management. So, over the last 5 years, total assets increased by 93 210 212 thousand UAH, or by 74,8% and at the end of 2018 net profit for the separate accounts of the Oschadank amounted to 162 million UAH and corresponded to the planned targets for 2018.

However, due to the difficult economic environment, there is still a need to improve the existing anti-crisis regulation mechanism, so our recommendations will be addressed to Part 3.

PART 3. WAYS FOR IMPROVING THE CRISIS MANAGEMENT OF THE BANK

3.1. Global experience of anticrisis management of the bank

The realities in the modern world require a more intensive integration of Ukraine into the world economy. The transition to a market economy also requires a significant transformations in the financial field, especially in the banking sector. And numerous external factors affecting the economy of Ukraine, which are inherent for the market economies of other countries, show the necessity of the adaptation of domestic crisis banking management to the global.

Thus, the global financial crisis of 2007-2008 has faced the entire global community with new challenges, causing widespread negative effects: the bankruptcy of numerous banks in the US and Europe, the deregulation of financial institutions, large-scale liquidity problems, falling GDP and unemployment. These countries have many years of extensive experience in crisis management in the most complicated conditions. Their practice by overcoming crisis phenomena and creating mechanisms for preventive and reactive measures and protection against negative consequences may be quite useful for implementation into domestic crisis management system in the bank. Because the problem of crisis management has never been so actual for national economy, especially after latest crisis in Ukrainian economy in 2014-2016.

If the bank's financial position is deteriorating, the ECB (European Central Bank) as supervisor has an expanded set of powers to intervene via so-called early intervention measures to prevent the bank from failing. These powers include, for example, the ability to dismiss the management and appoint a temporary administrator, as well as to convene a meeting of shareholders and require the bank to draw up a plan for the restructuring of debt with its creditors [55].

One of the significant problems in the European and American banking sector during the global crisis was supporting the adequacy of the banking equity. The bank's own capital is called upon to play the role of a buffer: it should accumulate in favorable times and be accessible for using used in difficult periods. In this regard,

the increase in equity and compliance with the capital adequacy ratio can be considered as a tool for the preventive work of the bank. Observing for a long period of time, the tendency to decrease in indicators of the equity adequacy, as a rule, indicates an increase in crisis factors in the bank [51].

Thus, stress test for assessment among other indicators – capital adequacy ratio, conducted by the European Banking Authority (EBA) in July 2011 showed that out of 91 banks, 8 did not pass the stress test. They do not have sufficient reserves to maintain capital adequacy ratio (tier 1) at 5%. So in case of slowdown in economic growth, these banks will need additional capital of 2,5 billion EUR. After such analysis EBA made suggestions for quarterly stress-testing inside banks to keep under control the financial situation in banks [51].

A balanced approach to capitalization is present in Europe. There are three conditions which need to be fulfilled for banks to make use of this option.

First, precautionary recapitalization is only available to solvent banks. The ECB, the direct supervisor for significant banks in the banking union, makes this assessment. The ECB analyze this requirement by assessing compliance with the minimum capital requirements [56].

Second, precautionary recapitalization is limited to the capital injections needed to address a capital shortfall under the adverse scenario of a stress-test. For significant banks in the banking union, the ECB is asked to confirm that there is no shortfall under the baseline scenario and the extent of the capital shortfall under the adverse scenario of the most relevant (recent) stress test exercise [56].

Third, public support must be of a precautionary and temporary nature, be proportionate to remedy the consequences of the serious disturbance and not be used to offset losses that the institution has incurred or is likely to incur in the near future. These losses should be covered by private capital. Compliance with these overall conditions needs to be approved by the European Commission under the Union State aid framework [56].

Much attention in the world banking practice focuses on credit risk assessment and minimization portfolio, the volume and its quality, and then measures are taken

for optimizing the structure to reduce risk. For providing credit assessment risk foreign banks often conduct special credit rating techniques that make up the aggregate the borrower's credit rating. Optimal use of such methods: minimize credit risk, clearly organized credit process for obtaining best quality loan portfolio. Risk management techniques such as credit sales, securitization, scoring, credit bureaus are also common abroad [57, p.470].

The dominant concept of credit risk optimization is diversification theory. Modern researchers believe that providing several large loans are much more dangerous than providing a large number of small ones. A clear manifestation of the diversification process credit risk is the development in the world of consortium lending practices, which several banks are lenders – consortium members [57, p. 471].

In the US and Western Europe, credit scoring is widely used as a method of credit risk assessment, that is, the use of automated systems based on mathematical and statistical methods. Credit scoring can enables you to take the loan, because it based on certain characteristics of existing customers and potential suppliers by calculating points identify risks associated with lending.

In many countries, including Ukraine, there are restrictions on the amount of credit given to one client or a group of related parties whose potential risks are practices only major risk. There were also installed requirements for banks by giving for supervisory authorities the information about the greatest potential risks, which are determined by the maximum marginal level for such loans (usually 10-25% of the bank's capital).

It should be mentioned that an excessive concentration of problems assets can lead to a loss of solvency in the bank. In order to prevent such a situation, European banking institutions and American are actively using mechanisms for the transfer of problem loans to a third party, among which are the following: acquisition of assets and commitments (P&A – Purchase and Assumption), transitional bank (Bridge Bank), a hospital bank (Bad Bank). It is this mechanism that underlies the functioning

of the banking systems of Sweden and Germany, whose financial institutions, in dealing with bad assets, prefer to use the hospital bank mechanism [42, p.150].

Table 3.1

**Anti-crisis measures of governments and central banks of foreign countries
in the conditions of economic instability during 2008-2010**

Country	Anti-crisis measures
USA	“Bridge bank”; government liability for mortgage companies' debt; redemption of bad loans by the state; increasing liquidity in the bank by lending through a discount window
Great Britain	providing government guarantees to banks participating in the recapitalization schemes; providing by the Bank of England loans for recapitalization under adequate security
France	stress-testing; reorganization; guarantees on interbank loans; during crisis 41 million EUR were provided for bank's recapitalization; key rate reduction
Austria	monitoring and often diagnosis; government subsidies in the event of liquidity problems; state guarantees protect private savings for 100%
Ireland	Stress-testing; providing absolute deposit guarantees at all banks
Italy	providing auctions by the Bank of Italy to exchange banks' assets for government securities; risk management
Germany/Sweden	practice of "hospital bank"; discounted buyout of problem loans by the Special Financial Market Stabilization Funds ; providing state guarantee for deposits

**According to source [58]*

In our opinion the most adapted to the development realities of the domestic banking sector is the operation scheme of the bridge bank, which is successfully implemented in the United States. Among the above-mentioned crisis measures of USA, it is worth to highlight no less important: government liability for mortgage companies' debt; redemption of bad loans by the state; banks lending by FRS for the purchase of corporate debt from money market funds; providing guarantees to the US Treasury for investments in money market funds; Increasing banks' liquidity by lending through a discount window.

The underlying principle of the German model is also a discounted buyout of problem loans by the Special Financial Market Stabilization Funds (SoFFin) (in most cases the buyout price is 90% of the book value, provided by exchanging the

problematic assets for discounted bonds). It is financed by public funds, followed by mandatory repayment. At the same time, due to the adjustment of the amount of the primary discount during the obligatory repayment, it creates a kind of compensator for the probable losses of the hospital bank and ensures the fair market price of the problem loan [42, p. 151].

Despite the decline in profitability of many banks, shortages liquidity and insolvency threats, one of the priorities directions is to reduce the cost of banking institutions. This reactive measure is used in the whole European countries: Germany, Austria, Sweden, Italy, and Great Britain etc. Since the beginning of the global financial crisis the world's leading banks have begun implementing the program of cost savings. The cost minimization strategy is based on the Pareto principle "80/20", so before implementing an aggressive minimization costs policy, it is necessary to conduct a thorough analysis of the bank's activities, to separate the main directions of expenses and possibilities of their reduction.

Analysis of the experience of such leading foreign banks, such as Deutsche Bank AG, The Royal Bank of Scotland Plc, Commerzbank AG, Citibank and others allowed distinguishing the main areas reducing costs during crisis situations. These banks used next methods of reducing costs: outsourcing, downsizing, transition to a cheaper sources of communication between banks and customers, reduction of branches, restriction in marketing policy, reducing in operational costs, costs aimed at participation in seminars; salaries [58].

In general, the current set of ECB instruments used to refinance commercial banks generally covers so-called permanent credit and deposit mechanisms that can influence the liquidity of EU banking institutions. They include:

- deposit operations ("window" for attracting short-term deposits – deposit facility), which allows commercial banks to place short-term deposits with national central banks at a pre-determined interest rate. Typically, term deposits are set by the ECB one business day (overnight deposits) and interest rates on them form the lower boundary of one-day interbank credits to the euro market;

- credit operations (“window” of short-term lending – marginal lending facility) that allow commercial banks to obtain short-term loans to replenish their liquidity with national central banks under certain security [58].

In particular, the substance of the UK’s anti-crisis measures during the global crisis was to increase liquidity through the swaps aimed at exchanging their own illiquid assets; providing government guarantees to banks participating in recapitalization schemes; providing the Bank of England loans for recapitalization under adequate collateral [59].

The banking systems of foreign countries have undergone the following changes: increase in the volume of problem loans, decrease of financial stability indicators of the leading banks, liquidity shortages, transfer of the largest banks to the state of "problematic" ones or their bankruptcy, devaluation of national currencies. All of these trends in their national economies motivated to find out new effective approaches of getting out crisis situations.

Thus, based on the analysis of the state anti-crisis regulation of the banking sector in different countries, we identified the main anti-crisis measures that are most appropriate to adopt or use more intensive in Ukraine: providing policy by central bank to have a possibility for reduction of key rates when it is needed; guaranteeing inter-bank loans, small and medium-sized business loan; to improve the procedure of discounted buyout of problem loans by the special organization; reducing costs during the pre-crisis period by liquidation of non-efficiency branches (bailout; downsizing); adoption trend of Bridge bank; providing recapitalization only after thorough assessment of its necessity; development of financial rehabilitation.

We are deeply convinced, there is a necessity for implementation international liquidity ratio – NSFR to integrate into the global economy. Compliance to this metric creates incentives for the banks to increase the maturity of liabilities, the stability of funding and reduce the tendency for short-term funding, thus long-term loans should not be financed by short-term deposits [60].

However, before implementing foreign experience, it is impossible to blindly copy all instruments of crisis management: their implementation requires adaptation to the realities of the domestic financial and banking system.

3.2. Improvement of regulatory measures of anti-crisis management of the bank

The results of analysis of the main anti-crisis measures used by domestic banks indicate that they were implemented not completely, without taking into account the mutual influence. We also indicate that there is a need for further study of the theoretical foundations and regulatory factors of anti-crisis management in banks with the aim to increase the efficiency of banking institutions in this area.

A significant problem during the implementation of the anti-crisis regulatory measures in a banking institution is their fragmentation and concentration only on certain areas of the bank's activity. The mechanism for ensuring the complexity and systematic nature of anti-crisis measures should be a regulated procedure for their implementation. It is logical to conclude the urgent problem is improving the procedure for implementation of the crisis management in Ukrainian banks.

The main features of suggested procedure for implementing anti-crisis measures are a clear sequence of implementation appropriate measures; high degree of adaptation of the crisis management system to the internal and external conditions of the banking activity.

Also it is worth to note the following features of the procedure: rapid and adequate response to changes depend on internal and external conditions of the bank; availability of sufficient resources at the bank to ensure the implementation of anti-crisis measures, well-established interaction with the regulator of the banking system in case of lack of resources.

So, the complex procedure of systematic anti-crisis measures can be provided with following steps (fig.3.1):

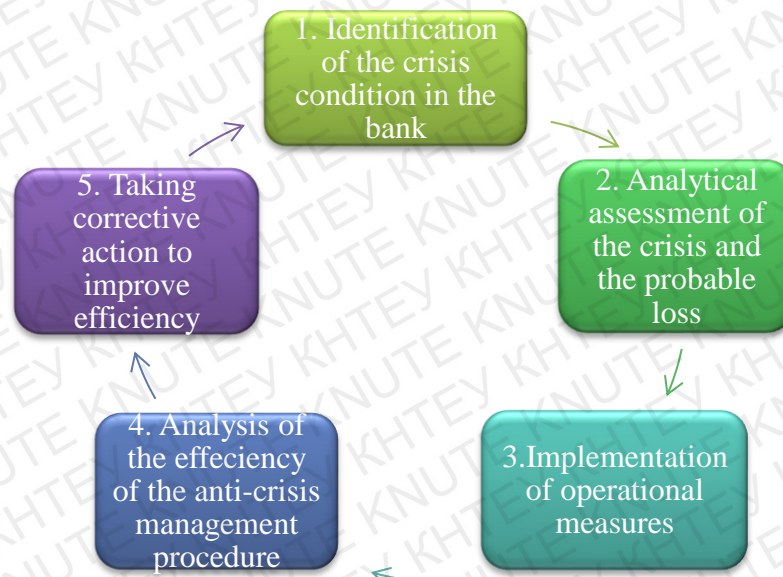


Figure 3.1 The procedure against crisis phenomena in the bank

*Developed by the author

1. Identification of the crisis condition in the bank. It may be based on the coefficient analysis of its activity in terms of assessment of liquidity, structure, and quality of assets, level of capitalization etc. We advised use also Cromonov's methodology of coefficient analysis as it was shown during the analysis of Oschadbank's performance.

2. Analytical assessment of the crisis and the probable loss from it. At this stage, it is usefully to provide a stress testing to assess the need for potential capitalization, taking into account the individual risks of the bank's activities (credit, currency, liquidity, etc.). It is also advisable to conduct a SWOT-analysis on this stage of the bank's activities to determine its competitive advantages and potential threats to its financial sustainability.

3. Implementation of operational measures aimed at security required level of liquidity, improvement of asset quality, increasing capital. It should be implemented depending on the result of the analytical assessment and the necessity of these measures.

4. Analysis of the effectiveness of the anti-crisis management procedure of a banking institution based on comparing costs to implementation of anti-crisis measures and available financial resources of shareholders.

5. Taking corrective action to improve efficiency of anti-crisis management and elimination of identified shortcomings.

The particular role of the identification process is predetermined the possibility of identifying crisis trends in the activity of a banking institution in the early stages, when the degree of damage to the banking activity and losses from the crisis are minimal. Timely implementation of preventive measures helps to avoid significant impact of the crisis in the future.

This subsystem is based on a coefficient analysis of the bank's activities. In case of signs of crisis phenomena manifested in deviation of the coefficients values from recommended ones in the banking practice, it is urgent to move to the next stage, where preventive measures of analytical and predictive nature will be implemented.

We also suggest to provide stress-testing developed by regulator independently by banks, or by NBU every quarter as it is intended in European countries. It would be useful for banking institution conducting basic scenario each quarter and adverse macroeconomic scenarios annually.

The basic macroeconomic scenario is based on the National Bank's public forecasts, in addition to the forecast of changes of the exchange rate for which the consensus forecasts are used.

The unfavorable scenario is based on hypothetical assumptions of the macroeconomic indicators that lead to significant credit and market risks. Credit risk arises as a result of deteriorating in asset quality, and market risk combines interest rate risk arising because of changes in interest spread and net interest margin [61].

According to the solution of NBU, banks that fail to meet these requirements will need to develop and implement a capitalization program and / or action plan to maintain or restore their capital levels [61].

The aforementioned components of the banking institution's anti-crisis management procedures (early identification of the crisis and analytical assessment of the existing and potential magnitudes of the crisis phenomena) actually provide the tools for the preventive phase of implementation of anti-crisis measures in the bank.

Functional aspect of anti-crisis measures to maintain an adequate level of liquidity is manifested in the application of specific instruments: prolongation of deposits, restructuring of debt to non-residents, etc.

We also think that problems of accumulated imbalances in managing the assets and liabilities of the bank can be solved by attracting a stabilization loan from the regulator.

Thus, the institutional aspects of the crisis management of banking institutions are highlighted: fulfillment by the regulator of the function of the lender of last resort, reduction of the level of uncontrolled outflow of creditors' funds through the introduction of a moratorium by the regulator to satisfy the requirements of creditors.

Functional aspect of crisis management of banking institutions is manifested in the application of a number of specific tools: debt restructuring, sale of loans to a third party, etc.

For national economy it is also necessary to keep the global trend in absorption of liquidity shocks. To absorb liquidity shocks on the horizon for more than a year by reducing the mismatch between asset and liability terms we advise to use international indicator -Net Stable Funding Ratio (NSFR). This metrics is planned to be implemented from the beginning of 2020 during test-regime and replace R6 in future. Formula of this metrics is introduced below:

$$NSFR = \frac{\text{Total Available Stable Funding (ASF)}}{\text{Total Required Stable Funding (RSF)}} \geq 100\% \quad (3.1)$$

Net Stable Funding Ratio (NSFR), unlike LCR, is a structural rather than a stress indicator.

We are also convinced, that implementation of LCR improves the risk management system, liquidity of the banking sector and increases the efficiency of regulatory requirements.

The advantage of LCR implementing in Ukraine is significant also because it is a commonly used global liquidity metric and results of this indicator are understandable both for international financial organization and investors.

One of the most important regulatory preventive measures is the adoption of new requirements for capital buffers. They are intended for the ability of banks to confront crisis phenomena and create additional “Safety Cushion”. Both strategic and intermediate goals are achieved through the use of macro-prudential tools (shown in the app. F). By using even one tool, several intermediate goals can be achieved.

We should also mention specific requirements for the activity of systematically important banks implemented by NBU from 01.01.2019 (fig.3.2):

Specific requirements for the activity of systematically important banks	
<ul style="list-style-type: none"> - R7 not more 20%; - R9 – not more than 20% of regulatory capital; - LCR \geq 100% (also for non-systematicall important); - R4 and R5 are reffered to be canceled in the September 2019. 	<ul style="list-style-type: none"> - capital conservation buffer (0,625% in 2020; 2,5% in 2023); - systemic importance buffer 1%-2%; - countercyclical capital buffer – from 0% to 2,5%.

Figure 3.2 Specific requirements for the activity of systematically important banks

*Developed by the author according to source [61]

More detailed information about new requirements is given bellow:

- Maximal level of credit risk per 1 counterparty (R7) – not more than 20%, for non-systematically important – 25%.
- From 01.01.2020 this buffer will be implemented only for systematic important banks and the level will differentiate depend on the category of banks’ importance – from 1% to 2%.
- Capital conservation buffer – from 0,625 to 2,5%, buffer will form during 2020-2023. It accumulates over a period of economic growth to cover potential losses during general economic decline.

- Countercyclical capital buffer – from 0% to 2,5% depend on the phase of economic cycle. The main aim is to secure the banking sector from accumulating risks during the period of credit expansion.

It should be noted that significant role in operational activities aimed at ensuring the proper level of bank capitalization. Functional aspect of crisis management is manifested in the application of specific instruments: increase of authorized capital, conversion of debt into capital. Recapitalization of banking institutions at the expense of public funds [42, p.140].

We advise to use approach of discounted buyout that is inherent for the European banking system. This method was described in the 3.1 paragraph in the Part 3.

The sequence of the crisis measures implementation is very important during anti-crisis management. Failure to comply with this principle leads to ineffective implementation of the crisis management procedure. The example of this point is given below.

For example, a sufficient level of equity cannot be ensured without eliminating a liquidity shortage that limits the ability of the bank to meet its obligations to creditors.

Thus, the procedure of effective anti-crisis regulatory management should also include complex interaction between next subjects:

- Communication with the participants of the banking market and the public;
- Availability of personnel capable of performing specific activities functions (debt collection);
- Corporate Governance capable of delivering anti-crisis measures (special emphasis on management risks);
- Communication with the banking sector regulator and other public authorities [42, p.144].

Summarizing the information above, we conclude that crisis management in domestic banks was marked by haphazard and ill-considered measures.

Thus, in order to improve existing regulatory measures during anti-crisis management, we suggest:

1. To provide coefficient analysis to define the real internal condition in which bank is functioning; to identify all of the risks by which bank is affected the most; to provide justified complex procedure in which reactive and preventive tools will be logically related to each other and continue the each anti-crisis procedure stage;

2. To conduct stress-testing and SWOT-analysis during analytical stage, define the level of problem credits in the general assets, etc.

3. To highlight more in special directive next options for solving possible negative consequences: recapitalization of banking institutions through public funds – thorough assessment of crisis situation to receive it; the establishment of a regulatory framework for capital requirements, and for the procedure for calculating capital ratios reveal the institutional aspect of the above process.

4. To evaluate the effectiveness of provided procedure and make new strategy depend on the received results; to develop the program by which assessment of received results will be provided.

CONCLUSIONS AND RECCOMENDATIONS

In the final qualification paper anti-crisis bank management and its features of functioning in the domestic economy were considered. The mechanism of using reactive and preventive toolkit was analyzed during the diagnosis of crisis situations in JSC “Oschadbank”. According to the research conducted in the work, we can draw the following conclusions:

1. Anti-crisis management of the bank is a system of measures aimed at detecting, preventing, minimizing and completely neutralizing potential and existing crisis phenomena, to ensure uninterrupted banks’ functioning. Anti-crisis control is carried out both at external and internal subjects. It should be noted that the subjects of management at the external level are: National Bank of Ukraine, Government of Ukraine, Supreme Council of Ukraine, Deposit Guarantee Fund. In turn, anti-crisis management in the bank at the micro-level is carried out by internal subjects: shareholders, the Board of the Bank, headed by the Chairman of the Board. Anti-crisis management often is provided by using preventive and reactive toolkit. Preventive or prudential measures focus on timely identifying potential threats and preventing the bank's livelihoods crisis under certain economic and political conditions. Reactive instruments are based on clearly defined measures that are able to quickly and effectively influence on the recovery of the previous pre-crisis state.

2. After diagnosis of the crisis management activity in the JSC “Oschadbank” during the last crisis period 2014-2016, we revealed that the management of the bank used both reactive and preventive measures. Thus, in 2014-2017, the government provided recapitalization by investing 31, 1 billion UAH into the capital of Oschadbank (through the issue of government bonds), which exceeds the amount of its losses during this period by 10 billion UAH. Oschadbank also received huge amount of refinancing loans. According to the Annual financial reports of Oshadbank of 2014-2016 years, bank received 19 768 922, 8 thousand UAH from NBU, but has already repaid all the sum back. In order to reduce personnel costs and costs spending for functioning of the banking institution, such reactive measure as bailout was

intensively used. Thus, the greatest bailout was provided during 2017-2018, when 565 branches were eliminated. Oschadbank also conducted rebranding, which improved communication with the customers and attracted additional capital. There was developed modernization strategy called “My bank. My country”. Among implementation of the preventive management we identified next instruments: internal analyses, which is provided and controlled by the independent auditing company; annual and consolidated reports that reflect current situation of the bank every quarter and year.

During analysis of data we carried out the lowest amount of equity in 2015, but the growing trend of total assets and liabilities was observed as well. Thus, the biggest increase of total assets was during the crisis period – +27, 8 % and +32, 3% in 2014 and 2015 accordingly. One of the factor of such sharp rise was high level of inflation in 2014 and 2015 year – 24,9% and 43,3% respectively. Capital and liquidity ratio were also diagnosed. The lowest value of capital adequacy (R2) is observed in 2016 – 10, 73 %, but this indicator is still greater than the optimal rate of 10%. Regulatory capital was the lowest in 2015 – 9 745 822 thousand UAH. This is due to the consequences of the macroeconomic crisis, which began in 2014. Despite of this, the bank adhered to the requirements of the National Bank of Ukraine. Such instrument as regularly stress-testing and monitoring was provided in the institution. So, new liquidity metrics – LCR was under controlling. The results show that LCRnc and LCRfc are higher normative level of 90%, especially LCR in national currency – it is equal to 338, 03% and is more optimal level by 3 times. It means that high-quality assets (HQA) available in the bank significantly exceed the total net cash outflows (TNCO). During analysis one problematic aspect in banking activity was also uncovered – huge amount of problematic credits. The overall number share of the total amount of NPL loans in total credit portfolio in 2018 was equal to 67%, in 2017 – 63%. But the presence of more than 60% problematic credits in the state banking institution acts as a factor of damage to the entire banking sector, especially in crisis processes. The return of such credits might not happen. In this case, state losses will negatively affect the growth of the economy and GDP.

3. After calculating the general coefficient of Cromonov's rating, it can be seen that over the past 5 years, we observed the upward trend of the general ratio. In 2018 we received limited rating of the figure equal to 41 – the highest value among indicators of previous years, – but it is still middle value. It can be concluded that because of economical and financial crisis in the banking sector in 2014-2016 years, Oschadbank could not receive and improve its result to better position. We can also determine the most affected risks on the Oschadbank's activity: credit risks and liquidity risks, because of the high level of NPL and unstable economical conditions with high level of inflation, high market volatility, necessity of the recapitalization of the bank in certain volumes and the outflow of qualified staff due to fierce competition in the labor market.

4. During analysis the main crisis instruments that are most appropriate to adopt in Ukraine were identified. Thus, we convinced that it would be quite useful to provide guaranteeing inter-bank loans, small and medium-sized business loan; to recapitalize banks only after thorough assessment of its necessity; to improve the procedure of discounted buyout of problem loans by the special organization; reducing costs during the pre-crisis period by liquidation of non-efficiency branches (bailout; downsizing); improve adoption trend of Bridge bank, etc.

5. We also deeply convinced in the usefulness of implementing new liquidity ratios – LCR and NSFR. We are sure that these metrics will help achieve positive effects for individual banks and the banking system as a whole by the formation of sufficient liquidity reserves to counteract the adverse impact of crisis phenomena at national and international levels, regardless of strategic macroeconomic projections. Due to the chaotic using of anti-crisis tools, we also recommend for the management of banking institution to involve the comprehensive complex procedure of crisis measures in their business policy. We advise to provide permanent internal analysis and quarter stress-test to predict crisis phenomena and take quick action to avoid it. In the banking institution responsible department should evaluate the effectiveness of provided procedure and make new strategy depend on the received results.

LIST OF REFERENCES

1. European Central Bank. Bank risk during financial crisis: [Електронний ресурс]. – Режим доступу: <https://www.ecb.europa.eu/pub/pdf/scpwps/ecbwp1394.pdf>.
2. Кондрат І. Ю. Антикризове управління фінансами банків на прикладі ПАТ «БРОКБІЗНЕСБАНК» / І. Ю. Кондрат, І. І. Топій // Вісник ЛНУ.– 2014. – № 797. – с. 461-469.
3. Манжос С. Б. Антикризове управління банківською діяльністю: форми і технології / С. Б. Манжос // Науковий вісник ХДУ. – 2014. – № 6 (5). – с.16-20.
4. Болдирев О. О. Антикризове управління банком: дисертація канд. екон. наук: 08.00.08 / О. О. Болдирев. – К. : КНЕУ, 2014. – 20 с.
5. Жовтанецька Я. В. Механізм антикризового управління діяльністю банків/ Я. В. Жовтанецька // Бізнес-інформ. – 2015. – №6. – с. 187–192.
6. Ingves St. Central bank governance and financial stability / St. Ingves, Governor // Bank for International Settlements. – 2011. – №1 – 83 p.
7. Claudia Buch. CGFS Papers: Structural changes in banking after the crisis – CGFS. – 2018. – №60. – 119 p.
8. Swedish National Debt Office: Financial crisis management – Stockholm: Ricksgalden.–2018. – 26 p.
9. Preventing and managing financial crises: [Електронний ресурс]. – Режим доступу:<https://www.regeringen.se/49bb32/contentassets/0bc8a98c719b474983c1cb715eaa099e/sammanfattning-oversatt-till-engelska---preventing-and-managing-financial-crises>.
10. Dalvinder Singh. Developing a Framework for Effective Financial Crisis Management/ S. Dalvinder // OECD. – 2012. – №2. – 30 p.
11. Olga Afanasyeva. Analysis of Main Instruments of Crisis Regulation of Banking Activity During the Global Financial Crisis of 2008-2009: [Електронний ресурс] / Afanasyeva Olga. – Режим доступу: https://mpra.ub.uni-muenchen.de/60651/1/MPRA_paper_60651.PDF.

12. Honohan P. Management and Resolution of Banking Crises: Lessons from Recent European Experience – NW: Massachusetts Avenue. – 2017. – 11 p.
13. The new EU framework for financial management and resolution [Електронний ресурс]. – Режим доступу: https://www.ecb.europa.eu/pub/pdf/other/art3_mb201107en_pp85-94en.pdf.
14. Saksonova S. Approaches to Improving Asset Structure Management in Commercial Banks / S. Saksonova// Procedia Social and Behavioral Sciences. – 2013. – №.9 – p.877-885.
15. Strategic planning and analysis for commercial banking: an analysis based a commercial bank operating in Srilanka [Електронний ресурс]. – Режим доступу: [http://www.aessweb.com/pdf-files/2-273-6\(9\)2016-JABS-195-213.pdf](http://www.aessweb.com/pdf-files/2-273-6(9)2016-JABS-195-213.pdf).
16. Пшик Б. І. Сучасні методи антикризового управління сучасною діяльністю банку: монографія/ Б.І. Пшик. – Л.: Університет банківської справи, 2017 [Електронний ресурс]. – Режим доступу: <http://www.economy.nauka.com.ua/?op=1&z=5961>.
17. Глосарій банківської термінології [Електронний ресурс]. – Режим доступу: https://bank.gov.ua/control/uk/publish/article?art_id=123675.
18. Basel Committee on Banking Supervision: Stress-testing principles, 2018 [Електронний ресурс]. – Режим доступу: <https://www.bis.org/bcbs/publ/d450.pdf>.
19. Tursoy T. Risk management process in banking industry – MU: Near East University. – 2018. – 36 p.
20. Бихова О.М. Класифікація видів бенчмаркінгу в системі управління банками / О.М. Бихова // Економіка розвитку. – 2014. – № 3 (71). – с. 15–18.
21. Ponomarenko V. Benchmarking of bank performance using the lifecycle concept and the DEA approach/ V. Ponomarenko // Banks and Bank Systems. – 2017. – № 3. – p.74-86.
22. Складові системи антикризового управління банком [Електронний ресурс]. – Режим доступу: <http://banking.uabs.sumdu.edu.ua/images/department/banking/discip/akub/L4.pdf>.

23. Превентивні та реактивні заходи в системі антикризового управління банками [Електронний ресурс].– Режим доступу: https://knowledge.allbest.ru/bank/3c0a65625b2bd79a5c43b88421216d36_0.html.
24. Положення про застосування Національним банком України заходів впливу за порушення банківського законодавства: затв. Постановою Правління НБУ від 17.08.2012 р. № 346 (зі змінами і доповненнями) [Електронний ресурс]. – Режим доступу: <http://zakon4.rada.gov.ua/laws/show/z1590-12/print1402575733494288>.
25. Єгоричева С.Б. Аутсорсинг як сучасна тенденція розвитку банківського бізнесу [Електронний ресурс]. – Режим доступу: <https://rep.polessu.by/bits/tream/123456789/12094/1/17,%20%D0%95%D0%B3%D0%BE%D1%80%D1%8B%D1%87%D0%B5%D0%B2%D0%B0.pdf>.
26. Effect of outsourcing on banking staff productivity: A case study of Barclays bank Ghana limited [Електронний ресурс]. – Режим доступу: https://www.academia.edu/37419510/Effects_of_Outsourcing_on_Banking_Staff_Productivity_A_Case_Study_of_Barclays_Bank_Ghana_Limited_Cape_Coast-Ghana.
27. Sidak V. Anti-crisis management economic safety of banking institution on the state level: problems and ways of their solution / V. Sidak // Європейський науковий журнал економічних та фінансових інновацій. – 2018. – №2. – с.20-28.
28. Олійник А. В. Реструктуризація банківської системи України як інструмент протидії банкрутству банків/ А. В. Олійник// – Вісник ХНУ. – 2016. – №4 (2). – с. 190–196.
29. Lakhdar A. Restructuring of Banking: Concept, Justifications, Stages and Results / A. Lakhdar // Mediterranean Journal of Social Sciences. – 2014. – p.123-134.
30. Koval Y. Stress-testing of complex risks in the banking system, as an instrument of state anti-crisis management [Електронний ресурс]/ Y. Koval. – Режим доступу: <https://cyberleninka.ru/article/v/stress-testing-of-complex-risks-in-the-banking-system-as-an-instrument-of-state-anti-crisis-management>.

31. KPMG: Optimizing banking operating models [Електронний ресурс]. – Режим доступу: <https://home.kpmg/content/dam/kpmg/pdf/2014/07/Optimizing-Banking-Operation-Models.pdf>.
32. Ощадбанк [Електронний ресурс]. – Режим доступу: https://www.oschadbank.ua/ua/private/web_bank_ng.
33. Портал Мінфін [Електронний ресурс]. – Режим доступу: <https://minfin.com.ua/company/oschadbank/rating/?date=2019-07-01>.
34. Кот О. В. Місце прогнозування в процесі страте гічного управління фінансовою діяльністю банку / О.В. Кот // Вісник Житомирського державного техно логічного університету (Економічні науки). – 2015. – № 4 (38). – с. 388 – 392.
35. Дзюблюк О. В. Кредитний ризик і ефективність діяльності банку: монографія/ О. В. Дзюблюк, Л. М. Прийдун. – ТНЕУ. – 2015. – 271 с.
36. Головіна Я. С. Антикризове регулювання банківської системи України у період 2014 - I півріччя 2015 років / Я. С. Головіна. // Глобальні та національні проблеми економіки. – 2015. – №7. – с. 658- 663.
37. Гірняк В. В. Управління ліквідністю банків за умов економічної нестабільності (на прикладі АТ "Ощадбанк") / В. В. Гірняк, Т. А. Путьківський. // Глобальні та національні проблеми економіки. – 2018. – №22. – с. 776-773.
38. Окрема фінансова звітність та звіт незалежного аудитора за рік, що закінчився 31 грудня 2017 року [Електронний ресурс]. – Режим доступу до ресурсу: https://www.oschadbank.ua/sites/default/files/2019-04/SSBU_17fsu_Separate_UKR.pdf.
39. Консолідований звіт про управління АТ "Ощадбанк" 2018 [Електронний ресурс]. – Режим доступу: https://www.oschadbank.ua/sites/default/files/2019-04/oschadbank_report0426_new_2in1.pdf.
40. Економічні нормативи та ліміти відкритої валютної позиції. [Електронний ресурс] – Режим доступу: <https://www.oschadbank.ua/ua/about/monthly-report>.

41. Річний звіт емітента цінних паперів [Електронний ресурс]. – Режим доступу: https://www.oschadbank.ua/ua/about/reporting_issuer.
42. Сирота В. С. Функціональні та інституційні аспекти антикризового менеджменту в банківських установах України: дис. канд.: 08.00.08 / Сирота Вадим Сергійович – Київ, 2015. – 209 с.
43. Q&A по запровадженню нормативу LCR [Електронний ресурс]. – Режим доступу: https://old.bank.gov.ua/control/uk/publish/article?art_id=64531875&cat_id=64591009.
44. Окрема фінансова звітність та звіт незалежного аудитора за рік, що закінчився 31 грудня 2015 року [Електронний ресурс]. – Режим доступу: <https://www.oschadbank.ua/sites/default/files/2019-04/FS%20SSBU%202015%20separate%20ukr%20ISA.pdf>.
45. Окрема фінансова звітність та звіт незалежного аудитора за рік, що закінчився 31 грудня 2016 року [Електронний ресурс]. – Режим доступу: <https://www.oschadbank.ua/sites/default/files/2019-04/SSBU16fsuseparate.pdf>.
46. НБУ про проблемні кредити [Електронний ресурс]. – Режим доступу: <https://minfin.com.ua/2019/08/22/38815902/>.
47. Розподіл кредитів, наданих фізичним та юридичним особам, за класами* боржника станом на 01.01.2018 [Електронний ресурс]. – Режим доступу: https://bank.gov.ua/control/uk/publish/article?art_id=34661442.
48. Розподіл кредитів, наданих фізичним та юридичним особам, та розміру кредитного ризику за класами боржника, станом на 01.01.2019 року * [Електронний ресурс]. – Режим доступу: https://bank.gov.ua/control/uk/publish/article?art_id=34661442.
49. Liquidity Coverage Ratio (LCR) - Executive Summary [Електронний ресурс]. – Режим доступу: <https://www.bis.org/fsi/fsisummaries/lcr.htm>.
50. Оборотно-сальдовий баланс 2019 [Електронний ресурс]. – Режим доступу: https://bank.gov.ua/control/uk/publish/article?art_id=34661442.
51. EBA report on 04 .10.18 Of preliminary impact of the Basel reforms on EU banks capital and updates on liquidity measures in the EU [Електронний ресурс]. –

Режим доступу: <https://www.mnb.hu/en/pressroom/press-releases/press-releases-2018/eba-publishes-the-preliminary-impact-of-the-basel-reforms-on-eu-banks-capital-and-updates-on-liquidity-measures-in-the-eu>.

52. ODDO BHF [Електронний ресурс]. – Режим доступу: <https://www.oddo-bhf.com/>.

53. Fitch Ratings [Електронний ресурс]. – Режим доступу: <https://www.fitchratings.com/site/home>.

54. Moody's Rating Scale [Електронний ресурс]. – Режим доступу: <https://www.moody.com>.

55. Crisis management in the banking union: overview and early experience [Електронний ресурс]. – Режим доступу: <https://www.bankingsupervision.europa.eu/press/speeches/date/2017/html/ssm.sp170629.en.html>.

56. Precautionary recapitalisations under the Bank Recovery and Resolution Directive: conditionality and case practice: Directive general of European Parliament [Електронний ресурс]. – Режим доступу: [http://www.europarl.europa.eu/RegData/etudes/BRIE/2017/602084/IPOLBRI\(2017\)602084_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/BRIE/2017/602084/IPOLBRI(2017)602084_EN.pdf).

57. Mykylyshyn M. The impact of problem debt on the solvency of the banking system of Ukraine / M. Mykylyshyn, V. Kravchuk // Money, finance and credit. – 2018. – № 6 (11). – с.466-473.

58. Плешакова Н. Світовий досвід антикризового регулювання в зарубіжних країнах [Електронний ресурс]/ Н. Плешакова. – Режим доступу: <http://www.economy.nauka.com.ua/?op=1&z=4332>.

59. Науменкова С. Проблеми підтримки фінансового сектору в умовах кризи/ С. Науменкова // Вісник Національного банку України. – 2009. – № 6. – С.12-18.

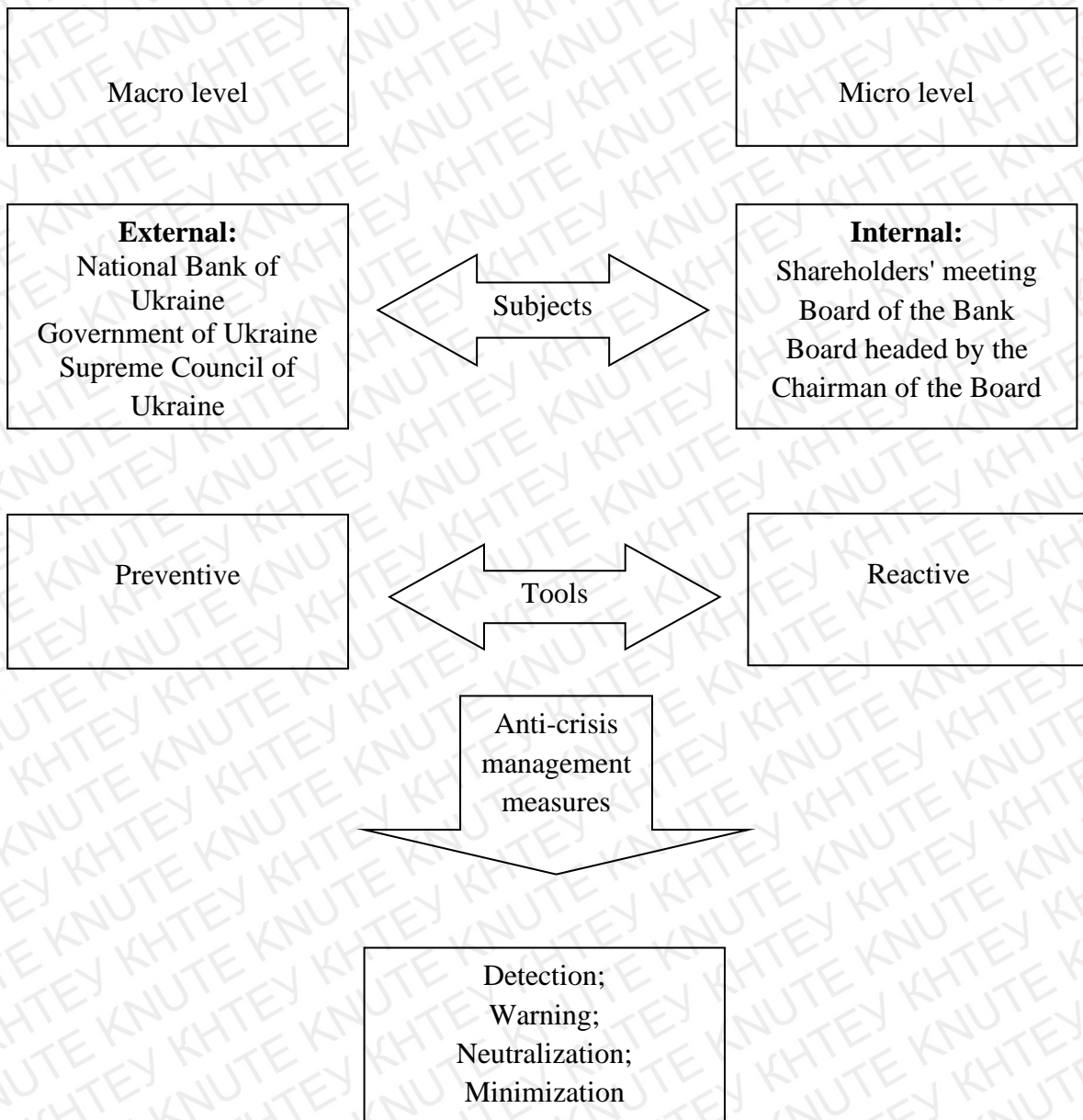
60. Еркес О. Нові нормативи ліквідності в системі ризик-орієнтованого нагляду за діяльністю банків України/ О. Еркес, Т. Гордієнко // Економіка і суспільство. – 2019. – №20. – с.635-642.

61. Національний банк оприлюднив підхід до стрес-тестування банків у 2019 році [Електронний ресурс]. – Режим доступу: https://bank.gov.ua/control/uk/publish/article?art_id=89024933&cat_id=55838.

APPENDIXES

Appendix A

Mechanism of anti-crisis management of the bank*



*According to source [16]

Assets, liabilities and equity of JSC “Oschadbank”

Assets, UAH thousands :	2014	2015	2016	2017	2018	3 q. 2019
Cash and bank accounts in NBU	4 532 863	5 632 365	10 438 941	12 228 420	10 600 815	11 920 850
Cash at banks	7 985 265	17 775 189	31 150 549	17 028 838	10 910 047	15 274 403
Financial instruments at fair value revaluated through profit or loss	4 252 179	10 095 933	17 148 763	-	-	-
Derivative financial assets	-	-	-	21 767 424	-	-
Clients' credits	70 236 315	65 462 189	65 946 584	74 502 538	67 543 176	65 145 553
Investments	33 452 496	54 637 837	77 650 074	98 104 393	116 590 238	102 675 399
Investments in subsidiaries and associates	24 800	24800	24 800	24 800	24 800	24 800
Investment property	-	-	-	-	796 869	809 346
Fixed assets and intangible assets	3 374 366	3 945 327	6 535 809	7 614 578	8 953 527	9 311 142
Deferred income tax assets	80 180	80 672	-	-	-	-
Income tax prepayment	-	299 817	271 521	294 694	267 324	270 756
Other assets	603 293	1 178 882	1 440 173	2 276 811	2 065 173	2 676 279
Total assets	124 541 757	159 133 011	210 607 214	233 842 496	217 751 969	208 108 528

*Developed by the author according to source [38; 39; 43; 44]

Assets, liabilities and equity of JSC “Oschadbank”

Liabilities and equity, UAH thousands :	2014	2015	2016	2017	2018	3 q. 2019
Liabilities :						
Cash of banks	22 176 386	16 557 088	4 639 317	6 435 248	54 074	78 973
Clients' accounts	56 265 913	94 269 726	145 586 238	150 151 178	154 016 454	161 937 467
Credits received from international and other financial organizations	19 339 635	29 498 132	33 418 838	34 548 265	34 496 675	18 208 132
Other borrowed money	5 451 113	7 200 519	7 039 860	7 299 686	6 618 734	4 757 729
Other indebtedness	438 433	1 731 009	1 001 614	719 458	1 013 391	1 798 592
Subordinated debt	1 656 729	2 536 133	2 807 088	2 903 463	2 879 790	2 448 012
Deferred liabilities tax assets	-	-	374 063	533 569	130 137	259 816
Total liabilities	105 328 209	151 792 607	194 867 027	202 590 867	199 209 255	189 488 721
Equity :						
Share capital	30 153 460	30 153 460	35 108 980	49 724 980	49 724 980	49 724 980
Reserve revaluation of buildings	1 237 084	1 193 252	1 820 998	1 822 086	1 821 887	1 820 433
Reserve revaluation of investments revaluated at fair value through other total income	-1 241 604	-800 037	57 751	725 456	215 554	152 201
Uncovered loss	-10 935 392	-23 206 271	-21 766 542	-21 020 893	-33 219 707	-33 077 207
Total equity:	19 213 548	7 340 404	15 740 187	31 251 629	18 542 714	18 619 807
Total liabilities and equity:	124 541 757	159 133 011	210 607 214	233 842 496	217 751 969	208 108 528

*Developed by the author according to source [38; 39; 43; 44]

Ratios of Crononov's model (index type)

Coefficient	Calculation	Characteristics
1. General coefficient of reliability (C1)	Equity/Working assets	Determines how risky the bank's investments into working assets are, which are protected by the banking equity
2. Quick liquidity coefficient (C2)	Quick liquid assets/current liabilities	Shows whether bank use clients money as qwn credit resources
3. Cross-coefficient (C3)	Total liabilities/Working assets	Demonstrates the degree of risk the bank allows during using borrowed funds
4. General coefficient of liquidity (C4)	(Liquid assets+Secured capital)/Total liabilities	Characterizes the ability of the bank to meet the requirements of creditors in the minimum period of non-repayment of issued loans.
5. Coefficient of capital protection (C5)	Secured capital/Equity	Shows how much the bank takes into account inflationary processes and how much of its assets it places in real estate, values and equipment.
6. Stock capitalization coefficient of profit (C6)	Equity/Authorized capital	Characterizes the ability of the bank to raise equity from profit

*Developed by the author according to source [9]

Main functional and institutional components of crisis management banking institution

Functional tools	Institutional tools
Analytical forecasting tools and planning (stress testing of major banking risks (credit, liquidity, etc.); organization of risk management in the bank	Effective banking regulation and supervision; system of deposit insurance; output by regulator insolvent banks from the market
Organizational and management tools (cost optimization - reduction of affiliates and offices, staffing, reduction payroll); outsourcing, benchmarking	Institutional support measures resource base (execution by the regulator functions of the lender of last authority)
Ways to balance assets and liabilities (prolongation of deposits; debt restructuring; loyalty programs for contributors)	Mechanisms of working with bad assets (proper legal protection of creditors' rights; creation with the participation of the state specialized institution for work with problem assets)
Asset management tools (restructuring of credit debt; foreclosure / in court order; write-offs from reserves;	Mechanisms of working with bad assets (bureau of credit histories and registries of borrowers with a bad reputation)
Methods of capital (increasing authorized capital; attraction of the subordinated capital; conversion of debt instruments in equity)	Ways to ensure an adequate level capitalization of the banking system (recapitalization at the expense of state funds; the presence of institutional investors financial market and access for foreign institutional investors)

*Developed by the author according to source [42, p.32]

Appendix E

Distribution of loans to individuals and legal entities during 2017-2018

	Distribution of NPL loans by classes of debtor - an individual, thousand UAH			Distribution of NPL loans by classes of debtor - legal entity, thousand UAH			Total amount of NPL loans, thousand UAH	Total amount of loans individuals, thousand UAH	Total amount of loans by classes of debtor - legal entity, thousand UAH	Total credit portfolio	Share of total amount of NPL loans (individual) in total amount of given loans, thousand UAH	Share of total amount of NPL loans (legal entity) in total amount of given loans, thousand UAH	Share of total amount of NPL loans in total amount of total credit portfolio, thousand UAH
	Total	Loans in national currency	Loans in foreign currency	Total	Loans in national currency	Loans in foreign currency							
2017	3 538 316	1 759 837	1 778 479	76 988 507	29 072 448	47 916 059	80 526 823	7 164 358	120 274 602	127 438 960	49%	64%	63%
2018	4 307 894	2 557 414	1 750 480	93 636 582	32 481 282	61 155 300	97 944 476	9 185 665	136 353 731	145 539 396	47%	69%	67%

*Developed by the author according to source [10; 11]

Intermediate objectives of macro prudential policies and an indicative list of tools for Ukraine

Objectives:	Set of tools:
Prevent excessive credit growth	<ul style="list-style-type: none"> ▪ capital requirements by stress testing; ▪ countercyclical capital buffer - activation is possible not earlier than in 2020; ▪ a buffer of capital conservation - the activation is foreseen in 2020, the buffer will be 0.625% with a phased increase of 2.5% by the beginning of 2023; ▪ system risk buffer; ▪ sectoral capital requirements; ▪ additional risk weights for certain types of loans; ▪ leverage ratio.
Prevent excessive maturity mismatch and market illiquidity	<ul style="list-style-type: none"> ▪ since December 2018 a norm has been introduced at the level of 80%. Till the end of 2019 the value of the norm will be raised to 100%; ▪ <i>Net Stable Funding Ratio</i> (NSFR) - is planned to be introduced from the beginning of 2020; ▪ other funding requirements, such as loan-to-deposit ratio (LTD); ▪ additional liquidity requirements, such as liquidity buffers.
Limit risk concentration	<ul style="list-style-type: none"> ▪ capital requirements by stress testing; ▪ systemic risk buffer.
Limit influence distorted incentives (In particular, state banks)	<ul style="list-style-type: none"> ▪ capital requirements for stress testing; ▪ additional capital requirements for systemically important banks. May be introduced from the beginning of 2020 at the level of 1% to 2% depending on the degree of systemic importance of the bank; ▪ systemic risk buffer; ▪ additional requirements for liquidity of systemically important banks.
Reduct level of dollarization	<ul style="list-style-type: none"> ▪ increase ratio of PD and LGD for loans in foreign currency, which are elevated on a group basis; ▪ the ratio of liquidity coverage (LCR) in foreign currency; ▪ restriction of open currency position. As

	<p>at October 2018, short-term and long-term foreign currency positions of banks are at the level of 5% of regulatory capital;</p> <ul style="list-style-type: none">▪ introduction of additional risk weights for currency assets;▪ establishing stricter requirements for credit risk assessment for loans in foreign currency.
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*Developed by the author according to source [55]