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DILEMMAS AND WAYS OF SOLVING THE FUNCTIONING OF THE BANKING SYSTEM OF UKRAINE IN THE CONDITIONS OF MARTIAL LAW

ABSTRACT

The military invasion of Ukraine, in addition to human losses and destruction of infrastructure, caused a significant decline in all sectors of the country's economy. In particular, the banking sector was also affected, although the worst-case scenarios were not realized due to the efficient work of banks and the NBU. Nevertheless, the industry has experienced losses and problems that have both immediate and long-term effects. These problems require constant monitoring and the search for ways of stabilization, which determines the relevance of the chosen research topic. The purpose of the article is to determine the problems of the banking sector of Ukraine, which were generated as a result of a full-scale military invasion of the country, to analyze the trends of the industry indicators, as well as to propose measures to stabilize the situation. The following scientific methods were used during the research: analysis and synthesis, economic-statistical method, method of establishing cause-and-effect relationships, and graphic methods. As a result of the conducted research, the main risks generated by the military invasion for the banking system were characterized, and their change compared to the pre-war period was also noted. The main problems associated with the consequences of the invasion for the banking sector were outlined. Changes in key statistical indicators of banks, as well as changes in indicators of their financial stability, were analyzed. A number of measures that can contribute to the stabilization of the situation in the sector have been identified. The main conclusion from the conducted research is confirmation of the need for further monitoring of the situation in the banking sector of Ukraine and the application of preventive measures to minimize possible risks.

Keywords: banking system of Ukraine, National Bank of Ukraine, commercial banks, military invasion, NBU discount rate, deposits, loans, interest rates, indicators of financial stability, digitalization, risks

JEL Classification: G21

INTRODUCTION

The full-scale invasion of sovereign Ukraine has caused considerable upheaval in all spheres of life. In addition to the deaths of thousands of people and the destruction of infrastructure, the war caused a significant downturn in the economy, particularly a significant deterioration in the performance of the financial sector. As a key segment of the economy's financial sector, the banking system also suffered notable losses. In addition, the aggressor continues to direct its actions against Ukraine, so new negative consequences could hit the banking sector again. Therefore, an important and topical issue is the coverage of the current situation in the banking sector of the country, characterizing the causes and results of such a state of affairs, as well as identifying possible directions of stabilization of the situation.

Available studies, revealing the current state of the banking sector in Ukraine, note that the industry has suffered moderate losses due to the timely actions of banks and the NBU (Semencha & Ilchenko, 2022). However, the problems generated by the invasion remain the focus of most scholarly works. Gavrish et al. (2022), in addition to a number

of war-induced banking market problems, emphasize that the banking industry has undergone significant change and upheaval due to three major factors: global digitalization, the COVID-19 pandemic, and military invasion. It is clear that the military invasion is the most crisis factor of those listed, but the fact that the researchers rank the pandemic and digitalization alongside it increases the importance of these factors in the current state of the industry.

Romdhane (2021) notes even before the war began that the pandemic, despite all its tragic consequences, definitely prepared the banking industry for the crises to come. The main effect of this "preparation" is the widespread introduction and development of digitalization measures. Otherwise, digitalization (along with the timely actions of banks and the NBU) is defined by researchers as one of the key factors of sufficient sustainability of the Ukrainian banking system during the war (Shkolnyk et al., 2022). The use of modern e-commerce methods, digital platforms, and blockchain allows companies to gain new advantages and opportunities (Kibik et al., 2022). Such a statement is especially relevant during wartime, as it opens the door for banks to survive and maintain competitiveness.

LITERATURE REVIEW

Given the fact that almost eight months have passed since the beginning of the military invasion, there have been relatively few studies on the problems and prospects of the banking sector of Ukraine under war conditions. However, the existing scholarly writings sufficiently reflect the current state of affairs in the area during the period in which they have been carried out. However, events continue to unfold, which is reflected in the indicators and the overall situation in the banking sector. Thus, a study of current information and indicators of the banking sector is appropriate and relevant.

Druhov and Druhov's (2022) study reveals in detail what actions were taken by the NBU immediately after the military invasion of Ukraine. The researchers outline the main positions of the resolution that the NBU promptly adopted in connection with the declaration of martial law.

The problems faced by the banking industry in the first days after the invasion and thereafter are revealed in the study by Prokopenko et al. (2022). In addition to highlighting the problems, the authors offer a number of measures to solve them.

The work of Shkolnik et al. (2022) focuses on the outstanding role of digitalization in preserving the reliable functioning of the Ukrainian banking system after the outbreak of hostilities. Sheludko and Bratkevich (2019) even before the outbreak of war noted that the stable functioning and competitiveness of the banking sector in modern conditions is not possible without the continuous implementation of digitalization measures. Romdhane (2021) in the post-quarantine period suggests that the COVID-19 crisis allowed banks to prepare for other crises in a certain way in the future.

Thus, the works of scholars allow us to see the situation in the banking sector after the invasion in all its aspects. Firstly, it is a definition of risks and problems of the system; secondly, it is a study of the reaction of the system to the following problems; thirdly, it is a characterization of future measures and proposal of directions to overcome and minimize further growth of the level of risks. This study complements the results of other scientists with a comprehensive review and analysis of risks and indicators of the banking sector, as well as the formation of proposals to improve the situation based on the results.

AIMS AND OBJECTIVES

The purpose of the article is to identify the problems of the banking sector of Ukraine, generated as a result of a full-scale military invasion of the country, to analyze the trends of the industry indicators, as well as to propose measures to stabilize the situation.

Achievement of the goal requires solving the following tasks:

- to characterize the risks of the financial sector after the full-scale invasion of Ukraine by the Russian Federation;
- to analyze the dynamics of statistical data of the banking system in 2022;
- to analyze changes in the main indicators of the financial soundness of the banking system;

Determine directions and ways to solve problems in the banking system of Ukraine.

METHODS

The following methods were used in the study: analysis and synthesis, economic and statistical methods, method of establishing cause and effect relationships, and graphical methods.

RESULTS

Financial sector risks after the full-scale invasion of the Russian Federation in Ukraine

With the beginning of the full-scale invasion of Ukraine by the Russian Federation, the financial sector of the country's economy experienced significant turmoil. The banking industry, as a key element of the financial sector, ensures the stability of production and operational processes. However, in the first days of the invasion, the payment system was on the verge of stoppage. This was due to the inability of employees to go to work, the closure of branches, and the mass withdrawal of cash from ATMs. As time passed, the situation stabilized somewhat, but the prolonged impact on the system as a whole remains uncertain, and the upcoming trials are unpredictable.

Timely actions of commercial banks and the National Bank of Ukraine regarding the uninterrupted operation of financial institutions and electronic payment system allowed the financial sector to survive the first months after the invasion with moderate losses ("NBU - on the financial state of the banking system during the war", 2022). However, trends in the indicators and risks of the financial system, particularly the banking sector, show notable changes. The first of such indicators investigated in the article is the Financial Stress Index (FSI).

The FSI indicates the level of stress in general in the financial sector of the country. It is measured in the range of values from 0 to 1, where 0 characterizes the absence of stress, 1 - its highest degree. The disadvantage of the indicator is that it represents the current level of stress, not counting future risks. The calculation of the index includes twenty indicators divided into groups - a subindex of the banking industry, household behavior, corporate as well as government securities, and foreign exchange market. Depending on the volume and impact on the financial sector, the indicators are assigned a baseline weighting (Financial Stability Report. June 2022, 2022). Figure 1 shows the evolution of the FSI from 2008 to 2022.



Figure 1. Financial Stress Index (English). (Source: *Financial Stability Report. June, 2022*)

As can be seen in Figure 1, the FSI was reaching its highest degree of tension when Lehman Brothers reported bankruptcy. This event is considered the starting point for the onset of the global financial crisis in 2008, after which it moved into an acute phase. But despite the criticality of this event, its consequences did not cause such prolonged tension for the Ukrainian economy as the escalation of the military conflict between the Russian Federation and Ukraine, which began in 2014. The next test for Ukraine was the Russian Federation's armed aggression in the Kerch Strait, followed by the beginning of the quarantine associated with the COVID-19 pandemic. As significant as the last two events were, however, the financial stress of a full-scale attack on Ukraine in 2022 overshadows their impact on the financial system. The FSI reaches a value of about 0.8 in the first months after the invasion, and subsequent changes are difficult to predict.

The NBU's June 2022 Financial Stability Report lists the main risks to Ukraine's financial sector. These risks include currency risks, macroeconomic risks, credit risks of households and corporations, capital, profitability, and liquidity risks. The NBU

evaluates these risks on a scale from 1 to 10, where 1 corresponds to the lowest and 10 to the highest level of risk (Report on Financial Stability. June 2022, 2022). The document compares the degree of these risks in December 2021 and June 2022 (Figure 2).

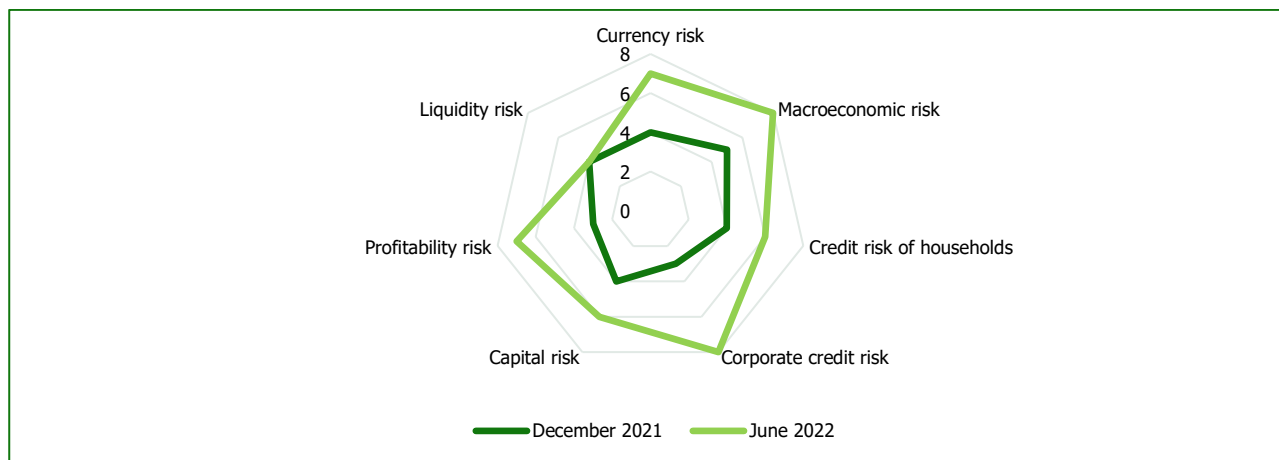


Figure 2. Financial sector risk map. (Source: *Financial Stability Report. June, 2022*)

From Figure 2 we can note a significant increase in macroeconomic risk associated with the economic recession, a catastrophic growth of the budget deficit, and increased tension in the foreign exchange market. The credit risk of households also demonstrates growth due to the decline in the incomes of the population, which is logically caused by the growth of the share of overdue loans. The risk is somewhat limited by the moderate debt burden of households. Corporate credit risk is defined as high, due to an increase in expected credit losses. Capital risk has also increased, but the increase is moderate because there has been only a slight decline in capital. However, this risk could increase markedly in the future due to the realization of credit risks. Profitability risk is high now: losses are due to high deductions to the provision for credit losses, lower fee income due to lower demand for bank services, and lower tariffs. A positive aspect is the growth of interest income, which helped maintain the net interest margin. Liquidity risk is the only risk that has not changed since the beginning of the invasion, but banks forecast its negative trend in the future. The increase in foreign exchange risk is due to imbalances in the foreign exchange market, but the risk is limited by some stabilization of the exchange rate as well as the dollarization of banks' balance sheets (Financial Stability Report, 2022).

In addition, in order to implement preventive actions on the implementation of the risks of the activity, the NBU has been conducting a survey of the heads of the largest banks and non-bank financial institutions since 2018. The survey, conducted in May 2022, witnessed a significant deterioration of specialists' assessments of the state of the financial sector. More than 50% of those surveyed rated the state of the financial sector as "satisfactory," while about 30% rated it as "poor" or "very poor." Table 1 shows experts' rankings of individual risks in November 2021 and May 2022, with changes over the period (rank 1 corresponds to the most significant risk, so the higher the rank value, the less risk).

Table 1. Ranks of risk factors (by the total share of answers "very high" and "high"). (Source: *Financial Sector Systemic Risk Survey. May, 2022*)

Ranks of risk factors (according to the cumulative share of "very high" and "high" responses)	Rank, May 2022	Rank, November 2022	Change, +/-
War with the Russian Federation	1	3	2
Current and expected inflation	2	7	5
Value of assets and quality of collateral	3	13	10
Dynamics of foreign capital inflows (including direct investments) into Ukraine	4	1	11
Exchange rate dynamics and volatility	5	14	9
Fraud and cyber threats	6	2	-4
Level of economic activity	7	20	13
Dynamics of world prices for commodities	8	5	-3

(continued on next page)

Table 1. (continued)

Ranks of risk factors (according to the cumulative share of "very high" and "high" responses)	Rank, May 2022	Rank, November 2022	Change, +/-
Possibility of bankruptcy and/or significant financial difficulties of financial institutions	9	17	8
The political and social situation in Ukraine	10	6	-4
Level and dynamics of real estate prices	11	16	5
Corruption, the activity of law enforcement bodies, and the judicial system	12	1	-11
State of creditors and investors protection	12	4	-8
Access to financing	14	19	5
State economic policy (monetary, fiscal, etc.)	15	21	6
Quality of legislation and tax system	16	12	-4
Quality of human capital in the financial sector	17	9	-8
Competition in the financial services market	18	10	-8
State of cooperation with international financial institutions	19	11	-8
Climate change	20	17	-3
Quarantine and epidemic measures	21	8	-13

As presented in Table 1, the main source of risk is expected to be war with the Russian Federation. The highest-ranked risk in previous surveys was the level of corruption, law enforcement, and the judicial system, but it ranked only 12th. Among the "leaders" were risks associated with inflation, asset value and quality of the collateral, foreign capital inflows, exchange rates, and still fraud and cybersecurity. Climate risks and quarantine measures moved into last place (Financial Sector Systemic Risk Survey. May 2022, 2022).

The outlined indicators and risks of the financial sector are reflected in the actual change of the indicators of the banking sector of Ukraine. Therefore, the next stage of the study should focus on these changes, which will identify the greatest threats to the banking industry. Along with the definition of threats, it is necessary to characterize the main directions, which can provide a certain stabilization of the situation in the conditions of functioning of the subjects of the industry.

Dynamics of banking system statistics in 2022

During the first quarter of 2022, the banking system of Ukraine underwent significant transformations. The main changes that occurred during this period are shown in Figure 3. It should be specially noted, that in the report of NBU, according to which Figure 3 was built, it was stated that the discount rate of NBU had been kept at 10% ("NBU - on the financial state of the banking system during the war", 2022). However, in June it was decided to increase the discount rate to 25%. This decision was explained by the desire to reduce inflation and attract more funds into the state budget but received a lot of criticism from financial analysts. In particular, some experts are of the opinion that a sharp increase in the discount rate will only help banks to get rich, while others note that raising funds by taking such a decision will cost the state more. According to some analysts, raising the discount rate to combat inflation caused by non-monetary factors is the wrong move (Obukh, 2022).

Figure 3 shows changes in key banking sector indicators and briefly describes their drivers. Special attention should be paid to such indicators as the change in the share of NPLs, as well as the financial result of the system. These factors (credit risk and profitability risk) are identified by the NBU itself as the main risks for the banking system. The situation requires from the banks a balanced assessment of the financial condition of debtors, as well as the successful use of credit holidays and loan restructuring instruments. Accordingly, deterioration in loan portfolio quality and lower income may result in increased profitability risks. As shown in Figure 3, the banking sector suffered a loss in the first three months of 2022 for the first time since 2017 ("NBU - on the financial state of the banking system during the war", 2022).

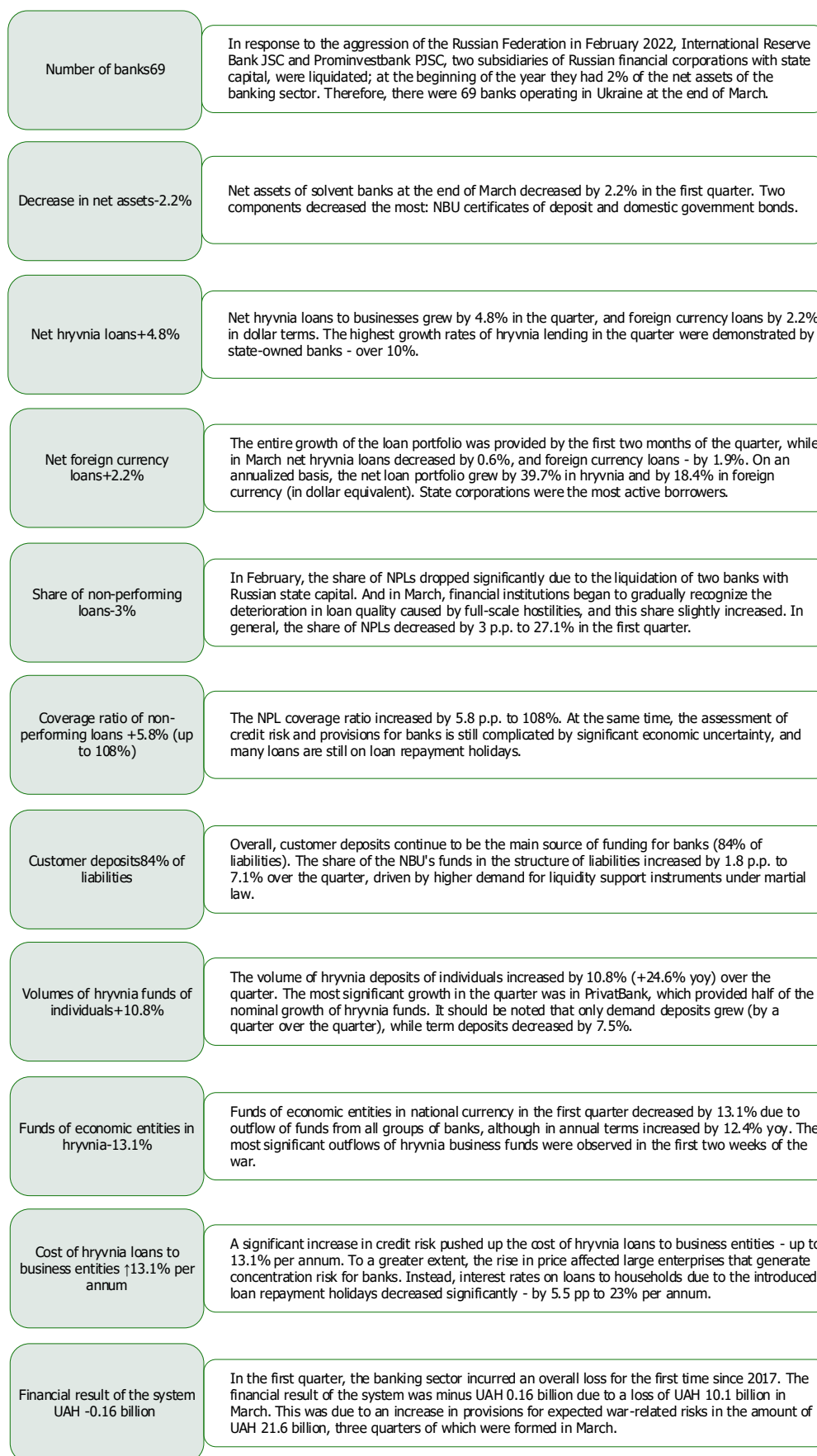


Figure 3. Changes in key banking system indicators for the first quarter of 2022. (Source: "NBU - on the financial state of the banking system during the war", 2022)

Figure 4 shows the trend of loans granted by deposit corporations (banks and others, except the NBU). In the first quarter of 2022, a slight increase in the trend can be noted, but there was no sharp jump. Loans were most often attracted by state corporations.

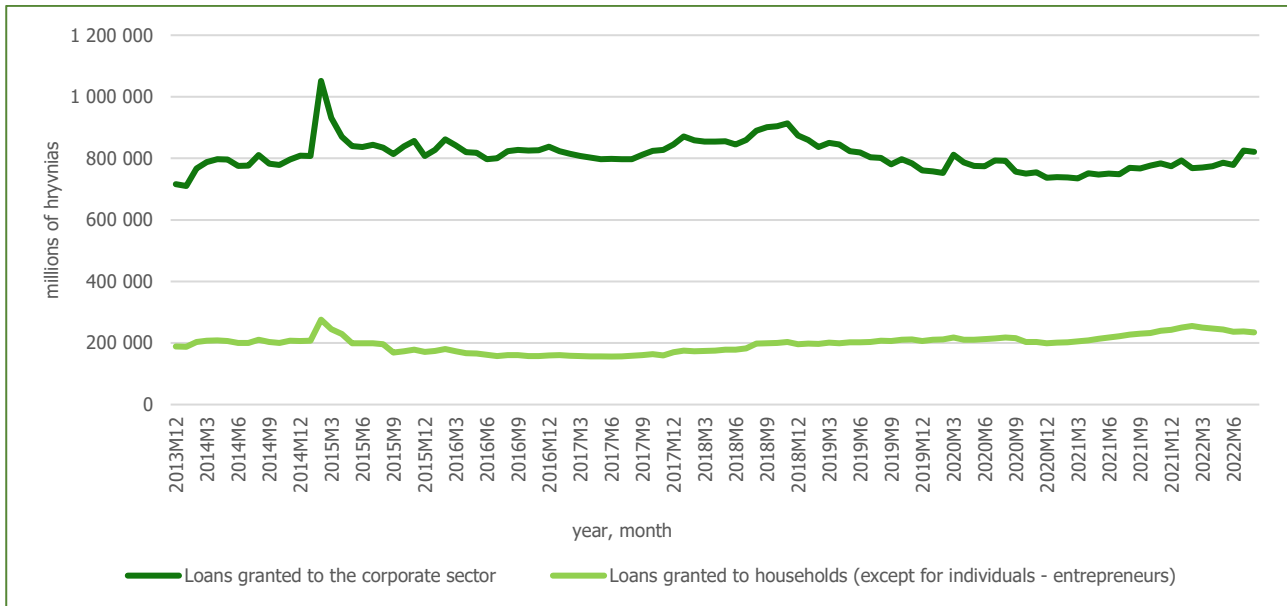


Figure 4. Loans granted to residents by deposit corporations (except for the National Bank of Ukraine). (Source: National Bank of Ukraine, 2022)

Figure 5 shows deposits attracted to customer accounts. As can be seen from the figure, there were no significant outflows of funds in the first quarter of 2022, which helped financial institutions to maintain operational efficiency and almost not increase deposit rates. Going forward, financial institutions will need to adapt their business models to function in a downturn. Future changes in the funding structure may pose interest rate risks ("NBU - on the financial state of the banking system during the war", 2022).



Figure 5. Deposits attracted to residents' accounts. (Source: National Bank of Ukraine, 2022)

The deterioration in profitability discussed above due to the deterioration in the quality of the loan portfolio is shown in Figure 6. The losses are mainly explained by a significant increase in provisions for expected risks due to the war. Further growth of profitability risk may be associated with an increase in the share of non-performing loans and a decrease in the income of financial institutions, as well as other risks (Table 1).



Figure 6. Dynamics of retained earnings of depository companies. (Source: National Bank of Ukraine, 2022)

Currency risk is also one of the most significant risks. Stabilization of the currency market required the introduction of various restrictions by the NBU. Since May, the limits of banks' foreign currency positions have been reduced from 15 to 5 percent ("NBU - about the financial state of the banking system during the war", 2022). Already in June, as mentioned above, the NBU discount rate was changed from 10 to 25 percent. These and other measures are intended to reduce sensitivity to foreign exchange risk.

Figure 7 shows the development of the USD exchange rate since 2013. As can be seen on the chart, since June 2022, after a sharp jump, the hryvnia exchange rate against the dollar has somewhat stabilized. In mid-October 2022, the hryvnia to the dollar exchange rate is 36.95 UAH/USD. USD. However, the Government expects that the dollar exchange rate in 2023 will reach 42 UAH/USD. USD, and by the end of 2023 may rise to 49 UAH/USD. USD (Guiwang, 2022).

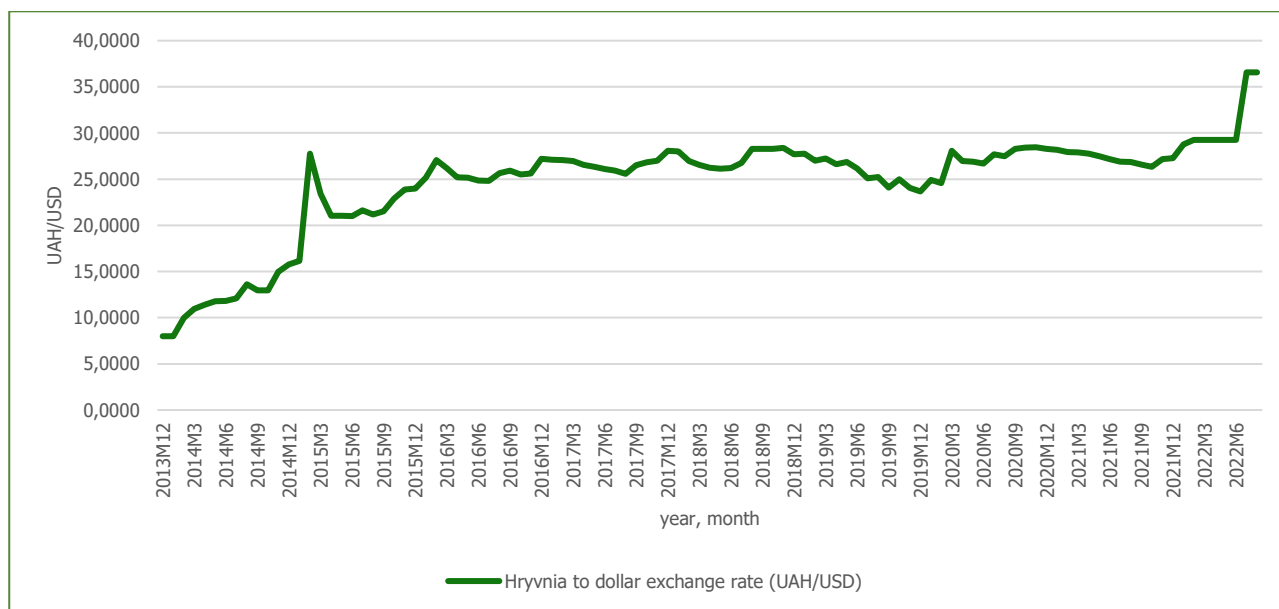


Figure 7. Hryvnia to dollar exchange rate for the period from 2013 to 2022. (Source: National Bank of Ukraine, 2022)

The analysis shows that the risks to the functioning of the Ukrainian banking system identified in the first stage of the study significantly affected its performance in the first half of 2022. However, timely steps by banks and the NBU helped to reduce the manifestations of such risks. Given the uncertainty about the further development of the military conflict,

banks, and the NBU should continue to closely monitor the situation, develop effective measures to minimize risks, and plan responses to possible future challenges.

Key indicators of financial stability of the banking system

There are twelve core and fourteen recommended FSIs for depository institutions (International Monetary Fund, 2007). They include:

- regulatory capital to risk-weighted assets ratio;
- tier 1 regulatory capital to risk-weighted assets ratio;
- the ratio of non-performing loans excluding provisions to capital;
- the ratio of non-performing loans to total gross loans;
- the ratio of loans by economic sectors to gross loans;
- rate of return on assets;
- rate of return on equity;
- interest margin to gross income ratio;
- the ratio of non-interest expenses to gross income;
- the ratio of liquid assets to total assets;
- the ratio of liquid assets to short-term liabilities;

the ratio of a net open position in foreign currency to capital (National Bank of Ukraine, 2022).

The dynamics of these indicators is shown in Figures 8 and 9. The indicator "Ratio of loans by sector of the economy to total gross loans" is presented separately in Figure 9, as it contains several indicators by sector of the economy.

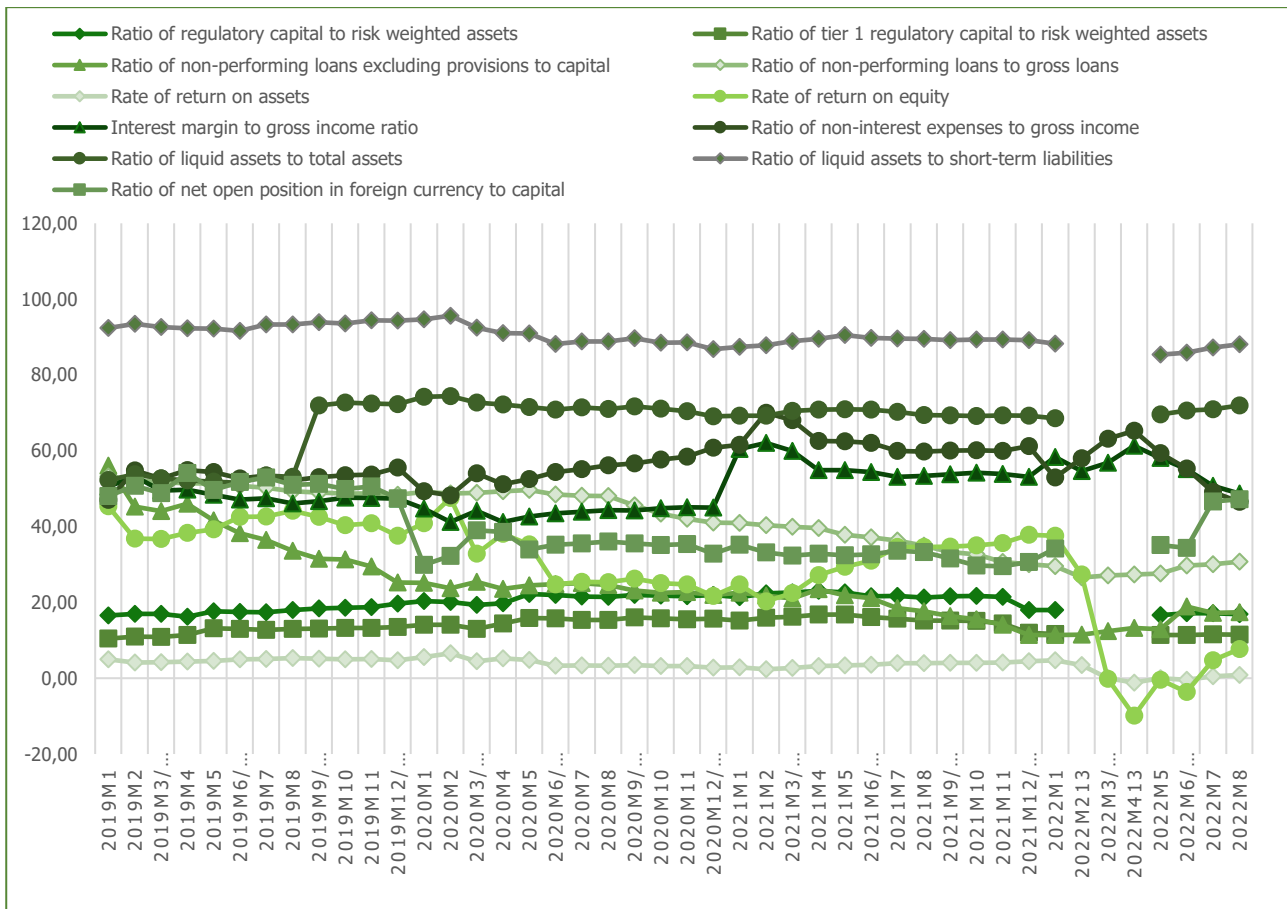


Figure 8. Key Financial Soundness Indicators (FSIs) of depository corporations (except for the ratio of loans by sector to total gross loans). (Source: National Bank of Ukraine, 2022)

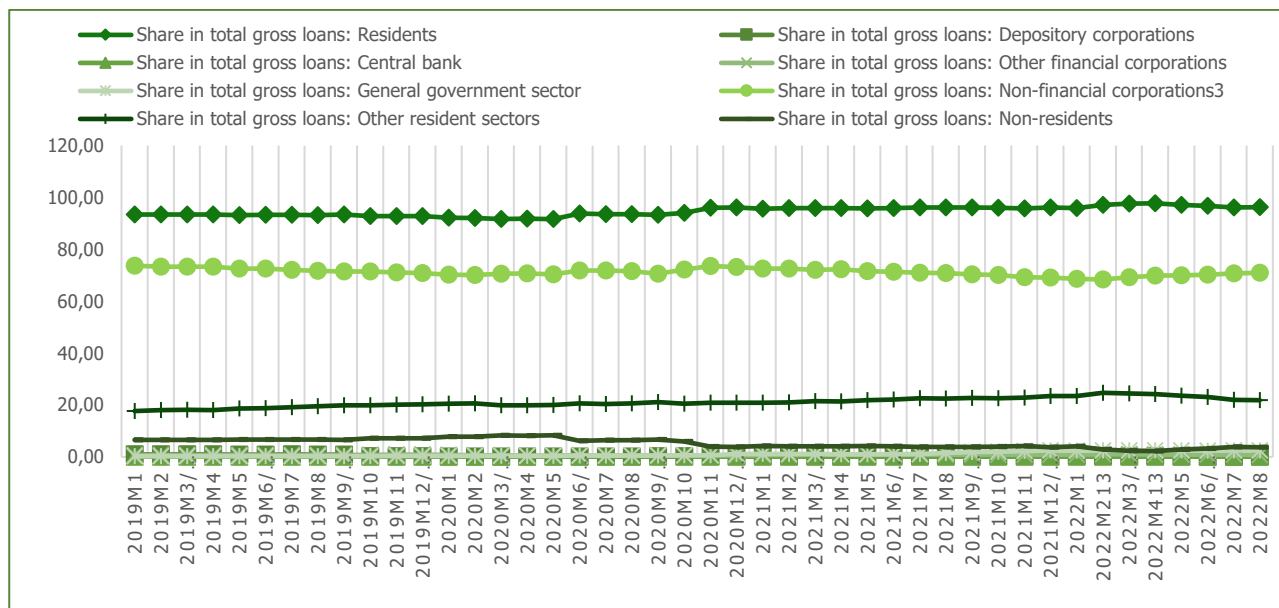


Figure 9. The ratio of loans by economic sectors to total gross loans. (Source: National Bank of Ukraine, 2022)

Analyzing the dynamics of the indicators in Figures 8 and 9, we can identify particularly notable changes in the following indicators: the ratio of non-performing loans to total gross loans (NPL/TPA); rate of return on assets (ROA); rate of return on equity (ROE); the ratio of interest margin to gross income (IR/GI); the ratio of noninterest expense to gross income (NI/GI). Regarding the NC/SGC, we can see that immediately after the invasion there was a decline in the indicator, caused by the liquidation of two banks with the Russian state capital. However, already in March, financial institutions began to note the deterioration of credit quality caused by the invasion, and the NFP/IRR increased slightly. The increase in banks' reserves is the main factor that caused the noticeable fall in NPAs and NPAs. The PM/IR showed an increase after the invasion, which can be attributed to an increase in interest rates on loans to business entities by banks. However, later on, this indicator began to decrease along with the rates of profit. A similar trend is followed by the NV/VD. The detailed content and method of calculation of the selected indicators in the indicators of financial stability. The formation guide" is given below.

Return on Equity - this IFS is designed to assess the efficiency of depository institutions in the use of their capital. When considered over time, it can also provide information on the long-term sustainability of the capital position of deposit-taking institutions. This ratio should be interpreted in conjunction with the capital adequacy FSI, as a high ratio may indicate high profitability and/or low capitalization, while a low ratio may indicate low profitability and/or high capitalization. The return on equity ratio is calculated by dividing net income (gross income minus gross expenses) by the average cost of capital for the same period. The denominator can be calculated at least as an average of the beginning and end of period positions (e.g., the beginning and end of the month), but compilers are advised to use the most frequent observations available to calculate the average.

Rate of return on assets (ratio of net income to average total assets) - this indicator is designed to be an indicator of the efficiency of depository institutions in the use of their assets. It can be interpreted together with the above-mentioned IFS on the rate of return on equity. The rate of return on assets is calculated as the ratio of net income to the average value of total assets for the period. The denominator can be calculated at least as an average of the beginning and end of period positions (e.g., beginning and end of the month), but compilers are encouraged to use the most frequent observations available to calculate the average.

The ratio of non-performing loans to total gross loans - this FSI is designed to identify asset quality problems in the loan portfolio. An increase in the ratio may indicate deterioration in the quality of the loan portfolio, although this indicator is usually a retrospective indicator, as non-performing loans appear when there are problems with their servicing. For this ratio to be meaningful, it is important to ensure that NPLs are properly recorded. This indicator can be considered in parallel with the non-financial corporations' sector, as the value of this ratio may well reflect, in particular, the deterioration of the financial condition of non-financial corporations. This IFS is calculated using the value of non-performing loans as the numerator and the total value of the loan portfolio (including non-performing loans and before special provisions for loan losses) as the denominator.

Interest Margin to Gross Income Ratio - This IFS is a measure of the relative share of net interest income - interest received less interest expense - in gross income. The value of this ratio can be affected by the ratio of capital to assets of depository institutions: with asset levels, higher capital levels result in lower borrowing needs, reduced interest expense, and increased net interest income. This IFS is calculated using net interest income as the numerator and gross income as the denominator.

The ratio of non-interest expense to gross income - This IFS measures the amount of administrative expenses on gross income (interest income plus non-interest income). This IFS is calculated using non-interest expenses as the numerator and gross income as the denominator (International Monetary Fund, 2007).

Judging from this analysis, it can be noted that the financial soundness of banks has experienced and continues to experience significant upheaval. The importance of uninterrupted functioning of the banking sector for the economy necessitates the search for the most effective ways to stabilize the situation, both in the short-term and long-term perspective. Analyzing the above, such methods include:

- the application by banks and the NBU of urgent and adequate measures to ensure the smooth operation of financial institutions and the electronic payment system;
- monitoring the risks and timely application of appropriate preventive measures;
- the competent use by banks of such instruments as loan vacations and restructuring of loans
- a balanced assessment of the financial situation of debtors;
- review and timely adjustment of banks interest rates on credits and deposits;
- revision and adjustment of the NBU discount rate;
- application of measures to ensure cybersecurity;
- digitalization of operations.

DISCUSSION

The conclusions obtained in the article are supported and supplemented by the results of research by Ukrainian and foreign scientists. Of particular interest are their views on ways to stabilize the situation in the banking sector. Therefore, it is advisable to focus on the comparison of the results of the author's and other scientists' research concerning the measures of risk minimization and other stabilization actions.

The author's article notes that thanks to timely steps taken by banks and the NBU, the first months of the war avoided significant financial losses. Such steps included ensuring the smooth functioning of financial institutions and the electronic payment system. On this issue, Druhov and Druhova (2022) reveal exactly what measures were taken by the NBU. The researchers note that the National Bank promptly adopted a resolution in connection with the declaration of martial law throughout Ukraine, which, in particular, provides:

banks ensure the operation of branches in an uninterrupted mode in the absence of a threat to the life and health of the population;

- the banks shall continue to operate with an account of restrictions established by this resolution;
- access to safe deposit boxes shall be provided in uninterrupted mode;
- non-cash payment without restrictions;
- ATMs cash out without restrictions;
- The NBU confirms cash turnover without restrictions.

The measures taken helped to prevent the most unfavorable scenarios. However, in a situation such as a military invasion into Ukraine, it was impossible to avoid losses, negative consequences, and significant problems for the banking system. The list of problems in the banking industry given in this article echoes the list given by Prokopenko et al. (2022). The following identified problems are common: labor shortages, the threat of cyber-attacks, exceeding cash balance limits, and losses for pre-loans. Adding to the author's study are the following factors: seizure of bank accounts and payment hang-ups. In addition to the problems of the banking industry, the researcher proposes a number of measures to solve them: ensuring the stable functioning of the system, the development of risk management, digitalization, non-cash settlements, electronic payment system, and international financial support. In general, the author's article considered similar

measures to overcome problems to a greater or lesser extent, except for the analysis of the aspects of international support. Therefore, it is the study of this side of the topic that can be devoted to the direction of further research.

The study by Shkolnik et al. (2022) pays the most attention to the security of the financial sector based on the bank-centric model of the financial system of Ukraine. Debt security has the greatest impact on the integral indicator of economic security at the level of 37%. In second place is the security of the financial sector at 25%. In third place is digitalization with an impact at level of 22%, followed by budget security, which affects economic security at the level of 15%. In last place is the stock market, the influence of which is even 1%. The results of the study of scientists confirmed that digitalization allowed to maintain the reliable functioning of the banking system in conditions of active hostilities in Ukraine and maintain a minimum standard of living for the population.

Attention to the digitalization of the banking sphere is given by many studies by scientists. In particular, Sheludko and Bratkovich (2019) noted several years before the full-scale invasion that in order to maintain strategic competitiveness in a systemic FinTech-sector development, the necessary precondition for the normal functioning of the Ukrainian banking sector is the continuous introduction of the latest technologies and processes in accordance with the overall digitalization of the economy. Romdhane (2021) investigates the impact of digitalization on the banking sector during the COVID-19 epidemic and in the post-quarantine period. The scholar's work demonstrates, on the one hand, that the crisis confirms the need for banks to combine physical interaction and digital offerings, and on the other hand, that digitalization could be a solution for banks to consistently reduce risk. Through digital transformation, banks could protect themselves from potential similar crises, the researcher notes. By adopting a more digitized and open behavior, banks would be protected from such crises because they would have appropriate strategic plans, be better prepared to deal with threats, and be better prepared to transform them into opportunities. From this, we can summarize that the COVID-19 epidemic, beyond its large-scale tragic consequences, has allowed the banking industry to prepare for the coming shocks in a certain way. The main effect is the introduction of digitalization measures, which were necessary because of the need to limit physical contact between people. Today, such measures facilitate access to banking resources and services from anywhere in the world, even under conditions of martial law in the country.

Thus, it can be noted that the views of author of this article and many other scholars agree that digitalization is one of the main factors that helped prevent significant losses to the banking system. Other factors are the timely and adequate actions of banks and the NBU during the first days of the war. The subsequent situation in the banking sector depends, in addition to unpredictable actions by the aggressor, on careful monitoring of the situation by the NBU, the competent application of appropriate tools by it and the banks, as well as international support for Ukraine.

CONCLUSIONS

The article's analysis leads to the following key conclusions. The full-scale invasion of Ukraine led to a decline in all sectors of the economy. However, the banking industry made it through the first months of the war with moderate losses. This was possible due to the timely actions of banks and the NBU to support the uninterrupted functioning of financial institutions and electronic payment systems. In addition, the digitalization of the banking system, as well as international support, had a positive impact.

However, it would be an exaggeration to claim that the banking sector is functioning normally in the current environment. Although the worst-case scenarios did not materialize, the war caused significant damage and led to a marked deterioration in the performance of the banking sector. The following risks increased the most: macroeconomic risk, corporate credit risk, profitability risk, and foreign exchange risk. The ratio of non-performing loans to total gross loans, rate of return on assets, rate of return on equity, ratio of interest margin to gross income, and the ratio of non-interest expenses to gross income deteriorated.

The further situation in the banking sector of the country requires careful monitoring and timely preventive measures. It is advisable to conduct a detailed analysis of international support for the Ukrainian banking sector in subsequent studies

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ДИЛЕМИ ТА ШЛЯХИ ВИРІШЕННЯ ФУНКЦІОНУВАННЯ БАНКІВСЬКОЇ СИСТЕМИ УКРАЇНИ В УМОВАХ ВОЄННОГО СТАНУ

Воєнне вторгнення в Україну, окрім людських утрат та руйнування інфраструктури, спричинило значний спад в усіх галузях економіки країни. Зокрема постраждала й банківська галузь, хоча відносно неї не були реалізовані найгірші сценарії розвитку подій завдяки ефективній роботі банків та НБУ. Незважаючи на це, галузь зазнала втрат та проблем, що мають і миттєвий, і пролонгований у часі ефект. Ці проблеми потребують постійного моніторингу та пошуку шляхів стабілізації, що обумовлює актуальність обраної теми дослідження. Метою статті є визначення проблем банківської сфери України, що були згенеровані в результаті повномасштабного воєнного вторгнення на територію країни, аналіз тенденцій показників галузі, а також пропозиція заходів зі стабілізації ситуації. У ході проведення дослідження було застосовано такі наукові методи: аналіз та синтез, економіко-статистичний метод, метод установа-лення причинно-наслідкових зв'язків, графічні методи. У результаті проведеного дослідження було охарактеризовано основні ризики, згенеровані воєнним вторгненням для банківської системи, а також відзначено їх зміни порівняно з довоєнним періодом. Окреслено основні проблеми, пов'язані з наслідками вторгнення для банківського сектора. Проаналізовано зміну ключових статистичних показників банків, а також зміну індикаторів їхньої фінансо-

вої стійкості. Визначено ряд заходів, що можуть сприяти стабілізації ситуації в секторі. Основним висновком із проведеного дослідження є підтвердження необхідності подальшого моніторингу ситуації в банківському секторі України та застосування превентивних заходів для мінімізації можливих ризиків.

Ключові слова: банківська система України, Національний банк України, комерційні банки, воєнне вторгнення, облікова ставка НБУ, депозити, кредити, процентні ставки, індикатори фінансової стійкості, цифровізація, ризики

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