

DOI: <https://doi.org/10.15407/ingedu2023.56.189>
УДК 336(477):341.38
JEL: E58, E65, F35, G28

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FUNCTIONING OF THE BANKING SYSTEM OF UKRAINE DURING THE WAR

The purpose of this article is to outline the financial situation in Ukraine during the ongoing war with Russia and to show the actions of the National Bank of Ukraine to preserve and ensure financial stability in emergency conditions. The article indicates the impact of the war on the financial state of the economy and the banking sector. The state of the Ukrainian economy, including the banking sector, as the basis of the financial system, is characterized. Threats and challenges, and the risks inherent in the activities of financial service providers – banks are indicated, with attention focused on credit risk. Changes in bank balance sheets in terms of assets and liabilities in foreign currency in recent years (2018–2022) are considered, and the main reasons for the deterioration of the quality of the loan portfolio and the reasons for the reduction of the loan portfolio are noted. An analysis of non-performing assets of banks and the reasons for their increase is carried out. The reports of the National Bank of Ukraine and the State Statistics Service of Ukraine were used for the analysis.

The following priority directions of NBU's activities for 2023 have been identified: credit risk and liquidity risk management; capital; and maintaining business models and internal management, including ensuring the continuity of operation of bank branches under martial law. The need for global efforts to restore Ukraine's economy and financial system after the end of the war is substantiated.

Keywords: National Bank of Ukraine, financial system, economy, credit risk, non-performing assets (NPL), loan portfolio.

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ISSN 0320-4421. Істор. нар. gospod. ekon. dumki Ukr. 2023, 56

ФУНКЦІОНУВАННЯ БАНКІВСЬКОЇ СИСТЕМИ УКРАЇНИ ПІД ЧАС ВІЙНИ

Метою цієї статті є окреслити фінансове становище України під час триваючої війни з Росією і показати дії Національного банку України щодо збереження та забезпечення фінансової стійкості в надзвичайних умовах. В статті зазначено вплив війни на фінансовий стан економіки і банківського сектору. Охарактеризовано стан української економіки, а також банківського сектору, як основи фінансової системи. Вказано на загрози і виклики, ризики, притаманні діяльності надавачам фінансових послуг – банкам, акцентовано увагу на кредитному ризику. Розглянуто зміни в банківських балансах в частині активів і пасивів в іноземній валюті за останні роки (2018–2022), зазначено основні причини погіршення якості кредитного портфелю та причини зменшення кредитного портфеля. Здійснено аналіз непрацюючих активів банків та причини їх збільшення. Для проведення аналізу використано звіти Національного банку України та Державної служби статистики України.

Визначені такі пріоритетні напрями діяльності НБУ на 2023 рік: управління кредитним ризиком та ризиком ліквідності; капітал; підтримання бізнес-моделей та внутрішнього управління, у тому числі забезпечення безперервності роботи банківських відділень в умовах воєнного стану. Обґрунтована необхідність глобальних зусиль для відновлення економіки та фінансової системи України після закінчення війни.

Ключові слова: Національний банк України, фінансова система, економіка, кредитний ризик, непрацюючі активи (NPL), кредитний портфель.

Throughout 2022, the ongoing Russian-Ukrainian war had a negative impact on the Ukrainian economy. However, thanks to exceptional monetary, fiscal, regulatory and supervisory measures, as well as sound capital and liquidity positions, the banking sector has played a key role in the overall response to the situation. Banks supported Ukraine's real economy by providing loans and satisfying the liquidity needs of households and non-financial enterprises. In the

last months of 2022 and in the first months of 2023, the overall risk structure has changed significantly. In particular, there was a high level of risk and uncertainty, which complicated the functioning of the financial sector, but macro-financial stability was and continues to be supported by significant international financial assistance.

Under the circumstances of martial law and acting in accordance with its mandate, the NBU identified, assessed and monitored existing and new types of risk and sources of vulnerability in the financial sector. The NBU tried to adjust and prioritize its supervisory activities in order to ensure, if necessary, an operative change of resources in accordance with the existing risk.

The NBU, in close cooperation with the competent national authorities, recorded and assessed the greatest challenges expected to affect the supervised institutions. In its assessment, the NBU indicated the main risks from the point of view of the banking sector and its susceptibility to threats and adverse phenomena.

The Russia-Ukraine war constitutes the main factor of risk, threats and adverse phenomena, having led to an unprecedented decline in economic activity in Ukraine in 2022. The Ukrainian economy shrank by over 30% in 2022, with the annual inflation rate amounting to 26.6% [3]. Economic activity in 2023 is projected to remain below the level of the previous year, and the pace of the recovery will be uneven. In 2023, the Ukrainian economy may grow by about 0.3%, and the inflation rate is projected to fall to 18.7% [8]. Continuation of the war increases uncertainty about the economic outlook and leads to the inhibition of long-term economic growth and development, at least until the peace is secured. The extent to which projected levels of economic activity and inflation are at risk depends very much on how the war unfolds, and in particular on its impact on energy markets.

An important factor weakening the pace of recovery is the increase in geopolitical tensions related to the sanctions imposed on Russia and Belarus by the EU, the USA and other countries. The renewed intensification of trade conflicts has a negative impact. Also important is the increase in tensions of the financial markets, the growth in commodity prices and uncertainty in the economy, which is manifested by a slowdown in economic growth and rising inflation. Geopolitical tensions exert a negative impact on the growth outlook and will therefore pose a threat to key macroeconomic and financial indicators.

1. Stability of the Ukrainian financial system during the war

The stability of the financial system is understood as a state in which the financial system performs its functions in a continuous and effective manner, even in the event of unexpected and unfavorable disturbances on a significant scale. Ukraine's financial system has survived the hardest challenges of the first year of aggression, performing its functions and effectively coping with the challenges posed by the Russian-Ukrainian war.

The National Bank of Ukraine is jointly responsible for the stability and development of the Ukrainian financial system. The NBU was granted such a mandate in 2015 [5], when the function of promoting financial stability was established (as the second priority after maintaining price stability). The NBU actively participates in the construction of the financial safety net in Ukraine and in the work of the Financial Stability Committee for macroprudential supervision and crisis management. The President of the NBU is a member of the Financial Stability Committee, alongside the Minister of Finance, the president of the National Securities and Exchange Commission, and the president of the Management Board of the Bank Guarantee Fund. (Regulations on the Financial, 2015) The Financial Stability Committee acts as a macro-prudential authority and is responsible for crisis management in the financial system.

The NBU takes measures to maintain the stability of the financial system and to minimize the impact of the war. This involves, on the one hand, applying solutions aimed at the financial institutions themselves, and on the other hand, taking measures to facilitate the situation of Ukrainian banks' customers and prevent panic, which would be extremely dangerous, even in calmer periods than during the war. The first thing the NBU performs qualitative analyses and informs about identified threats. The dissemination of this type of knowledge is intended to help maintain financial stability and identify the level and scope of risk in the financial system.

The restrictive monetary policy measures applied by the NBU contributed to the stability of the financial system during the first year of the war. The most important activities of the NBU in this direction were, in particular, setting interest rates at a constant level of 25 percent, fixing the exchange rate of the hryvnia, and introducing restrictions on the functioning of the banking system and the currency market. Foreign aid played a key role in maintaining the stability of

Ukraine's financial system in the face of the economic collapse caused by the war.

The NBU Report for 2022 presents the results of the financial situation of the banking sector and the sector of non-bank financial institutions, which deteriorated in the analyzed period. Basing a synthetic assessment of the stability of the domestic financial system on NBU research, it should be noted that the outlook for the system's stability in 2023 will deteriorate.

Among the risk factors affecting the stability of the financial system, macroeconomic risk and financing risk should be distinguished. The interdependence between the deterioration of the financial conditions and the weakening of economic activity, which increases the risk of these processes taking place, would adversely affect the stability of the financial system in Ukraine. This situation has led to higher funding risks and increased costs of credit risk in the banking sector. In addition, turmoil in the global financial markets has a negative impact on Ukraine's GDP, which will lead to a deterioration in the quality of loans. Moreover, the economic slowdown will affect credit losses in the portfolio of unsecured loans, as the share of loans with a high ratio of loan-to-value of collateral is significant in the Ukrainian banking system.

The increase in uncertainty as to the scope and scale of durability of disruptions in the functioning of the world economy caused by Russia's armed aggression against Ukraine is the main external factor affecting the conditions of operation of the Ukrainian financial system.

2. The economic situation of Ukraine

The Ukrainian economy entered 2022 with a high pace of economic development, having ended 2021 with an all-time high GDP of \$195 billion, an increase in consumer spending and a progressive rebuilding of inventories. The economy was gaining momentum, which was also manifested in a not excessively high unemployment rate of 10.3% and an increase in wages by 37.6% compared to 2020. In 2022, inflation was one of the biggest economic challenges. After a period of relatively low level (in 2020 – 5%, in 2021 – 10%), at the end of 2022 it approached 26.6% [3]. In this period, measures were also taken in the field of monetary and fiscal policy aimed at reducing

the pace of further growth in the prices of consumer goods and services. These efforts must continue in 2023.

The aggregate state debt is one of the most important indicators that confirms the state of the state's economy. From the point of view of economic security, the main place in the structure of public debt management is given to foreign debt. As of December 31, 2022, it amounted to UAH 2,671,828 million (external debt – UAH 1,560,230.0 million or internal debt – UAH 1,111,597.6 million). During the first year of the war, there was a significant increase in the foreign debt by 14,202 million dollars. USD or 24.8% and amounted to 71,399 million USD or 54.1% of the total national debt.

At the same time, it is worth noting that the total public debt of Ukraine during the period of martial law increased by 52.4% and amounted to UAH 4,071,683.1 million as of December 31, 2022 (external debt – UAH 2,610,945.6 million, external debt and domestic debt – UAH 1,460,737.5 million). The share of the total public debt of Ukraine in GDP increased by 30%, and was 78.4% as of December 31, 2022, and 48.9% as of December 31, 2021. Military spending as a share of GDP rose to 34% of GDP in 2022, up from 3.2% in 2021 [3].

It should also be noted that the drop in real GDP of Ukraine in 2022 reached 29.2%, and the drop in industry – 38%.

Before the war broke out, solid long-term growth was forecasted for the Ukrainian economy. However, as soon as Ukraine's economy had started its recovery from the pandemic, the Russian invasion brought new challenges. Forecasts of economic decline in Ukraine in 2022 were inflated. However, the projected decline in GDP dynamics as a result of the economic slowdown and the ongoing war was much smaller (30.4%) than the historically assumed level of over 35%. Also, the NBU macroeconomic projections formulated in December 2022 point out to economic growth being expected in 2023 compared to a decline in 2022, despite the fact that public debt and budget deficit in relation to GDP remain at a high level. Large-scale shelling of energy infrastructure has also worsened the macroeconomic outlook. This had an impact on the stability of the financial system in Ukraine and will certainly affect the profitability of financial institutions, moreover, there is still significant uncertainty about the nature of the economic situation, especially in countries that are Ukraine's trading partners.

For this reason, the deterioration of the economic growth outlook and the persisting debt crisis in Ukraine indicate that the risk of materialization of a threat to the stability of the financial system has increased. There is no doubt that the current war in Ukraine constitutes a serious challenge for the entire economy and economic policy. Even when the war is over, Ukraine may be perceived for a certain period of time as an unstable and high-risk country, even if this perception is not reflected in reality. The destruction caused by the war will also encourage a permanent increase in the number of people leaving Ukraine. These extraordinary circumstances make it extremely difficult to assess Ukraine's macroeconomic situation in the coming months. Current economic development may be distorted much more strongly.

The war continues, the cost of damages and losses from Russian aggression has already reached record levels, and the fall in real GDP in Ukraine is deeper than in most countries that have experienced armed conflicts. At the same time, Ukraine managed to maintain macro-financial stability and attract significant amounts of international aid, which will have a positive impact on post-war recovery prospects.

An indicator such as inflation also tells about the state of the economy in the country. In December 2022, consumer inflation in annual terms was 26.6%, according to the forecast of 30%, it is worth noting that the Ukrainian economy has successfully adapted to functioning in war conditions. In December 2021, the inflation rate was 10%, in the first year of the war, the inflation rate increased by 16.6%. The main factors that led to the growth of inflation in Ukraine in 2022 include: infrastructure damage, a drop in demand and supply, and pressure on the national currency.

Despite the war and high world inflation, the actual rates of price growth in Ukraine remain under control, and inflationary pressure has stabilized. It was possible to ensure relatively moderate inflation dynamics thanks to the anti-crisis measures of the NBU and the Government with the support of international partners and, of course, the successful actions of the Ukrainian army, which not only stopped the Russian offensive, but also liberated Ukrainian lands.

The war and the resulting changes in economic conditions (sanctions, changes in exchange rates, demand for necessities) make this challenge much more difficult. Regardless of the introduced solutions, inflation can be expected to increase further and

stabilize at a high level throughout 2023. This will pose a challenge not only for the entire economy, but also for banks operating in Ukraine. The decline in the interest in investment activity in the conditions of war will constitute a barrier to lending activity in most economic areas. Controlling inflation will become the most important problem from the perspective of creating conditions for further economic development of the country.

War and the resulting changes in economic conditions (sanctions, changes in exchange rates, demand for necessities) significantly hinder this challenge.

According to the latest System Stability Report – the financial report published periodically by the National Bank of Ukraine, the increase in uncertainty related to the scope, scale and duration of disturbances in the functioning of the global economy, caused by Russia's armed aggression against Ukraine, constitutes the main external factor affecting the situation of the Ukrainian financial system [7].

The outlook for the situation of the Ukrainian economy has changed significantly, as the Russian invasion dealt an unprecedented blow. This will have an impact on the functioning of the Ukrainian financial system. It should be noted, however, that in 2023 the growth rate of the Ukrainian economy may slow down more than forecasts in 2023, as the ongoing war has worsened the prospects for a post-pandemic recovery both in the country and across Europe.

The Ukrainian economy proved able to quickly adapt to difficult war conditions. However, the challenges of reconstruction will be enormous, from building physical infrastructure, mainly energy, to the functioning of institutions in the face of a potentially significant inflow of aid funds. An important driving factor for the country's economic reconstruction after the war will be foreign investments, as well as the mechanism of Ukraine's integration with the EU single market.

3. Banking system under martial law

The indicators measuring the condition of the Ukrainian banking sector, analyzed at the end of 2022, pointed out to a good condition of banks. Equity in capital, the rate of growth of lending (especially at the end of the year) and the positive financial result serves as a basis for the statements that the situation of the Ukrainian banking sector is stable.

Banks continued to renew their outlets in the liberated regions and to regain customer confidence. A significant part of the banks in Ukraine recorded an increase in funds from customers, especially in the form of households term deposits. The growth rate of foreign currency deposits is also increasing. The loan portfolio shrank as a result of both falling demand and rising credit risk losses. The share of non-performing loans increased. Despite significant write-downs, the banking sector posted an annual profit.

According to the information provided in the NBU [7], despite the increase in allocations for provisions, the banking system generated UAH 24.7 billion in profit, i.e. more than three times less than in 2021, including UAH 17.3 billion – in Q4. Of course, there are banks that have suffered losses and banks which record profits. Over 20 banks suffered losses, including 2 state-owned banks of Ukraine (Ukreksimbank – losses of UAH 6.88 billion and Ukrgasbank – losses of UAH 2.76 billion). In turn, in the private sector with foreign capital, Sense Bank (Alfa-bank) with Russian capital suffered the greatest losses. PrivatBank, Ukraine's largest state-owned bank, recorded a profit of over 30 billion, and UKRSIBBAN with foreign capital – 3.53 billion UAH.

In 2022, banks put more emphasis on the increase in fee and commission income, as attacks on energy infrastructure had a moderate impact on the dynamics of commission income. Revenues from foreign exchange operations supported the growth in operating revenues. The banking system survived and quickly adapted to work in the conditions of war, is operationally stable, liquid and profitable [12].

As for profitability, after the decline that occurred in 2022, in 2023, banks expect moderate growth, although not a very strong one. However, these forecasts are burdened with the risk related to the further course of the war and its adverse economic consequences. This situation fuels pressure on banks to eliminate existing vulnerabilities and adapt business models to the conditions and challenges of war.

The stability of the banking system was preserved thanks to: the reforms carried out in previous years, the efforts of the banks themselves, timely actions, and the support of the National Bank of Ukraine.

Although the war in Ukraine is not able to shake the foundations of the Ukrainian banking sector, it may amplify existing tensions or

weaknesses in the banking system. First of all, the greatest threat to the stability of the banking sector is the occurrence of many shocks over the last year, lead to losses in the banking system and negatively affecting the long-term ability of banks to generate profits.

Working conditions for financial institutions remain difficult: the war drags on and Russia continues to use terror tactics and destroy civilian infrastructure. Despite this, the financial sector operates efficiently: payments are made on time and customers have free access to their own funds. However, the consequences of large-scale shelling reduce the growth rate of demand for banking services and cause additional credit losses and operational losses for banks. Public confidence in banks is stable and remains at a relatively stable level.

4. Changes in the structure of the bank balance sheet

When assessing the lending policy of commercial banks, it is worth noting that the growth rate of consumer loans and car loans at the end of December 2022 was negative (above – 30%), and that the amounts of these loans were successively decreasing. This trend was noticeable from the beginning of the war. The reason for the reduction of the loan portfolio is the awareness of credit risk and the small number of new loans that do not compensate for the amount of currently repaid ones. The volume of unsecured consumer loans is falling sharply, primarily as a result of the tightening of banks' lending policies resulting from a significant deterioration in the quality of loans granted under a lenient lending policy and (which is related to) high impairment losses. Commercial banks also decided to change the currency structure of newly granted loans, increasing the share of hryvnia loans, although foreign currency loans still have a significant share in their portfolio, which poses a danger of a credit risk arising from the depreciation of the Ukrainian currency [7].

According to the currency structure of the banking sector's balance sheet in 2018–2022 in Ukraine (Table 1), it follows that in 2018 and 2022 an increase in the value of both foreign currency liabilities and assets was recorded. Foreign currency assets in 2022 amounted to UAH 819 billion and accounted for 30.2% of total assets compared to 28.8% at the end of 2021. Foreign currency liabilities amounted to UAH 657 billion, i.e. 35.1% of total liabilities compared to 32.9% at the end of 2021.

A significant increase in the value of both assets (by 15.7%) and foreign currency liabilities (by 21.3%) in 2022 resulted primarily from the weakening of the hryvnia. The phenomenon of high value of foreign currency loans granted to households is associated with the risk taken by banks and increases the risk in the financial system. It should be underlined that only a small part of households that receive income in foreign currencies is hedged against currency risk.

Table 1

**Currency structure of the banking sector balance sheet
in 2018–2022 (billion UAH)**

Year	2018	2019	2020	2021	2022
Assets					
Total assets	1911	1982	2206	2358	2717
<i>of which in foreign currency</i>	779	718	746	679	819
Net assets	1360	1493	1823	2053	2354
<i>of which in foreign currency</i>	495	492	585	583	731
Gross loans to business entities	919	822	749	796	801
<i>of which in foreign currency</i>	460	381	332	292	281
Net loans to business entities	472	415	432	540	529
Gross loans to natural persons	197	207	200	243	210
<i>of which in foreign currency</i>	61	38	31	21	13
Net loans to natural persons	114	143	149	200	134
Liabilities					
Funds of business (deposits) of which in foreign currency)	430	525	681	800	943
<i>of which in foreign currency</i>	150	191	233	233	317
Funds of individuals (deposits)	508	552	682	727	934
<i>of which in foreign currency</i>	241	238	285	270	340
Change (y/y, %)					
Total assets	3,8%	3,7%	11,3%	6,9%	15,2%
Net assets	1,9%	9,8%	22,1%	12,6%	14,6%
Gross loans to business entities	6,3%	-10,6%	-8,8%	6,2%	0,7%
Gross loans to individuals	15,3%	5,0%	-3,5%	21,6%	-13,5%
Funds of business entities (deposits)	0,8%	22,1%	29,7%	17,4%	17,9%
Funds of individuals (deposits)	6,3%	8,6%	23,5%	6,6%	28,4%

Source: Report Review of the banking sector, (February 2023).

The challenges for banks arising from the war are primarily related to the need to create additional reserves. What is equally important the war also affects the ability of banks to generate revenues, which further weakens the already low level of revenues and profita-

bility. Undoubtedly, interest income will remain under constant pressure. This is partly mitigated by the high volume of loans, however, the potential tightening of credit standards and the expiration of government guarantees entail downside risk for the future. At the same time, revenues from fees and commissions are decreasing due to strong competition. All these factors combined with a parallel strong increase in the level of provisioning resulted in a decline in the rate of return on equity. Further development of the situation depends on how the hostilities will proceed.

5. Credit risk is a challenge for Ukrainian banks

The increase in the value of credit risk and its effective management in Ukrainian banking sector is determined by the deterioration in both the economic and financial situation of a significant number of borrowers and the quality of credit portfolios. The increased importance of credit risk in banks is also related to the heightened exposure to such risks as: market risk of the borrower's activity or operational risk of credit transaction execution. Supervisory prudential standards constitute an important instrument for credit risk management. They define the requirements for capital adequacy, credit concentration, specific provisions as well as for limiting operational risk. In addition to supervisory prudential standards, banks rely, in the process of credit risk management, on internal regulations based on the recommendations of the NBU, e.g. internal concentration limits and monitoring rules. In addition to concentration limits and quantitative and qualitative diversification, syndicated loans, relevant provisions in the loan agreement, the assessment of creditworthiness is also of great importance. In the procedures for assessing this capacity, Ukrainian banks use Western European solutions.

In Ukraine, as in other countries of Central and Eastern Europe, there have been significant changes in banking in recent years. Before the crisis in 2008, the largest increase in assets concerned housing loans, while in the years 2018–2021 an increase in non-purpose cash loans was noticeable. Credit risk entails the risk of loss due to the default of a debtor. Due to the fact that banks have insufficient equity in relation to the value of assets, if a certain part of total loans becomes unpaid, the bank may find itself on the brink of bankruptcy [13]. As scientific research shows, credit risk is by far the most

important of all risk exposures in commercial banks. Over 90 percent of bank failures in the world result from exposure to credit risk.

Therefore, one of the main challenges for the banking sector and the NBU is credit risk. The potential negative impact on banks is further magnified by a clear vulnerability to external threats. In sectors – especially those hit hardest by the war – non-financial companies saw their profits fall sharply as a result of the war, and thus the risk of insolvency increased. At the same time, the labor market situation is likely to deteriorate in case of households related to these sectors, which in turn will be reflected in their ability to pay. These developments are accompanied by a growing risk of a correction in real estate markets. In Ukraine, residential real estate markets have suffered greatly, mortgage lending has almost disappeared, the mortgage market will remain inactive until the end of the war due to high risk, while activity in the commercial real estate sector is already slowly stabilizing.

Credit risk is identified as the risk of an individual borrower and the risk of the entire loan portfolio. Banks try to limit the credit risk on the basis of the probability that the customer will not meet his obligations until the end of the loan agreement by assessing the borrower's creditworthiness and determining the credit rating. In Ukraine the process of assessing the borrower's creditworthiness is very complex because of high share of the shadow economy in the national economy. It is estimated that in 2021 the above-mentioned share amounted to 32% of GDP. At the same time, it should be noted that in certain individual cases the financial statements of companies do not constitute reliable sources of information. In addition to the credit rating, the collateral itself is also very important. The situation with the recovery of collateral in Ukraine is not good, especially during the ongoing war, and the periods of forced debt collection are very long. In relation to the loan portfolio, banks apply various tools and methods for their measurement, assessment and credit risk management. Portfolio diversification serves as one of the most important tools used by individual banks – banks try to diversify their loans to different clients to ensure low interdependence of settlement problems, since diversity reduces the likelihood that more debtors will have problems at the same time.

The economic downturn caused by the war will cause a deterioration in asset quality. It is necessary to pay attention to the financial difficulties experienced by non-financial enterprises and households

due to the war than to the more permanent economic effects resulting from the deterioration of the macroeconomic environment due to the impact of both supply and demand factors. Difficulties with logistics, an increase in the prices of production raw materials, restrictions in trade relations and sanctions have a negative impact on the aggregate supply. On the demand side, rising energy and commodity prices as well as the cost of financing have a negative impact on the real income of households and enterprises. Increased uncertainty caused by the ongoing war is hampering investment and lowering consumer confidence. This lowers the credit ratings of companies and weakens the ability of households to service their debts. In addition, the risk of deterioration of the state's fiscal position as a result of the economic slowdown caused by the war decreases space for intervention in the area of the real economy. Hence, an increase in credit risk and a tightening of lending policy in banks can be expected.

6. Non-performing assets (NPL) are a threat to Ukrainian banks

The Ukrainian banking system in recent years has been characterized by a relatively high interest rate on non-performing loans (NPL) and a slow recovery of collateral. For a number of reasons, the total value of NPL has been declining since 2018 and was one of the reasons for the improvement in the macroeconomic situation, as reflected in GDP growth and increased purchasing power. In recent years, banks have made a significant change in terms of concentration, consisting in the transition from simply granting loans to the construction of appropriate debt recovery centers. Added to this is the strengthening of the market for the purchase and sale of non-performing loans.

Russia's invasion of Ukraine reversed the trend of a gradual reduction in the share of non-performing loans (NPL) in Ukrainian banks, which had been ongoing since 2018: during this time, the amount of NPL decreased by almost UAH 300 billion, and their share in the loan portfolio decreased from 55% to 27% on March 1, 2022. The consequences of the war, i.e. destruction of assets and collateral, loss of income and deterioration of borrowers' solvency, reduce the ability of banks to service loans, deteriorate the quality of their loan portfolios and lead to an increase in write-downs on provisions.

Banks have already recorded significant credit losses – since the beginning of the war, the amount of write-downs for provisions for loans has exceeded UAH 100 billion and constitutes over 12% of the loan portfolio that banks had at the end of February 2022. Potential losses of the loan portfolio due to war, economic crisis and energy terror by the aggressor may be as high as 30%. At the end of 2 – 22 the NPL coverage ratio (the ratio of all loan loss provisions to NPLs) amounted to 95%.

The volume of loans and the share of non-performing assets [13] in the banking sector as at January 1, 2023 amounted to 38% compared to January 1, 2022. The volume of non-performing loans increased during the year by UAH 87 million to UAH 432 billion (Table 2).

Table 2

Loan volume and share of NPL (million UAH)

Assets	Jan 1, 2018	Jan 1, 2019	Jan 1, 2020	Jan 1, 2021	Jan 1, 2022	Jan 1, 2023
Credits:						
Corporate loans	892900	959601	847259	795405	835658	847586
NPL	500263	535770	456074	371157	301665	363321
NPL share,%	56,03	55,83	53,83	46,66	36,10	42,87
Household loans (including SPD loans)	174448	202202	214252	208383	256291	224260
NPL	93353	93086	73077	58230	43210	68272
NPL share,%	53,51	46,04	34,11	27,94	16,86	30,44
Household loans (including SPD loans)	22046	28888	31368	34057	30581	36917
NPL	1372	1073	946	984	256	4
NPL share,%	6,22	3,71	3,02	2,89	0,84	0,01
Credit to the authority of the government	1519	2867	4717	1519	2867	24800
NPL	10	838	683	10	838	507
NPL share,%	0,69	29,22	14,48	0,69	29,22	2,04
Total loans	1090914	1193558	1097595	1049579	1149567	1133563
NPL	594999	630767	530780	430371	345131	432105
NPL share,%	54,54	52,85	48,36	41,00	30,02	38,12

Source: Report Review of the banking sector, (February 2023).

The assessment of assets will continue, so the volume of NPLs will continue to grow. The NBU expects banks to take a balanced approach to credit risk assessment, especially in relation to borrowers who lost their income as a result of the war and are unable to repay their debt. Banks should conduct flexible restructuring in case of borrowers with the prospect of business recovery, as well as appropriately assess the value of collateral, recognizing loss of access to property, its damage or destruction in a timely manner. The NBU plans to carry out an asset quality assessment in 2023 in order to confirm the correctness of the presented quality of the loan portfolio, the adequacy of creating provisions and assess the actual amount of regulatory capital. Based on the results of the assessment, a transitional period for capital increases to the minimum regulatory values will be determined. Most banks will be able to recapitalize with future profits, but many banks will likely need shareholder support.

Summary. An efficiently operating central bank and banking system is the basis for the stability of the state's financial system. During the war, the NBU and the banking sector play an important role in maintaining balance in the financial markets, e.g. by taking quick radical decisions and implementing the rules of operation and execution of transactions, risk management or maintaining liquidity. The analysis of the impact of the NBU and commercial banks on the stability of the financial system in Ukraine, with an indication of activities and threats to this stability, which is the purpose of this article, leads to the conclusion that despite the good condition of the Ukrainian banking sector, the lending and deposit policy of banks should be conducted with particular caution.

This is mainly due to the economic slowdown and the related increase in non-performing loans in banks' portfolios. The not very optimistic prospects for economic growth and the ongoing war pose a risk of materializing a threat to the stability of the financial system in Ukraine. Based on the assessment of the main risks and vulnerabilities in the banking sector, the NBU set supervisory priorities for 2023 in assessing asset quality, adequacy of provisioning and assessing the actual size of regulatory capital. Priority areas for the NBU for 2023 should include: credit risk and liquidity risk management; capital; maintaining business models and internal management, including ensuring the continuity of operation of bank branches under martial law.

In 2022, the real GDP decreased by 30%, which is the deepest annual decline of the economy in the entire history of Ukraine. Currently, the situation is stable thanks to the manual management of the financial system, infusions from the NBU and Western partners, as well as the availability of liquidity in banks. The economy will still have to descend into a shock situation. After the end of active hostilities, the NBU will have to let go of manual control. Some banks will leave the market, system banks may be nationalized.

The real level of growth of non-performing loans (NPL), which are classified in this group as a result of the war, will be possible to assess only after the war and their level will increase significantly. In post-war conditions, with the lack of capital to form reserves for NPL assets, the banking system of Ukraine will find itself in a difficult position. To restore Ukraine's economy after the end of the war, major global financial efforts will be needed. The world partners of the USA and the EU already make a significant contribution to increasing the current stability of this state, but in the medium and long term, more support will be needed to restore the foundations of a free and prosperous country, irrevocably oriented to European values and reliably integrated into the European and world economy, as well as to support it on the European path.

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*The article was received on October 4, 2023.
Стаття надійшла до редакції 4 жовтня 2023 р.*