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BANKING SYSTEM OF UKRAINE IN WAR

Introduction. With the beginning of hostilities on the territory of Ukraine on February 2022, the domestic banking system has undergone considerable turmoil and it functions in a stress mode and uncertainty. At the same time, banks continue their activities, try to fulfill all their obligations and adhere to regulations. However, certain transformations take place in the banking sector. The banking system quickly adjusts to functioning under martial law.

Problem. The specified circumstances led to changes in the banking infrastructure, influenced the current trends of the banking market and accelerated the pace of digitization of banking processes.

The aim of the article is to study the functioning of the domestic banking system under martial law.

Methods. Methods of theoretical generalization, analysis and synthesis, grouping, and system approach were used in the paper.

БАНКІВСЬКА СИСТЕМА УКРАЇНИ В УМОВАХ ВІЙНИ

Вступ. З початком воєнних дій на території України в лютому 2022 р. вітчизняна банківська система зазнала значних потрясінь та функціонує в режимі стресу і невизначеності. При цьому банки продовжують свою діяльність, намагаються виконувати всі свої зобов'язання та дотримуватися нормативів. Проте очевидним є те, що в банківському секторі відбуваються певні трансформації. Банківська система вимушена оперативно підлаштовуватися до функціонування в умовах воєнного стану.

Проблема. Визначені обставини обумовили зміни у банківській інфраструктурі, вплинули на поточні тенденції банківського ринку та активізували темпи діджиталізації банківських процесів.

Метою статті є дослідження функціонування вітчизняної банківської системи в умовах воєнного стану.

Методи. У процесі дослідження використано методи теоретичного узагальнення, аналізу та синтезу, групування, системного підходу.

Results. The features of the domestic banking system and the functioning of banks under martial law were considered. The changes that took place in the structure of the banking sector and banking infrastructure under martial law were determined. The key trends of the banking market during the period of martial law were studied. The authors identified digitization features of the banks under current conditions and defined the key principles and instruments of financial support of the banks by the regulator.

Conclusions. The country's banking system operates stable and ensures continuous work of financial institutions through the coordinated actions of the regulator and the banks under martial law. There are no significant changes in the structure of the banking market, but the infrastructure of banks has been transformed under martial law. In addition, the current trends of the banking market demonstrate the presence of obvious difficulties in the work of banks due to the influence of martial law. Despite the war risks, the banks have a sufficiently high level of liquidity, which allows ensuring the further continuous implementation of non-cash payments and other obligations.

Keywords: banks, banking system, refinancing, liquidity, digitalization.

JEL Classification: G21, E59, H81

Introduction. The priority area of the development of Ukraine's financial system is improvement of the banking system, which is characterized by digitalization of all banking processes under modern conditions. Recently, the domestic banking system has undergone considerable turmoil and operates in conditions of stress, uncertainty, significant market volatility. All this was due to the Covid-19 pandemic and the quarantine restrictions since 2020, and of course the hostilities that began in Ukraine on February 24, 2022. These circumstances have become very important factors influencing the intensification of digital transformation of the banking business as a whole.

Problem. During the pandemic period and quarantine restrictions, all participants in the banking business were able to appreciate the benefits of the updated format of customer service. In particular, this was due to the need to reduce physical contact between people, which became a catalyst for the rapid transformation of offices and branches of banks, the organization of remote work for staff, development of mobile applications and other remote customer service channels. The same thing happened with the beginning of the war. Banks were forced to adapt to martial law, accelerate the pace of their digitalization, as most of banks were forced to cease the activities of their branches and to move the banks head offices to other safer regions of Ukraine.

Результати дослідження. Розглянуто особливості діяльності вітчизняної банківської системи та функціонування банків в умовах воєнного стану. Визначено зміни, що відбулися у структурі банківського сектора та банківській інфраструктурі під час воєнного стану. Досліджено ключові тенденції банківського ринку в період воєнного стану. Зокрема, ідентифіковано особливості диджиталізації банків у нинішніх умовах. Крім того, визначено ключові принципи та інструменти фінансової підтримки банків регулятором.

Висновки. В умовах воєнного стану шляхом злагоджених дій регулятора та банків банківська система країни функціонує достатньо стабільно і забезпечує безперервну роботу фінансових установ. За період воєнного стану значних змін у структурі банківського ринку не відбулося, проте певної трансформації зазнала інфраструктура банків. Крім того, поточні тенденції банківського ринку демонструють наявність очевидних складнощів у роботі банків, що обумовлені впливом воєнного стану. Попри воєнні ризики банки мають достатньо високий рівень ліквідності, що дає змогу забезпечувати подальше безперервне здійснення безготівкових розрахунків та інших зобов'язань.

Ключові слова: банки, банківська система, рефінансування, ліквідність, диджиталізація.

Analysis of recent research and publications. The works of such domestic and foreign scientists as J. Dovhan, A. Zaverbny, N. Sokulsky, L. Marichak, I. Masyk, Lai Hi May Phuong, V. Varzaba, T. Boru, N. Mosteanu, A. Faccia, L. Cavaliere, S. Bhatia, Z. Korzeb, P. Niedziolka devoted to the issues of banks functioning and banking systems in the conditions of the pandemic Covid-19. In particular, J. Dovhan determined the main problematic aspects of the banking sector in the context of the Covid-19 pandemic [1]; A. Zaverbny, N. Sokulsky investigated the level of the banking system digitalization during the Covid-19 pandemic [2]; L. Marichak, I. Masyk substantiated the development of internet and mobile banking in conditions of current restrictions and the emergence of new opportunities for banks and their clients in connection with the transition to distance services [3]. Peculiarities of the banking system and banks under martial law have not been studied yet. Therefore it is timely and relevant to explore the functioning of the domestic banking system under martial law.

The aim of the article is to investigate the impact of the war on the functioning of the Ukrainian banking system and banks.

The purposes of this paper are (a) to identify the main changes that took place in the structure of the banking sector and banking infrastructure under martial law; b) to study the key trends of the banking market under martial law, digitalization features of banks in the current conditions; c) to determine the priorities of the banking system under martial law and the features of its support by the regulator.

Methods. Scientific methods of theoretical generalization, analysis and synthesis, grouping, system approach were used in the paper. The information and analytical base of the research includes materials of the National Bank of Ukraine, scientific articles, etc.

Results. The domestic banking system operates in a state of stress and uncertainty with the beginning of hostilities on the territory of Ukraine on February 2022. At the same time, banks continue their activities, try to fulfill all their obligations and adhere to regulations. The National Bank of Ukraine actively supports stability of the banking system by implementing a number of regulations, including NBU Resolutions "On the peculiarities of maintaining the liquidity of banks under martial law", "On the banking system under martial law" and implementing a number of interrelated measures aimed at maintaining financial stability and regulating the financial sector. During this time, the NBU has made a number of unusual decisions. The regulator limited the activity of banks in the foreign exchange market, stopped the outflow of foreign currency and set limits on cash transactions.

Anti-crisis decisions of the regulator are based on three key principles:

- protection of the interests of bank customers, especially depositors. Banks must maintain access to their own and credit funds of customers, the ability to make payments and transfers;
- support for banks activity and their liquidity. The negative impact of hostilities on banks performance should not lead to banks being declared insolvent. Troubled financial institutions, if necessary, will have time to restore financial stability after the end of martial law;

• transparency of reporting, reflecting the real financial condition of banks. In the absence of reliable and transparent reporting to the regulator, it will be difficult to implement effective measures to improve the banking system after the war [4].

Based on these principles, the NBU determines the list and content of measures aimed at supporting the banking system. However, the feasibility of applying certain measures in practice depends on the scenarios of the unfolding of events.

It is important to study the functioning of the banking system and domestic banks under martial law in the following areas: the structure of the banking sector and major changes, banking infrastructure, banking market trends, peculiarities of digitalization of banks in the current environment under martial law.

The structure of the banking sector of Ukraine has not changed significantly under martial law. There are 69 banks operating in Ukraine, including 4 state-owned banks, 16 banks of foreign banking groups and 49 private banks on May 1, 2022. 14 banks are systemically important banks. In response to Russia's aggression on February 2022, two subsidiary banks of Russian financial corporations with state capital were liquidated – JSC "International Reserve Bank" and PJSC "Prominvestbank", which at the beginning 2022 had 2% of net assets of the domestic banking sector [5].

Banking infrastructure. According to the results of the 1st quarter of 2022, banks continued the trend to reduce the network, which became widespread and intensified during the Covid-19 pandemic (*Figure 1*). This trend under martial law is justified by the impossibility of branches and offices of banks to work on the occupied territories and territories where hostilities take place. In addition, a significant number of banks have been forced to relocate their head offices. Most branches were closed by state and foreign banks. Reductions were mainly observed in Kyiv and Donetsk region.

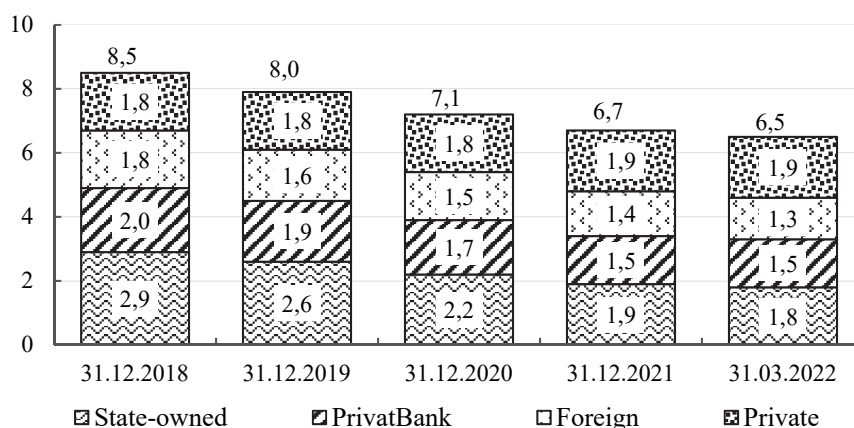


Figure 1. Number of banking units, thousand* [5]

* Separate structural branches and head offices.

On March 3, 2022 the share of operating branches of systemically important banks in the regions was 55 % (2 761 branches). On April 1, 2022, the share of operating branches of systemically important banks in the regions was already 69 % (3 415 branches). At the end of April 2022, banks tried to restart the work of their branches; systemically important banks in Kyiv city, and in Sumy, Chernihiv, Kyiv regions actively started the work of their networks [5].

After the start of a full-scale war, *the conditions for the functioning of the banking sector* underwent transformations. Nevertheless, in such crisis circumstances, banks and the National Bank of Ukraine continue to operate over the past three months. The NBU's electronic payment system (EPS) operates 23 hours a day and 7 days a week, which makes possible to make payments in the usual way, taking into account all the needs of bank clients. Despite the fact that a significant number of bank branches are closed, at the same time banks continue to ensure uninterrupted cashless payments of legal entities and individuals, as well as the operation of payment infrastructure (including pos-terminals and ATMs). In addition, the stable operation of banks provides their customers with round-the-clock payment card transactions, including withdrawals from cards and non-cash transactions on card accounts.

The main trends in the domestic banking market under martial law cover such key components of the banking business as the level of liquidity supported by the NBU refinancing, the volume and structure of assets, the amount of liabilities, and the level of profit or losses. Let's consider each of these components.

Liquidity of banks. Banks have a sufficient stock of highly liquid assets to secure all payments and settlements on their liabilities, even in the current difficult environment. The NBU's measures to support the liquidity of the banking system led to an increase in the share of the NBU funds in banks' liabilities: on February, their share increased by 2.4 %, for the quarter by 1.8 %, up to 7.1 %. The majority of the NBU refinancing was received by private and state-owned banks (*Figure 2*).

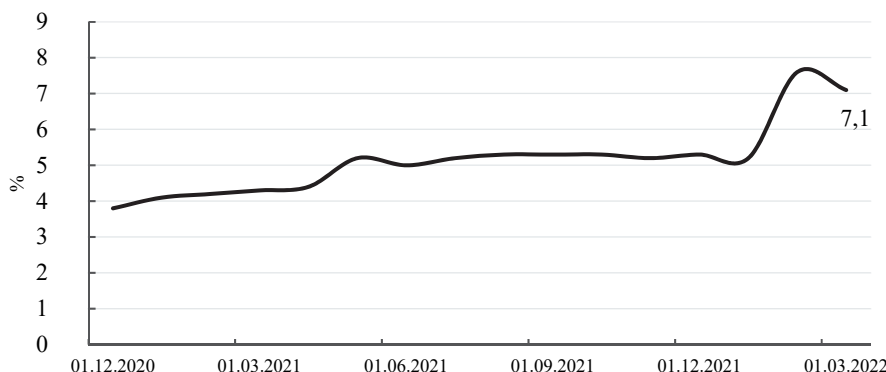


Figure 2. NBU funds in banks' liabilities [5]

The NBU refinancing is an additional "safety cushion" for banks. The National Bank is also implementing a blank refinancing instrument for up to one year. Thus, since the beginning of the war, banks have received about 82 billion UAH of refinancing loans and have already returned 45 billion UAH; on 03.03.2022 blank refinancing was used by 29 banks. The total amount of banks' debt on blank refinancing is 20.2 billion UAH (less than 3 % of household deposits) [6]. However, at the beginning of May the demand for this instrument was not so great and a significant amount of funds had already been returned, and on May 2, the volume of blank refinancing loans decreased to 8 billion UAH. However, in case of real need, banks will be able to receive refinancing in the form of various instruments. Banks can receive blank refinancing in the amount not exceeding 30 % of the balances of individuals as on February 23, 2022. From May 4, 2022, the blank refinancing loan is available only to those banks that have exhausted their refinancing capabilities and have a personal outflow of 5 % or more since February 23, 2022. Refinancing is not provided to banks whose shareholders are residents of the aggressor's country, as well as to banks classified as troubled [7]. The National Bank of Ukraine also replenishes banks with cash without restrictions, if necessary.

For the period from February 25 to May 27, 2022, the NBU provided refinancing loans for more than 30 calendar days to more than 40 banks of Ukraine for a total amount of 80 432.4 million UAH. During this period, the following banks received the largest number of refinancing loans: JSC "PrivatBank" – 26 500 million UAH, JSC "Ukreximbank" – 11 000 million UAH, JSB "Ukrgasbank" – 7 200 million UAH, as we see the regulator provided significant support for state-owned banks [8].

It should also be noted that on April 1, 2022, the actual value of the LCR standard, which demonstrates the adequacy of the stock of highly liquid assets to cover the possible outflow of funds for 30 days significantly exceeded the minimum requirements of the NBU.

Bank assets. At the end of March, the net assets of solvent banks decreased by 2.2 % (Figures 3, 4). The largest decrease was in two components of assets: the NBU certificates of deposit and IGLBs. The dynamics of loan portfolios is unbalanced, but generally increased in January-March. Net loans in UAH to enterprises grew by 4.8 % in the quarter, while foreign currency loans grew by 2.2 % in dollar terms. State banks had the highest growth rates of loans over 10 % in UAH during the quarter. The full growth of the loan portfolio was ensured by the first two months of the quarter, while in March net loans in UAH decreased by 0.6 % and foreign currency loans by 1.9 %. Compared to the same period last year, the net loan portfolio increased by 39.7 % in UAH and by 18.4 % in foreign currency (in US dollars). State-owned enterprises were the most active in attracting loans. Net retail lending grew by 5.8 % in the first two months of the year.

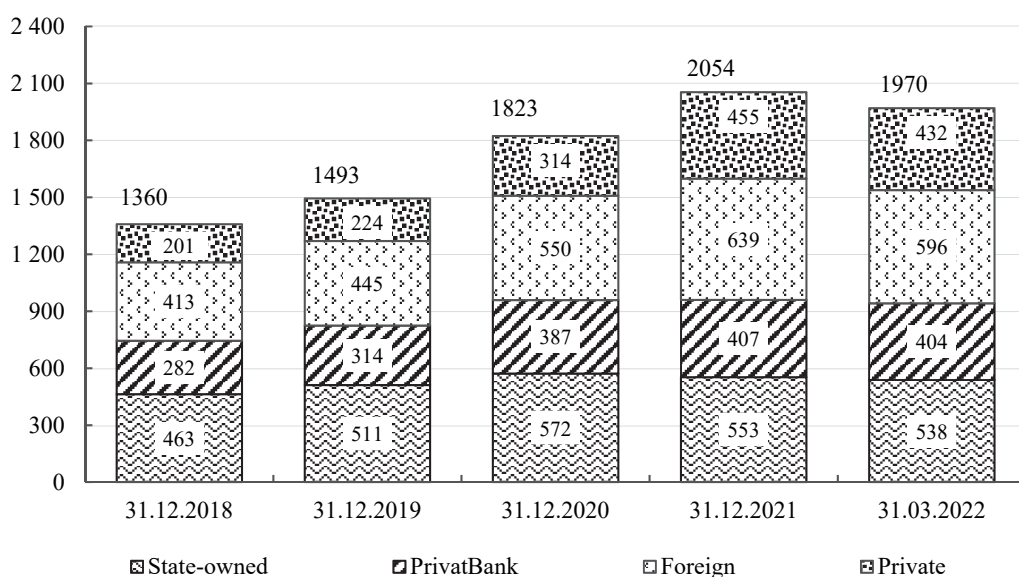


Figure 3. Banks' net assets, UAH billions [5]

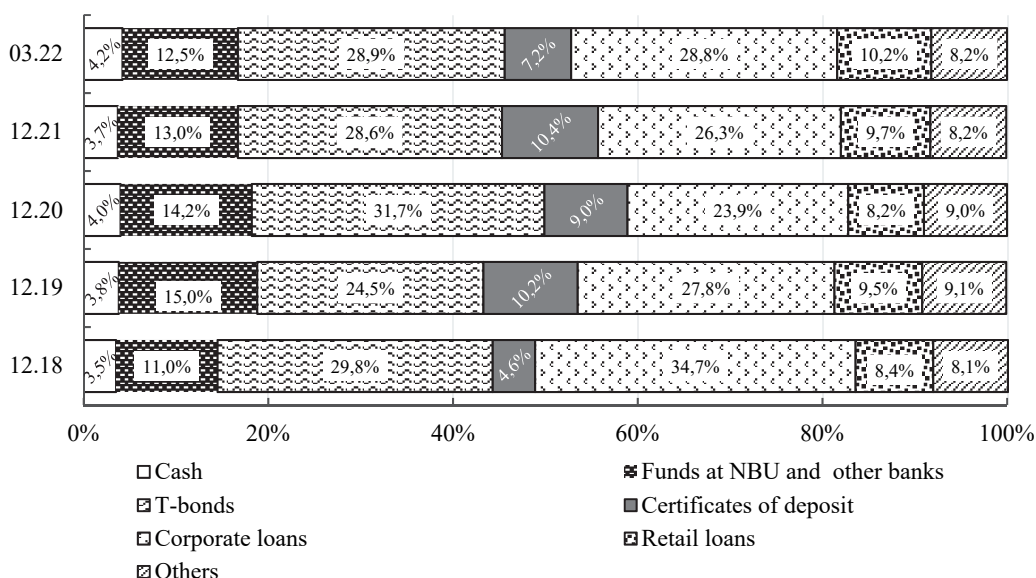


Figure 4. Sector's net assets by components [5]

The government has also approved a number of programs aimed at financially supporting businesses through bank loans. There are no official statistics on the volume of such loans, but state-owned banks confirm that loans are already issued to "a significant number of clients" in the field of agriculture, various SMEs and big business. It should be noted that such programs are implemented by private banks as well including:

- Extended program "5-7-9 %" – all previously established businesses, most of whose beneficiaries are Ukrainians, can receive up to 60 million UAH at an interest rate of 0 %, which will be increased to 5 % after the war. Investment loans and refinancing loans are provided for up to 5 years, and working capital financing is available for up to 3 years.

- Partial state guarantees for Ukrainian banks on SME loan portfolios (up to 80 % of the total value).

- Compensation of interest rates on loans (loan body up to 50 million UAH) for small and medium-sized agricultural businesses (annual turnover up to 20 million EUR) for the sowing campaign [9].

Liabilities of banks. Liabilities of solvent banks in the 1st quarter of 2022 decreased slightly, mainly due to the outflow of funds of economic entities. In general, customer deposits remain the main source of bank financing (84 % of liabilities) (Figures 5, 6).

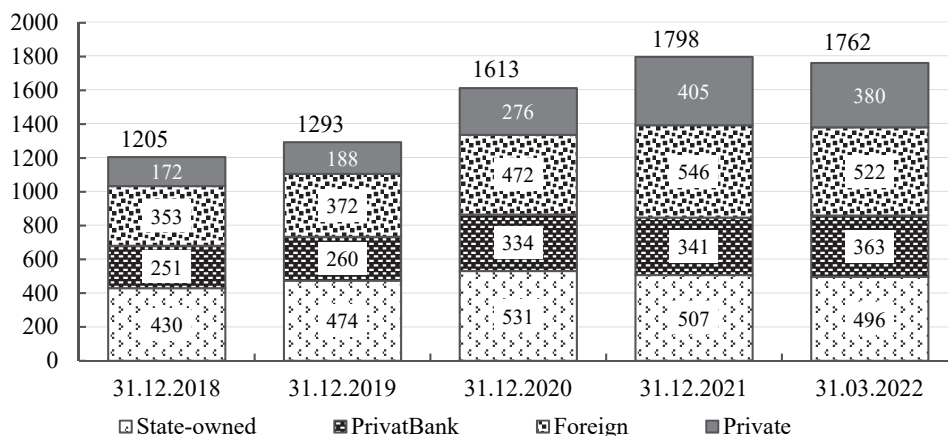


Figure 5. Liabilities by groups of banks, billions UAH [5]

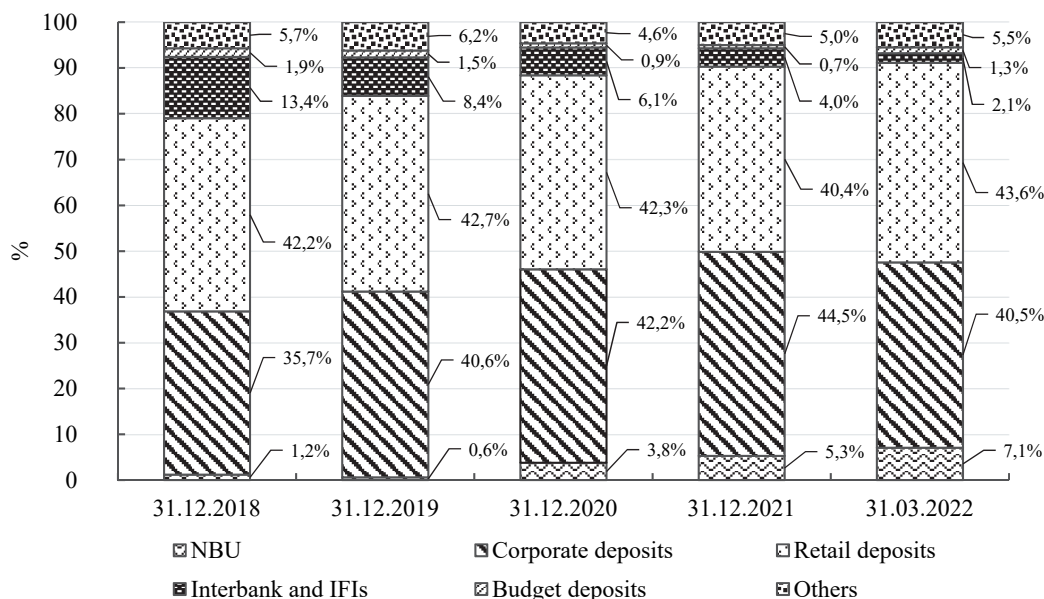


Figure 6. The structure of liabilities [5]

It may be noted the tendency to increase the volume of funds of bank customers, which provides a high level of bank liquidity despite military risks. The outflow of funds in the first two months of the year was somewhat offset by the growth of deposits in March due to information pressure.

Funds of individuals in the national currency for the quarter increased by 10.8 %, the volume of term deposits of individuals in UAH decreased for the 1st quarter by 7.5 %. The share of new short-term deposits with original maturity of up to 1 month rose sharply to 31.8 % in March. Half of the new time deposits were opened by clients for up to three months, although before the war such were only a one to third part. Due to the preservation of confidence in banks, deposits of the population in UAH in the banking system are increasing, despite the war.

Deposits of individuals in foreign currency decreased by 8.6 % in the first quarter, indicating the "dedollarization" of the economy. Stabilization in the deposit market can be explained by the adoption of the Law of Ukraine №2180-IX "On Amendments to Certain Laws of Ukraine on Ensuring the Stability of the Deposit Guarantee System for Individuals", which provides a 100 % guarantee on bank deposits of individuals and private individuals. After the expiration of the three-month period from the date of abolition or termination of martial law, the maximum amount of guaranteed compensation for depositors of Ukrainian banks will be 600 000 UAH [10], under martial law and after three months 100 % guarantee on bank deposits for individuals and private individuals (including interest on deposits). This means that the Deposit Guarantee Fund of individuals will return the funds to its depositors in full, if during the period of this rule the procedure of withdrawal of the bank from the market will be started. At the same time, the Law does not apply to depositors of banks that are already in liquidation process or liquidated.

Funds of economic entities in the 1st quarter of 2022 in the national currency decreased by 13.1 % due to the outflow of funds from all groups of banks, but increased by 12.4 % year on year. The most rapid outflow of funds of legal entities was observed in the first 2 weeks of martial law, but then another trend followed and deposits were slowly growing.

Financial results of banks. In the first quarter of 2022, for the first time since 2017, the banking sector suffered total losses. The financial result of the system amounted to minus 0.16 billion UAH due to a loss in March of 10.1 billion UAH (*Figure 7*). This was due to an increase in allocations to reserves for expected losses due to the war in the amount of 21.6 billion UAH, three quarters of which were formed in March – about 15.9 billion UAH. The number of unprofitable banks for the quarter increased from 5 to 25, their total loss amounted to 6 billion UAH. Two state-owned banks were among the unprofitable ones. At the same time, PrivatBank earned more than 60 % of the profits of profitable banks.

In the first quarter, banks were operating profitably, but in March, after the start of active hostilities, growth in operating income slowed down. Demand for loans and banking services declined. The reduction in trade in goods and services in the country has led to a decrease in the volume of payments, a key basis for commission income of banks. This had a negative

impact on the main components of operating income. Interest and commission income of financial institutions has declined since the start of the full-scale war, as most banks have introduced credit vacations for their customers and reduced fees for using their services.

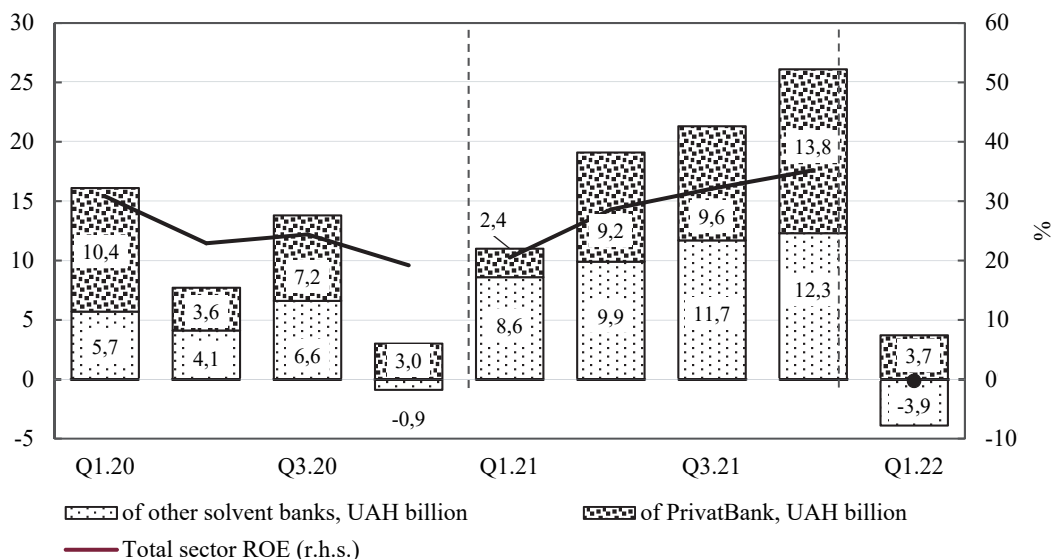


Figure 7. Profit/losses and return on equity [5]*

* Quarterly data, including adjusting entries.

As a result, the growth rate of net interest income in March slowed down significantly to 17 %, compared to 35 % in January and February 2022. Net commission income decreased by 13 % in the first quarter due to the fall in March at 58 %.

The general decline in business activity and falling demand for loans and banking services will continue to have a negative impact on banks' profitability. Losses from credit risks are expected to increase due to the gradual impact of the economic crisis on the activities of borrowers. Therefore, it will be possible to assess the impact of the war on the capital of banks only over time.

Digitalization of banks under martial law is very important, because during hostilities it should ensure the usual "pre-war" function of permanent access to banking services for all groups of customers regardless of their location, including partially closed branches and non-operating branches of banks. Mobile and Internet banking systems remain one of the main tools for remote customer service. Banks support and improve their work, which provides customers with constant remote access to manage their own accounts and funds. In particular, the process identification of bank customers through the application "Diia" provides easy and efficient access to accounts.

It is also worth noting that during the war, banks are trying to simplify certain operational processes for the convenience of their customers. The most common problem in recent months, which customers have approached banks, is the expiration date of the payment card. As a result, most domestic banks automatically extended the validity of payment cards. Another extra

service under martial law and the inability of customers to visit bank branches is that the online banking systems and mobile applications of banks allow the customer to issue a virtual card. The convenience of virtual card is that it can be added by customer to Google Pay or Apple Pay and pay with it by smartphone in retail chains anywhere in the world. Banks have also been able to use cloud technology to store their data. Now they do not depend on critical infrastructure inside the country, which allows maintaining a certain level of security of banking data.

A useful innovation is the opportunity for Ukrainians to withdraw cash from card accounts directly at the cash registers of large retail chains and gas stations. It is allowed to withdraw up to 6 000 UAH at the time of purchase in cash. It is a convenient option in the current extremely difficult conditions.

It should be emphasized that a significant number of banks have created a new unique opportunity to make charitable contributions to the needs of the Ukrainian army in their mobile applications, as well as to support volunteer organizations to finance the needs of the Armed Forces and Territorial Defense Forces of Ukraine, that is an extremely important element of assistance to our country in conditions of war.

Conclusions. Thus, we can conclude that through coordinated actions of the regulator and banks, the national banking system operates stably enough and ensures the continuous operation of financial institutions under martial law. According to the NBU, the losses of the financial sector under martial law are moderate. Despite the military risks, banks have a fairly high level of liquidity, which allows for further continuous implementation of non-cash payments and other liabilities. In the future, the main factor of negative impact on the financial condition of banks will be credit risk, which can significantly reduce the level of bank capital due to the losses of part of the loan portfolio. However, the NBU will not apply sanctions to banks due to non-compliance with capital and liquidity requirements under martial law and after its end will provide sufficient time for banks to restore their financial stability.

The study of the war influence on the level of capitalization and liquidity of Ukrainian banks, as well as the research of changes in stability and resilience of the domestic banking system during the war are the prospects for further research.

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