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FINANCIAL MARKET REGULATION AND MONETARY POLICY ON FINANCIAL STRESS MANAGEMENT IN THE NATIONAL ECONOMY

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Introduction. Neutralising the dynamic threats of war and economic crises and reducing the stress index for the country's financial system requires prompt action from the regulator. This allows financial market participants to reduce the stress index of the country's financial system. However, dynamic changes and the lag in time for the introduction of regulatory actions create challenging conditions for the activities of financial market participants, which determines the relevance of studying the functioning of Ukrainian financial markets.

Aim and tasks. This study aims to identify the key indicators of financial market conditions and the level of effectiveness of regulatory influence on these indicators.

Results. It is indicated that changes in the conditions for the functioning of the Ukrainian financial market in 2022-2023, with a reduction in the profitability of financial market participants by 152%, an increase in the share of non-performing loans by 19%, and a reduction in funds in banks’ correspondent accounts only for the first quarter of 2022 by 30%, led to an urgent need for regulatory action. These actions increased the liquidity coverage ratio by 3.27 times and reduced the Financial Stress Index by 59.79%. Simultaneously, the long-term liquidity ratio increased by only 7%, indicating uneven liquidity dynamics. A cumulative negative effect is noted, even when using the regulator's monetary policy instruments for 2022-2023. The money supply increased by 21.03%, the monetary base increased by 25.77%, and the volume of cash outside banks increased by 8.24%. This necessitates strict control over capital movements, taking into account the impact of this factor on the reduction in the activity of market participants.

Conclusions. The directions of the monetary policy of the regulator of Ukraine are indicated, in particular, increasing the level of lending to financial market participants, solving the problem of liquidity surplus in banks, and regulating relative prices, which contributes to reducing the level of financial stress. This indicates that the activities of financial intermediaries in martial law conditions acquire new significance as a damper of fluctuations in financial market risks, particularly the risks of financial transactions. This indicates that the financial market has not acquired a proper level of stability, and the stress index fluctuated up to 65% of the average value for the study period.

Keywords: financial market, banking management, monetary base, interest rate, financial intermediaries.

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1. Introduction.

Military operations in Ukraine significantly burden the financial system, leading to significant deformations of the financial market, negatively affecting the financial system and the country's economy. Thus, a significant decrease in the activity of the financial market due to the effects of the war in Ukraine reduces the regulatory role of the price policy in the redistribution of resources, which, in turn, leads to a decrease in economic activity.

Therefore, ensuring the proper functioning of the financial market as an integral component of the financial system is one of the main tasks that institutional structures and private businesses must implement in martial law conditions. The dynamic impact of military threats on financial market participants (FMP) requires prompt and far-sighted management actions, first of all, the actions of the regulator to neutralise them (Sokrovolska et al., 2023).

The National Bank of Ukraine (2020) laid down the principles of the financial market functioning, facilitating its adaptation to the conditions of military operations. In addition, the basic principles of monetary policy in martial law were introduced immediately after full-scale military operations in Ukraine (National Bank of Ukraine, 2022).

This made it possible for financial market participants – banks and non-banking financial institutions – to implement their activities under the harsh challenges and reduce the stress index of the country's financial system. At the same time, with low starting conditions, Ukraine ranked only 120th among 125 countries in the world in terms of the state of the financial market (Roshylo et al., 2020), leading to a narrowing of the possibilities for the effective functioning of the financial market, especially under a significant level of risk.

The indicated narrowing of opportunities and the integral impact of the war on the financial system of Ukraine as a whole, and, in particular, on the financial market, requires a study of the state and trends of the development of the financial market in the conditions of dynamic changes in challenges to ensure the appropriate level of financial security of the country as a component of national security.

2. Literature review.

Significant research is devoted to the study of the financial market, banking management, the direction of influence of military threats on the banking system, the financial market and, in general, on the financial security of the country. Saeed and Shanan (2020), for the study of the effects of the war in Iraq on the national financial market, confirmed the importance of regulatory influence in reducing financial stress for market participants. Bernardelli et al. (2023) indicated that the financial crisis in Ukraine affects the state of the financial markets of countries worldwide.

For the analysis of financial risks, Khoury et al. (2020) indicated that even local disasters, earthquakes, and war in Syria are factors in the destabilisation of markets. Although there are influential players in the global financial market, there is significant volatility in financial markets.

Onour and Sergi (2021) studied financial markets under conditions of significant political uncertainty, which destabilises the economic environment. In particular, it is noted that the stabilisation of the national currency exchange rate, as one of the main conditions for stabilising the financial market, is more difficult to ensure in the absence of financial reserves because restoring exchange rate stability after a sharp depreciation will require a more significant expenditure of resources and the time required to achieve equilibrium.

Devereux and Yu (2019) studied the formation of an optimal monetary policy during financial crises in developing countries. The proposed model considers external monetary influences, nominal prices, and wage rigidity. The importance of macro-prudential measures to neutralise the adverse reactions of monetary and financial markets to crisis factors is indicated (Umar et al., 2022).

Schmidt (2020) studied the impact of the actions of monetary policy regulators on financial markets depending on the level of risk according to its types: macroeconomic, economic-political, and financial risk. An autoregressive model for calculating the regulatory vector under shock monetary policy was introduced.

This is especially important for the formation of regulatory measures to stabilise Ukraine's financial market under martial law conditions. This indicates that the intensity of the conflict and, accordingly, the level of infrastructure losses (Zayed et al., 2022) and population impoverishment determine the direction of the recovery of financial activity in the post-war period (Haas, & Pivovarsky, 2023).

In particular, Korneev et al. (2024) noted that the formation of the financial market in Ukraine was slowed down due to significant external and internal challenges. It was also noted that the financial stress level has significantly changed since the beginning of intensive hostilities. However, with the regular policy of relevant institutional structures, indicators of financial stability have not acquired threatening values.

Arzhevitin et al. (2023) investigated the factors of the destabilisation of the Ukrainian financial market under dynamic threats of war. The importance of stimulating internal funding in the financial market to reduce the stress level and ensure its stabilisation in crisis conditions is indicated. This thesis is considered by Zhurba (2024), which analyses the effectiveness of regulatory policy to stabilise the foreign exchange market of Ukraine and ensure its liquidity. This is confirmed by Roshylo et al. (2020), who pointed out the role of financial technologies in the effective functioning of the financial services market.

The study of the consequences of regulatory influences, notably the National Bank of Ukraine (NBU) monetary policy, on the activity of financial market participants has received considerable attention. Previous studies have been devoted to various aspects of the functioning of the financial market in the post-war period and the consequences of the martial law on the financial system.

UkraineInvest (2022) pointed to the long-term negative impact of the macroeconomic depression, which is already limiting activity in the financial market, an indicator of which, in particular, there is a fall in the stock exchange index "PFTS Ukraine". Ukraine Invest (2022) sees the recovery of the financial sector infrastructure as one of the main ways to overcome the macroeconomic depression.

In particular, because of the monetary policy of inflation targeting, banks have reduced the investment process and generally limited their activity in financial intermediation. This was also considered in this study. The above literature review indicates significant complications in the functioning of Ukraine's financial market during the war. This requires determining the impact of regulatory measures on the financial market's stabilisation and the war's impact on the activity of financial market participants.

It identifies the consequences of the regulator's monetary policy on the functioning of the financial market, determines the main areas of influence of the war, which leads to changes in the conditions of the financial market, and studies the role of financial intermediaries in wartime in activating the financial market.

3. Methodology.

The results of this study are derived from the evaluation of regulatory impact using statistical analysis methods. The Pearson correlation coefficient was used to assess the level of correlation between regulatory impact factors and the leading indicators of the financial market. As it is known, the Pearson correlation coefficient for a part of the total data set is calculated by the formula:

$$r_{xy} = \frac{\sum_{i=1}^{m}(x_i-\underline{x})(y_i-\underline{y})}{\left[\sum_{i=1}^{m}(x_i-\underline{x})\right]^{1/2} * \left[\sum_{i=1}^{m}(y_i-\underline{y})\right]^{1/2}} \quad (1)$$

where m – number of elements of the total data array; i – indicator of the current sample element $(i = 1,,2,3 \dots m)$; x_i, y_i – current elements of the numerical series on which the sample is made; $\underline{x}$, $\underline{y}$ – average values of the elements of the numerical series on which the sample is made.

It should be noted that the Pearson correlation coefficient indicates a purely linear correlation of elements of numerical series. The calculation was carried out according to the data in Figures 1, 3, 5, and Table 1. The level of correlation between the main regulatory instrument of the National Bank of Ukraine (the key policy rate) and the main indicators of the money market is quite significant.

Table 1. Pearson correlation coefficient values.

The parameter x	The parameter y					Interest rates on NFC term deposits
	DS overnight	Refinancing loans	Money supply	Monetary base	Banks' correspondent accounts with the NBU	
Key policy rate, %	0.649	0.689	0.5329	0.4606	0.6181	0.7717
Interest income of banks	0.6648	0.9774	0.7626	0.8926	0.8789	-
Total income of banks	0.6267	0.89464	0.5212	0.6723	0.6934	-

The correlation coefficient between the key policy rate and credit market indicators (DS overnight and refinancing loans) was also significant. A significant correlation has been demonstrated between bank interest and total income, with the key indicators of the money market and credit market indirectly regulated by the National Bank of Ukraine.

At the same time, the lower values of the correlation coefficients of banks' total income and their interest income from the money and credit markets indicators were indicative. This indicates that, under the influence of the regulator's actions, financial institutions provide instruments for acquiring interest income, primarily the manoeuvre of loans and domestic government bonds, over other financial instruments. This is evidence of the effectiveness of the regulatory influence on financial market indicators.

4. Aim and tasks.

This study aimed to identify the key indicators of the financial market in war and crisis conditions and the level of effectiveness of regulatory influence on these indicators.

The tasks of the study are as follows: determining the effects of war on the activity of financial market participants; identifying the consequences of the actions of institutional structures, in particular, the monetary policy of the regulator, on the functioning of the financial market; determining the main directions of the influence of the war, which leads to a change in the conditions of the financial market; and studying the role of financial intermediaries in the conditions of war in the activation of the financial market.

5. Results.

The functioning of the financial market in war conditions is determined by both the direct influence of military actions in the form of the destruction of financial infrastructure, the displacement of one or another part of the financial market, the need to change the means and methods of communication between financial markets, and the indirect influence, for example, the actions of institutional structures caused by the war, primarily the actions of the National Bank of Ukraine. As a result of a full-scale war in Ukraine, government instructions to finance the country’s urgent needs actively introduced an infusion of money supply into the economy (Garbowski et al., 2019; Minakov, 2022; Shtunder et al., 2022).

One of the ways of infusing the money supply was the purchase of government bonds, which multiplied the increase in the money supply and narrowed the activity of the financial market, increasing the level of inflation in Ukraine. This could lead to an emergency in the monetary sphere.

The risks of the growth of the money supply in the economy and the unsecured impact of this growth on the formation of threats of devaluation of the national currency, as well as the narrowing of the volumes and sources of available loans, were mitigated by the regulatory instruments of the National Bank of Ukraine and international fundings to preserve the Ukrainian financial system (Korneev et al., 2024). The war conditions also significantly increased the factor of destabilisation of the activities of the financial market participants as an unpredictable quasi-budgetary deficit.

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The above deficit can be caused by so-called "quasi-fiscal operations", which include, for example, state guarantees of risky loans, primarily state-owned enterprises; artificial restraint of prices or tariffs; cancellation of tax debts, which reduces budget revenues.

According to the National Bank of Ukraine (2024a), a high level of risk for financial market participants will remain until the end of the current year. Military actions led to radical changes in the functioning of the financial markets.

The main directions of the war's influence, which led to a significant change in the operating conditions of the specified market, are as follows:

1. Change in demand for financial services significantly and unevenly.
2. Changing the structure of the financial services market.
3. Reduction in access to external borrowing for financial market participants due to the high risk of military actions.
4. A significant increase in the risk of loss of assets by financial institutions and collateral of clients, deterioration of clients' financial condition due to suspension of activities due to military threats.
5. Decrease in the solvency of client-legal entities for interest in loans due to impoverishment of the population.
6. Growth in the deficit of credit resources due to a reduction in the inflow of external investments into economic entities.
7. Restrictions on the war conditions of traditional financial instruments to neutralise financial risks.

In January-March 2022, banks' profitability decreased by 152% (National Bank of Ukraine, 2024b). The rate of change in banks' liquidity in January-March 2022 compared to the first quarter of 2021 decreased by 320%. The regulatory measures of the National Bank of Ukraine (2024b) during 2022 ensured a liquidity coverage ratio (LCR) growth of 227%. During this period, the long-term liquidity indicator – the net stable funding ratio (NSFR) – increased by only 7%, indicating uneven liquidity dynamics.

The liquidity of financial market participants has increased, as evidenced by the growth in the volume of funds in banks' correspondent accounts with the National Bank of Ukraine.

From the second quarter of 2022 to the second quarter of 2023, volume increased by 295%; by the second quarter of 2023, volume increased by 295%; and in 2024, by 374% (National Bank of Ukraine, 2024b). The volume of funds in banks' correspondent accounts with the National Bank of Ukraine fluctuated by 25% each month. Although banks' total assets in 2022-2023 increased by 40% during this period, the share of non-performing assets fluctuated within 22.66%.

This increased the need for effective bank management at all levels of management, including the National Bank of Ukraine. As an example of management actions, it is possible to cite the fact that the crisis management of the National Bank of Ukraine after the start of a full-scale war used an extremely risky instrument of monetary financing of the public debt and, after the threat was partially mastered, a set of monetary instruments was introduced: capital control, currency risk hedging, currency restrictions, exchange rate fixation, regulation of the discount rate, purchase of securities of state institutions, in particular, military bonds on the primary market.

The key (accounting) rate and "inflation targeting with a flexible (nevertheless, manageable) exchange rate" are defined by the management of the National Bank of Ukraine as the main tools of monetary policy (National Bank of Ukraine, 2023a).

The main objectives of monetary policy during the war were named by the management of the NBU: support for adaptation and stable functioning; minimisation of monetary financing of the state budget; management of inflation expectations. As a case of the effective use of the discount rate, one can point to its increase immediately after the start of a full-scale war to a level not observed in recent years (Figure 1), which made it possible to overcome the crisis but also led to a decrease in the activity of the financial market participants.

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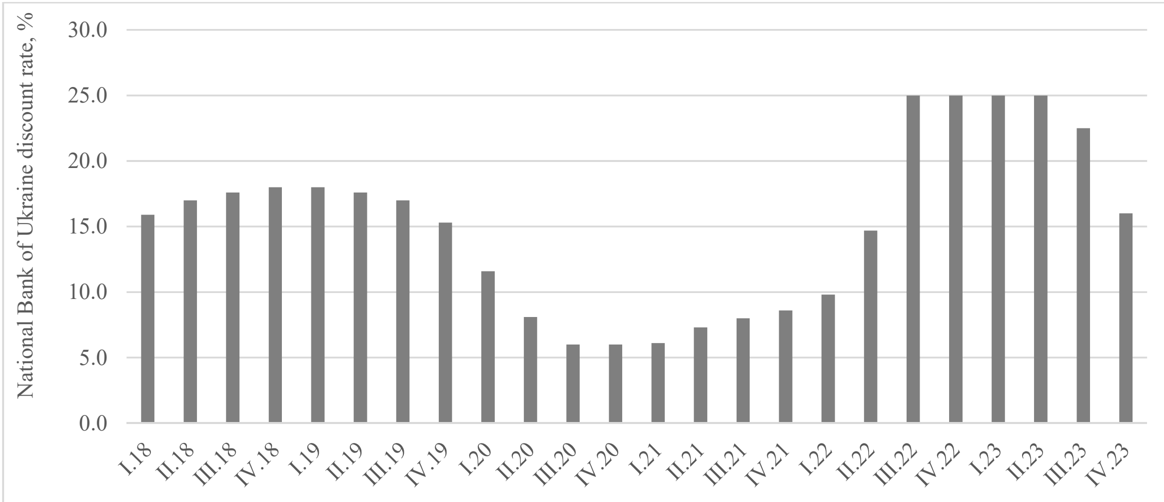

Fig. 1. Trends in the discount rate of the National Bank of Ukraine, %.

Source: based on the National Bank of Ukraine (2023b).

Therefore, from the third quarter of 2023 to the fourth quarter of 2023, the National Bank of Ukraine began to reduce the discount rate, and already in the fourth quarter of 2023, it reduced the discount rate to ~16%. Thus, the accounting rate became even lower than in 2018 – before the start of a full-scale war.

These measures of the National Bank of Ukraine also led to the fact that the specified indicator became comparable to the rate for overnight deposit certificates. This increased the volume of operations under this instrument of the financial market already in the fourth quarter of 2023 (Table 2).

Table 2. Liquidity of the banking system and the balance of NBU operations, $ billion.

Date	DS overnight, $ billion	Reconciliation accounts, $ billion	Refinancing loans, $ billion
04.01.2022	3.494	2.024	-3,490
01.04.2022	4.909	1.473	-4,304
01.06.2022	5.832	1.473	-3,921
01.09.2022	5.959	1.657	-2,043
01.11.2022	6.221	1.597	-2,013
02.01.2023	13.058	1.602	-1,045
03.04.2023	9.134	5.603	-0,552
01.06.2023	8.256	5.453	-0.232
01.09.2023	8.308	4.714	-0.123
01.11.2023	8.464	6.193	-0.069

Source: based on the National Bank of Ukraine (2023b).

This signals a structural liquidity surplus and allows the short-term national currency (hryvnia) interbank rates to approach the indicated ~16%, which decreases inflationary expectations (Figure 2). The dynamics of the indicators given in Table 2 indicate a tendency to increase the banking system's liquidity, which will affect the activity of financial market participants. The uneven nature of the liquidity dynamics of the banking system testifies to the effects of the war on the indicators of this process and determines its unstable nature.

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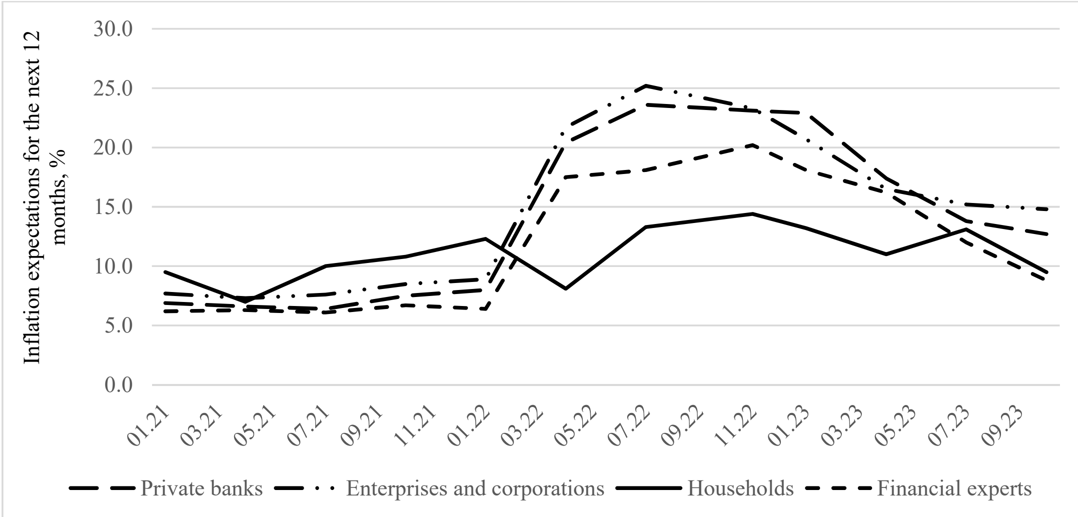

Fig. 2. Dynamics of inflation expectations for the next 12 months, %.

Source: based on the National Bank of Ukraine (2023b).

Also, the actions of the National Bank of Ukraine regarding the regulation of the interest rate policy reduced the level of interest rates on financial instruments in the hryvnia, which has a significant impact on the activities of financial market participants. The level of interest rates for domestic government bonds (DGB) and hryvnia deposits restrains the inflationary depreciation of the national currency.

The indicated actions of the regulator led to a decrease in inflation expectations in 2023 relative to the indicators of 2022 (Figure 3). At the same time, the ability of the National Bank of Ukraine to regulate interest rate policy is limited due to the need to maintain accurate interest rates on hryvnia-denominated financial instruments within specified intervals and to create a basis for easing currency restrictions. The growth trend of inflationary expectations was reversed for most financial market participants at the end of 2022. This trend, for example, for commercial banks, is evidenced by the data in Figure 3. This policy of the National Bank of Ukraine led in 2023 to a reduction in the weighted average interest rates on hryvnia term deposits (Figure 3), which increased the profitability of a significant part of financial market participants, first of all, those whose activity related to deposit operations.

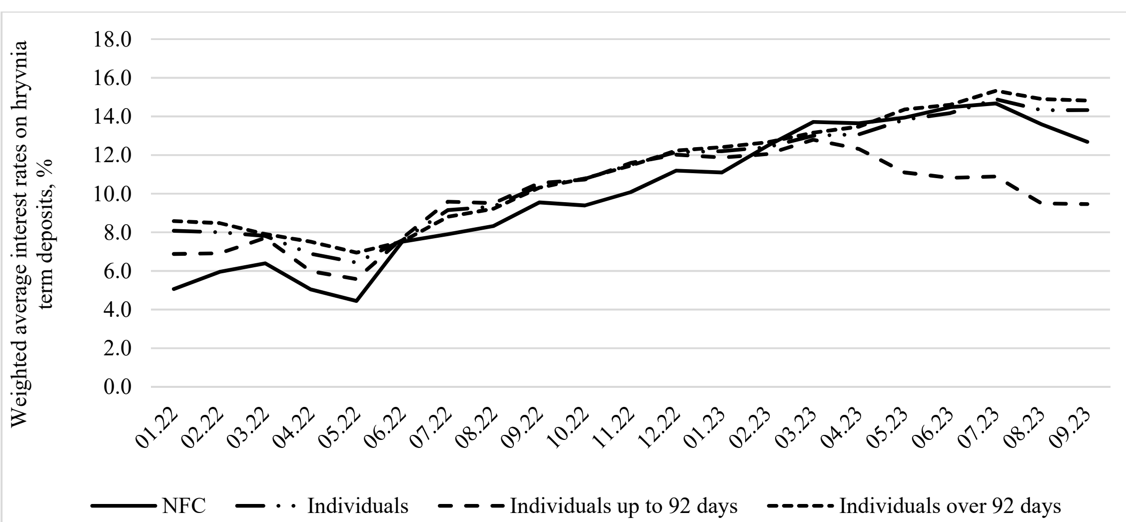

Fig. 3. Weighted average interest rates on hryvnia time deposits, %.

Source: based on the National Bank of Ukraine (2023b).

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The effects of the regulator's monetary policy on the financial system and its component, the financial market, can be conceived as follows:

1. The need to increase lending levels affects monetary transmission.
2. Lack of foreign exchange earnings to stabilise the exchange rate.
3. Surplus liquidity of banks.
4. The need to regulate relative prices due to structural changes.

The neutralisation of first-named threats is greatly hindered because financial institutions tend to restrain lending due to significant war risks. Therefore, it is expedient to introduce insurance for specified risks and form credit guarantee mechanisms. One example is the provision of state guarantees to creditor banks by 2022.

Thus, in 2022, state guarantees were provided to 28 banks to ensure the partial fulfilment of credit obligations. According to the second threat, foreign exchange earnings from export deliveries are restrained by targeted military threats to logistics routes and transport infrastructure. Short-term monetary instruments for countering this threat include currency interventions and tight control of short-term capital. It is advisable to use monetary tools to neutralise the threat of excess liquidity in banks.

The significant adverse effects on the activities of financial market participants in the current period are:

– Increase in the level of risk uncertainty.
– Decrease in the level of financial assistance from international partners and the instability of its receipt.
– The restoration of monetary financing started in 2022 to prevent a crisis with public finances, which helped reduce financial stress.
– Threat of significant currency flow volatility.
– The occurrence of expenses unforeseen in the state budget for defence needs and liquidation of the consequences of damage to civil infrastructure will directly and tangentially lead to decreased participants' activity.
– A decrease in the liquidity of the financial market participants.
– Slowing down the conversion of individuals' savings into long-term resources in the financial market.
– Loss of human and client potential due to increased migration and mobilisation activities.
– Increases the risk of money supply growth.

The specified negative impacts cause a change in the direction of short-term trends in the Financial Stress Index (Figure 4).

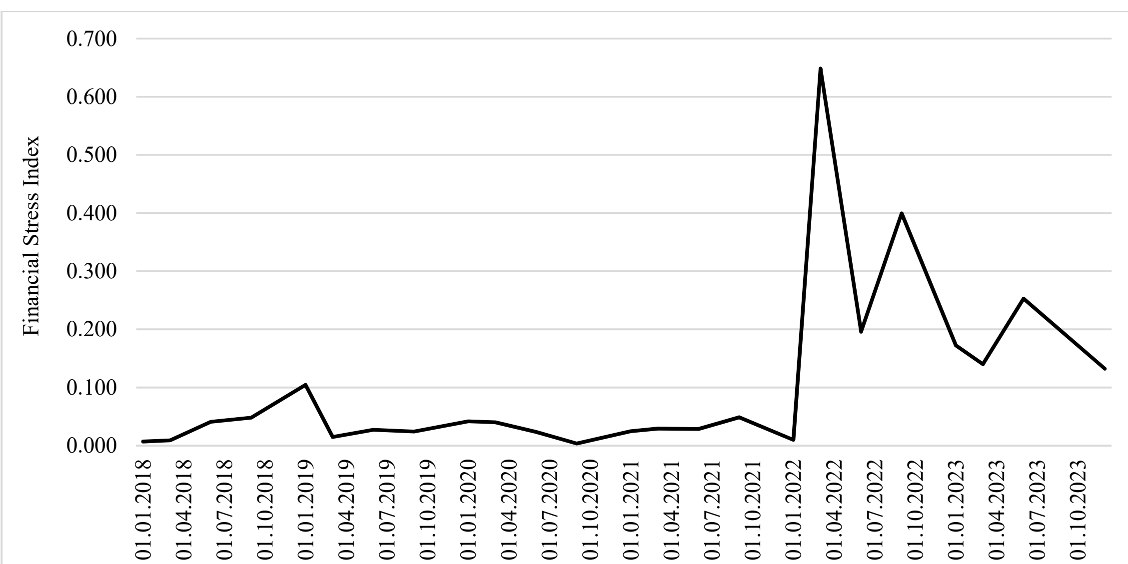

Fig. 4. Financial Stress Index, Ukraine (2018-2023).

Source: based on the National Bank of Ukraine (2023b).

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The Financial Stress Index is also an indicator of uneven dynamics of the stress level in the Ukrainian financial system, particularly for financial market participants. This is evidenced by significant fluctuations in the Financial Stress Index throughout 2023, which are a consequence of the war's effects. The regulator's actions do not ensure the proper level of financial market stability, an indicator of significant fluctuations in the stress index up to 65% of the average value in 2023.

A trend of decreasing the level of the Financial Stress Index characterises the effectiveness of the National Bank of Ukraine's anti-crisis measures.

In assessing the impact of the war on the activities of Ukrainian financial market participants by their areas of activity, it is necessary to note that bank profits for January-November 2023 amounted to 3,005 billion US dollars, which is 14.85% more than a year earlier. The banking instrument that provided this was interest income, which included income from domestic government bonds (National Bank of Ukraine, 2023b).

The operating income of commercial banks increased by approximately 17.9% compared with the specified periods, and net interest income increased by approximately 38.7% (National Bank of Ukraine, 2023b).

At the same time, the growth in net commission income by a relatively insignificant amount (~5.4%) indicates an inadequate level of bank management regarding communication with payment card holders and infrastructure development in this activity area.

During the full-scale invasion, commercial banks formed reserves for active operations in the financial market for UAH 104,000 million ($ 2,844 million) (National Bank of Ukraine, 2023b).

Return on equity in this segment of the financial market for the first to third quarters In 2023, compared to 2021, it increased by approximately 13.23 times, which indicates an increase in the stability of banks even in war conditions. As a result, it led to a significant change in the structure of interest income of financial market participants (Table 3).

Table 3. Dynamics of the structure of interest income of financial market participants, share of net assets.

Data	Loans		Securities of state institutions		Other interest income
	Corporate loans	Loans of individuals	Government debt securities	NBU certificates of deposit	
31.01.2022	0.0290	0.0330	0.0250	0.0080	0.0020
28.02.2022	0.0260	0.0320	0.0220	0.0050	0.0020
31.03.2022	0.0310	0.0270	0.0250	0.0060	0.0020
30.04.2022	0.0290	0.0280	0.0250	0.0080	0.0020
31.05.2022	0.0320	0.0270	0.0250	0.0080	0.0020
30.06.2022	0.0290	0.0260	0.0230	0.0180	0.0030
31.07.2022	0.0340	0.0250	0.0230	0.0190	0.0040
31.08.2022	0.0330	0.0250	0.0200	0.0210	0.0030
30.09.2022	0.0350	0.0270	0.0200	0.0260	0.0040
31.10.2022	0.0360	0.0260	0.0210	0.0290	0.0040
30.11.2022	0.0330	0.0230	0.0200	0.0350	0.0050
31.12.2022	0.0340	0.0190	0.0200	0.0410	0.0060
31.01.2023	0.0320	0.0220	0.0210	0.0400	0.0060
28.02.2023	0.0280	0.0180	0.0210	0.0300	0.0060
31.03.2023	0.0310	0.0200	0.0250	0.0340	0.0070
30.04.2023	0.0290	0.0200	0.0240	0.0330	0.0070
31.05.2023	0.0290	0.0200	0.0260	0.0370	0.0080

Source: based on the National Bank of Ukraine (2023c).

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The use of monetary financing in 2022 helped reduce the value of the Financial Stress Index (Figure 4) but led to significant threats to the financial system. Therefore, the National Bank of Ukraine was granted permission to support the state budget by purchasing government military bonds from financial institutions in the primary market and to carry out the specified purchase in the amount that per month should not exceed UAH 30,000 million ($ 820 million) (National Bank of Ukraine, 2023a).

This opened up significant opportunities for obtaining interest income from the securities of public institutions for public and non-public financial institutions (Table 3).

Thus, on 31 January 2022, the amount of interest income from loans to business entities and loans to individuals exceeded the amount of interest income from the National Bank of Ukraine and domestic government bond certificates of deposit by 87.9%, and the difference between them gradually decreased until the 3rd quarter.

However, from the first quarter of 2023, the interest income from loans was less than the integral value of interest income from the National Bank of Ukraine and domestic government bond certificates of deposits. A comparison of these integral indicators indicates that in the third quarter of 2023, the interest income from the National Bank of Ukraine and domestic government bond certificates of deposits was more significant than income from lending by 28.57%. This has led to deformation in the financial services market of Ukraine. This can be explained by the fact that the financial sector tried to reduce lending risks during the war, giving preference to more reliable state instruments for acquiring interest income.

It would be expedient to regulate the market and reduce lending risks by restructuring the loans of individuals who have become insolvent due to military operations with the possible involvement of international financial institutions. The dynamics of the key indicators in war conditions differ for different categories of financial market participants (Table 4).

Table 4. Dynamics of indicators of non-state financial institutions of Ukraine.

Financial institutions	Parameter	Time							
		2019	2020	2021	2022	Q1 2023	Q2 2023	Q3 2023	Q3 2023 vs. Q2 2023
Insurance companies	Assets, $ billion	2.45	2.39	2.39	2.14	1.79	1.94	2.01	96.46
	Number	233	210	155	128	122	115	111	-4
Credit unions	Assets. $ billion	0.10	0.09	0.09	0.04	0.04	0.04	0.04	98.24
	Number	337	322	278	162	157	151	143	-8
Financial companies	Assets. $ billion	6.21	6.86	7.99	7.41	6.60	6.49	6.87	94.49
	Number	986	960	922	760	682	629	594	-35
Pawn shops	Assets. $ billion	016	0.14	0.16	0.12	0.11	0.12	0.13	98.93
	Number	324	302	261	183	171	164	158	-6
Commercia l banks	Assets. $ billion	57.22	67.02	75.79	71.53	61.80	70.06	72.40	96.77
	Number	75	73	71	67	65	65	63	-2

Source: based on the National Bank of Ukraine (2023c).

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Thus, the rate of increase in the volume of banking assets in 2023 was slightly (by 0.2 percentage points) ahead of the rate of increase in the volume of assets of non-banking financial institutions.

According to data for the third quarter of 2023 (National Bank of Ukraine, 2023c) in the non-banking sector of the financial market, 53 institutions were terminated. In the third quarter of 2023, the volume of assets of the non-banking sector increased by approximately 11.9%.

During the same period, the volume of assets of insurance market participants in the life insurance sector increased by ~4% and in the risk insurance sector by only ~3%. Motor transport insurance continues to dominate the premium structure and drives recovery in this segment of the financial services market. The conditions of the war also led to an increase in the amount of insurance payments in the area of risk insurance by ~6% and in the area of life insurance by ~9%.

Income from investments in risk insurance in the third quarter of 2023 increased relative to the indicators in second quarter of 2023 by 10%.

Investments in domestic government bonds provided the main share of income. Income from investments in life insurance covered the losses of their operational activities, and made it possible to obtain a profit of 0.7 billion UAH ($19.14 million), with a profitability of 25% (National Bank of Ukraine, 2023a). Credit unions in third quarter 2023 increased their quarter-on-quarter assets by approximately 1.8%. Profitability increased by approximately 28% during this period. Over the same period, the volume of assets of financial companies and pawnshops increased by ~ 5.8% and ~1.1%, respectively (Table 4).

It should be noted that the role of financial intermediaries (credit institutions, banks, credit unions, institutions that do not engage in credit activities (insurance and investment companies, pension funds) under the challenges of war has acquired new importance as a damper of significant fluctuations in financial market risks, particularly financial risk operations.

Therefore, the activity of financial intermediaries acts as a multiplier in the financial market.

It contributes to the elimination of the uneven development of various financial sectors of the market due to the function of the specified participants of the financial market, ensuring and guaranteeing transactions between institutions that concentrate and rationally use monetary capital and the coordination of financial interests of a significant number of market participants. Although a significant portion of financial intermediaries do not accept deposits and do not collect mandatory payments, it is their activity under the conditions of releasing a significant amount of money to the market in a short period of time to a certain extent that neutralises the negative consequences of an increase in the amount of money in circulation, in particular, as a result of the use of long-term financial instruments.

An important focus of regulators and other institutional structures is to reduce public expenditures and defer payments into the future to free up resources to pay for military needs currently.

The indicator of this activity is, in particular, the fact that the price of Ukrainian Eurobonds, in which private investors have invested money, is currently 40 cents per dollar.

On the one hand, this creates the need for negotiations on the restructuring of external public debt and, on the other hand, indicates the assessment by investors of the regulator's monetary policy and the significant pressure of the specified policy on the activity of the financial market.

Restructuring or reprofiling of Eurobonds will not lead to significant risks to Ukraine's financial market since Ukrainian participants are not owners of significant volumes of the specified securities. The money market indicators in Figure 5 were used to assess monetary policy. This figure illustrates the dynamics of the main components of the monetary base in Ukraine, such as the emission of cash hryvnia and funds in bank accounts at the National Bank of Ukraine, as these indicators determine the size of banks' mandatory reserves (Minakov, 2022). From the third quarter of 2022 to the third quarter of 2023, the following indicators increased: money supply by 21.03% and the monetary base by 25.77%.

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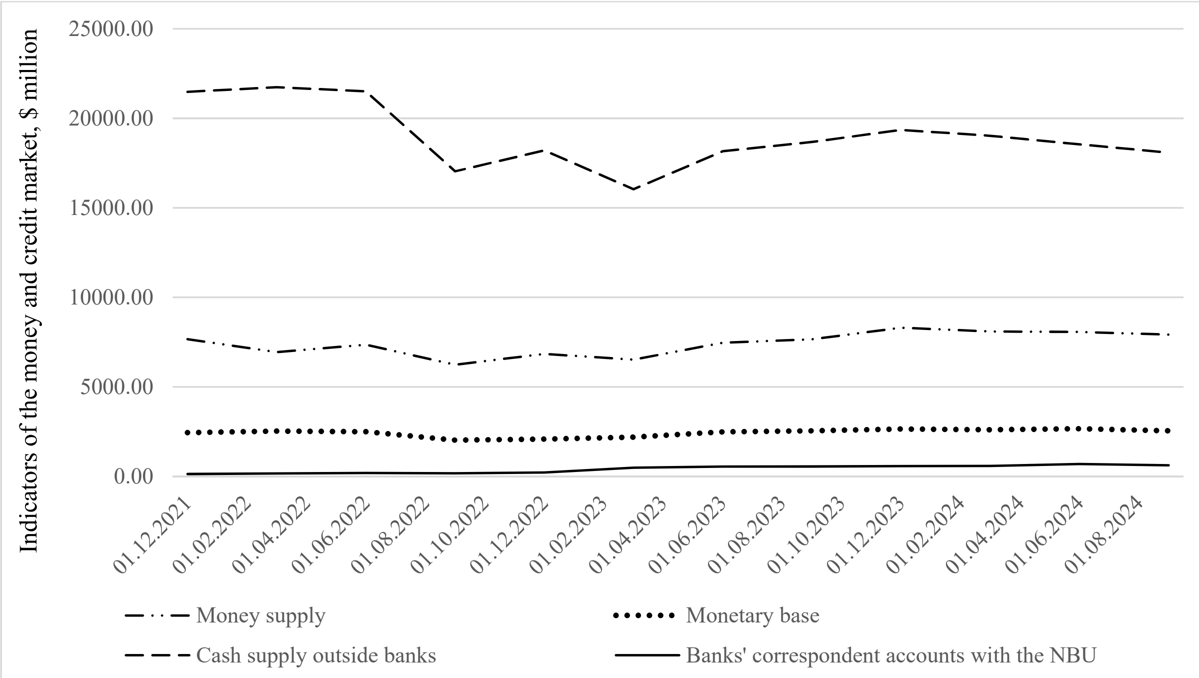

Fig. 5. Indicators of the money and credit market, $ million.

Source: based on the Independent Association of Banks of Ukraine (2024).

However, the most significant increase was in the volume of banks' correspondent accounts with the National Bank of Ukraine, which increased by 202%. This indicates the effects of war, which has significant and, to a greater extent, adverse effects on the functioning of the financial market. This also determines the need for strict control over the movement of capital. This, in particular, can reduce market participants' activities in certain areas.

6. Conclusions.

The functioning of the financial market in martial law conditions is determined both by the direct influence of military actions, such as the destruction of financial infrastructure, the relocation of some market participants, and the need to change the means and methods of communication between market participants and by the indirect influence of institutional structures, for example.

The management of the National Bank of Ukraine defined the discount rate and inflation targeting with a flexible exchange rate as monetary policy instruments. The impact of the regulator's monetary policy on Ukraine's financial system and market is determined.

In particular, the increase in the discount rate to a significant level in March 2022 allowed a reduction in the level of financial stress but, at the same time, led to a decrease in the activity of financial market participants.

The gradual decrease in the discount rate in the third and fourth quarters of 2023 led to the fact that the specified indicator became comparable to the rate on overnight certificates of deposits. This resulted in the activation of the financial market. This also signalled the market about a structural liquidity surplus and allowed short-term hryvnia interbank rates to be closer to 16%, leading to decreased inflation expectations. This indicates that the National Bank of Ukraine's actions regarding the regulation of the interest rate policy reduced the level of interest rates on financial instruments in the hryvnia, which had a significant impact on the activities of financial market participants. Inflation is a factor restraining the interest rates for domestic government bonds.

This indicates that the regulatory impact at the end of 2022 changed the crisis trend in inflation expectations. This became a factor in reducing interest rates on hryvnia deposits, which increased the profitability of financial market participants.

The adverse effects on the activity of financial market participants are a 152% decrease in the profitability of banks in the first quarter of 2022, a 30% reduction in the volume of funds on correspondent accounts, and a 22.21% increase in the share of non-performing loans to the corporate sector.

The regulator's actions increased the liquidity coverage ratio in the critical period from 01.01.2022 to 01.01.2023 by 3.27 times. The long-term liquidity indicator increases by only 7%, indicating uneven liquidity dynamics. Using monetary financing in 2022 helped reduce the value of the Financial Stress Index but led to significant threats to the financial system. The National Bank of Ukraine granted permission to support the state budget for financial market participants by purchasing government military bonds in the primary market. This led to a significant change in financial market participants' interest income structure.

The increasing importance of financial intermediaries in military operations has been highlighted. Their activities take on a new significance as a damper of significant fluctuations in financial market risks, particularly the risks of financial transactions. Therefore, the activity of financial intermediaries plays the role of a multiplier for the activity of the financial market and contributes to the elimination of the uneven development of various financial sectors in the market.

According to the study's results on the financial market's functioning in martial law conditions, the effects on the participants of the financial market according to their types of activity were determined. The effects of the actions of institutional structures, particularly the monetary policy of the National Bank of Ukraine, on the functioning of the financial market were determined.

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