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THE MONETARY COMPONENT IN ENSURING THE FINANCIAL SECURITY OF THE STATE

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ABSTRACT

The paper studies the place and degree of the monetary component's influence on the level of financial security of the state in the conditions of political and socio-economic imbalances in the development of Ukraine. The aim of the research is to investigate the effectiveness of monetary policy instruments, to determine the level of the monetary component's impact on the financial security of the state, as well as to form perspectives for balancing the symbiosis of "monetary policy and national financial security". Based on the conducted research, it is established that in recent years the role of the financial security system formation at all levels has significantly increased, whether it is macroeconomic security, the security of economical subjects, or the financial security of a household. At the same time, the monetary component plays a significant role in ensuring the financial security of the state, namely, it affects macroeconomic processes in the country. Therefore, in order to ensure macroeconomic stability and economic growth in the context of ensuring the financial security of Ukraine under martial law, it is necessary to improve the mechanisms of monetary policy. The article analyzes the latest threats that lead to the negative impact of the monetary component on the financial security of the state. These include: the consequences of russian military aggression on the economic development of Ukraine, continued COVID-19 outbreaks, the introduction of administrative restrictions on the use of monetary policy instruments by the National bank of Ukraine, violations of the economic security of financial institutions, an insufficient level of financial inclusion, and the contradictory nature of the coordination of monetary and fiscal policies. In the context of establishing the decisive role of the monetary component in ensuring the financial security of the state, the adopted development strategies at the level of national security of Ukraine and at the level of the monetary sector of Ukraine are considered and systematized. The block diagram of the implementation of monetary policy in the context of ensuring the financial security of the state is proposed. It is proved that the mechanism of such interrelationship is implemented through the instruments and methods of monetary policy in combination with key macroeconomic indicators. To confirm the proposed hypothesis, the econometric model of the influence of monetary instruments on the level of financial security of the state is developed. As a proxy indicator of the financial security of Ukraine, the Financial Stress Index is used, which reflects the current state of the financial sector (without considering future risks) and consists of sub-indices for the banking sector, households, government and corporate securities, and foreign exchange market. Estimated and re-estimated models made it possible to determine the most influential indicators of the monetary component of the Financial Stress Index, namely: consumer price index; producer price index; GDP to monetary aggregate M2 ratio; cash to GDP ratio; share of foreign currency in monetary aggregate M3; NBU key policy rate (annual average); share of non-performing loans (NPL). The proposed model can be used to forecast the influence of the parameters of the monetary component on the level of financial security of the state.

Based on the results of the study, it is proved that, despite the difficult political and economic situation in Ukraine, it is necessary to focus on improving the coordination of monetary and fiscal policies, considering the further implementation of the main provisions of international documents adopted by International Monetary Fund on this issue.

Keywords: monetary policy, financial security, threats, monetary instruments and methods, Financial Stress Index, policies coordination

JEL Classification: E52, F52, G18

INTRODUCTION

Financial security is the main indicator of socioeconomic development and wealth in any country. Currently, in the conditions of martial law in Ukraine, this direction is becoming more and more relevant for research.

In recent years, the role of the formation of the financial security system at all levels has significantly increased, whether it is macroeconomic security, the security of economic subjects, or the financial security of an individual household. The specified problem remains one of the main and, accordingly, the most urgent in the modern conditions of the socio-economic and political development of Ukraine. On the one hand, it is obviously important and necessary to ensure the financial security of the state, and on the other hand, many of its aspects are beyond the bounds of comprehensive systemic understanding and even more effective implementation practice.

In this aspect, it is worth noting that the monetary component plays a significant role in ensuring the financial security of the state, namely, it affects macroeconomic processes in the country (inflation level and rates, economic dynamics, financial market conditions). Therefore, in order to ensure macroeconomic stabilization, effective economic growth in the context of ensuring the financial security of Ukraine in the conditions of martial law, it is necessary to improve the mechanisms of monetary policy.

LITERATURE REVIEW

The analysis of relevant literature on the impact of monetary policy on the level of financial security of a country gives grounds to claim that the concept of financial security of a country is not considered in the publications of foreign economists. It is associated with uncertainty and risks inherent in one or another cycle of the socio-economic development of the state. At the same time, monetary factors of macroeconomic development are studied as the main paradigm.

Thus, Yang Hu investigated the relationship and influence of monetary and other economic policies uncertainties on US materials from 1986 to 2022 (Hu Yang et al., 2022) [1]. The significant influence of monetary policy uncertainty on the emergence of six factors of uncertainty related to politics, namely taxes, public expenditures, health care, national security, social programs and law enforcement agencies, has been proven. It was established that considering the medium- and long-term impact of monetary policy during the formation of an economic strategy allows to significantly minimize the transfer of risks from the monetary sphere to other branches.

The authors of the paper (Bianchi, J., Bigio, S., 2022) [2], using the example of the GFC of 2008, built a balancing model of non-systematic transfer of deposits between banks using refinancing operations. The authors proved the importance of considering the problems with banks' liquidity and the peculiarities of interbank lending in order to prevent full-scale bankruptcies.

Scholars Yifei Wang, Toni M. Whited, Yufeng Wu and Kairong Xiao conducted an assessment of the impact of bank regulatory bodies on the effectiveness of monetary transmission (Wang, Y. et al., 2022) [3]. They proved that the actions of supervision authorities in the banking sector in many cases explain the transfer of monetary policy impulses to borrowers, which can be compared with the effectiveness of bank capital regulation. At the same time, it is emphasized that at low-interest rates bank regulatory bodies will transform bank capital supervision, which is ultimately ineffective.

Dario Caldara and Edward Herbst considered the impact of monetary shocks on economic activity (Caldara, D., Herbst, E., 2019) [4]. The authors prove that monetary policy shocks significantly suppress real economic activity and financial climate. The main component of this influence is corporate lending spreads, which must be considered an endogenous variable in the formation of monetary policy.

José-Luis Peydróa, Andrea Polob and Enrico Settec using the example of Italy considered the breach of monetary transmission as a result of the banks' imbalance of their own portfolios in favour of securities (Peydróa, José-Luis et al., 2021) [5]. Researchers argue that during a crisis, central bank liquidity is higher, so banks respond by increasing the supply of securities instead of lending. At the same time, the transition from lending to investing in securities allows banks to renew full-fledged lending already a year after the end of the crisis.

The analysis of scientific publications on the issues under this study has proven the clearly defined nature of the influence of monetary policy on the financial security of a state. This is because, for Ukraine, financial security plays a key role in maintaining its external competitiveness, which is ensured by regulation and balancing of monetary policy decisions, especially during martial law. Thus, among the scientific developments on this issue, the works of O. Sharov (Sharov, O.,

2022) [6], G. Myskiv (Myskiv, G.V., Vinichu, M.V., 2022) [7], S. Krynytsia (Krynytsia, S.O. et al., 2022) [8], A. Ya. Kuznetsova, & N. P. Pohorelenko. (2021) [9]. The presented researches prove that monetary policy plays the role of an essential element of national security; the influence of monetary policy instruments and parameters on the financial security of Ukraine is substantiated; it was determined that price and exchange rate stability, investment activity and economic growth in Ukraine depend on the effectiveness of monetary policy implementation; the process of monetary policy formation and its interrelationship with the monetary security of the state are investigated.

Certain aspects of purely financial security of the state are reflected in the writings of D. Korobtsova (Korobtsova, D.V., 2022) [10], B. Moskvin (Moskvin, B.Yu., 2022) [11], I. Mushenyk (Mushenyk, I.M., Grushetskyi, S.M., 2022) [12] and many others. In the presented papers it is substantiated that financial inclusion, in combination with business and population's confidence in the monetary sector, is a stimulating factor for directing savings to the investment sphere, reducing the level of shadowing of the economy, increasing the financial stability of business entities, and, as a result, increasing the level of state revenues and ensuring financial security. The legal field, which regulates the main functional links between monetary policy and the financial security of the state, is also systematized.

AIMS AND OBJECTIVES

The purpose of this research is to study the effectiveness of monetary policy instruments, to determine the level of influence of the monetary component on the general financial security of the state, as well as to form directions for balancing the symbiosis of "monetary policy and national financial security".

To achieve this purpose the following tasks were defined:

- to take the identification of threats to the financial security of the state, which were formed during the full-scale russian military invasion;
- to determine the relationship between monetary policy and the financial security of the state through the legal framework that regulates the adopted strategies in this direction;
- to propose a mechanism for the implementation of the monetary policy of Ukraine in the context of ensuring national financial security;
- to analyze the most significant factors of the monetary component of the financial security of the state;
- to develop recommendations for further balancing the effective influence of the monetary component on the country's financial security.

METHODS

The object of the study is the process of establishing the relationship and effective influence of monetary policy on ensuring the financial security of Ukraine.

Achieving the goals of the paper is possible through the use of such research methods as:

- a systematic approach to identifying threats to the state's financial security;
- analysis, synthesis and generalization when determining the relationship between monetary policy and the financial security of the state;
- calculation and analytical, graphical methods, coefficient analysis in the study of the dynamics of the most significant factors of the monetary component of the national financial security;
- least squares method (LS) within the framework of the multifactorial regression approach when construction of the econometric model of the monetary component's influence on the level of ensuring the financial security of the state;
- expert assessments and comparisons when formulating recommendations for further balancing the effective influence of the monetary component on the financial security of the country.

The study is based on the following working hypothesis. In order to determine the most significant influence of the monetary component on the level of financial security of the state, first, it is necessary to single out those threats caused by the current socio-economic situation in Ukraine.

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One of the newest threats is precisely the consequences of the russian military aggression on the development of Ukraine's economy. Attention should be paid to the number of dead in Ukraine, who were potentially involved in the creation of added value; their death or injuries create additional state costs for their burial and treatment (Figure 1).

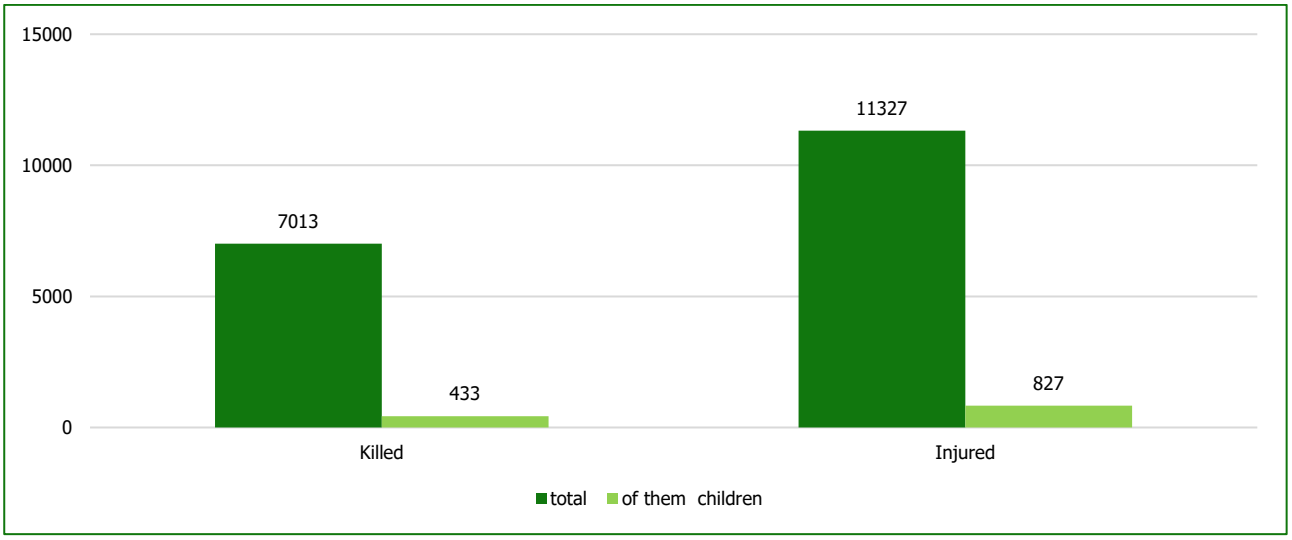


Figure 1. The number of victims among the civilian population in Ukraine during russian invasion, as of January 15, 2023. *(Source: [13])*

According to the Office of the UN High Commissioner for Human Rights, it has been confirmed that since the beginning of russia's invasion of Ukraine, there have been 7'013 deaths of civilians, including 433 children. The largest number of deaths was recorded in March 2022 - more than 3'200 people.

The largest bilateral aid commitments to Ukraine were undertaken by the United States and amounted to more than 47.8 EUR billion as of November 20, 2022 (Figure 2).

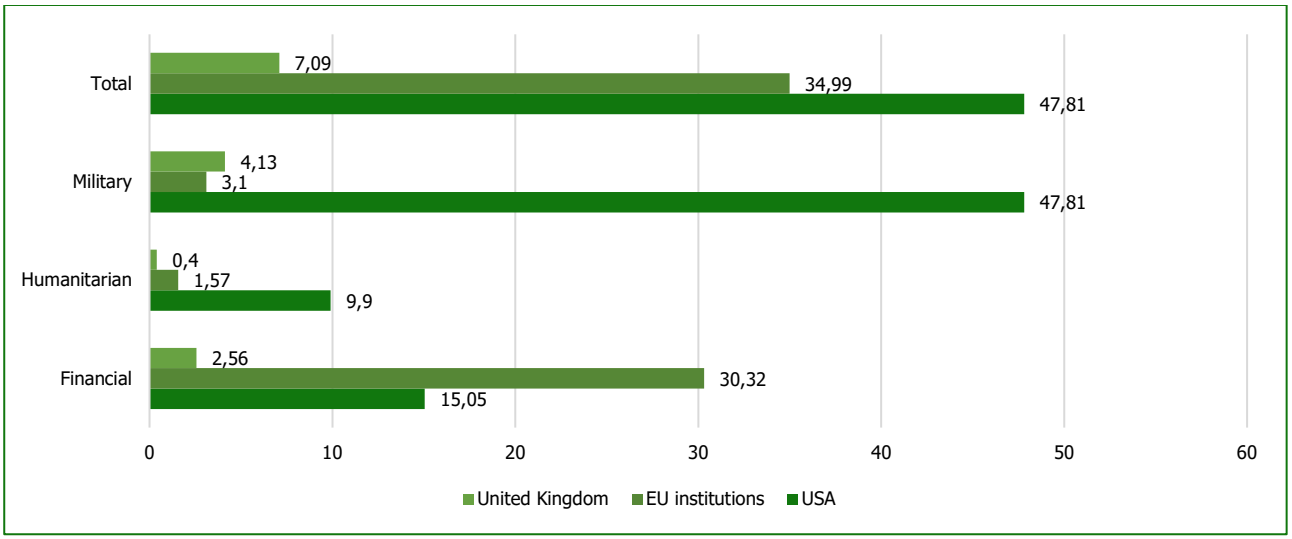


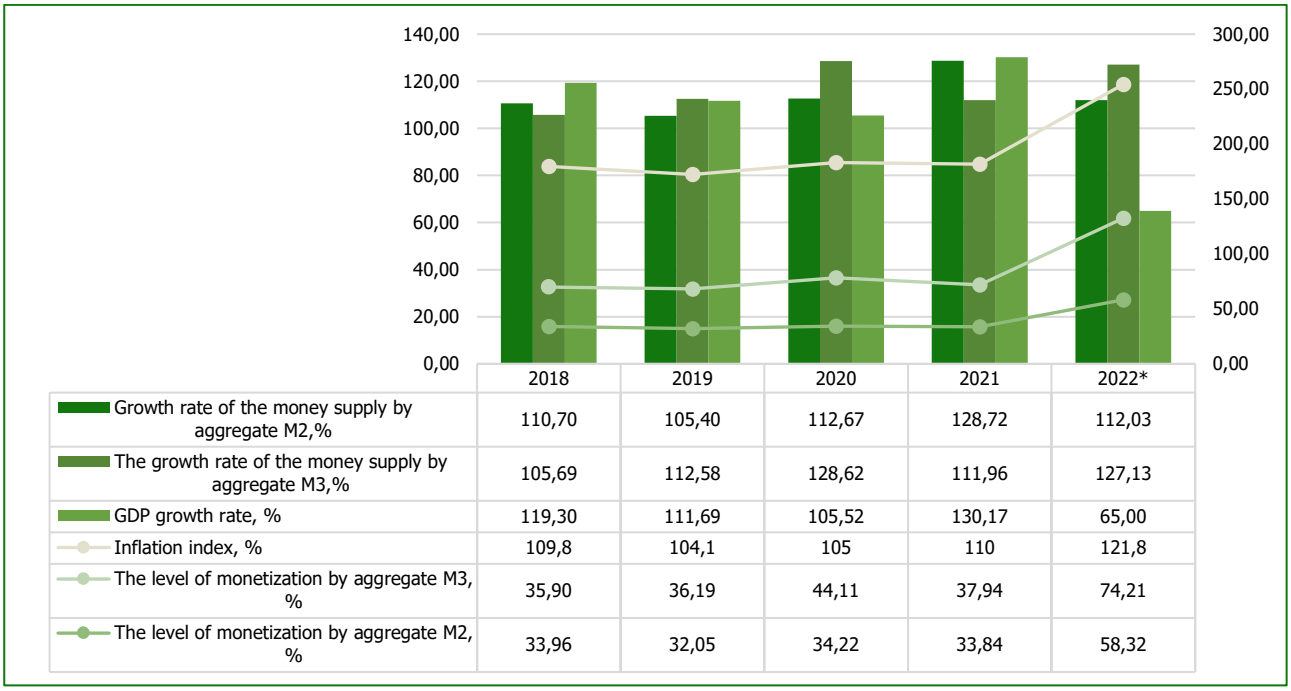
Figure 2. The volume of bilateral aid commitments to Ukraine from January 24 to November 20, 2022, by type (in EUR billions). *(Source: [13])*

Despite the fact that international support is relevant for Ukraine today, it leads to an increase in public debt, which complicates the situation with financial security. Thus, as of November 31, 2022, the external state and state-guaranteed debt of Ukraine amounted to USD 69'306.1 million. USA and, accordingly, it grew by 21.17%.

It is also necessary to analyze macroeconomic and monetary indicators, and how they affect the state of the economy of Ukraine (Figure 3).

As evidenced by the data in Figure 3, in 2018 there was an increase in GDP growth rate by 19.3% with a gradual decrease in the growth rate of M3 money supply at the level of 5.7%, which led to a decrease in the level of monetization of the

economy (34% for the M2 aggregate and to 35.7% by M3 aggregate). In 2019-2020, economic processes in Ukraine had an upward trend. However, during the times of martial law in Ukraine, the level of GDP decreased by 35% according to the results of the three quarters of 2022, which provoked a decrease in the supply of goods, which was reflected in the growth of the monetization ratio for M2 aggregate to 58.32%, and M3 aggregate to 74.21%, almost twice as much. Regarding inflation rates in Ukraine in the last months of 2022, they were expected and practically did not go beyond NBU forecasts.



	2018	2019	2020	2021	2022*
Growth rate of the money supply by aggregate M2,%	110,70	105,40	112,67	128,72	112,03
The growth rate of the money supply by aggregate M3,%	105,69	112,58	128,62	111,96	127,13
GDP growth rate, %	119,30	111,69	105,52	130,17	65,00
Inflation index, %	109,8	104,1	105	110	121,8
The level of monetization by aggregate M3, %	35,90	36,19	44,11	37,94	74,21
The level of monetization by aggregate M2, %	33,96	32,05	34,22	33,84	58,32

Figure 3. Dynamics of macroeconomic and monetary indicators for 2018-2022*, %. Note: *2022 – shown as Q1-Q3. *(Source: compiled by the authors based on [14])*

Among the threats that cause a negative impact of the monetary component of the financial security of the state is the introduction of administrative restrictions, in particular, the introduction of a fixed official exchange rate of hryvnia. This is caused by NBU's refusal to implement a lexical, orthodox inflation-targeting policy (Sharov, O., 2022) [6, p. 181].

Moskvin B., as one of the threats to the financial security of the state, singles out the violation of the economic security of financial institutions, which should include financial, personnel, technical and technological, informational, legal, market, security of operational activities, reputational security, cyber security, as well as psychological and physical security, the role and meaning of which were actualized in the conditions of the russian military aggression against Ukraine (Myskiv, G.V., Vinichu, M.V., 2022) [7, p. 115].

In the paper (Mushenyk, I.M., Grushetskyi, S.M., 2022) [12, p. 71] it is emphasized that the level of financial security of the country depends on the level of financial inclusion. Its insufficient level can act as a threat. Its provision leads to the inflow of profitable foreign investments, the development of exports and imports, the provision of food security, and the growth of tourism, an increase in the level of income, the development of small and medium-sized businesses, the reduction of corruption, fraud and plundering.

In the context of establishing the determining role of the monetary component in ensuring the financial security of the state, it is appropriate to consider the adopted development strategies both at the level of national security of Ukraine and at the level of the monetary sector of Ukraine (Figure 4).

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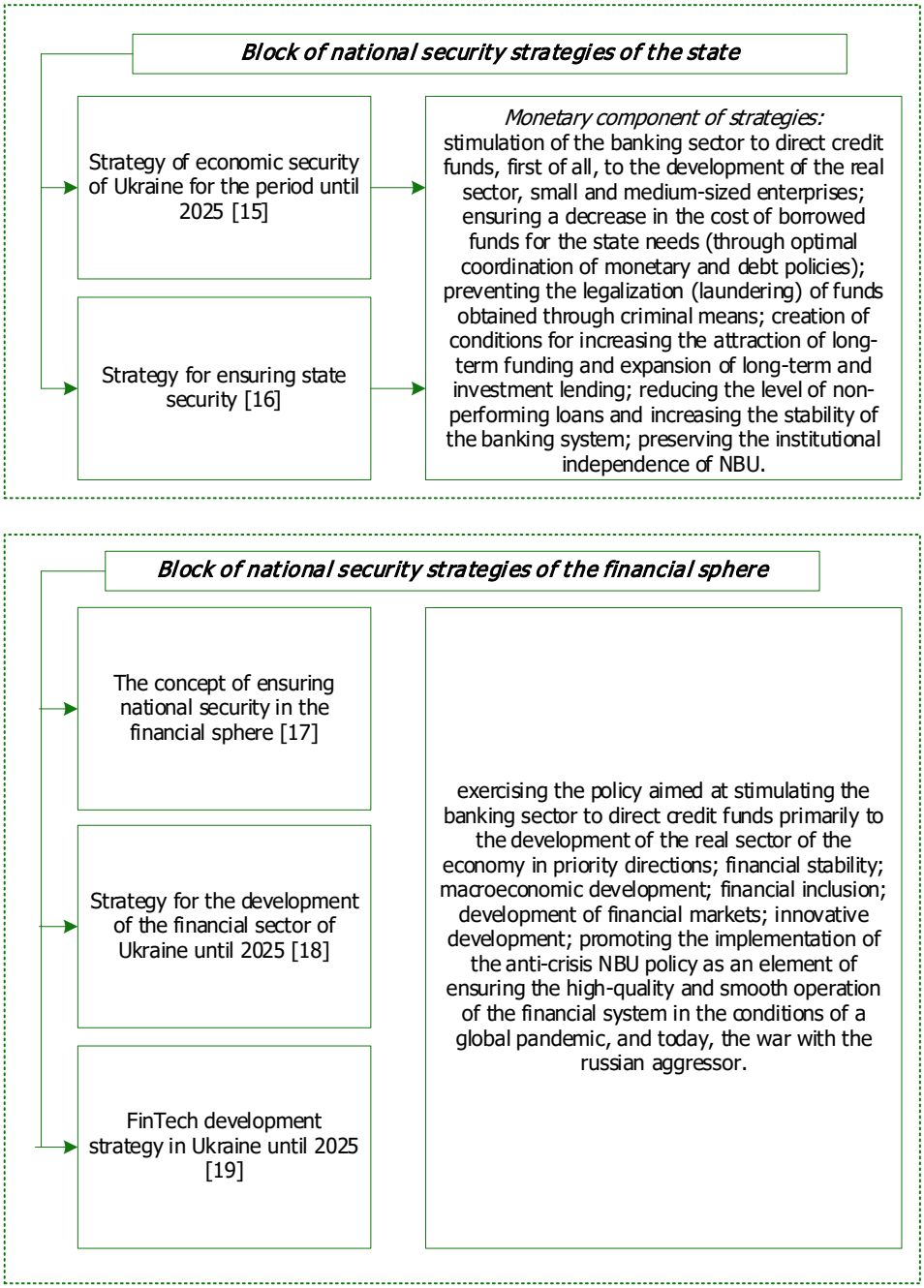

Figure 4. Characteristics of strategies that determine the relationship between monetary policy and financial security of the state.

It should be noted that the defining document that indicates such a relationship is "Basic principles of monetary policy". As noted by D. Korobtsova (Korobtsova D.V., 2022) [10, p. 144], the national level of financial security of the state from the banking system, as a segment of the state economy, consists in the legal regulation of money circulation on "Basic principles of monetary policy for the period of martial law", developed by NBU, which determine the need to preserve its own institutional, financial and operational independence for the proper performance of NBU's functions. The specified powers of NBU to conduct such a monetary policy are aimed at limiting inflation and directing finances to the needs of the defence industry.

The very mechanism of such interrelationship is implemented through the instruments and methods of monetary policy in combination with key macroeconomic indicators (Figure 5).

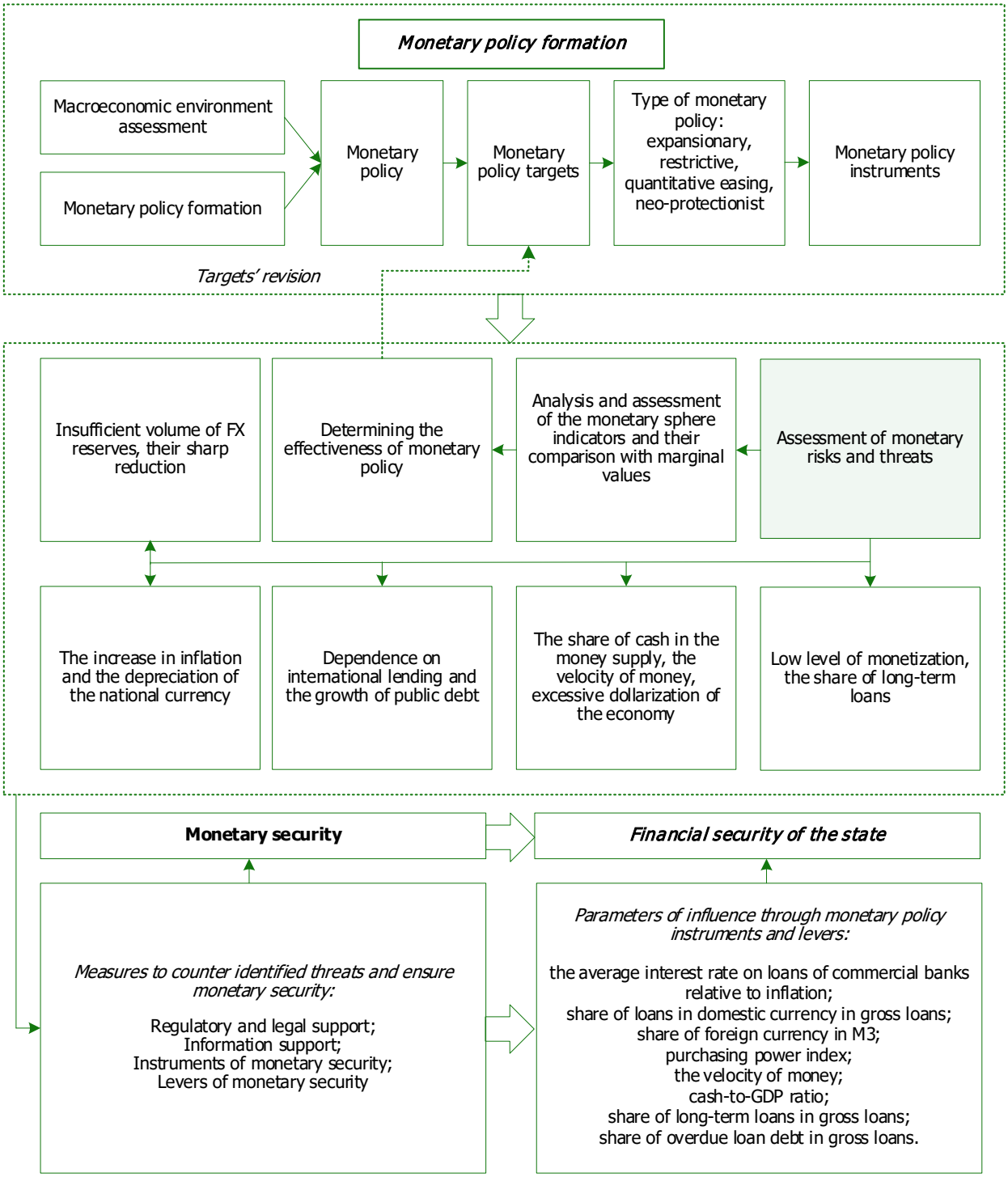

Figure 5. Block diagram of the implementation of monetary policy in the context of ensuring the financial security of the state. *(Source: developed by the authors using [7; 8])*

To confirm the proposed hypothesis, an econometric model of the monetary instruments' influence on the level of ensuring the financial security of the state was built.

RESULTS

To determine the most significant factors of the monetary component of the country's financial security, which demonstrate a close historical connection with the key indicator, the authors selected a number of indicators of the money market and the banking system.

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As a proxy level of the financial security of Ukraine, it is advisable to use the Financial Stress Index (FSI) – an integral indicator reflecting the current situation of the financial sector (without considering future risks) and consisting of sub-indices for the banking sector, households, government and corporate securities, foreign exchange market.

The index can take on a value from 0 to 1, where 0 is the complete absence of stress, and 1 is the highest degree of tension. Thus, the FSI reflects the level of financial stability of the country at a specific moment in time and is an indicator of real threats to the security of the financial sector.

To build an econometric model, FSI values will be taken as the dependent variable (Y), and the rest of the indicators will be taken as independent factors (X1, X2, ... X11), namely:

- X1 – consumer price index (CPI y-y),
- X2 – producer price index (PPI y-y),
- X3 – gross domestic product to monetary aggregate M2 (GDP-to-M2 ratio),
- X4 – cash-to-GDP ratio,
- X5 – monetary aggregate M3-to-GDP ratio,
- X6 – share of foreign currency in monetary aggregate M3,
- X7 – NBU key policy rate (annual average),
- X8 – weighted average interest rate on loans in hryvnia (CPI adjusted),
- X9 – level of non-performing loans (NPL ratio),
- X10 – share of long-term loans,
- X11 – share of loans in domestic currency.

The method of least squares (LS) within the multivariate regression approach was used as the methodological basis of the study. The series of initial data for the dependent and assumed independent variables are presented in Table 1.

Table 1. Source data for determining the impact of the monetary component on the Financial Stress Index in 2008-2021. *(Source: calculated and compiled by authors using [14; 20-21])*

Variables	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Y	0.26	0.29	0.03	0.04	0.02	0.02	0.30	0.52	0.12	0.03	0.03	0.03	0.03	0.03
X1	25.20	15.90	9.40	8.00	0.60	-0.30	12.10	48.70	13.90	14.40	10.90	7.90	2.70	9.40
X2	35.50	6.50	20.90	19.00	3.70	-0.10	17.10	36.00	20.50	26.40	17.40	4.10	-1.60	40.80
X3	1.93	1.95	1.81	1.91	1.82	1.62	1.66	2.00	2.16	2.47	2.80	2.77	2.29	2.64
X4	0.17	0.18	0.19	0.16	0.16	0.18	0.19	0.16	0.14	0.12	0.11	0.11	0.13	0.11
X5	0.52	0.51	0.55	0.53	0.55	0.62	0.60	0.50	0.46	0.41	0.36	0.36	0.44	0.38
X6	30.63	31.68	29.13	30.40	32.12	27.24	32.16	32.17	32.87	31.90	29.25	28.70	26.86	22.97
X7	11.40	11.00	8.90	7.80	7.60	7.00	10.50	24.90	17.30	13.30	17.30	16.80	7.50	7.60
X8,	-7.41	5.02	6.25	7.96	17.80	16.93	5.52	-26.87	4.64	1.96	8.23	11.88	11.44	3.91
X9	3.88	13.70	15.27	14.73	20.37	16.35	23.32	35.39	38.95	54.82	54.41	50.53	43.47	31.72
X10	31.80	31.19	29.26	25.37	21.64	19.10	21.29	21.81	25.88	26.44	22.76	19.63	18.28	14.21
X11	40.90	49.15	53.97	59.69	63.25	66.18	53.69	44.19	50.57	56.13	57.22	63.15	63.32	71.10

Considering the situation in Ukraine in relation to the Financial Stress Index, it is possible to emphasize the two most significant periods – 2009 and 2015. The indicated situation was created due to the Global Financial Crisis of 2008 and the transformation of the financial sector, in particular the banking sector, in 2015. Also, it is worth to be noted that the period is evidence of the annexation of Crimea and the territories of Donbas, as evidenced by the negative value of the weighted average interest rate on loans in hryvnia (-26.87%), a decrease in the volume of loans granted in the national currency (Figure 6).

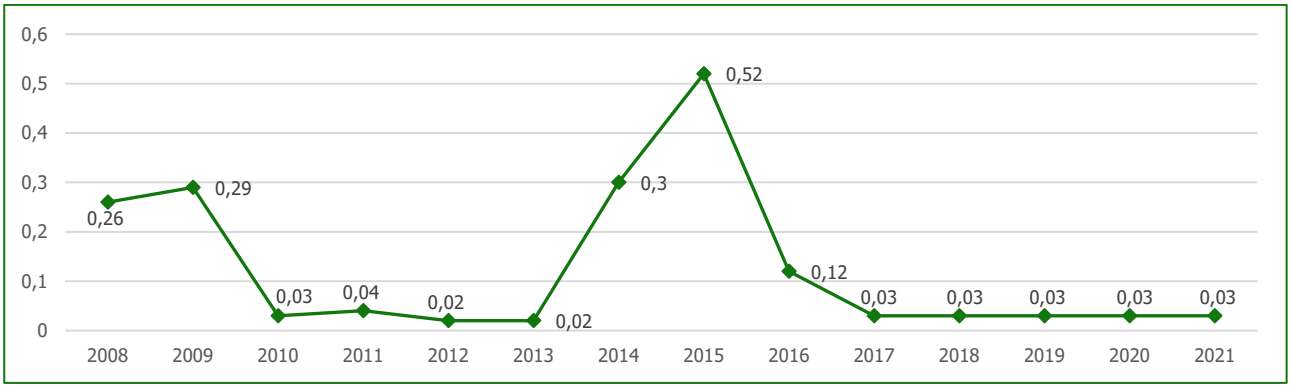

Figure 6. Dynamics of the Financial Stress Index in 2008-2021. *(Source: compiled by authors using [14])*

A necessary condition for the adequacy of the model that will be built in this way is the absence of heteroscedasticity of the data, which is determined using the unit root test. The results of such a test using the W-statistics method according to Im, Pesaran and Shin are presented in Table 2.

Table 2. Im, Pesaran and Shin unit root test results.

Input conditions	W-statistics	Probability of the null hypothesis, %	Interpretation (a unit root is present)
Untransformed series, intercept	-1.0138	15.53	yes
Untransformed series, intercept and trend	0.1801	57.14	yes
1st difference of series, intercept	-5.6001	00.00	no
1st difference of series, intercept and trend	-3.0411	00.12	no

Although the adjusted R2 value is 0.9443 (that is, the changes in the selected factors can explain 94.43% of FSI dynamics), which is a high result for a similar data set, the probability of a null value (p-value) of many regressors is quite high. This requires further adjustment of the model by discarding independent variables with the highest probability of the null hypothesis about their influence on the value of the regressive.

Thus, to fulfil the requirements of the model for data heteroskedasticity, it is necessary to transform the original series to the first difference. The characteristics of the model evaluated according to LS are presented in Table 3.

Table 3. Characteristics of LS estimated model.

Regressors	Coefficients	Standard error	t-statistics	p-value
X_1	0,038834	0,018927	2,051810	0,2887
X_2	-0,003010	0,002451	-1,228051	0,4351
X_3	0,505756	0,359259	1,407775	0,3932
X_4	3,295947	2,149825	1,533124	0,3679
X_5	1,458131	1,862999	0,782680	0,5772
X_6	1,990796	1,309761	1,519968	0,3705
X_7	-0,020349	0,008598	-2,366703	0,2545
X_8	0,022966	0,020429	1,124183	0,4628
X_9	-0,007289	0,003780	-1,928203	0,3046
X_{10}	0,416160	1,337062	0,311250	0,8079
X_{11}	-0,322196	0,528050	-0,610162	0,6512
intercept	0,047853	0,027215	1,758333	0,3292

After four rounds of re-estimation of the model, such variables turned out to be: the level of monetization, the weighted average interest rate on loans in hryvnia, the share of long-term loans and the share of loans in hryvnia (Table 4).

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As shown in Table 4, the adjusted R2 indicator of the model improved slightly and amounted to 0.9573: the dynamics of the original series can explain 95.73% of the change in FSI. At the same time, p-values for coefficients for variables are within acceptable levels of significance: 0.5%, 1%, 5%, respectively.

Table 4. Characteristics of LS re-estimated model.

Regressors	Coefficients	Standard error	t-statistics	p-value
X_1	0,016803	0,001772	9,480274	0,0002
X_2	-0,005028	0,000964	-5,215607	0,0034
X_3	0,446775	0,093561	4,775241	0,0050
X_4	5,507781	1,015614	5,423106	0,0029
X_6	2,700538	0,480551	5,619672	0,0025
X_7	-0,011147	0,004363	-2,554714	0,0510
X_9	-0,008959	0,001878	-4,770829	0,0050
intercept	0,035805	0,011723	3,054136	0,0283

The model can be presented as a multivariate regression equation of the form:

d(Y) = 0,0168* d(X1) – 0,005* d(X2) + 0,4468** d(X3) + 5,5078* d(X4) + 2,7005* d(X6) – 0,0111*** d(X7) – 0,009** d(X9) + 0,0358***

*where: * – 0,5% level of significance, ** – 1% level of significance, *** – 5% level of significance; X1 – CPI; X2 – PPI; X3 – GDP-to-M2 ratio; X4 – cash-to-GDP ratio; X6 – share of foreign currency in monetary aggregate M3; X7 – NBU key policy rate; X9 – NPL ratio*.

By analyzing the signs of the variable coefficients, it is possible to establish the direction of their influence. Thus, producer prices, NBU key rate and the share of NPL have an inversely proportional effect on the level of financial stress: the higher the value of these factors, the lower the fears in the financial market.

This, at first glance, an illogical trend can be explained not by the beneficial influence of these factors (which, obviously, none of them has), but, on the contrary, by the oppression of activity in the financial market, which each of these variables bears. Thus, an increase in PPI and the share of NPL indicates a virtual halt in economic development (hence, the stress on the financial market has already reached its limit), while raising the level of the key policy rate is a measure that "freezes" the financial market artificially to a similar state.

Other regressors have a directly proportional influence on FSI, and the most pronounced are the cash-to-GDP ratio and the share of the foreign currency in M3. This indicates that the increase in the volume of cash and foreign currency in monetary circulation threatens to increase the level of shadowing of the economy, and also leads to the devaluation of the domestic currency.

It should be compared the obtained data on the Financial Stress Index based on the constructed model with the actual ones (Figure 7).

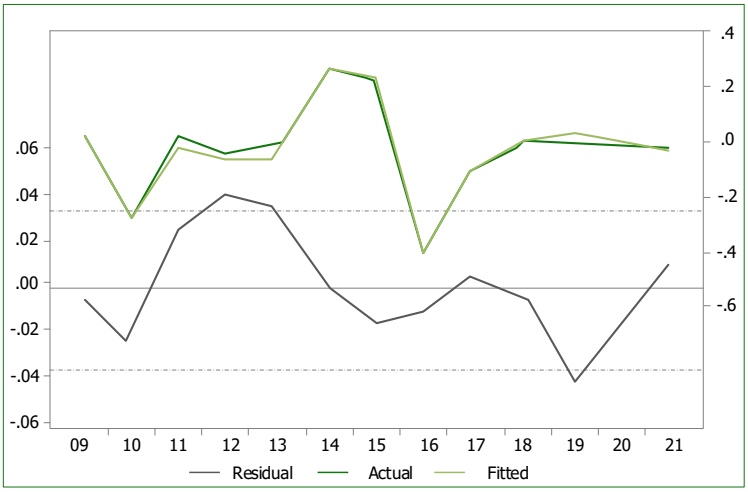

Figure 7. Actual and simulated values of the Financial Stress Index.

Since the re-estimated model describes more than 95% of the changes in the Financial Stress Index, it can be seen from the presented figure that the lines of the actual value and the simulated FSI practically coincide. The deviations of the values in 2012 and 2019 are presumably related to the asymmetry of the data information. This is confirmed by the broken line of model residuals (which are otherwise called "model errors") – this is, in fact, the difference by which the calculated value (according to the equation) differs from the actual data. The graph of the residuals should be within the confidence intervals. Where the graph of residuals goes beyond the intervals (2012, 2019), the model gives an inaccurate result.

In general, the model built by the authors satisfies the limitations of this type of model and can be used to assess the future impact of the monetary component on the level of financial security of the state.

DISCUSSION

The purpose of this study was to justify the effectiveness of monetary policy instruments, to determine the level of influence of the monetary component on the financial security of the state, as well as to form directions for balancing the symbiosis of "monetary policy and national financial security". It has been proven that in the conditions of the ongoing COVID-19 pandemic, as well as the martial law in Ukraine, which has an extraordinary impact on the socio-economic state of Ukraine, the monetary system and the national security of the state, finding effective mechanisms for ensuring the effective symbiosis of monetary policy and financial elements of national security becomes more relevant for the adoption of coordinated actions and strategies both at macro- and microeconomic levels.

In continuation of the discussed issues, it is noted that an effective monetary policy directly and proportionally affects the financial security of states. But at the same time, it is still necessary to return to the issue of coordination, and coherence of monetary and fiscal policies in Ukraine, which has been discussed and modified over the past decade. Therefore, from our point of view, a debatable issue is the introduction of certain restrictions on monetary decision-making by NBU during martial law, which violates the status of the performance of the functions assigned to it as defined by the Law of Ukraine "On the National Bank of Ukraine", due to the need to preserve its own institutional, financial and operational independence.

In this context, the proposals expressed in the research (Naumenkova, S.V., Mishchenko, S.V., 2022) [22, p. 16], (Kuznetsova, A., Pohorelenko, N., 2021) [26, p. 38] that the coordination of monetary and fiscal policies should take place in the context of the implementation of such strategic goals as ensuring price stability, achieving target indicators of the state budget deficit, ensuring sustainable economic growth and ensuring an appropriate level of transparency in the activities of the government and the central bank. Although the research was conducted 10 years ago, it has not lost its relevance even today.

Also, in the paper (Kovalenko V.V., Koreneva O.G 2017) [23, p. 140] it is emphasized that the coordination of monetary and fiscal policies should consist in developing and implementing them in such a way that they do not contradict each other and together contribute to the achievement of general goals for the economic policy, which are sustainable economic growth, low unemployment with long-term price stability and external stability. The authors of the article single out the main instruments for achieving such coordination, namely: ensuring the complementarity of measures and methods for managing inflation, the state budget deficit, and sustainability; legislative and regulatory regulation of mechanisms and procedures for the development and coordination of the main parameters and indicators of economic, monetary and fiscal policies.

In accordance with the above, attention should be paid to the violation of the effectiveness of the transmission mechanism of monetary policy. Thus, the authors of the study (Kovalenko, V. et al., 2020) note "...the insufficient effectiveness of the monetary transmission mechanism was reflected in the imbalance of the money and currency markets, the deformation of the credit market and the deterioration of the credit climate, the reduction of the influence of the monetary impulses of the central bank on the financial system, as well as the real sector of the economy" [24, p. 80]. Therefore, it can be argued that the problem of the significant influence of the monetary component on the financial security of the state is contained in the restoration of the effectiveness of the channels of the transmission mechanism of monetary policy, which in turn depends on the choice of the monetary system.

The situation with the financial security of the state in 2023 is influenced by forecasts made by analysts, namely:

Electricity shortages are expected to increase consumer inflation by 1-2% in 2023, depending on which electricity shortage scenario is implemented. At the same time, according to the NBU's estimates, even under such conditions, the cycle of decreasing inflation will begin already in the second quarter of 2023.

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The average official exchange rate in 2023 will be 42.2 UAH per US dollar, and at the end of the year - 45.8 UAH per US dollar. If in 2023 NBU departs from the policy of a fixed exchange rate, then the exchange rate on the cash market will differ insignificantly from the official one, as it was before the war (according to governmental forecasts).

By 2023, the state's needs will be significant - about 38 billion USD, which Ukraine hopes to receive from the EU, the USA and IMF. When planning the budget, the government expected most of these funds to come in the form of loans, which would cause the national debt to exceed GDP in 2023. However, it is predicted that Ukraine will receive a significant part of the money in the form of grants. If the ratio of public debt to GDP is in the range of 85-90%, this is not evidence of an imminent debt crisis.

Due to a sharp drop in revenues to the state budget and multiple increases in expenditures in the first days of the war, the Government decided to depart from long-standing principles and allow NBU to directly finance the budget. In 2022, he "issued" UAH 400 billion by purchasing government bonds. At the same time, it should be noted that larger volumes of emissions threaten to increase inflationary pressure and worsen the quality of life of Ukrainians. Therefore, the coordinated work of NBU and the government will allow to avoid emission financing; NBU's purchase of new government bonds will remain a reinsurance factor if external budget support is delayed.

Regarding the recovery of Ukraine's economy, experts note that the shelling of the infrastructure will continue in 2023, affecting the pace of economic recovery. The trajectory of restorative growth is determined at the level of 1% to 1.5%. Threats to the recovery of the economy in 2023 are also identified: terrorist attacks by russia, prospects for a diplomatic settlement, the presence of a sufficient number of weapons in the Armed Forces, new waves of mobilization in the aggressor country, potential participation in the war of belarus (Vinokurov Ya., 2022) [25].

Thus, all these issues are debatable and relevant from the point of view of ensuring the financial security of Ukraine through further regulation of the coordination of monetary and fiscal policies.

CONCLUSIONS

The financial security of the state reflects a key role in overall national security. In turn, it includes the following sub-levels of security, namely: budget security, debt security, insurance and stock market security, and monetary security as well.

Among the subspecies of financial security, monetary security has the greatest impact, the provision of which is aimed at ensuring the stability of the domestic currency, availability of loans, low inflation, the level of growth of the population's income and economic growth of the country.

The monetary component of financial security is an important instrument for ensuring it and exerts a powerful influence on economic processes in the state and contributes to effective money circulation, stable functioning of the banking and foreign currency systems, credit and investment market, and reproduction of added value in production. However, an unbalanced monetary policy disrupts the flow of income and expenses, and causes sharp fluctuations in production volumes, unemployment growth, and price instability. Inefficient monetary policy is the main indicator of the emergence of financial and economic crises, and therefore is a threat to the financial security of the state.

Today, there are new threats that lead to a negative impact of the monetary component on the financial security of the state. These include the consequences of the russian military aggression on the development of the economy of Ukraine, continuing outbreaks of COVID-19, the introduction of administrative restrictions on the use of monetary policy instruments by NBU, violations of the economic security of financial institutions, and an insufficient level of financial inclusion. Most importantly, it is the continuing contradictory nature of monetary and fiscal policy coordination.

To justify which indicators of the monetary component of the state's financial security have the most significant influence, an econometric model was built, which is based on the definition of those indicators of the monetary component that prove the amplitude dynamics of the Financial Stress Index. Based on the results of the research, it was established that such indicators include producer prices, NBU key policy rate and the share of NPL, the cash-to-GDP ratio and the share of the currency component in M3. Therefore, when choosing the measures and methods of modern monetary policy, their dynamism should be taken into account in order to ensure the financial security of the state according to such vectors as a gradual decrease in the rate and level of inflation, the achievement of a high level of employment, maintaining the stability of the domestic currency, interest rates and the stability of the functioning of the financial market.

In conclusion, based on the results of the conducted research, it can be stated that despite the difficult political and economic situation in Ukraine, it is necessary to focus on the issues of improving the coordination of monetary and fiscal

policies, based on the further implementation of the main provisions of international documents adopted by the International Monetary Fund "Code of good practice on ensuring transparency in monetary and financial policy: declaration of principles" and "Code of good practice on ensuring transparency in the budget and tax sphere".

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МОНЕТАРНА СКЛАДОВА ЗАБЕЗПЕЧЕННЯ ФІНАНСОВОЇ БЕЗПЕКИ ДЕРЖАВИ

Стаття присвячена дослідженню місця та ступеня впливу монетарної складової на рівень фінансової безпеки держави в умовах політичних та соціально-економічних дисбалансів розвитку України. Метою роботи є дослідження дієвості інструментів монетарної політики, визначення рівня впливу монетарної складової на фінансову безпеку держави, а також формування напрямів урівноваження симбіозу «монетарна політика та фінансова безпека країни». На підставі проведеного дослідження встановлено, що впродовж останніх років значно зросла роль формування системи фінансової безпеки на всіх рівнях, будь то макроекономічна безпека, безпека суб'єктів економічної діяльності чи фінансова безпека окремо взятого домогосподарства. При цьому монетарна складова відіграє значну роль у забезпеченні фінансової безпеки держави, а саме впливає на макроекономічні процеси в країні. Тому задля забезпечення макроекономічної стабільності та економічного зростання в контексті забезпечення фінансової безпеки України в умовах воєнного стану вважаємо за необхідне вдосконалення механізмів монетарної політики. У статті проаналізовано новітні загрози, які призводять до негативного впливу монетарної компоненти на фінансову безпеку держави. До них віднесено: наслідки воєнної агресії рф на розвиток економіки України, тривалі та такі, що повторюються в часі, сплески COVID-19, уведення адміністративних обмежень щодо використання НБУ інструментів монетарної політики, порушення економічної безпеки фінансових інституцій, недостатній рівень фінансової інклюзії та суперечливий характер координації грошово-кредитної й фіскальної політик. У контексті встановлення визначальної ролі монетарної складової забезпечення фінансової безпеки держави розглянуто та систематизовано прийняті стратегії розвитку й на рівні національної безпеки України, і на рівні монетарного сектора України. Запропоновано блок-схему реалізації монетарної політики в контексті забезпечення фінансової безпеки держави. Доведено, що механізм такого взаємозв'язку реалізується через інструменти та методи монетарної політики в поєднанні з ключовими макроекономічними показниками. Для підтвердження висунутої гіпотези побудовано економіко-математичну

модель упливу монетарних інструментів на рівень забезпечення фінансової безпеки держави. Як проксі-рівень фінансової безпеки України використано індекс фінансового стресу, який відображає поточний стан фінансового сектора (без урахування майбутніх ризиків) і що складається з субіндексів: банківський сектор, домогосподарства, державні і корпоративні цінні папери, валютний ринок. Оцінка математичної моделі дала змогу визначити найбільш упливові індикатори монетарної компоненти на індекс фінансового стресу, а саме: індекс споживчих цін; індекс цін виробників; валовий внутрішній продукт до грошового агрегату М2; готівка до ВВП; питома вага іноземної валюти в грошовому агрегаті М3; облікова ставка НБУ (середньорічна); рівень непрацюючих кредитів (NPL). Запропоновану модель можна використовувати для прогнозування впливу параметрів монетарної компоненти на рівень фінансової безпеки держави.

Спираючись на результати проведеного дослідження, доведено, що, незважаючи на складну політичну та економічну ситуацію в Україні, слід зосередитися на питаннях удосконалення координації монетарної та фіскальної політик на підставі подальшої імплементації основних положень міжнародних документів, які прийняті Міжнародним валютним фондом із цього питання.

Ключові слова: монетарна політика, фінансова безпека, загрози, інструменти та методи монетарної політики, індекс фінансового стресу, координація політик

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