Economic Affairs, Vol. **69**(Special Issue), pp. 239-249, February 2024
DOI: 10.46852/0424-2513.1.2024.25

Review Paper

Efficiency of Fiscal and Monetary Policy in the Challenging Economic Environment

Dmytro Zakharov[1*], Halyna Kryshtal[2], Anatolii Lutsyk[3], Halyna Vasylevska[3] and Alla Chornovol[4]

[1]Department of Information Systems in Management and Accounting, Faculty of Business and Services, Zhytomyr Polytechnic State University, Zhytomyr, Ukraine
[2]Department of Finance, Banking and Insurance, Interregional Academy of Personnel Management, Kyiv, Ukraine
[3]S.I. Yuriy Department of Finance, West Ukrainian National University, Ternopil, Ukraine
[4]Department of Finance, Accounting and Taxation, Chernivtsi Institute of Trade and Economics of State University of Trade and Economics, Chernivtsi, Ukraine

[*]Corresponding author: dima.zakharov@ztu.edu.ua (**ORCID ID:** 0000-0003-3423-0093)

Received: 18-10-2023 **Revised:** 29-01-2024 **Accepted:** 07-02-2024

ABSTRACT

In order to ensure the effectiveness of fiscal and monetary policy in the challenging economic environment, it is important to ensure coordination, coherence and consistency of the work of state regulators. Fiscal and monetary instruments and tools should help overcome short-term macroeconomic shocks and achieve long-term macroeconomic stability. The purpose of the academic paper is to study the effectiveness of fiscal and monetary policy in the challenging economic environment on the example of Ukraine. The research methodology included methods of structural analysis of the basic instruments of fiscal and monetary policy used in conditions of macroeconomic instability and war. The results demonstrate the effectiveness of fiscal policy in the time of challenging economic conditions in Ukraine. It's crucial to move swiftly to government initiatives and regulatory mitigation during a macroeconomic shock. Reducing the tax burden on the private sector is one of the most significant budgetary tools. At the same time, the budget execution was ensured by tax and non-tax revenues (domestic taxes, income taxes, taxes on profits, market value, and income from property and business activities, official transfers). The effectiveness of monetary policy in the context of a rapid decline in GDP and rising inflation has been ensured by the exchange rate fixation, foreign exchange interventions, and a systemic inflation targeting policy. The effectiveness of the NBU's monetary policy is achieved through the formation of sufficient capital in the financial sector, provisions to cover non-performing loans in the 2022 crisis, and maintaining operating profitability through interest income.

HIGHLIGHTS

- In challenging economic conditions, Ukraine effectively employed fiscal policies, including tax reduction and external borrowing, to maintain budget execution and stimulate economic activity during the war-induced decline of 29.1% in GDP in 2022.
- The National Bank of Ukraine's monetary policy, characterized by exchange rate fixing, foreign exchange interventions, and inflation targeting, demonstrated effectiveness in ensuring financial stability, sufficient capital formation, and support for operating profitability amid the 2022 crisis, although challenges persist, such as the risk of insolvency and a growing share of non-performing loans in the financial system.

Keywords: Fiscal policy, monetary policy, tax burden, efficiency of fiscal instruments, efficiency of monetary policy, tax regulation, sustainable development

How to cite this article: Zakharov, D., Kryshtal, H., Lutsyk, A., Vasylevska, H. and Chornovol, A. (2024). Efficiency of Fiscal and Monetary Policy in the Challenging Economic Environment. *Econ. Aff.*, **69**(Special Issue): 239-249.

Source of Support: None; **Conflict of Interest:** None

Fiscal and monetary policies are the means for achieving economic stability and growth. It is crucial to ensure coordination and coherence of actions of state regulators of these policies, to create a consistent structure for their combination in order to ensure the achievement of the established social-economic goals (Kvrgić, Čolić & Vujović, 2011; Fukuda, 2023). Fiscal policy addresses issues related to the formation of public expenditures and revenues, the impact on aggregate supply and demand, employment, unemployment, inflation, foreign trade, and GDP through measures and instruments. The sustainability and effectiveness of monetary policy in difficult economic conditions lies in preventing hyperinflation, overcoming the effects of cyclical unemployment, searching for sources to cover the growing budget deficit, and borrowing on the most favorable terms. Reducing fiscal imbalances in situations of increasing public debt and high fiscal deficits is also one of the goals of fiscal policy in the context of a downturn (Chukuigwe & Abili, 2008). The goals of fiscal policy focus on stimulating investment and improving the quality of the population's welfare through such types of fiscal instruments as taxes, investment, and consumption (Phuc Canh, 2018; Rodrigues, 2020).

Monetary policy regulates and controls the supply of money, focusing on ensuring price stability, avoiding high inflation, and a stimulating and stable exchange rate. The major consequences of an effective monetary policy are a satisfactory level of employment, a positive balance of payments, a reduction in the excessive amount of aggregate liquidity in the economy, an increase in production, and economic growth (Rakić & Rađenović, 2013).

The purpose of the academic paper is to analyze the effectiveness of fiscal and monetary policy in difficult economic conditions on the example of Ukraine.

Literature Review

Fiscal policy is a targeted activity of public authorities aimed at the formation and use of financial resources to achieve the goals of economic growth, price stability, income distribution, and employment growth (Adegoriola, 2018; Якушко, 2022). Monetary policy pursues similar goals of growth, price stability, and unemployment reduction by controlling and regulating the volume of money supply in the economy. Expansionary fiscal and monetary policies are aimed at overcoming the recession and economic downturn through the increase in aggregate demand, which results in a rise in the key policy rate and inflation.

Ensuring an adequate money supply in the economy and an efficient structure of state budget revenues and expenditures are crucial for achieving macroeconomic stability (Ajisafe & Folorunso, 2002). The coordination of fiscal and monetary policies should be focused on maintaining long-term macroeconomic stability and enhancing social welfare (Chugunov *et al.* 2021). The study by Bianchi, Faccini & Melosi (2020) on the implications of coordinating fiscal and monetary strategy in a pandemic shows that the former is aimed at creating an emergency budget in difficult conditions, while the latter is concerned with the effects of rising inflation due to budget execution. The increase in efficiency from fiscal stimulus is due to the coordinated policy of regulators, which also contributes to reducing inflation below the target level (Bianchi, Faccini & Melosi, 2020). An empirical study by Benmelech & Tzur-Ilan (2020) provides results on the use of monetary and fiscal policy instruments in pandemic conditions. The authors compare countries with different income levels. A more active and ambitious fiscal policy was conducted in high-income countries compared to low-income countries. the most important factor in making financial decisions in the most difficult periods was the country's credit rating. Historically low interest rates were set in high-income countries to stimulate business. Non-traditional monetary policy instruments have also been used in high-income countries (Benmelech & Tzur-Ilan, 2020). The conclusions of the study indicate that in difficult economic conditions, fiscal and monetary policies should be changed.

The importance of coordinating monetary and fiscal policy is evidenced by the postwar experience of the United States, where the shock of public expenditures became ineffective precisely because of the lack of coordination of government authorities. The channel of professional experts' expectations for GDP and consumer growth under aggressive monetary policy notwithstanding fiscal stimulus was another factor contributing to the ineffectiveness of US policies (Kim, Shao & Zhang, 2023). The experience of Egypt as a developing country shows that monetary policy is more effective in stimulating GDP than fiscal policy. At the same time, the latter provides a shock and quick influence on real economic activity (El Husseiny, 2023; Kovalko *et al.* 2022).

In Ukraine, the defense budget began to grow under the conditions of war, which accordingly affected the structure of expenditures, in particular, the reduction of funding and support for the private sector. In addition, tax revenues have significantly decreased due to the shutdown of businesses, the destruction of their assets and infrastructure, rising unemployment, labor migration, rising consumer prices and inflation. As a result, social payments increased significantly and the level of real incomes declined (Levytska *et al.* 2022). Therefore, we believe that in such a challenging environment, it is essential to regulate both the money supply and its impact on economic activity, as well as government expenditures that affect GDP growth.

The government affects the disposable income of individuals, businesses, consumption, savings, and investment through its fiscal policy, which involves taxation and the allocation of state budget expenditures. State spending can stimulate business activity in the private sector. At the same time, the inter-sector competition for limited public financial resources can lead to deficits and increased public debt. Therefore, it is crucial to ensure a balance in public financial management, making sufficient expenditures in order to meet the government's needs while investing in the private sector to ensure its development (Kareem *et al.* 2013). The major consequences of ineffective monetary and fiscal policies include high unemployment, rising prices, a balance of payments deficit, growing inequality, uneven income distribution, and a reduction in disposable income for households and businesses (Kryshtanovych *et al.* 2021; Sumets *et al.* 2022).

The study by Adegoriola (2018) revealed a long-run equilibrium relationship between fiscal and monetary policy instruments and economic growth in Nigeria. The data on money supply, budget deficit, interest rate, government revenues and expenditures were used to study the correlation. Public spending and the money supply are defined as the key monetary policy instruments (Adegoriola, 2018). Enami, Lustig & Taqdiri (2019) identified a reduction in poverty and inequality in Iran due to effective fiscal policy measures. In addition, transfers are more effective in reducing inequality. Taxes are a more effective tool for increasing the population's income. In the case of China, taxation contributes to a more efficient distribution of income, and government expenditures have a negative impact on income inequality (Cevik & Correa-Caro, 2020).

The experience of the UK shows that in the short term, economic growth is driven by investment and public consumption. State investments and capital gains tax have a significant impact on GDP in the long term. The most effective fiscal tools are investment, government consumption, and consumption taxes in condition when the nominal key policy rate goes to zero. In such circumstances, taxes on capital and labor income are the least effective (Bhattarai & Trzeciakiewicz, 2017).

Therefore, there are sufficient studies in the scientific literature on the effectiveness of fiscal and monetary policy. At the same time, there are no explorations on the effectiveness of fiscal and monetary regulatory measures of the state in the context of the economic downturn.

Methodology

The research provides a structural analysis of the changes in Ukraine's fiscal and monetary policies, and their coordination and coherence in the conditions of war. The effectiveness of fiscal policy instruments in challenging economic environment is studied by analyzing as follows: a set of fiscal policy instruments; dynamics of the general government balance (GGB) by various dimensions in 2014-2023; dynamics of consolidated budget revenues and expenditures in 2014-2023; changes in the structure of state budget financing in 2014-2023; dynamics of state and state-guaranteed debt in 2014-2023; dynamics of the deficit of the central fiscal accounts in 2014-2023.

At the second stage, the changes in the approaches and types of monetary policy in 2015-2023, which have been implemented by National Bank of Ukraine (NBU), are analyzed. The dynamics of the key policy rate as a key instrument of the inflation targeting regime, changes in inflation and GDP growth rates are thoroughly analyzed to assess the effectiveness of monetary policy.

At the third stage, the analysis of financial stability indicators for the period 2015-2021 (during the NBU's transition to inflation targeting) and in 2022-2023 (with a change in monetary policy), implemented by the Ministry of Finance and National Bank of Ukraine (MFU, NBU), the financial system regulators, was conducted to assess the effectiveness of fiscal and monetary policy.

RESULTS AND DISCUSSION

Fiscal policy

In general, Ukraine has been pursuing a soft fiscal policy since 2014, as evidenced by the negative dynamics of the general balance of the central government. In the period of the war, fiscal policy instruments were used to reduce taxes by using fiscal reserves, which led to the introduction of a stimulating fiscal policy (Bondaruk, 2023). These measures include changes in import taxation, allowing business entities to switch to the simplified taxation system, and tax incentives. The latest measures have led to a reduction in tax revenues in 2022.

During the war, the overall balance decreased to 30,2% of GDP in the second quarter of 2022 (25,1% in the third quarter of 2022) with a gradual reduction in the difference between revenues and expenditures. The adjusted primary balance also decreased to 32% of potential GDP in the second quarter of 2022 (20,3% in the third quarter of 2022). The total balance without grants from the government of Ukraine to cover the growing level of expenditures in the context of a significant reduction in tax revenues is significantly higher than the total balance (Fig. 1).

The negative initial balance of the consolidated budget of Ukraine, adjusted for the cyclical position of the country's economy, indicates a sharp softening of fiscal policy. The implementation of such a fiscal policy was caused by a significant increase in budget expenditures for ensuring the country's defense capability and incentives to support the economy under martial law (Bondaruk, 2023).

One-time receipts are excluded from revenues. A negative value indicates a soft fiscal policy; a positive value indicates a tight fiscal policy.

In 2014-2021 and the first quarter of 2022, the volume of domestic taxes and taxes on goods imported into Ukraine increased significantly in the structure of consolidated budget revenues. Domestic taxes and taxes on imported goods have been significantly reduced since the beginning of the war while non-tax revenues have grown significantly (Bazaluk *et al.* 2022). In 2022, the structure of the consolidated budget was dominated by tax revenues, which accounted for 78% of revenues, including 50% of

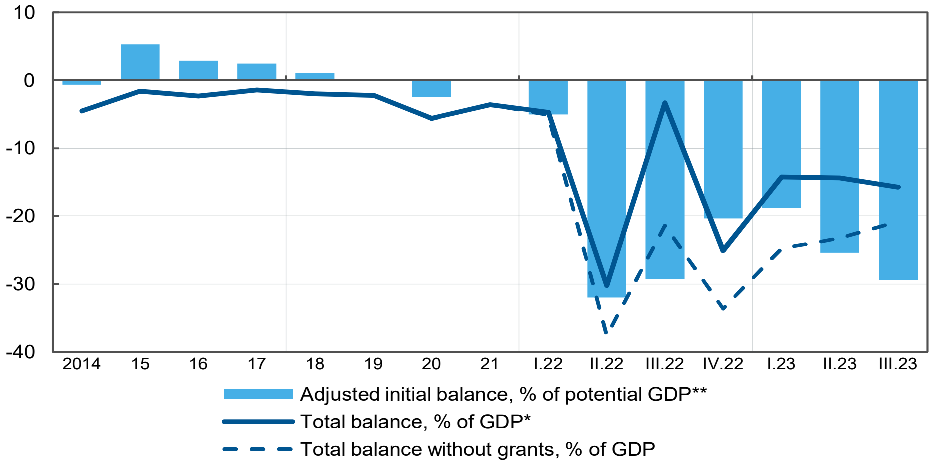


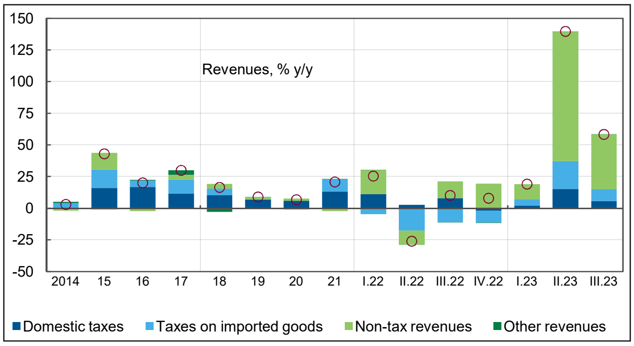
Fig. 1: The balance of GGS (general government sector) by different dimensions

Source: *National Bank of Ukraine (2023a).*

** Total balance - the balance of the consolidated budget, including loans to the Pension Fund from the Treasury Single Account.*

***The primary balance of the general government sector (GGS) is the difference between seasonally adjusted revenues and primary expenditures. Tax revenues are modified in the structure of adjusted revenues to account for cyclical fluctuations in GDP.*

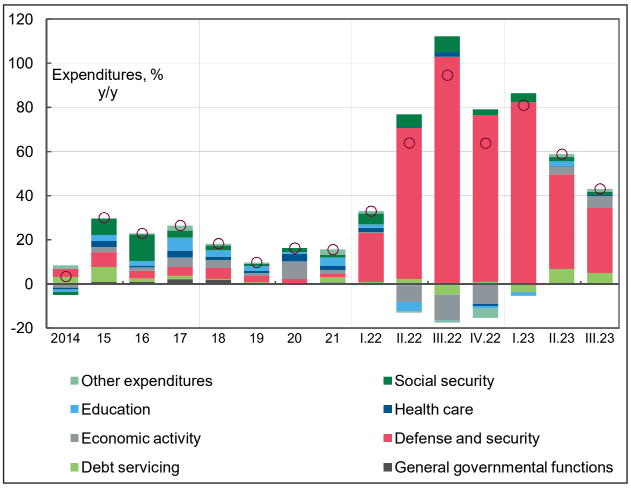
domestic taxes, 21% of taxes on income, profits, and increases in the market value of enterprises. The share of non-tax revenues amounted to 13%, of which the tax on income from business activities and property made up 9%. In addition, 8% of the consolidated budget revenues in 2022 constituted official transfers from the European Union, international organizations, donor agencies, and foreign governments. In 2022, the government made internal and external borrowings to finance the state budget, the share of which in the financing structure was 79% and 46%, respectively (Fig. 2).



Source: *National Bank of Ukraine (2023a).*

Fig. 2: Contributions to the annual change in consolidated budget revenues excluding grants, %

Since the beginning of the war, expenses for general government functions have been reduced, and the government has been increasing spending on the security and defense sector to protect national interests (Fig. 3). Expenditure on debt servicing decreased in the face of increased budgetary spending on the defense sector.

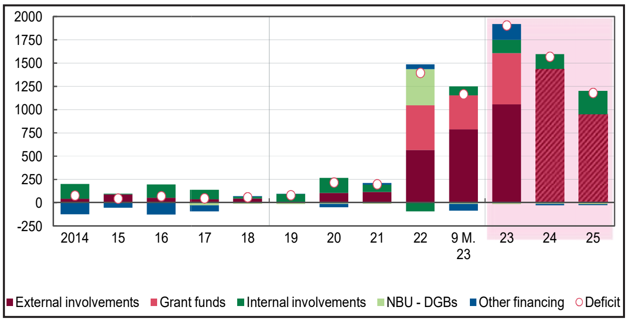


Source: *National Bank of Ukraine (2023a).*

Fig. 3: Contributions to the annual change in consolidated budget expenditures excluding grants, %

Since 2014, the growth rate of defense and security spending has averaged 84% (27,365 billion UAH in 2014, 97,024 billion UAH in 2018, 106,63 billion UAH in 2019, 1143,20 billion UAH in 2022). The war caused a 796% increase in defense spending in 2022, with 806% going towards military defense and 1156% going towards civil defense. The functional structure of defense expenditures is generally dominated by military defense expenditures – 2,35% of consolidated budget expenditures in 2012, 6,35% in 2017, and 59,62% in 2022, respectively. At the same time, expenditures on civil defense and military education constitute a much smaller share of the total budget expenditures – less than 1%. (Ministry of Finance of Ukraine, 2023a; 2023b; State Budget Web Portal for Citizens, 2023).

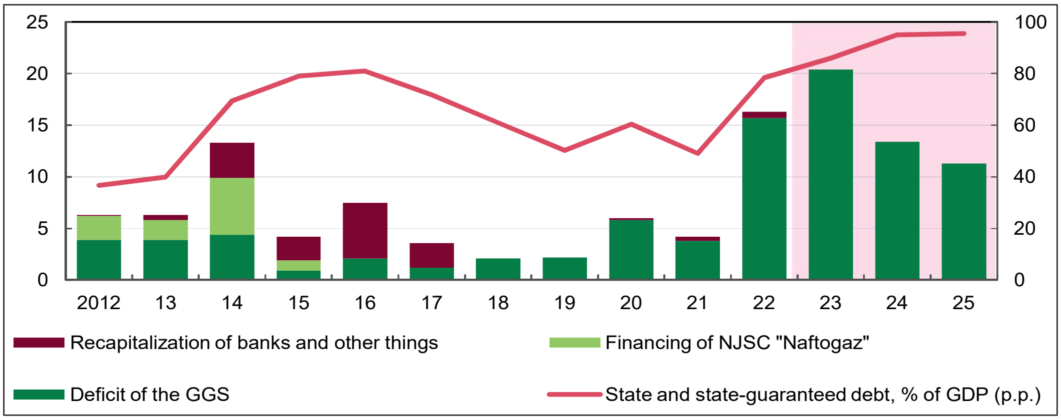
The way the state finances its budget is structured changes in 2022. Taking into account the increase in the budget deficit to 139 billion UAH in 2022, grants in the amount of 481 billion UAH in 2022 and 263 billion UAH for the first three quarters of 2023 become a significant source of financing (Fig. 4). Domestic government loan bonds (DGBs) are becoming an important source of budget deficit repayment. External borrowings have become the most significant source of budget financing. Domestic borrowings and own revenues are not enough to cover expenditures, and as a result, international assistance remains the primary key for debt-free budget financing.



Source: *National Bank of Ukraine (2023a).*

Fig. 4: State budget financing, billion UAH

Since 2022, public and publicly guaranteed debt starts to grow significantly, amounting to 78,4% of GDP in 2022, 86% is projected in 2023 (49% of GDP in 2021) (Fig. 5). The GGS deficit is also increasing, amounting to 15,7% of GDP in 2022, 20,4% is projected in 2023 (3,8% of GDP in 2021). It is worth noting that an insignificant share of the funds was



Source: *National Bank of Ukraine (2023a).*

Fig. 5: Wide deficit of GGS, state and state-guaranteed debt, % of GDP

allocated for bank recapitalization – only 0,6% of GDP in 2022 (0,4% of GDP in 2021).

In the short term, the fiscal policy of the authorities will be focused on financing priority expenditures in the security and defense sector and seeking external and internal resources to finance them. The necessity to preserve debt and fiscal sustainability, as well as to establish a robust tax revenue base, will place an increased strain on the private sector in the context of the war.

Monetary policy

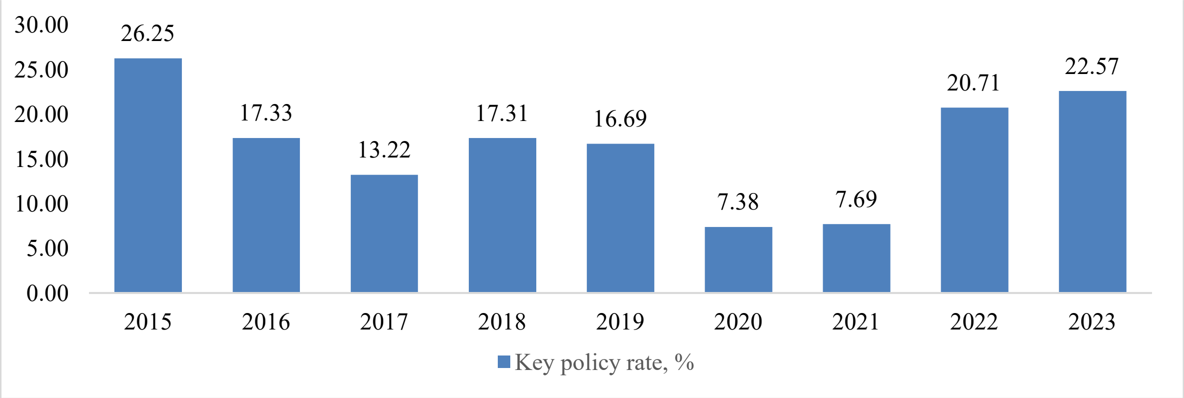
Achieving and ensuring price stability is a priority of the monetary policy of the National Bank of Ukraine (NBU). Price stability means a slight gradual increase in prices, stable and low inflation rates, and, as a result, an impact on economic growth through increased incomes, household savings and business investment, lending, and financial stability (National Bank of Ukraine, 2023b).

As part of the banking sector reform in 2015, the NBU adopted a mixed-type monetary policy that included inflation targeting and a floating exchange rate policy. This policy was followed until the full-scale invasion of Ukraine in 2022. The components of the inflation targeting regime included: public announcement of inflation targets, flexible exchange rate, the NBU's commitment to achieve inflation targets; management of household and business expectations regarding inflation; transparency and clarity in communicating decisions and their motives (National Bank of Ukraine, 2023b). The inflation targeting regime has been effective for Ukraine's economy, as reflected in the stabilization of economic growth and a decline in inflation. Thus, the average GDP growth rate for 2016-2019 was 2,87%; it was 3,75% during the pandemic, and it was 3,45% in 2021. In the context of the war, Ukraine's GDP declined by 29,1% in 2022 and is expected to grow by 4,9% in 2023 (Fig. 6).

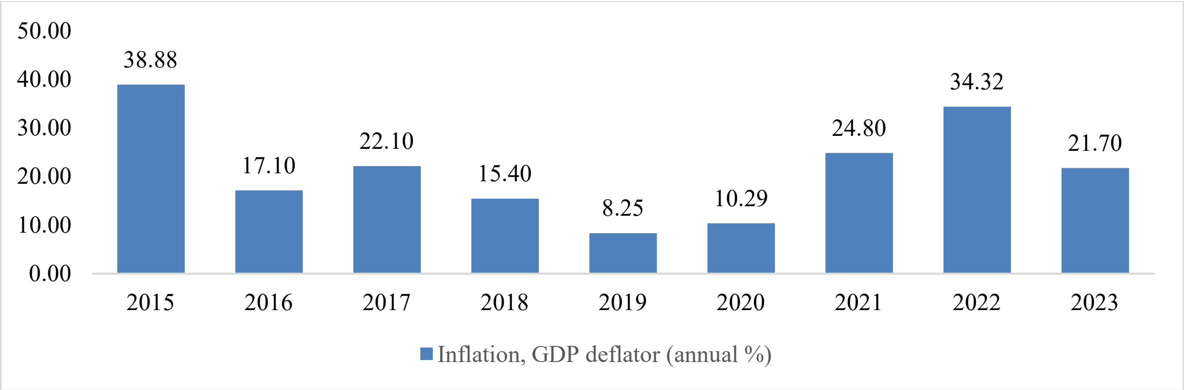
The increased level of market uncertainty in the face of the war had a negative impact on monetary policy and led to a departure from the traditional inflation targeting regime. As a result, approaches to the NBU's key functions, principles, and objectives of monetary policy have changed.

Currency interventions have become the main instrument of monetary policy in the conditions of war. Consequently, in 2020, the volume of foreign exchange interventions amounted to 3 690,70 million USD, and 1 275,7 million USD in sales. In 2021, the volume of foreign exchange interventions amounted to: purchase – 3 267,95 million USD, 110,97 million EUR, sale – 26 380,59 million USD, 1 789,11 million EUR. In 2023, the volume of foreign exchange interventions amounted to 214,66 million USD, and 25 548,95 million USD in sales (National Bank of Ukraine, 2023d).

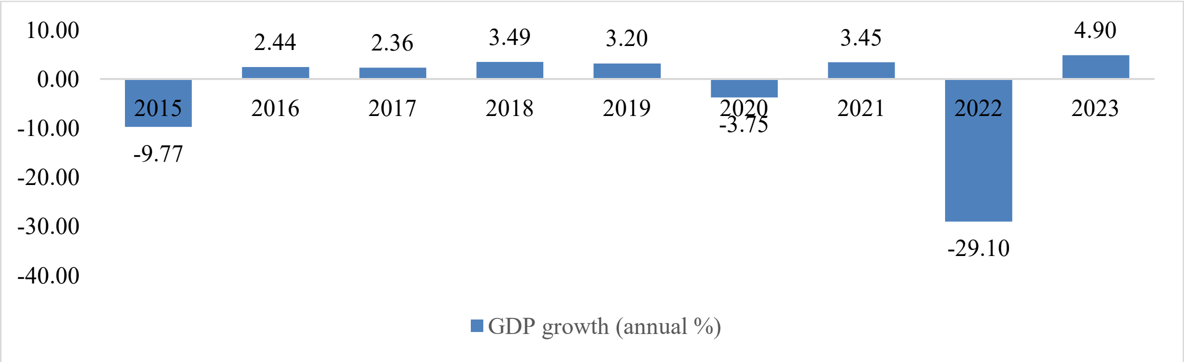
The NBU focused on maintaining exchange rate stability in order to stabilize the economy and gradually reduce inflation. The key policy rate played a significant supporting role in protecting international reserves and the stability of the foreign exchange market. In order to ensure the stability of the foreign exchange market, the NBU took the following measures: approving and maintaining administrative restrictions on foreign exchange transactions and capital flows; suspending emission



(a) key policy rate dynamics, %



(b) inflation dynamics, %



(c) GDP dynamics, %

Source: *National Bank of Ukraine (2023c); World Bank (2023).*

Fig. 6: Dynamics of the key policy rate, inflation, and GDP growth in Ukraine in 2015-2023

financing; and supporting the attractiveness of assets in the national currency (National Bank of Ukraine, 2023b).

After February 24, 2022, the NBU fixed the official hryvnia exchange rate to the US dollar and introduced temporary administrative restrictions on cross-border capital flows and foreign exchange transactions. Such measures were aimed at maintaining macroeconomic stability, allowing the NBU to control the price situation and the foreign exchange market despite initial shocks to the economy.

Taking into account a number of advantages and disadvantages of the fixed exchange rate regime, the NBU plans to change its exchange rate policy. Currency restrictions may become ineffective, and economic agents' expectations of a fixed exchange rate may change. As a result, market distortions may increase, and the level of the shadow economy may increase, impeding the growth of productivity in the manufacturing sector (National Bank of Ukraine, 2023b).

Under a fixed exchange rate regime, stakeholders and market participants may accumulate currency risks and experience a gradual degradation of business models and risk management systems. The lack of exchange rate flexibility leads to a reduction in the level of adaptive capacity of the economy to external changes. Therefore, the fixing of the exchange rate has a favorable impact only at the initial stage of an economic downturn and macroeconomic shock, when it is necessary to overcome the effects of inflation (Bazaluk *et al.* 2020).

Taking into account the possible negative long-term consequences of the exchange rate fixation, in October 2023, the NBU switched to managing exchange rate flexibility to strengthen the economy's resilience and the currency market. This will facilitate more efficient adaptation of the economy to external and internal shocks (National Bank of Ukraine, 2023b; 2023c).

Management of exchange rate flexibility will be achieved gradually through the NBU's activity on the currency market and compensation for the structural difference between supply and demand for foreign currency. This will minimize risks for all economic players and guarantee that the exchange rate will be flexible, weaken and strengthen, and migrate to inflation targeting in a regulated manner (Mia *et al.* 2022; Karpenko *et al.* 2019). The NBU will limit such fluctuations to avoid weakening of the hryvnia and its significant strengthening. The NBU's ability to maintain exchange rate stability is strengthened by a significant amount of international reserves. In the long term, the NBU will continue its inflation targeting policy with a floating exchange rate, which will make it possible to return to the pre-war principles of monetary policy (National Bank of Ukraine, 2023b).

Thus, the NBU will resume inflation targeting with a floating exchange rate in the case that favorable conditions are met. This regime simultaneously ensures that the NBU meets its goals of achieving price and financial stability and maintaining sustainable GDP growth in the long term. According to the viewpoint of Chugunov *et al.* (2021), monetary policy should combine inflation targeting and adaptation of instruments to external conditions to ensure long-term economic growth (Chugunov *et al.* 2021).

Let's analyze the indicators of Ukraine's financial stability in 2015–2021 and in 2022–2023 in the face of the war in order to evaluate the efficacy of monetary policy.

The ratio of regulatory capital to risk-weighted assets (gradually increasing from 12,3% in 2015 to 22% in 2020 and 18% in 2021) indicates that the problems related to capital adequacy and risks in the financial sector of Ukraine have been resolved. This factor was crucial for the banking system to cover its own losses from capital reserves in challenging conditions.

The gradual decline in the ratio of non-performing loans excluding provisions to capital indicates an increase in the level of equity capital of Ukrainian banks to cover losses (the decrease of 92,2% in the ratio between 2015 and 2021).

The ratio of non-performing loans to gross loans in 2015-2021 indicates a low level of asset quality; that is, the funds raised by the banking sector were used inefficiently. There were 35,4% of outstanding loans in 2015, 54,4% in 2018, and 31,7% in 2021, respectively. Therefore, the ability of business entities to repay loans puts banks in Ukraine at risk of insolvency.

The concentration of loans by the economic sector to total gross loans shows that 68% in 2015 and 69,4% in 2021 of banking sector loans were concentrated with non-residents, including non-financial corporations. This poses significant risks to the financial sector since the high concentration of bank credit resources makes the banking system vulnerable to financial shocks.

The increase in provisions for non-performing loans in 2015-2021 from 62,8% in 2015 to 91,6% in 2021 (by 28,7%) can be considered a positive trend.

The rate of return on assets averaged -5,5% in 2015 and increased to 4,5% in 2021. The negative value of profitability in 2015-2017 is caused by the low level of equity capital. The rate of return on equity was negative in 2015-2017, but since 2018, there has been a significant increase in the return on equity, reaching 35% in 2021.

The ratio of interest margin to gross income increased by 14,1% in 2015-2021, indicating a reduction in interest expenses and an increase in interest income of banks and operating profitability, efficiency, and risk reduction in the financial sector. The ratio of non-interest expenses to gross income increased by 6,8%, which indicates the banking costs growth (administrative, commission, and special provisions).

The ratio of liquid assets to total assets indicates banking system vulnerability to financial crises. In 2015-2021, the value of the indicator increased by 11,4%; this caused an insufficient level of banking system liquidity and led to the insolvency risk of most banks during crisis periods. The ratio of liquid assets to short-term liabilities decreased by 3,7% in 2015-2021 (Table 1).

Some financial stability indicators have changed their dynamics in the challenging economic environment in the condition of war. Financial stability is ensured by the sufficient capital availability: the ratio of regulatory capital to risk-weighted assets was 19,7% in 2022 and 23,2% for the three quarters of 2023. A rise to 34,4% in the percentage of non-performing loans in the fourth quarter of 2022 is one of the adverse outcomes. The share of non-performing loans decreased to 28,5% in three quarters of 2023 due to monetary policy and bank reserves. In the context of the war, the share of non-performing loans in total gross loans is growing, amounting to 38,1% in 2022 and 38,5% in the first three quarters of 2023.

The reduction in the share of loan concentration by economic activity to 66,8% in 2022, as well as a slight decrease in provisions for non-performing loans (83,2% in 2022 and 83,9% in three quarters of 2023) can be considered a positive trend) (Table 2).

The return on assets in 2022 decreased to 1,5%, the return on equity – to 11%, respectively. The effectiveness of monetary policy is evidenced by a return on assets increase to 6,6%, and the return on equity to 57% over the three quarters of 2023.

The ratio of interest margin to gross income did not change significantly in 2022-2023, amounting to 52,1% and 57,7%, respectively. This confirms the maintenance of the banks' operational efficiency. The ratio of non-interest expenses to gross income increased to 48,5% in 2022 and to 46,9% in the first three quarters of 2023. This indicates an increase in commission and administrative fees and expenses, as well as the expenditures for the formation of special reserves.

The monetary policy effectiveness and banking sector confidence are evidenced by the ratio of liquid assets to total assets growth in 2022 (68,5% in the first quarter of 2022). The ratio of liquid assets to short-term liabilities also remained high (88,2% in the first quarter of 2022).

Table 1: Dynamics of Ukraine's financial stability indicators in 2015-2021, %

	2015	2016	2017	2018	2019	2020	2021	2021-2015
Core FSIs for Deposit takers								
Regulatory capital to risk-weighted assets	12,3	12,7	16,1	16,2	19,7	22,0	18,0	5,7
Tier 1 capital to risk-weighted assets	8,3	9,0	12,1	10,5	13,5	15,7	12,0	3,7
Nonperforming loans net of provisions to capital	106,0	107,7	96,8	69,9	33,8	25,3	13,8	-92,2
Tier 1 capital to assets	6,9	6,1	6,5	6,0	6,9	7,2	6,9	0,0
Nonperforming loans to total gross loans	35,4	39,0	54,8	54,4	50,5	43,5	31,7	-3,7
Loan concentration by economic activity	68,0	68,2	67,2	66,2	67,7	68,2	69,4	1,4
Provisions to nonperforming loans	62,8	71,0	81,1	86,0	90,4	89,3	91,6	28,7
Return on assets	-5,5	-12,5	-1,8	1,6	4,7	2,8	4,5	10,0
Return on equity	-65,1	-121,9	-17,6	11,3	34,8	20,0	35,0	100,1
Interest margin to gross income	39,0	45,9	50,2	52,0	47,4	45,0	53,1	14,1
Noninterest expenses to gross income	54,4	60,9	76,1	61,9	55,6	60,8	61,2	6,8
Liquid assets to total assets	57,8	64,6	70,2	70,1	72,3	69,1	69,2	11,4
Liquid assets to short-term liabilities	92,9	92,1	98,4	93,5	94,4	86,8	89,1	-3,7

Source: *International Monetary Fund (2023).*

Table 2: Dynamics of Ukraine's financial stability indicators in 2022-2023, %

	2022	2022Q1	2022Q2	2022Q3	2022Q4	2023	2023Q1	2023Q2	2023Q3	2023-2022
Core FSIs for Deposit takers										
Regulatory capital to risk-weighted assets	19,7	18,0	17,2	18,9	19,7	23,2	20,8	23,8	25,0	3,5
Tier 1 capital to risk-weighted assets	13,1	11,7	11,4	12,8	13,1	14,2	13,4	14,5	14,8	1,1
Nonperforming loans net of provisions to capital	34,4	11,8	18,9	24,5	34,4	28,5	32,0	27,4	26,2	-5,9
Tier 1 capital to assets	5,8	7,0	6,4	6,3	5,8	5,7	5,7	5,7	5,7	-0,1
Nonperforming loans to total gross loans	38,1	27,1	29,7	33,6	38,1	38,5	38,8	38,9	37,9	0,4
Loan concentration by economic activity	66,8	66,2	68,2	67,7	66,8	66,1	65,9	65,4	66,9	-0,8
Provisions to nonperforming loans	83,2	91,6	88,7	87,2	83,2	83,9	83,8	84,2	83,8	0,8
Return on assets	1,5	0,0	-0,4	0,7	1,5	6,6	6,7	6,4	6,7	5,1
Return on equity	11,0	-0,3	-4,8	4,1	11,0	57,0	58,4	55,9	56,7	46,0
Interest margin to gross income	52,1	57,0	55,3	50,7	52,1	57,7	56,4	57,9	58,6	5,6
Noninterest expenses to gross income	48,5	63,0	55,1	47,6	48,5	46,9	45,6	48,2	46,8	-1,6
Liquid assets to total assets	—	68,5	68,0	71,1	—	—	—	—	—	—
Liquid assets to short-term liabilities	—	88,2	85,9	88,8	—	—	—	—	—	—
Liquidity coverage ratio	298,8	—	—	—	298,8	314,8	332,2	311,2	300,9	16,0

Source: *International Monetary Fund (2023).*

CONCLUSION

During a challenging economic environment, the shift to less stringent regulations and government initiatives to address macroeconomic shocks guarantee the effectiveness of fiscal policy. Ukraine's experience shows that during the war and a decline in GDP by 29,1% in 2022, the tax burden on the private sector was reduced, and budget execution was ensured by tax revenues (domestic taxes on goods and services, income taxes, profit taxes, taxes on market value). Additional sources of budget financing included non-tax revenues: income from property and business activities, official transfers from the European Union, foreign governments, international organizations, and donor agencies. In order to cover the budget deficit, external and internal borrowing mechanisms were applied, in particular, through domestic government bonds, the issuance of which was within the NBU's competence. The effectiveness of monetary policy in the face of a rapid decline in GDP and increasing inflation was ensured by fixing the exchange rate, foreign exchange interventions, and a systemic inflation targeting policy from the beginning of 2015 to 2021 inclusive. The financial stability indicators prove the effectiveness of the NBU's monetary policy, which contributed to the formation of sufficient capital in the financial sector, provisions to cover non-performing loans in the context of the 2022 crisis, and support for operating profitability through interest income. The tightening of the NBU's regulatory requirements contributed to a slight decline in the financial sector's return on assets and equity in 2022. At the same time, the financial system is still characterized by the risks of insolvency of business entities and problems related to the growing share of non-performing loans.

REFERENCES

Adegoriola, A.E. 2018. An empirical analysis of effectiveness of monetary and fiscal policy instruments in stabilizing economy: Evidence from Nigeria. *Soc. Sci.*, **7**(3): 133-140.

Ajisafe, R.A. and Folorunso, B.A. 2002. The relative effectiveness of fiscal and monetary policy in macroeconomic management in Nigeria. *The Af. Econ. and Business Rev.*, **3**(1): 23-40.

Bazaluk, O., Havrysh, V., Nitsenko, V., Mazur, Y. and Lavrenko, S. 2022. Low-cost smart farm irrigation systems in Kherson province: Feasibility study. *Agron.*, **12**(5).

Bazaluk, O., Yatsenko, O., Zakharchuk, O., Ovcharenko, A., Khrystenko, O. and Nitsenko, V. 2020. Dynamic development of the global organic food market and opportunities for Ukraine. *Sustainability* (Switzerland), **12**(17).

Benmelech, E. and Tzur-Ilan, N. 2020. *The determinants of fiscal and monetary policies during the COVID-19 crisis* (No. w27461). National Bureau of Economic Research.

Bhattarai, K. and Trzeciakiewicz, D. 2017. Macroeconomic impacts of fiscal policy shocks in the UK: A DSGE analysis. *Economic Modelling*, **61**: 321-338.

Bianchi, F., Faccini, R. and Melosi, L. 2020. *Monetary and fiscal policies in times of large debt: Unity is strength* (No. w27112). National Bureau of Economic Research.

Bondaruk, T. 2023. Fiscal policy as a factor of sustainable development of territories in wartime. *Econ. Horiz.*, **3**(25): 57–67.

Cevik, S. and Correa-Caro, C. 2020. Growing (un) equal: fiscal policy and income inequality in China and BRIC+. *J. of the Asia Pacific Econ.*, **25**(4): 634-653.

Chugunov, I., Pasichnyi, M., Koroviy, V., Kaneva, T. and Nikitishin, A. 2021. Fiscal and Monetary Policy of Economic Development. *Eu. J. of Sustainable Dev.*, **10**(1): 42.

Chukuigwe, E.C. and Abili, I.D. 2008. An Econometric Analysis of the Impact of Monetary and Fiscal Policies on Non-Oil Exports in Nigeria: 1974-2003. *Af. Econ. and Business Rev.*, **6**(2): 59-73.

El Husseiny, I.A. 2023. The relative effectiveness of fiscal and monetary policies in promoting Egypt's output growth: an empirical investigation using an ARDL approach. *J. of Econ. Struct.*, **12**(1): 4.

Enami, A., Lustig, N. and Taqdiri, A. 2019. Fiscal policy, inequality, and poverty in Iran: assessing the impact and effectiveness of taxes and transfers. *Middle East Dev. J.*, **11**(1): 49-74.

Fukuda, S.I. 2023. Evaluation of fiscal policy using alternative GDP data in Japan. *Japan and the World Econ.*, **67**: 101204.

International Monetary Fund, 2023. Financial Soundness Indicators (FSIs). https://data.imf.org/regular.aspx?key=63174545

Kareem, R.O., Afolabi, A.J., Raheem, K.A. and Bashir, N.O. 2013. Analysis of fiscal and monetary policies on economic growth: Evidence from Nigerian democracy. *Curr. Res. J. of Econ. Theory*, **5**(1): 11-19.

Karpenko, L.M., Koev, S.R., Kashchena, N.B., Grushko, V. and Khorosheniuk, A. 2019. Formation of the stakeholders account model in conditions of sustainable development. *Academy of Accounting and Financial Stud. J.*, **23**(2): 1-7.

Kim, H., Shao, P. and Zhang, S. 2023. Policy coordination and the effectiveness of fiscal stimulus. *J. of Macroecon.*, **75**: 103489.

Kovalko, O., Eutukhova, T. and Novoseltsev, O. 2022. Energy-related services as a business: Eco-transformation logic to support the low-carbon transition. *Energy Engineering: J. Association of Energy Engineering*, **119**(1): 103-121.

Kryshtanovych, M., Akimova, L., Akimov, O., Kubiniy, N. and Marhitich, V. 2021. Modeling the process of forming the safety potential of engineering enterprises. *Int. J. of Safety and Security Engineering*, **11**(3): 223-230.

Kvrgić, G., Čolić, Z. and Vujović, T. 2011. Značaj koordinacije mera monetarne i fiskalne politike. *Bankarstvo*, **40**(3-4): 32-61.

Levytska, S., Pershko, L., Akimova, L., Akimov, O., Havrilenko, K. and Kucherovskii, O. 2022. A risk-oriented approach in the system of internal auditing of the subjects of financial monitoring. *Int. J. of Appl. Econo., Finance and Accounting,* **14**(2): 194-206.

Mia, M.M., Rizwan, S., Zayed, N.M., Nitsenko, V., Miroshnyk, O., Kryshtal, H. and Ostapenko, R. 2022. The impact of green entrepreneurship on social change and factors influencing AMO theory. *Systems*, **10**(5).

Ministry of Finance of Ukraine, 2023a. Statistical bulletin. https://mof.gov.ua/uk/statistichnij-zbirnik

Ministry of Finance of Ukraine, 2023b. Information of the Ministry of Finance of Ukraine on the implementation of the State Budget of Ukraine for 2022.

National Bank of Ukraine, 2023a. Macroeconomic and Monetary Review, October 2023. https://bank.gov.ua/admin_uploads/article/MMR_2023-10.pdf?v=6

National Bank of Ukraine, 2023b. On the monetary policy. https://bank.gov.ua/ua/monetary/about

National Bank of Ukraine, 2023c. Inflation Report, October 2023. https://bank.gov.ua/ua/news/all/inflyatsiyniy-zvit-jovten-2023-roku

National Bank of Ukraine, 2023d. Foreign exchange interventions of the NBU. https://bank.gov.ua/ua/markets/currency-interventions

Phuc Canh, N. 2018. The effectiveness of fiscal policy: contributions from institutions and external debts. *J. of Asian Business and Econ. Stud.*, **25**(1): 50-66.

Rakić, B. and Rađenović, T. 2013. The effectiveness of monetary and fiscal policy in Serbia. *Industrija*, **41**(2).

Rodrigues, E.D.S.F.L. 2020. Uncertainty and the effectiveness of fiscal policy in the United States and Brazil: SVAR approach.

State web portal of the budget for citizens, 2023. https://openbudget.gov.ua/?month=12&year=2022&budgetType=CONSOLIDATED

Sumets, A., Kniaz, S., Heorhiadi, N., Skrynkovskyy, R. and Matsuk, V. 2022. Methodological toolkit for assessing the level of stability of agricultural enterprises. *Agril. and Res. Econ.*, **8**(1): 235-255.

World Bank, 2023. Ukraine indicators. https://data.worldbank.org/country/ukraine

Yakushko, I.V. 2022. Fiscal policy: essence and features of influence on the development of the national economy. Problems of modern transformations. *Series: Economics and Management*, (6). https://doi.org/10.54929/2786-5738-2022-6-03-04