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UKRAINE'S MONETARY POLICY UNDER MARTIAL LAW

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Abstract. The relevance of the research is due to the change in the monetary policy regime of the National Bank of Ukraine (NBU), which consists in the transition from inflation targeting with a floating exchange rate to a fixed exchange rate as the nominal anchor of monetary policy under martial law. Such a plan to change the monetary policy regime was carefully calculated and outlined in the NBU's Monetary Policy Guidelines for the Duration of Martial Law. The timeliness and effectiveness of the NBU's monetary policy decisions enabled it to mitigate the impact of the military shock on the macro-financial stability of the national economy. The *purpose* of the article is to consider the theoretical and practical aspects of the NBU's monetary policy under martial law. *Methodology.* The study uses a systematic method of cognition to determine the sequence of application of monetary policy instruments to smooth out monetary shocks of the wartime period; an abstract-logical method to understand the future monetary policy strategy based on the abandonment of the fixed exchange rate regime and a gradual return to inflation targeting; and a statistical method to analyse the dynamics of monetary indicators of the national economy. *Results.* The paper presents the main principles of the NBU's monetary policy under martial law. The first shock from the war led to changes in the conduct of monetary policy and a shift to unconventional instruments of its regulation. The gradual adaptation of the economy to the new conditions determined the NBU's further steps to ease monetary policy and move to greater exchange rate flexibility. *Practical implications.* The practical significance of the research results is to assess the conditions for the transition from the key policy rate-based inflation targeting regime as the main monetary policy instrument to the use of foreign exchange interventions as the main operation in the foreign exchange market under martial law. *Value / Originality.* The originality of the article is due to the need to identify the prerequisites for the transition to a new monetary policy strategy in a wartime economy. *Conclusions.* The NBU's timely response to the negative phenomena associated with deteriorating inflation expectations, multiple exchange rates and pressure on international reserves helped prevent the development of a currency and financial crisis in Ukraine. Despite the active hostilities, the NBU is trying to find options that will allow it to conduct an effective monetary policy in the face of a full-scale invasion and unprecedented internal and external shocks. Internationally, Ukraine has exceeded expectations and the NBU has shown a high degree of responsibility, professionalism and creativity in the conduct of monetary policy. Increased confidence in the central bank is a valuable resource in times of martial law.

Keywords: monetary policy, exchange rate, inflation, financial stability, monetisation, nominal anchor, targeting, martial law.

JEL Classification: E42, E52, E31

1. Introduction

There are no universal recipes for conducting monetary policy in times of war. Every war is different, both in terms of the extent and duration of active hostilities. At the same time, there are certain regularities in the conduct of monetary policy in times of war. A common and effective measure to maintain macro-financial stability in such circumstances is

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to temporarily fix the exchange rate. This has been widely used in Israel, Iraq, Serbia and Georgia during full-scale wars. However, it is also true that excessive and prolonged exchange rate fixation is unsustainable and leads to the accumulation of significant macroeconomic imbalances.

With the launch of full-scale interventions, the National Bank of Ukraine (hereinafter – the NBU) switched from inflation targeting with a floating exchange rate to a fixed exchange rate monetary policy. This plan to change the monetary policy regime was calculated in advance and set out in the Monetary Policy Guidelines for the period of martial law. When fixing the exchange rate in February 2022, the NBU was clearly aware that this was only a temporary practice that would eventually have to be abandoned.

The next step in the NBU's monetary policy strategy was the adoption by the NBU Board of a strategy to ease currency restrictions, move to greater exchange rate flexibility, and gradually return to inflation targeting. As part of this strategy, the NBU switched to a managed exchange rate regime in October 2023.

2. Analysis of Recent Research and Publications

The role of monetary policy and its instruments in ensuring sustainable economic growth is widely discussed in the works of foreign scholars: J. Keynes, J. Tobin, B. Bernanke, M. Gertler, J. Taylor, F. Mishkin, M. Friedman, J. Stiglitz, Ch. Goodhart, etc. In his famous "The General Theory of Employment, Interest and Money", J. Keynes explains the interest rate as the main instrument of monetary policy in terms of the profitability of money, the advantage of its liquidity and the motive of prudence (Keynes, 1936). In fact, the search for answers to practical questions about targeting the monetary cycle dates back to Keynes's 1931 A Treatise on Money. It already contained: 1) an understanding of the theory of money as a theory of the economic process as a whole; 2) the embedding of this concept in the modern Keynesian vision of the economic process; 3) the radical division of saving and investment; 4) the argumentation, in the sense of K. Wicksell's theory of the division of the interest rate into a "natural" and a "monetary" part; 5) the importance attached to the expectation of a downward trend, "which is not yet a liquidity preference for speculative reasons, and the theory that a fall in the monetary wage rate during a depression leads to the restoration of economic equilibrium because it affects the interest rate (the bank rate) and reduces the need for money on the part of industrial circulation" (Keynes, 1971). According to M. Friedman, the central bank's unique function of supplying the country with money naturally leads to its responsibility for price stability (Friedman, 1982). Ch. Goodhart, Professor Emeritus at the London School of Economics, identified two main objectives of central banks: to promote price stability and to act as a lender of last resort, thereby maintaining financial stability and confidence in the authorities in the conduct of monetary policy, which directly influences the behaviour of economic agents (Goodhart, 2008). J. Taylor considers the impact of monetary policy on the economy through the transmission mechanism, which determines the impact of decisions through its main channels on changes in real GDP and inflation (Taylor, 1995). B. Bernanke and M. Gertler consider that negative interest rates as a monetary policy instrument are characterised by both moderate benefits and manageable costs. It is assumed that information about the transition to a negative interest rate has a stronger effect on market participants' perceptions in the future than a statement about the central bank's future interest rate (Bernanke et al., 1999). The problems of implementing monetary policy in the face of cyclical fluctuations are discussed in the works of domestic researchers: S. Arzhevitin, I. Bublyk, B. Danylyshyn, T. Iefymenko, O. Zholud, V. Koziuk, V. Lepushynskyi, S. Nikolaychuk, etc. According to S. Arzhevitin, the rise in inflation in European countries in 2021–2022 led to a sharp increase in interest rates by central banks to the highest level in recent decades. At the same time, the effect of changes in the key rates was much weaker than expected (Arzhevitin, 2023). T. Iefymenko notes that empirical targeting by reducing inflation to a threshold that causes monetary deflation and a transition to depression increases real GDP growth, while an increase in inflation above the threshold reduces real GDP growth (Iefymenko et al., 2021). Other authors point out that after the NBU switched to inflation targeting and introduced a new operational design of monetary policy, the central bank has sufficient control over short-term interest rates in the interbank market and through them influences other financial market indicators. The exchange rate channel remains the most powerful in monetary transmission (Zholud et al., 2019). As a result of prudent exchange rate and interest rate policies and strong external assistance, international reserves increased to 40.5 billion USD. At the end of 2023, the NBU's international reserves increased by 42% compared to 2022. The NBU managed to avoid a currency crisis by maintaining sufficient international reserves and liberalising the foreign exchange market (Khokhych et al., 2023). According to V. Koziuk, the use of the political business cycle approach in the political and economic analysis of the accumulation of significant reserves does not reflect the completeness of the theoretical problem. The choice of central banks to accumulate reserves is not predetermined, but results from the political and economic consensus on the design of the macro-financial stability mechanism and the channels of adjustment to shocks. It has been empirically confirmed that the tendency to accumulate large reserves is observed in countries with higher GDP per capita, non-democratic political regimes and dependent central banks that do not choose a flexible exchange rate (Koziuk, 2020). It is possible to improve the domestic financial stability of the economy and the regulatory potential of monetary policy by limiting its dependence on global economic cycles. One of the most important ways to overcome this dependence is a nationally rooted monetary policy aimed at supporting domestic economic activity and mitigating the impact of external conditions on financial stability (Bublyk, 2023).

In the context of martial law, the timing of the implementation of the monetary policy strategy and the transition to a flexible exchange rate regime within the inflation-targeting framework remains unresolved. In addition, the gradual liberalisation of foreign exchange and exchange rate policy will depend on the current market situation, as well as on the risks associated with the easing of interest rate policy and the intensification of lending to the real economy.

The purpose of the paper is to examine the theoretical and practical aspects of the NBU's monetary policy under martial law.

The methodological part of the theoretical part of the study is based on the conceptual provisions of economic theory that explain the effectiveness of monetary policy under martial law. The study used a system analysis method to determine the sequence of application of monetary policy instruments to smooth the monetary shocks of the wartime period, an abstract logic method to understand the future monetary policy strategy based on the abandonment of the fixed exchange rate regime and the gradual return to inflation targeting, and a statistical method to analyse the dynamics of monetary indicators of the national economy.

3. Results and Discussions

For the period of martial law, monetary financing of the budget deficit was introduced by amending the Law of Ukraine "On the National Bank of Ukraine". Such changes are a standard practice of the central bank in the face of a military shock, which is accompanied by significant financial expenditures amid a decline in budget revenues. A characteristic feature of martial law in countries where active hostilities are taking place is a rapid increase in state budget expenditures, as huge needs arise to finance the army. Due to the increase in defence spending, the NBU was forced to resort to monetising the state budget, but quickly withdrew from this regime.

Under martial law, the budget deficit is objectively growing. The approval of international assistance to Ukraine by international partners is slow, as it requires lengthy decision-making procedures in the relevant bodies of the European Union and the United States. In the first months of the war, the NBU bore the main financial burden. In particular, it financed the state budget deficit to the tune of 105 billion UAH. This shook exchange rate expectations to the core. Measures had to be taken to prevent this situation from turning into a prolonged financial crisis.

The continued prohibition of monetary financing of the state budget deficit and the postponement of the decision on the key policy rate until June 2022 were the main results of the NBU's effective work. Under martial law, the interest rate cannot be the main instrument of monetary policy, as the transmission channel from the key policy rate to the next links in the monetary transmission chain is delayed and inefficient for medium-term forecasting. In such circumstances, it is more efficient to introduce a fixed exchange rate, which acts as a nominal anchor for expectations and as an anti-inflationary tool. The main instrument of monetary policy has been a shift from the use of the interest rate to the use of foreign exchange intervention as the main monetary policy operation (Figure 1).

The first stage of monetary policy, which includes a change in the monetary policy regime and the use of unconventional monetary instruments, is conventionally referred to as the *first shock of war*. At this stage, there was no economic motivation for economic actors. Not many people thought about preserving their savings, changing their consumption patterns, etc. Moreover, there was a cohesion factor among the population to overcome the Russian invasion, to ensure maximum satisfaction of the needs of the armed forces and the country's defence capability. The NBU's task at this stage was to prevent panic in the foreign exchange market, ensure the smooth functioning of the country's banking and payment systems, and ensure the uninterrupted financing of critical budget expenditures.

The second stage of monetary policy implementation is a *war of exhaustion*. The realisation that a prolonged war would require more resources did not come as a surprise to the monetary authorities. The NBU returned to an active interest rate policy. This was done to reduce pressure on international reserves, since a cheap hryvnia in terms of interest rate policy means a cheaper hryvnia on the foreign exchange market. In times of war, there can be neither low interest rates nor a stable exchange rate. If the hryvnia is valuable on the foreign exchange market, it should also be valuable in terms of interest rates.

In June 2022, the NBU raised the key policy rate to 25% and gradually introduced changes in the

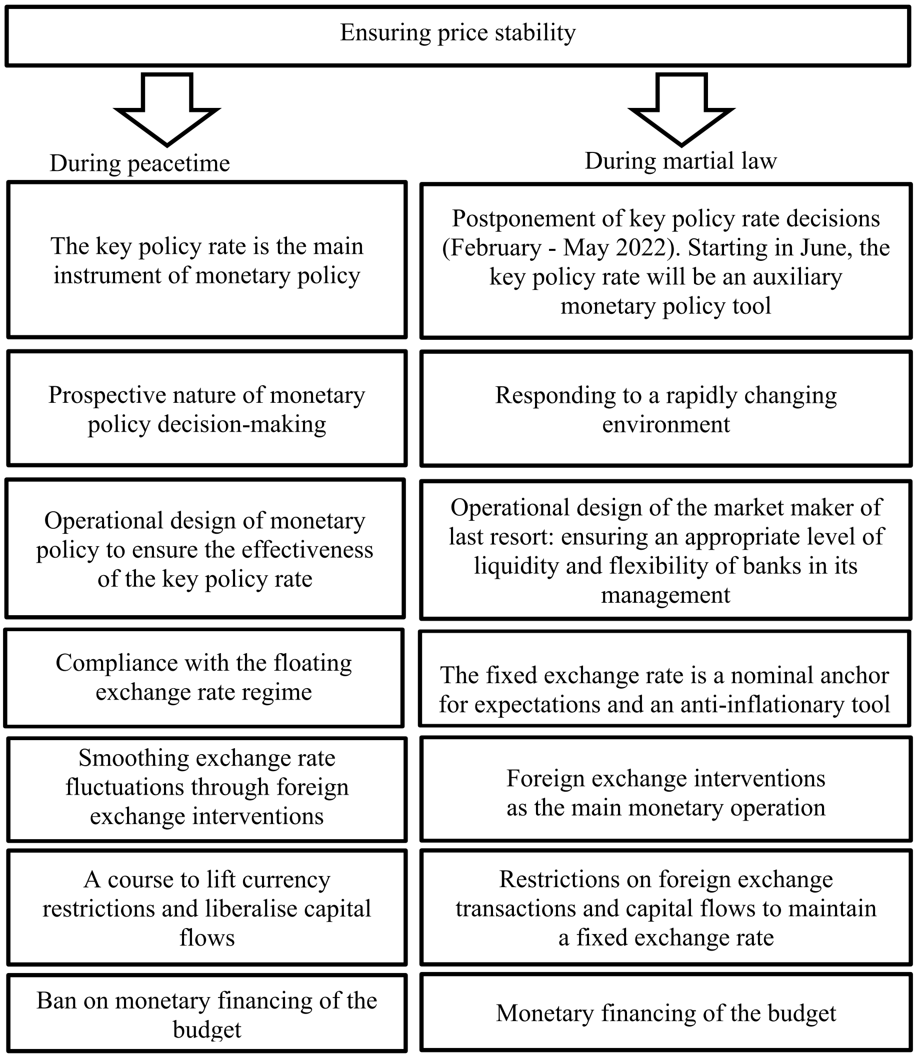

Figure 1. Changes in monetary policy principles during the war

Source: compiled by the authors based on data from the National Bank of Ukraine

operational design of monetary policy. This was done, first, to encourage banks to pay adequate remuneration to depositors to protect their savings from inflationary devaluation. Second, to create space for the Ministry of Finance to place domestic government bonds in order to reduce the pressure of monetisation on the financing of the budget deficit. This action plan was endorsed by the Monetary Policy Strategy, which envisaged an easing of currency restrictions, a move towards greater exchange rate flexibility and a gradual return to inflation targeting.

The changes in the operational design of monetary policy were quite creative. During the first phase of the war shock, the NBU moved from a classical liquidity management regime to a market maker of last resort, where the central bank operated in both directions: banks both refinanced and invested in certificates of deposit due to excess liquidity. Bank depositors needed to be reassured that they could always withdraw their funds, and banks needed to be confident that they would receive timely refinancing from the NBU. This had a calming effect on the financial system and helped to build confidence in the monetary authorities.

The new monetary policy design did not provide sufficient incentives for banks to raise interest rates on time deposits quickly. The NBU found a way out by introducing a non-conventional monetary policy design with 3-month certificates of deposit. Participation in the tender for the placement of 3-month certificates of deposit is conditional on meeting the bank's time deposit ratio. This, together with the increase in required reserves for current deposits, was a sufficiently strong incentive.

The transmission of the increase in the key policy rate in June 2022 was significantly accelerated by the increase in the required reserve ratio and the introduction of an unconventional monetary policy

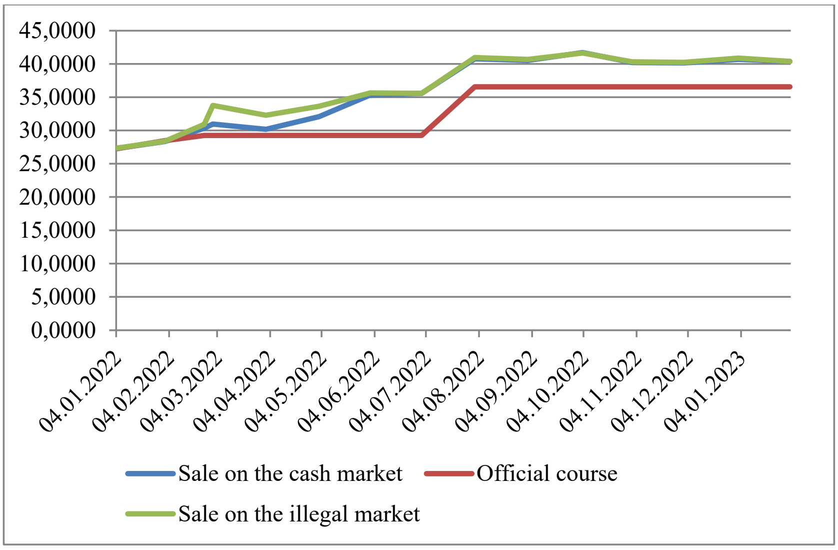

Figure 2. Dynamics of the UAH exchange rate against the USD

Source: compiled by the authors based on data from the National Bank of Ukraine

design. This monetary policy regime led to higher interest rates on term deposits, which helped to reduce pressure on the exchange rate. At the same time, the NBU adjusted the exchange rate, as maintaining the exchange rate at the level of 24 February 2022 was not in line with the current situation, as expectations of economic agents had increased significantly (Figure 2).

Together with the exchange rate adjustment and the increase in the key policy rate, the NBU managed to stabilise expectations, reduce pressure on the exchange rate and reduce the amount of monetisation of the state budget deficit. The combination of measures led to a gradual convergence of the cash exchange rate to the official exchange rate. This had a positive impact on expectations and allowed the NBU to maintain international reserves. The economy has moved to a trajectory of steadily declining inflation expectations, which has helped to reduce inflation from 26.6% at the end of 2022 to 5.1% at the end of 2023 (Figure 3).

This is a unique case in economic history. Significant international support has also helped to reduce inflation expectations. Prudent monetary and fiscal policies helped to achieve a positive result, and despite the full-scale war in Ukraine, the inflation and devaluation spiral did not unwind.

The NBU responded to the growing negative phenomena in a timely manner in an effort to avoid them, as inflation is a self-fueling process. Rising inflation expectations lead to an increase in demand for durable goods, including imported ones. Under such conditions, the volume of imports and the demand for foreign exchange increase, companies build price increases into their business models,

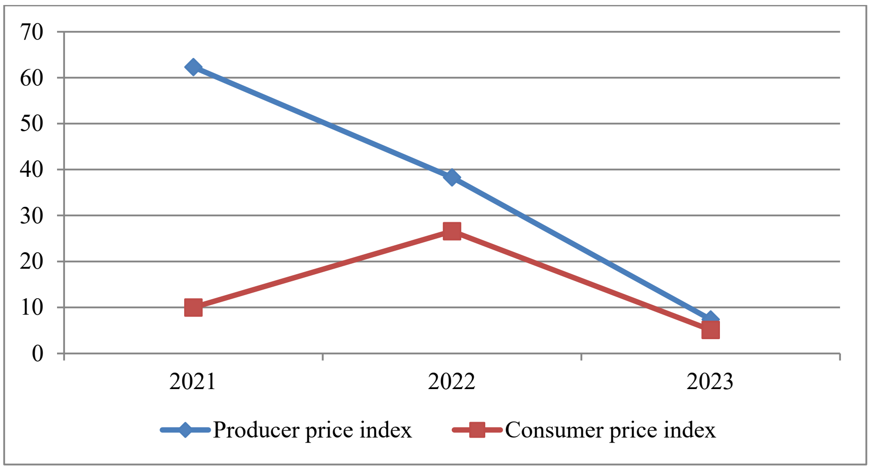

Figure 3. Ukraine's CPI dynamics in 2022–2023

Source: compiled by the authors based on data from the National Bank of Ukraine and this leads to an inflationary spiral that fuels inflationary expectations. This inflationary spiral must be stopped to prevent inflation from becoming an inflationary shock to the economy. The need to reduce the threat of a currency crisis means that the risks of an uncontrolled situation turning into a full-blown crisis are increasing.

Over time, the economy gradually adapted, and there was a gradual return to economic motives in the daily behaviour of households. This was very evident in the exchange rate dynamics. While at the beginning of martial law and the transition to a fixed exchange rate, the difference between the cash and official exchange rates was insignificant, it began to increase eventually. This happened because the NBU imposed administrative restrictions, which naturally affected the flow of funds between the official interbank foreign exchange market and the cash market. The deterioration of expectations gradually led to a widening of the gap between the official and cash exchange rates, the so-called exchange rate multiplicity, which is undesirable in a crisis. The existence of multiple exchange rates worsens expectations, as a fixed exchange rate loses visibility in the eyes of the population, which is not conducive to stability. As a result, the pressure on the NBU's international reserves gradually increased and inflation expectations became unbalanced, which is a natural phenomenon for such a period.

The third stage of monetary policy is the *path to victory*. At this stage, the NBU adopted a strategy of moving towards greater exchange rate flexibility, easing foreign exchange restrictions and returning to inflation targeting. The very idea of such a transition was laid down in the Monetary Policy Guidelines for the Period of Martial Law, which stated that the NBU would gradually return to inflation targeting with a flexible exchange rate as the financial system returned to normal. In order to implement this action plan, the NBU established the relevant conditions in the monetary field. The main ones are inflation, expectations, achieving an appropriate level of real interest rates to make hryvnia instruments attractive, reducing the inflow of a significant overhang of hryvnia mass to the foreign exchange market, ensuring the adequacy of international reserves, the resilience of the foreign exchange market and the stability of the financial system. Thanks to the NBU's coordinated actions, progress has been made in implementing these conditions. In particular, the process of gradual removal of foreign exchange restrictions has led to the beginning of a cycle of interest rate easing.

The transition to a soft exchange rate policy involves a three-dimensional space. The first area is the gradual removal of currency restrictions, which is very important for business. Such restrictions are effective only in the short term. In the long term, they become an artificial barrier to doing business. The second area is exchange rate policy. A fixed exchange rate is a burden on the economy and undermines confidence in the monetary authorities. It does not allow the economy to adapt to changes in the foreign exchange market in a timely manner. The third area is the easing of interest rate policy to stimulate lending to the real economy.

Thus, at this stage, the NBU began to move towards a looser interest rate policy and moved to managed exchange rate flexibility, as clearly evidenced by the situation on the foreign exchange market. In shifting to a flexible exchange rate policy, the NBU prioritised the elimination of multiple exchange rates, which helped to ensure that the cash and official exchange rates were synchronised. Despite the slow depreciation of the exchange rate, the spread between the cash and non-cash exchange rates narrowed as the NBU eased the calibration of administrative restrictions. The managed flexibility regime will gradually evolve, but maintaining exchange rate stability remains a priority for the NBU. The central bank's continued presence on the FX market means compensating for the structural foreign currency deficit that has persisted for a long time in the face of a significant budget deficit. The so-called double deficit problem arises when a large fiscal deficit leads to a current account deficit and, as a result, a currency deficit. On the one hand, the NBU will compensate for the deficit by limiting excessive exchange rate fluctuations, and on the other hand, it will maintain sufficient attractiveness of hryvnia deposits to protect depositors from inflation. The NBU will ensure that exchange rate fluctuations are two-way. However, as the foreign exchange market takes over the balancing function, the NBU will increase the possibility of exchange rate fluctuations.

The NBU ensures that hryvnia assets are sufficiently attractive in its key policy rate forecast, which is regularly published in the Inflation Report. This is a cornerstone of the NBU's monetary policy strategy, which aims to ease currency restrictions without creating significant risks for the FX market. The baseline forecast assumes that the key policy rate will remain within a sufficiently restrictive range and will be positive relative to inflation expectations. This means that hryvnia deposit rates will gradually decline in line with inflation expectations. For the vast majority of banks, deposit yields exceed expected inflation. Accordingly, the share of households' hryvnia time deposits is growing. The baseline forecast assumes that the key policy rate will remain within a fairly restrictive range and will be positive relative to inflation expectations. This means that hryvnia deposit rates will gradually decline relative to inflation expectations. For the vast majority of banks, deposit yields exceed expected inflation. Accordingly, the share of households' hryvnia time deposits is growing.

In 2024, the NBU expects inflation to accelerate due to increased non-monetary factors. These include rising production costs, a pickup in demand, and the pressure of labour market imbalances caused by high unemployment and a significant shortage of personnel in a wide range of specialties. The structural deficit in the labour market requires higher wages, which is reflected in the growth of consumption and business spending. Despite the forecasted acceleration of inflation, it will remain moderate.

Monetary policy in the recovery phase involves the use of traditional and unconventional monetary instruments in an environment of high uncertainty. There is a need for substantial financial support from both official lenders and private investment, a need for cheap credit to support private sector recovery, and a need to reduce the government budget deficit. The economic recovery is accompanied by significant volatility in foreign exchange flows, vulnerability to external and internal shocks, and structural changes in the economy (sectoral, consumer and industrial) leading to an adjustment of relative prices in the economy. Reliable and predictable monetary policy under conditions of uncertainty, a monetary regime that is uniform and understandable to international partners and investors, and capable of controlling inflation to reduce the cost of credit are key to a successful post-war economic recovery. The monetary regime should be flexible with a stable foreign exchange market. Experience shows that the best such regime is inflation targeting with a flexible exchange rate. This is the direction in which the NBU is moving. There are problems and challenges on the way back to this regime. These include the resumption of lending during the war, financial risk insurance, and the expansion of foreign capital, which leads to an appreciation of the exchange rate. On the one hand, hryvnia appreciation reduces pressure on the foreign exchange market, but on the other hand, it turns this process into a revaluation pressure, which exporters do not like. Therefore, some combination of foreign exchange interventions is needed to accumulate international reserves and control short-term capital inflows to make this process gradual and smooth.

The significant liquidity surplus in the banking system significantly weakens monetary transmission, and the NBU is actively using structural measures to regulate this surplus. Adjustments in relative prices are not directly within the NBU's mandate, as inflation is a change in absolute prices when prices in the economy rise due to monetary factors. However, this is a challenge for the NBU as the upward pressure on prices will increase and price spikes need to be smoothed out in time. The NBU's response to future price increases is a relatively high inflation target, which will remain in place for a relatively longer period of time than would have been expected before the full-scale intervention. In order to achieve the inflation target within the approved corridor, the economy will need more time to adjust due to the higher inflation target.

4. Conclusions

The achievements of monetary policy under martial law can be summarized as follows:

1) Stability of the financial system (the system functions and supports the country's defence capability, and the hryvnia performs its functions).
2) The National Bank of Ukraine managed to avoid demonetisation of the economy, when money does not perform its functions (there is a lot of money in the economy, but it is not trusted by the population and business).
3) The National Bank of Ukraine's compliance with the mandate of price and financial stability to support the defence capability of the military economy (to ensure this mandate, the NBU used both traditional monetary policy instruments and creative monetary policy models).
4) The National Bank of Ukraine has developed a set of measures that will be applied depending on macroeconomic conditions during the period of uneven flows of international financial assistance.

The key to overcoming the military shock is a strong stabilisation programme that includes both tight monetary policy and fiscal consolidation. Successful implementation of this programme requires structural reforms to ensure sustainable economic growth and post-war economic recovery.

The monetary policy regime under martial law differs from the pre-war inflation targeting regime, when the key policy rate was the main monetary policy instrument. The latter was based solely on forecasts and a floating exchange rate. This practice was expected to be effective, as the economy did not experience economic crises under such conditions. Since August 2015, when the actual transition to inflation targeting and a floating exchange rate took place, and until the start of the full-scale invasion, Ukraine has not experienced a currency crisis. This has shown, in line with the example of other countries, how necessary a floating exchange rate is.

Issues related to the sequence of monetary policy actions, the strategy for mitigating currency liberalisation, the transition from a fixed exchange rate to a flexible exchange rate, and the gradual return to inflation targeting are constantly in the focus of the NBU's attention. The central bank is trying to find options that will allow it to conduct an effective monetary policy in the face of a full-scale invasion and unprecedented internal and external shocks. Internationally, Ukraine has exceeded expectations, and the NBU has demonstrated a level of responsibility, professionalism, and creativity in implementing monetary policy. Growing trust in the central bank is the most valuable resource in the face of a full-scale invasion.

Consequently, conducting monetary policy under martial law requires coordinated and consistent actions by the monetary authorities to prevent the negative effects of a military shock on the country's financial system.

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