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**INFLATION TARGETING AND ECONOMIC GROWTH IN UKRAINE  
(THEORY AND ITS APPLICATION IN THE PRACTICE OF THE NATIONAL BANK)**

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**Abstract.** The reciprocal, two-way relationship between inflation and economic development, which is often, although not entirely correctly, measured by GDP dynamics, is the subject of long discussion in the economic literature. Following the main conceptual results of this debate, the authors analyze the relationship between economic growth and inflation in Ukraine over the past decade.

The goal of this article is to determine not only the impact of inflation on economic growth, but also to assess the level of effectiveness of government policy to curb inflation. Which is implemented, inter alia, through inflation targeting carried out by the National Bank of Ukraine.

The article discusses the main results of the implementation of this policy, draws relevant conclusions and formulates conceptual recommendations.

**Key words:** interrelationship between inflation and economic development, economic growth, inflation targeting, Keynesian policies, money supply, national banking policy, Phillips Curve, qualitative and quantitative analysis, the Tobin Effect.

**Introduction.** The reciprocal, two-way relationship between inflation and economic development, which is often, although not entirely correctly, measured by GDP dynamics, has been the subject of many years of discussion among academic economists, joined by politicians and heads of government agencies, in particular, central banks. The main question is whether inflation has a positive impact on economic development, or whether it is a negative factor that impedes economic growth.

At the same time, it should be noted that despite many years of discussion, the issue still remains unresolved.

Empirical and theoretical research studies conceptually examine three types of relationships between inflation and economic growth. Namely, positive, negative and sometimes a complete lack of connection.

At the beginning of the last century, the main scientific economic doctrine was Keynes's theory, which considered inflation as a factor that has a positive impact on the dynamics of the economy. Keynes's followers used the Phillips curve as an argument, which describes high inflation as a prerequisite for significant economic growth, which results in low unemployment. In fairness, it should be noted that there are also empirical studies, the results of which do not establish a close and significant positive relationship between inflation and economic growth [1, 2].

There are other scientific studies, particularly in Ukraine, the results of which indicate that in some cases this relationship was positive and sometimes negative in the long term.

The presence of such contradictory results encourages scientists to further research in the field of analysis of the direction, tightness and significance of the relationship between inflation and economic growth.

Such an analysis is of particular importance in developing countries with turbulent economies, which are more susceptible to high inflation volatility, which largely determines the level of consumption, investment volumes and production dynamics. At the same time, it is important to note that in some cases, excessive government intervention in the economic life of countries causes the above-mentioned turbulence, and often a collapse of markets.

The authors point out that this is exactly what is happening in Ukraine, as one of the countries of the post-Soviet bloc.

All of the above indicates the need for in-depth scientific research, the subject of analysis of which is the direction and level of the relationship between the dynamics of consumer prices and economic growth.

The structure of the article is presented as follows. The presentation of the main materials of the study is preceded by a deep and comprehensive analysis of the literature devoted to the problem under study.

The third section is devoted to scientific methodology, which is the conceptual basis of the study. The next two sections are devoted to the presentation and discussion of the research results, conclusions and recommendations.

**Literature review.** As noted above, the nature of the relationship between inflation and economic growth, the direction of this relationship, and such statistical characteristics as its closeness and significance have been widely studied in the scientific economic literature. There are empirical results from serious academic research indicating that there is a close and very significant positive relationship between the dynamics of consumer prices and economic development [1]. The main postulates of Keynes' theory state that there is a short-term relationship between changes in the level of inflation and the volume of GDP. But in the long term this connection is not visible.

Analysis of the well-known Phillips curve also gives reason to believe that high inflation is a factor that has a positive effect on the dynamics of economic growth and limits the level of unemployment.

This is also evidenced by the Tobin effect, which suggests that inflation forces people to carry out investment activities by investing money in interest-bearing assets. This, in turn, contributes to an increase in the volume of capital, which leads to a revival of economic dynamics. Thus, until the middle of the last century, inflation demonstrated a positive, close and significant relationship with macroeconomic indicators of economic development [4].

However, the situation changed in the 1970–1980s. During this period, the national economies of many countries, both developed and developing, experienced hyperinflation and mass unemployment.

As a result, the view that persistent and high rates of inflation can have very adverse consequences for economic growth in the long term has begun to prevail in the economic literature [5–7–8].

A more in-depth analysis based on economic and mathematical modeling methods [9–10] showed that inflation does not have a constant significant impact on economic dynamics, with the exception of those countries where its level exceeds 40%. Then, as the modeling results indicate, hyperinflation begins to have a very significant negative impact on changes in the volume of explosives. Studies based on cross-country comparisons [11–12–13] confirm the same point of view. In those countries where high rates of growth in consumer prices were recorded for a sufficiently long period of time, a very significant decline in the rate of economic growth was observed.

In addition, it can be considered proven that a high level of inflation has a negative impact on the volume of investments, an increase in the volume of which contributes to macroeconomic stability and, as a result, economic development [14]. American economic economist Fisher believes that since there are no compelling arguments in favor of high inflation, governments that allow a significant increase in consumer prices lose control over the situation in the national economy. Thus, it is the inflation rate that should be considered one of the indicators of macroeconomic stability and the government's ability to regulate the rate and proportions of economic growth.

The authors studied a fairly large number of sources containing the results of empirical studies of the patterns between inflation and growth, conducted in seventy countries [15–17], both industrialized and developing. Based on these data, it was concluded that the relationship between inflation and growth is uneven across countries. However, the vast majority of countries demonstrate reciprocal causality during the analyzed period.

A number of recent studies have provided evidence to support the argument that inflation has a negative impact on economic growth. In fact, he studied. For example, the source [18] analyzes the relationship between inflation and economic growth in Turkey (which, according to the authors, could become a good example for Ukraine) over the past twenty years. At the same time, a stable negative relationship was found between the variables.

On the other hand, cross-country studies show that countries that experienced higher economic growth had relatively low inflation rates. For example, a study by the World Bank says that East Asian countries, which have very little inflation, have experienced sustained high economic growth over the past two decades. First of all, due to the high rates of investment in economic development [21].

Some studies argue that the relationship between inflation and economic growth may differ depending on the level of openness of the economy. It manifests itself more intensely in open economies, which make more active use of foreign and domestic direct investment.

**Methodology.** The study uses data from the State Statistics Service of Ukraine [28], the National Bank of Ukraine [29], as well as the World Bank Indicators [33] on the growth rate of real GDP and inflation in Ukraine over the past ten years. Initially, a test was carried out to determine the stationarity of each time series. If any variable did not show stationarity of development, it was transformed using the multivariate cointegration method

**Results and discussion.** The authors believe that the presentation of the main material should begin with Table 1, which characterizes the relationship between key rate of the world's central banks and the inflation rate in eleven most developed and twenty developing countries including Ukraine.

According to economic theory and the practice of banking institutions, in particular central banks, the bank rate is the interest rate at which the country's central bank (National Bank of Ukraine (NBU) in our case) provides money to commercial banks in the form of short-term loans.

Bank rate management is a system of measures by which central banks (NBU) influence economic and investment activity. Obviously, lower bank rates can help warm up the economy by lowering the cost of funds for borrowers, and higher bank rates help regulate the national economy when the inflation rate rises above the planned (targeted) value.

Thus, the key interest rate is the main tool available to central banks to influence the level of inflation.

As a rule, central banks make decisions regarding the level of the key rate depending on the state of the economy in the country and the competitive environment. The NBU Board decides to leave the key rate at the same level, raise it or lower it and announce the decision at a press briefing after its meeting.

Table 1

**The relationship between the key bank rate of the world's central banks and the inflation rate**

Country	Key Rate, %	Consumer Price Index, %	Key Rate – CPI, %	Date
<b>Developed Markets</b>				
Switzerland	1	2,8	-1,8	Dec.22
USA	4,38	6,5	-2,1	Dec.22
Canada	4,25	6,8	-2,6	Dec.22
N. Zealand	4,25	7,2	-3	Nov.22
Norway	2,75	5,9	-3,2	Dec.22
Australia	3,1	6,9	-3,8	Dec.22
Japan	-0,1	3,8	-3,9	Jan.16
UK	3,5	10,7	-7,2	Dec.22
Eurozone	2	9,2	-7,2	Dec.22
Denmark	1,25	8,7	-7,5	Oct.22
Sweden	2,5	12,3	-9,8	Nov.22
<b>Emerging Markets</b>				
Brazil	13,75	5,8	8	Aug.22
Mexico	10,5	7,8	2,7	Nov.22
China	3,65	1,8	1,9	Aug.22
India	6,25	5,7	0,6	Dec.22
Indonesia	5,5	5,5	0	Nov.22
South Africa	7	7,4	-0,4	Nov.22
Peru	7,75	8,5	-0,8	Jan.22
Taiwan	1,75	2,7	-1	Dec.22
Colombia	12	13,1	-1,1	Dec.22
Malaysia	2,75	4	-1,3	Nov.22
South Korea	3,5	5	-1,5	Jan.22
Chile	11,25	12,8	-1,6	Oct.22
Russia	7,5	11,6	-4,1	Sep.22
Thailand	1,25	5,9	-4,7	Nov.22
Czech	7	15,8	-8,8	June.22
Poland	6,75	16,6	-9,9	Sep.22
Hungary	13	24,5	-11,5	Sep.22
Argentina	75	94,8	-19,8	Sep.22
Turkey	9	64,3	-55,3	Nov.22
Ukraine	25	16,6	+8,4	Dec.22

Source: Authors' calculations

One can say that most countries are currently competing with each other in terms of the magnitude of negative real interest rates. Among developed countries, the leaders in the “negative” category are the Eurozone, the USA, the United Kingdom, and Scandinavia. Among developing countries such are Turkey, Thailand, Hungary, Argentina, South Korea, Chile, Malaysia, and Taiwan.

In essence, the entire civilized world is in the “zone of negative real interest rates”, with countries literally competing with each other to provide their businesses with a larger interest rate advantage and, thus, a more efficient credit lever.

Ukraine, therefore, is the only country among those represented in Table 1 where the credit interest rate exceeds the inflation level (in our case, the consumer price index).

Upon realizing this, the authors set out to analyze the global practices of central banks in different countries that, while achieving relatively high, and more importantly, stable economic growth rates, managed to keep inflation at relatively low levels.

It was concluded that central banks most often employ the following monetary policy regimes: targeting the exchange rate of the national currency, monetary targeting, and inflation targeting.

Exchange rate targeting focuses on the national currency exchange rate as the target inflation indicator. The following sub-regimes may be applied: pegging to a stable foreign currency (most often the dollar or euro), a “currency corridor” or a fixed exchange rate. The logic behind using exchange rate targeting is that the exchange rate, as the purchasing power parity ratio of two currencies, serves as an indicator of the purchasing power of the national currency in relation to the strong foreign currency with which it is compared. A decrease in the national currency's exchange rate signifies a decrease in its purchasing power.

Monetary targeting implies managing the volume of the “broad” money supply. In this targeting approach, the influence on the inflation level is exerted through control over the dynamics of the corresponding money aggregate (M2 or M3).

When it comes to inflation targeting, the most commonly chosen target indicator is the consumer price index or its derivative – core inflation, which excludes short-term sharp price changes influenced by administrative, seasonal, or cyclical factors. This regime aims to reduce the inflation expectations of the population and entrepreneurs by increasing their confidence in the central bank's credit and monetary policy.

According to IMF data as of 2022, the inflation targeting regime was applied in 38 countries, as well as in the Eurozone (comprising 19 countries).

In Ukraine, the National Bank (NBU) began implementing the inflation targeting (IT) procedure in 2016, after the adoption of the Monetary Policy Strategy for 2016–2020. As a result, the NBU switched from using a fixed exchange rate to a flexible inflation targeting regime. With this approach, based on the use of the results of scientific research on the state of the economy and its forecast, inflation targets are determined and published, which the NBU undertakes to achieve in the medium term. At the same time, the NBU does not determine the price level for individual goods and services.

Despite the criticism that accompanies the use of this mechanism of monetary regulation, it is necessary to objectively assess the potential positive consequences of this regime. In particular, it establishes a nominal anchor for monetary policy that most closely aligns with price stability. In the IT regime, there is flexibility in the choice of monetary policy instruments, allowing for the determination of the most appropriate methodology for achieving target indicators in a given economic situation and specific macroeconomic environment. Finally, a clear criterion for the central bank's performance emerges, which is the stabilization of price expectations among the population.

After a deep analysis of the specialized literature on the researched issue, the authors conclude that in each specific case, the intermediate goal of monetary policy is the forecast of inflation over a certain period of time. For this reason, inflation targeting is often referred to as “forecast targeting”. This name was given to the regime by Professor of Princeton University and Deputy Governor of the Central Bank of Sweden, Lars Svensson, in 1997.

By adjusting monetary policy based on new information, the central bank affects expected inflation and gradually brings it in line with the target. Acting in this way, it eventually aligns actual inflation with the target level. The key phrase here is “over time”.

When applied to the Ukrainian economy, inflation targeting has its specifics. In particular, international experience suggests that inflation targeting can be effective when it is based on a long-term experience of low inflation. However, in the years leading up to the introduction of this regime, inflation in our country was very high: 24.9% in 2014 and 43.3% in 2015.

Desiring to reduce the level of inflation, the NBU introduced the IT procedure in 2016, which was a logical response to such high price growth rates. It may seem that achieving the inflation target in 2016 indicates the correctness of transitioning to inflation targeting. However, firstly, the transition to this regime is recommended after several years of low inflation, and secondly, the reasons for the significant slowdown in price growth in 2016 could have been natural and not solely a result of the IT regime (the end of the devaluation shock also played a role). Perhaps that's why the successes that the NBU had in inflation targeting are temporary in nature for now.

In addition, the experience of developed countries shows that effective achievement of the inflation target is possible only with stable rates of economic growth over a long period of time, in the absence of serious imbalances in its structure, and with low rates of price growth in industry. In the period preceding the introduction of the IT regime, significant economic growth rates were not observed in Ukraine. Thus, in particular, in 2014, GDP decreased (compared to 2013) by 6.8%, in 2015 (compared to 2014) – by 9.9. The structure of the economy was clearly skewed towards the dominance of the raw materials and semi-finished goods production and remained so. Prices in industry grew at a high rate: in 2014 – by 31.8%, in 2015 – by 25.4.

So, there were many prerequisites lacking for the transition to an inflation targeting regime in our country. Inflation is a complex, multifactorial, and contradictory process, and monetary policy measures often have an impact on the economy with a significant time lag. Inflation is subject to significant inertia, and plans to bring it to specific levels over a few years were not realistic, as the authors had pointed out back in early 2016 [25; 26].

Additionally, in Ukrainian conditions, inflation often arises due to uncoordinated actions of government bodies. The reliability of forecasts in our conditions is inherently questionable (there are also doubts about the forecasting abilities of NBU specialists). Therefore, they may not always serve as a quality basis for decision-making.

In discussions about the benefits or harms of inflation targeting, it is crucial not to forget about our main strategic goals – economic growth, reducing unemployment, and increasing people's incomes. Stabilizing inflation at a low level by itself does not guarantee the achievement of these goals. Moreover, the instrument currently used by the NBU for this purpose – raising the discount rate – leads to more expensive loans.

Nobel laureate in economics, Joseph Stiglitz [22], wrote: “Raising interest rates can reduce aggregate demand, which can slow down the economy and limit price increases for some goods and services. But these measures alone cannot bring inflation down to the planned level unless rates are raised to an unbearable level. For example, even if global energy and food prices increase more moderately than they do today and have less of an impact on domestic prices, reducing overall inflation to, say, 3% would require a significant reduction in other prices. Almost certainly, this would lead to a noticeable economic downturn and high unemployment. The cure would be worse than the disease”. Of course, the National Bank is obligated to strive for inflation stabilization at a level around the specified target. The authors believe that this level should fall within the range of single-digit figures, closer to 5–7%. However, the National Bank may also desire to promote economic growth at the maximum potential level. The stabilization of real sector variables, such as production growth and employment, does not always make it into the list of goals for the central bank of any given country. But inflation targeting can vary from rigid, where the central bank is not concerned with the problems of the economy's real sector, to flexible, where it shows some concern about it. Considering that dynamic economic growth is what the people of Ukraine expect from the

government, the NBU needs to consider a variant of using flexible inflation targeting that does not hinder economic growth, at the very least.

In answering the question of whether combating inflation or economic growth is more important, the authors believe that these issues are equally significant. Furthermore, they argue that reasonable compromises are needed to avoid pursuing one goal at the expense of complicating the achievement of the other. Addressing the question of how suppressing inflation contributes to economic growth, they typically respond that when economic agents are confident in price stability, they are more likely to increase production. While this argument has some validity, low inflation alone will not solve key problems such as weak domestic demand, technological lag, and high energy and material intensity. Affordable loans for the real sector of the economy can help address these issues.

It is evident that the inflation targeting regime is characterized by limited discretionary powers. This is because the central bank (as well as central banks in general) is tasked with keeping inflation at the targeted level regardless of the macroeconomic shocks it encounters. The central bank's actions are predetermined, and as such, lack flexibility, which may not always be viewed positively. Taking this into consideration, the authors believe that central banks have a broader range of possibilities under monetary targeting.

However, it is not advisable to completely abandon inflation targeting. This is partly because inflation targeting is a condition of Ukraine's cooperation with the IMF, and IMF loans are currently vital for Ukraine. But there is an opportunity to approach the issue more flexibly. For example, the authors favor the classification of types of inflation targeting proposed by IMF economists A. Carare and M. Stone [31]:

- Full-fledged inflation targeting.
- Eclectic inflation targeting.
- Lightweight inflation targeting.

In countries where full-fledged inflation targeting is applied, central banks enjoy a high or near-high level of trust from market players and the general population. They clearly define the inflation target for a specific period with a firm commitment to achieving it. Full-fledged inflation targeting involves a high degree of transparency in central bank actions and accountability for the decisions it makes.

Eclectic inflation targeting allows for maintaining inflation at a fairly low and stable level without strict accountability for meeting the inflation target. This is possible in conditions of high financial stability and permits the maintenance of other macroeconomic variables at appropriate levels, such as employment, economic growth, the balance of payments, etc. Eclectic inflation targeting is used by more than two dozen countries, including Algeria, Indonesia, Romania, Singapore, Slovakia, Switzerland, Japan, and others.

Lightweight inflation targeting is considered a transitional regime practiced in some developing countries during structural economic reforms. Its feature is that monetary authorities announce wide possible ranges of inflation fluctuations, but in practice, these are not strict commitments or unconditional targets for monetary policy. Lightweight inflation targeting entails greater opacity in central bank decisions compared to full-fledged and eclectic regimes, and a relatively low level of trust from society in policy objectives.

Essentially, Ukraine currently operates under a lightweight inflation targeting regime. Over time, the country may transition first to an eclectic regime (it is assumed that such a regime can be implemented immediately after the end of the war) and then to a full-fledged inflation targeting regime. However, it is essential to seize the opportunity that eclectic inflation targeting provides to address economic growth issues.

Joseph Stiglitz, in his article “Inflation Targeting: Lessons from the Reality”, [22] asserts the following: “Fighting rising prices for food and energy is a challenging task. Anemic economic growth

and higher unemployment resulting from inflation targeting moderately affect inflation but complicate survival in these already difficult conditions”. It is important not to ignore the perspective of a Nobel laureate. To avoid replicating the same impact on economic growth as with inflation, which we need to boost, in our attempt to suppress inflation, we must carefully consider the pace of growth.

In the 1990s, the National Bank of Ukraine (NBU) adhered to a “rules-based policy”, although as early as 1993, John Taylor published his famous article, “Discretionary Policy versus Policy Rules in Practice” [32].

In the 2000s, with its fixed exchange rate, the NBU appeared as an outlier compared to the discretionary policies of central banks worldwide, where the monetary authority reacts unexpectedly to the dynamics of key economic aggregates. The NBU was remarkably predictable during that time.

Since 2016, the NBU has been pursuing mainstream inflation targeting policies, aligning Ukraine with countries like the Czech Republic or New Zealand in terms of addressing the challenges of structural economic transformation.

However, the paradox lies in the fact that since 2008, with the launch of quantitative easing programs, the GDP targeting has silently woven itself into the target of central banks worldwide, even if a dual mandate is not explicitly stated in their charters.

Now, a new mainstream approach is reflected in Table 1. It's worth noting that, in the process, negative real interest rates are being formed, where the central bank's rate is lower than inflation. This creates an inflation premium for businesses through accessible financing and allows entrepreneurs to compete internationally.

In this context, the question, or rather the perplexity arises: immediately after the start of Russia's large-scale military invasion of Ukraine in February 2022, the NBU raised its rate by 2.5 times, from 10 to 25 percent (Table 2).

Table 2

**Value of the NBU discount rate during the war (from January 2022 to 2023)**

Period	Discount rate, (%)	Change in the discount rate, (%)
from 15.09.2023	20,00	<b>-2.00</b>
from 28.07.2023 to 14.09.2023	22,00	<b>-3.00</b>
from 16.06.2023 to 27.07.2023	25,00	0.00
from 28.04.2023 to 15.06.2023	25,00	0.00
from 17.03.2023 to 27.04.2023	25,00	0.00
from 27.01.2023 to 16.03.2023	25,00	0.00
from 09.12.2022 to 26.01.2023	25,00	0.00
from 21.10.2022 to 08.12.2022	25,00	0.00
from 09.09.2022 to 20.10.2022	25,00	0.00
from 22.07.2022 to 08.09.2022	25,00	0.00
from 03.06.2022 to 21.07.2022	25,00	<b>15.00</b>
from 04.03.2022 to 02.06.2022	10,00	0.00

Source: Ministry of Finance of Ukraine [30].

The consumer price inflation rate for January to December 2022 in Ukraine was 16.6% compared to the same period in the previous year (average annual inflation). The NBU's policy rate was 25%, which means the real interest rate was 8.4%. If you consider the forecasted inflation, the real interest rate would be even higher.

The process by which the key rate influences inflation is called the “monetary policy transmission mechanism”.



Using the prescribed procedure, at the first stage the NBU determines the base level of short-term interest rates in the interbank market.

As is known, it is interbank rates that determine the values of aggregate demand and inflation. This is done through various procedures, in particular, interest rates, stock and commodity exchanges, and the exchange rate of the national currency.

The mechanism for managing expectations is more effective the more the public trusts the regulator, that is, the more understandable and consistent the inflation targeting policy is.

It should be noted that the operation of the monetary transmission mechanism requires time, and most importantly, a clear methodology based on macroeconomic forecasts.

As the results of the analysis conducted by the authors show, in Ukraine, changes in the NBU key rate have any noticeable impact on the inflation rate after 9–12 months. Thus, the NBU's decisions on monetary policy are a reaction not to expected future events, but to events that took place in the past.

The impact of changes in the key rate on the short-term behavior of the money (interbank) market is the first stage in the implementation of the monetary transmission mechanism. Typically, central banks control short-term rates very effectively by timely adjusting the volume of bank liquidity. Naturally, if there is a liquidity surplus, central banks absorb excess liquidity, while if there is a liquidity deficit, central banks carry out the process of injecting funds into the banking system.

In the first case, the NBU sells certificates of deposit or government securities from its own portfolio on the market. It can also carry out reverse repo transactions, that is, the sale of securities with an obligation to repurchase them after a certain period of time.

In conditions of liquidity shortage, the NBU issues loans to commercial banks and/or accepts liquid collateral. There may also be a purchase of government securities or a reverse repurchase transaction.

By setting the key rate, the NBU gives a signal to the market about the level of rates that it considers optimal for achieving the goals of its strategic monetary policy.

In order to bring the levels of market rates closer to a value acceptable for the central bank, that is, to the key rate, the NBU carries out its operations at the key rate. In particular, in conditions of liquidity surplus, the main banking operation of the NBU is the sale of two-week certificates at a rate absolutely close to the key discount rate.

To reduce market volatility, the NBU also applies already proven mechanisms, including the sale of certificates of deposit for 1 percentage point below the key rate and providing overnight loans by 1 percentage point higher than the key rate.

The authors believe that the influence of the NBU on short-term interbank rates is effective as long as the bank does not impose additional restrictions when attracting or providing short-term loans. It is obvious that commercial banks carry out their transactions both with the central bank and with each other. For this reason, short-term interbank rates typically fluctuate between central bank rates on certificates of deposit on the one hand and overnight lending rates on the other.

The NBU has been determining the value of the key rate since its adoption as a normative rate in 1992. But until 2015, the key rate had little effect on bank rates. Because this rate did not determine the bank's policy. If only because the instrument: the interest rate on the main operations of the NBU was not tied to the key rate. Currently, that is, after 2025, the current system allows the NBU to effectively manage short-term interbank rates and maintain them close to the base value of the key rate.

Separately, it should be noted that a more important tool for influencing economic processes is medium- and long-term interest rates. At these rates, the banking system attracts funds temporarily available in commercial banks and directs them to where they are needed. Thus, medium- and long-term rates on bank deposits and loans depend both on short-term interbank rates and on the state of the national economy and financial system, as well as on the level of competition within the national banking system, confidence in banks, inflation expectations of the population, and the volume of demand for loans, etc.

In 2016–2017, the relationship between short-term interbank rates and rates on bank loans and deposits strengthened significantly. This happened as a result of the fact that the NBU significantly changed the design of the short-term tariff management system. As a result, the volatility of short-term rates has decreased significantly, and commercial banks have received a reliable indicator of the cost of money on the market, which allows them to make transactions with the NBU to manage liquidity.

The authors argue that changes in bank interest rates largely determine the decisions made by households and businesses, especially regarding the choice between consumption/investment and saving. It is clear that when deposit interest rates rise, households tend to save more and consume less. In contrast, when lending rates rise, businesses invest less because their expectations of higher loan payments and lower demand for the products they produce rise. It is clear that rising rates lead to lower consumer and investment spending and increased savings. On the other hand, a decrease in aggregate demand for goods and services restrains price growth, and an increase in aggregate demand leads to an increase in the inflation rate.

The situation in the Ukrainian banking system in 2012–2014 is a clear example of the impact of high rates on expectations of low inflation and a stable exchange rate. Despite the recession that began in 2013, the growth of household hryvnia deposits has noticeably accelerated. Against the backdrop of the fact that real interest rates rose significantly and, as a result, inflation dropped to zero in those years.

Short-term interest rates also have a significant impact on long-term rates, especially the yield on government securities. These domestic government bonds are the safest debt instruments on the market because their price includes the lowest risk premium and the yield provides investors with a benchmark for the risk of investing in other securities.

The maturity of domestic government bonds varies from several months to several years, and their yield, depending on the maturity period, forms the so-called yield curve, which characterizes the relationship between profitability and investment period.

In addition to interest rates, the key rate regulates the state of the economy through the exchange rate, which is extremely important for open economies with significant foreign trade flows and the presence of foreign capital.

In developed economies with free movement of capital, the exchange rate procedure allows you to borrow funds in a country with lower interest rates and buy bonds or, for example, deposits in another. In this case, an increase in the rate should stimulate the influx of foreign currency, which, in turn, increases the demand for the national currency and strengthens it.

It should be noted that, implementing its own NBU policy, Ukraine issues government bonds of varying yields both in hryvnia and in foreign currency. Obviously, if an increase in the key rate causes an increase in the yield of hryvnia government bonds, rather than foreign currency bonds, investors can sell foreign currency bonds and buy hryvnia bonds. In exactly the same way, individuals can choose between deposits in national and foreign currencies.

From this, the authors conclude that changes in the exchange rate affect the balance of supply and demand for foreign currency.

Obviously, the consumer price index (CPI) reflects the prices of both imported and domestic goods. As a result, importers competing with each other are forced to adjust prices for their products depending on the hryvnia exchange rate. When the hryvnia strengthens against the dollar, you can buy more goods with dollars while spending the same amount in hryvnia. As a result, the volume of imports in dollar terms is growing.

At the same time, Ukrainian goods are becoming more expensive in dollar terms, which makes Ukrainian goods less competitive in world markets. As a result, inflationary pressure on the economy decreases, but the trade balance worsens.

Taking into account that Ukraine also imports raw materials, the exchange rate also affects the final prices of consumer goods.

Research on the impact of the exchange rate on the price level shows that the inflation response varies depending on the intensity of the exchange rate change. The analysis shows that a 1% change in the exchange rate contributes to a 0.71% change in the inflation rate. A significant change of more than 15% has a significantly smaller impact on inflation. In addition, keep in mind that an increase in the exchange rate has a much smaller impact on prices than a decrease in the exchange rate.

Naturally, this change does not occur instantly, but over a certain time lag. For example, in Ukraine it takes 9–12 months for a change in the NBU key rate to have any significant impact on the inflation rate. Therefore, the NBU changes the key rate based on available inflation data. This happens, for example, against the background of rising current inflation or when inflation declines sharply.

The NBU, through inflation targeting, should influence inflation expectations, strengthening the confidence of enterprises and households in its ability to bring inflation to the target level in the medium term.

Only under these conditions does rising inflation not impede sustainable economic growth.

The mechanism for determining the impact of inflation expectations on long-term trends in the consumer price index is as follows:

- enterprises – make decisions on the volume of investments, lending, prices for their products and production resources;
- households – make decisions about the proportions to which their income is distributed for consumption and savings, as well as about the optimal form of savings.

It seems, it is making sense to discuss the monetary policy of NBU and its impact on the business environment in Ukraine, comparing it to the monetary policies of other countries, for instance, like Turkey and China. The NBU's decision to raise interest rates significantly can have various effects on the economy. While high interest rates can help combat inflation, they can also make borrowing more expensive for businesses, potentially slowing down economic growth. It's important for central banks to strike a balance between controlling inflation and supporting economic growth.

The policies and economic conditions of different countries, such as Turkey and China, can vary widely, and what works in one country may not be directly applicable to another. Each country's central bank must consider its unique economic challenges and goals when setting monetary policy.

While developing this model, Mandell [3] didn't overlook the role of inflation in international economics. Contrary to the prevalent theories of Irving Fisher and Abby Lerner, the scholar argued that an increase in the expected level of inflation could be a reason for economic growth. Inflation expectations under a fixed exchange rate encourage the influx of investors who hope to profit from the increasing profitability of alternative assets.

Currency devaluation compels the investment of money into businesses. The inflow of foreign capital and the activity of domestic investors, in turn, can stimulate further production, thereby fostering economic growth.

This economic paradox was named the Mandell-Tobin effect because James Tobin, alongside Robert Mandell, managed to identify the excess of positive consequences of increased economic activity over the negatives caused by high inflation rates [3; 23].

The impact of this effect could also be traced in Ukraine, where high inflation rates and high credit rates encouraged the arrival of foreign banks, paying their European depositors 3–5%, while lending to Ukrainians at more than 20%.

Of course, risks were also taken into account; however, a high margin has the ability to reduce sensitivity to potential economic threats. Throughout the years 2005–2008, the credit boom contributed to active economic growth in Ukraine until the crisis hit.

In the short term, the Mandell-Tobin effect plays a significant role, but in the long term, it is rather controversial. Interestingly, Mandell himself later became an opponent of excessive inflation, noting that the inflation rates during peacetime in the United States were higher than those during similar periods in the First and Second World Wars.

In 1963, Mandell published the article “Capital Mobility and Stabilization Policy under Fixed and Floating Exchange Rates” [3], in which the mechanism of regulating small national economies with high capital mobility was revealed.

The essence of the mechanism is that under a floating exchange rate, monetary and credit policies are effective, while under a relatively fixed exchange rate, stable fiscal and budgetary policies are more effective. For example, reducing interest rates in an economy with a relatively flexible exchange rate usually leads to significant currency devaluation.

As a result of currency devaluation, a country's exports become cheaper on the open international market, increasing the significance of net exports and significantly stimulating economic growth. As a result, interest rates then rise back to equilibrium levels, and the economy recovers.

Mandell concludes that under a floating exchange rate, monetary policy, which involves regulating interest rates, can become a powerful tool for influencing the volume of exports. In this case, fiscal policy is ineffective.

For instance, an increase in government spending leads to an increase in demand for money and, consequently, higher interest rates. As a result, capital inflow from abroad strengthens the currency's exchange rate to a level where the decrease in exports negates the effects of government spending.

Under a fixed exchange rate, on the other hand, fiscal policy becomes more effective because it does not alter the volume of net exports. A similar situation can be observed in China today, where the yuan's exchange rate is so regulated that it can be considered fixed.

This allows the government to maintain economic growth through massive state investments, which would have little effect under a floating exchange rate because a stronger yuan would lead to more expensive Chinese goods and a loss of market share.

Mandell and his IMF colleague Marcus Fleming formalized these logical arguments into a mathematical model named after them. It makes several assumptions, as its conclusions are valid for small open economies with free cross-border capital flows that cannot influence the global financial market.

The key thesis of the Mandell-Fleming model is that under a fixed exchange rate, a country cannot conduct an independent monetary policy. If such monetary policy adjustments do occur, the exchange rate cannot remain fixed in the long term.

From the model, the existence of the “impossible trinity” of macroeconomic regulation is deduced, which is also called the incompatible trio or the Mandell trilemma: free cross-border capital flows, a fixed exchange rate, and independent monetary policy. In the long term, it is impossible to achieve all three goals simultaneously.

In a country with an open capital account of the balance of payments, national policy can only focus on either the external goal – controlling the exchange rate – or the internal goal – regulating price levels, but not both simultaneously.

Expressing adherence to the core principles of the Mandel-Fleming model, the authors believe that an increase in risks and devaluation expectations leads to capital outflow and depreciation of the national currency. To offset these consequences, the National Bank of Ukraine (NBU) is forced to raise the base interest rate. Following this, the yield of all other financial instruments in the capital market increases.

However, at present, an increase in the NBU's policy rate cannot lead to the devaluation of the hryvnia since the exchange rate is fixed. Thus, tension in the financial markets is rising and exceeding all acceptable norms. Moreover, capital outflow is not possible, as all avenues for outflow are blocked.

From all the above, an exceptionally important theoretical conclusion emerges, according to which it is absolutely necessary to return to a market exchange rate when the interest rate is increased. However, it should be noted that with a trade balance deficit of at least 50 billion hryvnias, transitioning to a market, essentially floating exchange rate is akin to suicide.

Thus, the authors draw another important conclusion: if there is no opportunity for currency arbitrage, the movement of the policy rate is absurd, as it does not affect either the exchange rate or capital movement. The circle is closed.

From all that has been said, it can be concluded that the monetary model of the National Bank of Ukraine (NBU) currently resembles the fixed exchange rate policy of the State Bank of the USSR (with a gap between official and cash exchange rates and partial capital movement restrictions). However, can anyone imagine the existence of a policy rate at 25% in the USSR? Absolutely unbelievable.

Continuing the discussion, the authors observe that the absurdity of the situation is well understood by commercial banks. Despite the level of risks and the population's devaluation expectations, banks are not in a hurry to raise deposit rates.

Banks understand that 60% of the population's demand deposits are held in banks with zero interest simply because people consider banks as a means to store money for a rainy day, to avoid carrying cash around the country.

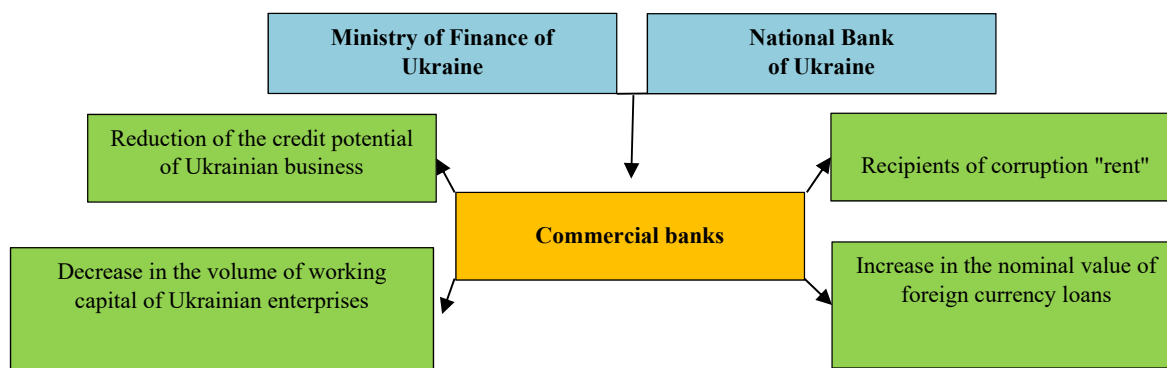
In addition, the salaries of military personnel, on which banks currently earn 25% for themselves, by placing the remaining funds in NBU deposit certificates. And the increase in the policy rate from 10% to 25% has had absolutely no impact on deposit rate increases or changes in the deposit structure towards term deposits and a reduction in demand deposits.

Therefore, a corrupt scheme has been created in the country, in the process of which commercial banks enrich themselves by 120–140 billion hryvnias annually (see Scheme 1).

As a result of the operation of this criminal corruption scheme, there has been an avalanche-like increase in the profits of banks in January-February 2023, against the backdrop of general chaos and a catastrophic decrease in the standard of living of Ukrainians.

It is quite clear that in this scheme, the Ministry of Finance of Ukraine, among others, grants the NBU the right to finance the budget deficit and distribute profits from currency issuance, partially including seigniorage (NBU's income as the difference between the cost of producing money and their nominal value). To what extent this complies with the Constitution of Ukraine is for the reader to decide. The authors reasonably believe that it does not.

Recognizing this, the authors have repeatedly recommended in their reports to the NBU and the Government of Ukraine to significantly reduce the policy rate, which, as noted above, is currently at 25%.



**Fig. 1. Formation and distribution of corruption rents obtained from ineffective regulation of banking activities in Ukraine**

Source: Designed by authors.

In doing so, as pragmatic individuals in economics and finance, they understand that by reducing, for example, the policy rate to the level of early 2022 (10%), the NBU would cut its income by 2.5 times, including income from government bonds, the interest rate on which is tied, as we know, to the NBU's policy rate. Whether the NBU would agree to this is a rhetorical question.

However, the corruption chain at the NBU does not end there. By reducing the rate (let's say, to 10%), the NBU thereby reduces the income of commercial banks on their deposit certificates by exactly 2.5 times. (See Figure 1).

And the leadership and management of commercial banks are accustomed to living well, living lavishly. Just look at the data in Table 2, which indicate that the net income of commercial banks has grown rapidly this year, increasing by nearly 54 billion hryvnias in the first five months of the year. If the policy rate were lowered to 10%, the authors do not rule out that commercial banks would find that the income from NBU deposit certificates no longer covers their cost base.

As a result of such a reduction, it would be necessary to forego corrupt rent income and seek opportunities for financing in the real sector in order to earn the same 15% that banks lost due to the reduction in the policy rate. In other words, excuse me, banks would have to start focusing on their core responsibilities.

Weak lending is one of the factors contributing to the slow pace of economic development in Ukraine in recent years. This factor, among others, has had an impact on the country's economic growth the Ukrainian economy lapsed into a recession since the beginning of 2014 after the annexation of Crimea by Russia in March 2014 and the consequent war in Donbas that started in the spring of 2014. As a result, Ukraine saw zero GDP growth observed in 2013, shrank by 6.8% in 2014, and this continued with a 12% decline in GDP in 2015.

In the beginning of 2017, the World Bank stated that Ukraine's economic growth rate in the previous year was 2.3%. So, the recession came to its end. *According to the analysis results, despite*

Table 3

#### Revenues and expenditures of Ukrainian banks (UAH million)

Showcases	January 2023	January – February 2023	January – March 2023	January – April 2023	January – May 2023
INCOME	38 650	65 825	103 984	136 390	171 743
Interest income	23 765	44 436	68 138	91 349	116 144
Commission income	8 307	15 582	23 511	30 960	39 211
The result of the re-evaluation and operation of the purchase and sale	5 932	4 649	10 136	11 190	11 754
Other operating incomes	506	883	1 536	1 940	3 039
Income	76	141	422	501	993
Return of write-offs of assets	64	133	242	451	602
Costs	23 956	44 347	69 928	92 393	118 154
Interest rates	7 245	14 000	21 932	29 942	38 591
Commission costs	3 895	7 487	10 511	14 004	18 398
Other Operating Costs	1 075	2 445	4 278	5 890	7 558
General administrative expenses	6 417	13 202	20 925	28 295	35 500
Others costs	561	1 182	1 755	2 386	3 071
Deduction to reserves	2 488	2 517	3 805	3 359	4 680
Tax on the butt	2 275	3 514	6 723	8 517	10 355
Net profit (loss)	14 694	21 478	34 056	43 997	<b>53 589</b>

Source: National Bank of Ukraine [29], calculations of the authors.

*this improvement, Ukraine remained the poorest country in Europe, which some have attributed to extremely high corruption levels, slow pace of economic liberalization and institutional reform, particularly, in the state finance and banking area.*

In April 2020, the World Bank reported that growth in the national economy was solid at 3.2 percent in the previous year, led by a good agricultural harvest and national economy sectors that depended on domestic consumption. Household consumption level grew by 11.9 percent in 2019, supported by sizable remittance inflows and a resumption of consumer lending. The domestic trade and agriculture levels grew by 3.4 and 1.3 percent, respectively. However, in 2020 GDP fell once again by 4.4 percent as a result of the COVID-19 pandemic.

So, when assessing the Ukrainian economy performance, the data on which is available, then it might be suggested that most indicators, first of all GDP dynamics demonstrated a downsized trend.

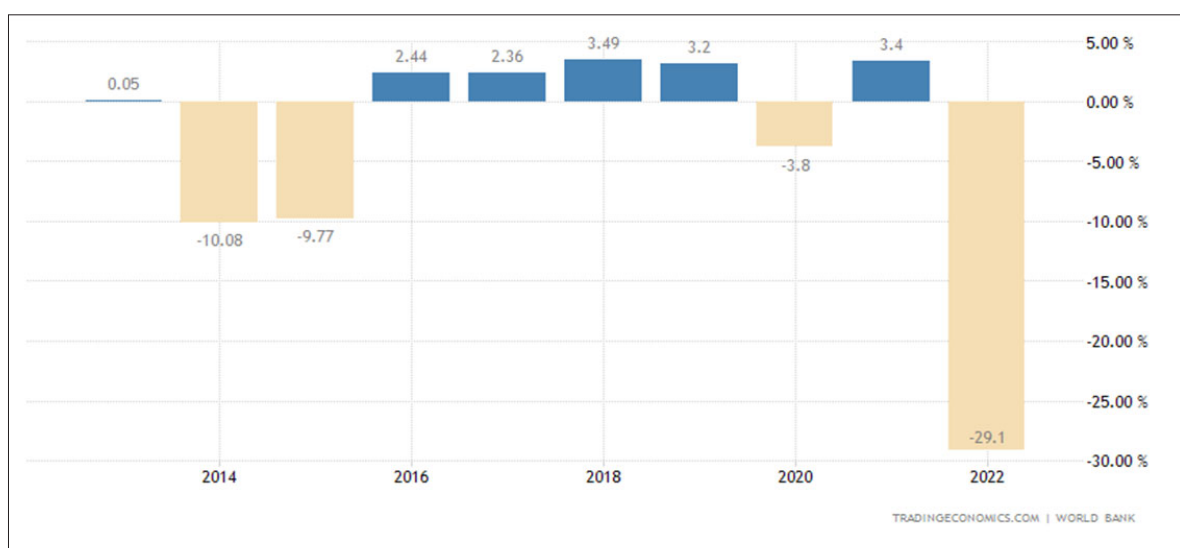
Russia's imperialist aggressive war against Ukraine has led to the significant decrease not only in GDP growth rate but to its absolute value. According to data from the State Statistics Service of Ukraine, in 2022 GDP decreased by 30.4% compared to growth of 3.4% in 2021 (see Figure 2). It should be noted that this is the most significant contraction of the national economy since independence in 1991. It is obvious that this decline is the result of the large-scale Russian invasion in February 2022.

This drop in GDP is associated with a reduction in domestic demand, a decrease in capital and labor, a disruption of internal economic relations, as well as the destruction of foreign trade logistics.

As a result of the war, more than 20 percent of Ukraine's population has an income at the poverty level. Unemployment rose to 24.5 percent. Real wages fell by 27 percent in 2022 and 2.5 percent in 2023, according to the International Monetary Fund (IMF). It is obvious that this level of unemployment and the decline in real incomes of the population affect the level of consumer demand and slow down the recovery process. economy.

Inflation rates have accelerated from 10 percent in 2021 to more than 20 percent in 2022. The main drivers of inflation growth were the restriction of domestic and, to an even greater extent, external supplies due to military operations, the destruction of the logistics of supplies of raw materials and energy and the transition to much more expensive types of them, the devaluation of the hryvnia and the increase in the cost of imported goods.

In 2022, the volume of exports of goods and services in Ukraine decreased by 40 percent. Obviously, this contributed to the deterioration of the balance of payments. However, the receipt of international



**Fig. 2. Real GDP percentage changes in 2014–2022**

Source: State Statistics Service of Ukraine [28] and World Bank [33].

assistance, as well as remittances from migrants and the freezing of debt servicing, to a certain extent contributed to the stabilization of the current account. On the other hand, the outflow of foreign capital led to a significant financial account deficit. At the end of 2022, the total balance of payments is negative and reached \$5 billion.

The destruction of social, transport and industrial infrastructure caused by the war also puts significant upward pressure on inflation. However, consumer inflation in 2022 performed better than expected. The reasons for this were weakened consumer demand, freezing of tariffs for housing and communal services and a relatively stable foreign exchange market.

As a result, according to NBU data, price growth in Ukraine in 2022 amounted to 16.6%. At the same time, an important factor in maintaining the stability of the national economy was the introduction of a fixed exchange rate for the national currency. This measure helped control exchange rate expectations and ease pressure on the market.

At the beginning of the war, the National Bank of Ukraine temporarily abandoned its flexible exchange rate policy and fixed the exchange rate at 9.25. From July 21, 2022, the dollar exchange rate was fixed at 36.57 UAH/USD.

In January-March 2023, compared with the previous quarter, the country's economy grew by 2.4%. Thus, according to data from the State Statistics Service of Ukraine, Ukraine's real GDP decreased by 10.5% in comparison to the same period last year.

The inflation rate level in Ukraine increased to 0.5% in May 2023 compared to 0.2% in April of the same year. Core inflation slowed to 0.3% in May from 0.5% in April and 1.3% in March. For five months of 2023, inflation in the country amounted to 3.8% with a base rate of 3.3%.

*According to the authors point of view, the real sector of the Ukrainian economy significant decrease is a result in a certain degree of the lack of AVAILABLE credit resources.*

Certainly, it is quite evident that the process of cleaning up the banking system in 2014–2015 led not only to the destruction of hundreds of banks, mostly with Ukrainian capital. As a result of these two processes (the elimination of the private core of the banking system and the consolidation of the state segment), Ukraine now has a quasi-state banking system: 55% of its assets are concentrated in the four major state-owned banks, 30% in foreign-owned banks, and only 20% in banks with Ukrainian capital.

It's widely known that the volume of new lending in Ukraine has hardly increased (even before the war), and banks are extremely reluctant to provide funding for new business projects, as they profit, as demonstrated earlier, from fees and operations with government securities (government bonds and NBU deposit certificates).

In essence, alongside the absence of monetary credit transmission (where an increase in the money supply is accompanied by a proportional increase in lending), there is an intensification of commission charges on bank clients (such as merchant fees for transactions in retail networks).

The authors believe that when banks choose low-risk strategies over lending, they end up with both risks and a dysfunctional credit system. In other words, there is a closed loop of creating risks through their minimization.

This might sound contradictory at first, so let's clarify: by reducing risks and denying credit to new projects, banks artificially slow down economic development and make it more vulnerable to external shocks, as only the simplest cycles related to exporting raw materials with a payback period of up to six months are promoted. This, in turn, leads to the formation of hidden long-term risks that become active during prolonged global crises.

The authors, to some extent adhering to the Austrian School of Economics and followers of Kondratieff's long-wave cycle ideology, explain the nature of economic cycles based on bank credit activity.

In the understanding of its proponents, crises result from the inefficiency of central bank policy. However, the founders of the Austrian School primarily studied the practice of lowering interest rates and the resulting overheating of the economy. In our case, it's precisely the opposite: a prolonged



period of high interest rates resulting in insufficient, if not critically minimal, utilization of the potential capacities of the real sector of the economy.

But the ideological and institutional basis for all of these extremely dangerous imbalances is the same – the inefficient (if not corrupt) policy of the National Bank of Ukraine.

Prior to the war, the NBU annually transferred approximately 40 billion hryvnias of its profit to the budget, without accounting for seigniorage at all (it was indirectly collected by banks in the form of their income from deposit certificates and, accordingly, NBU's expenses for their servicing). In reality, these funds dissolved within the budget, being beyond control, which encourages and creates a basis for corrupt actions.

However, if the NBU had established an effective lending model and its own transmission mechanism, its profit would have grown several times over, as would the dividends distributed to the citizens of the country.

**Conclusions.** Assessing the need for credit resources, the authors believe that the total requirements for small and medium-sized enterprises (SMEs) alone amount to \$73 billion, with the average amount required for one firm (ticket size) ranging from \$30,000 to \$300,000 in additional financing. Therefore, the government needs to expand the existing “Affordable Loans 5–7–9%” program. However, the state alone cannot provide the required funding. This is why it is urgently necessary to reduce the National Bank of Ukraine's policy rate and, as a result, increase the accessibility of cheap credit resources.

Another equally important goal should be to attract private investments, as the government and international donors cannot cover all the expenses. In addition, the level of investment should be to increase to 30-35% of GDP over the next 8-10 years, with at least half of these investments coming from non-government sources. An effective way to stimulate investments could be EU support in the form of joint investment funds and guarantees.

In the conditions of war, a significant reason for the lack of funding for enterprises is that they cannot obtain insurance against military risks. Although, as explained earlier, the direct risk to enterprises outside the combat zone is relatively low, military risks cannot be insured. The problem for insurance companies is that since July 2022, international reinsurers do not provide opportunities to insure military risks for insurers operating in Ukraine. The absence of insurance not only hinders the development of Ukrainian businesses and investments but also represents one of the major obstacles to attracting foreign direct investment into the country.

Therefore, the initiation of insurance programs covering such risks is of great importance. However, there are currently no proposals on how to change the situation during active hostilities. An expert group, the Ukraine War Insurance Group, has prepared recommendations for upcoming insurance of military risks, which can be financed by the Consortium Donor Fund under the control of the GoU and under the supervision of the National Bank of Ukraine (NBU) as the main regulator of the insurance market. According to the group's recommendations, the Fund should subsidize insurance of military risks in Ukraine after the active phase of the war ends, gradually reducing the subsidy and completing it within 10 years.

All of the above allowed the authors to draw several conceptual conclusions, the essence of which they outlined in the “Analytical Note to the Government and the National Bank of Ukraine”.

Briefly, these conclusions and recommendations boil down to the following.

1. The monetary policy of the NBU significantly affects the interest rate and, as a result, the volume of available loans in the financial system of Ukraine. The ability to gain access to relatively cheap loans, in turn, shapes the volume of aggregate demand of the population and the business.

2. It is quite obvious that the NBU's tighter monetary policy leads to an increase in the interest rate (which, as noted above, reached a record 25%) and a decrease in the volume of lending. which, in turn, led to the aggregate demand reduction. The volume of investment, first of all, in real business has decreased significantly, again, to a record low level.

3. Activities in the financial sector remain relatively attractive, because with such a high current key rate, it is advisable to invest only in financial investments, but not in real business.

4. High interest rates in Ukraine over the past three years have significantly hampered the development of consumer lending, as a result of which, in particular, real estate prices have fallen significantly (up to 40 percent) in both the primary and secondary markets.

5. Taking this into account, the National Bank of Ukraine is recommended to develop and begin to implement a soft or expansionary monetary policy, which will result in a much lower key rate. The implementation of such a policy in 9–12 months, as noted in the article, will lead to an increase in the volume of credit funds, which, in turn, will lead to an increase in investment in the real sector of the economy and consumer loans for expensive goods.

5. Thus, the Ukrainian economy, which is currently experiencing a recession and a drop in GDP, due, among other well-known reasons, to stimulating monetary policy will begin to return to the exponential growth rate that follows the upward Keynesian aggregate supply curve.

6. At the same time, the authors warn that if loose monetary policy aimed at ending a recession crosses a certain line, that is, goes too far, it could stimulate aggregate demand so much that it causes inflation. Which the NBU is quite successfully fighting by targeting its level.

7. Simultaneously, there are concerns that further tightening of monetary policy aimed at reducing inflation will lead to a subsequent decline in aggregate demand and a worsening recession.

8. The main approach to changing monetary policy is, as noted in the article, to change the size of the money supply. The NBU does this through open market operations, during which short-term government debt is exchanged with commercial banks. For example, the NBU buys or borrows treasury bills from commercial banks, adding the proceeds to cash in accounts called reserves. This operation expands the money supply. If the situation changes, the NBU, on the contrary, sells government securities to banks, which leads to a reduction in the money supply.

9. At the same time, the authors draw attention to one more extremely important circumstance. Which comes down to the fact that monetary policy has an additional impact on inflation also through expectations, that is, the so-called self-fulfilling component of inflation. It is quite natural that if the NBU increases the interest rate, the market understands that the bank and the Government are keeping inflation under control and, in the short term, projects a more modest increase in wages and wholesale prices, which, in turn, maintains actual inflation at a relatively low level.

10. The authors note that monetary policy should become a countercyclical tool that should lead to the desired expansion of production and employment with low inflation. In other words, the NBU must balance macroeconomic goals in both price and output.

That is, while targeting inflation, the NBU must also pursue another, no less important goal of stabilizing production and maintaining the economy at a higher level of employment.

11. In this regard, the authors emphasize that monetary policy is not the only tool for managing aggregate demand and, as a result, output. Fiscal government policy is another factor in stabilizing the economy. At the same time, the authors note, monetary policy is usually considered as the most effective and, most importantly, more efficient stabilization component. An exception may be countries with a fixed exchange rate, where monetary policy is entirely tied to the exchange rate target. But Ukraine, as we know, has long moved away from this course.

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