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**Abstract.** The global crisis of 2020, caused by the spread of the COVID-19 coronavirus disease, has led to decline of the Ukrainian economy and contraction in the welfare of society. To overcome the effects of the crisis, the monetary and fiscal authorities have provided strong incentives, primarily to support the most vulnerable social groups and businesses most affected by quarantine restrictions, as well as to facilitate the financial stability of the banking sector. In conditions of limited government resources, to minimizing the negative effects of the crisis requires the highest efficiency of monetary and fiscal policies, which can only be achieved through proper coordination between monetary and fiscal authorities.

The present article examines the peculiarities of the conduct and direction of monetary and fiscal policies before crisis processes arose in Ukraine and identifies the factors that constrain the effectiveness of both policies: shadow economy; permanent budget deficit; excessive public debt service costs; the dominance of non-monetary inflation factors in taking monetary policy decisions. Anti-crisis measures of monetary and fiscal authorities are described and analysed. It was determined that the stock exchange channel of money issuance stood inactive during the crisis, which led to a significant imbalance in the interest rate environment in Ukraine and to the increase in the cost of government borrowing in the domestic market, what was caused by poor coordination between monetary and fiscal policies. It has been established that the dominance of the state in the banking system of Ukraine has a negative impact on bank lending during the crisis, and the government's program to stimulate lending restrains the reduction of interest rates on new loans through market mechanisms.

To ensure post-crisis sustainable economic development, the following measures are advised: ensure a gradual reduction in public debt service costs; make the transition to a countercyclical fiscal policy, which will allow for an expansionary monetary policy; implement measures aimed at reducing the concentration of the state in the banking sector and endorse lending to the real sector of the economy rather than government, through state-owned banks; stimulating lending through monetary rather than fiscal mechanisms.

**Keywords:** monetary policy, fiscal policy, monetary-fiscal policy coordination, economic development, central bank, corona crisis, Ukraine.

**JEL Classification** E52, E62, E63, H12

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## КООРДИНАЦІЯ МОНЕТАРНОЇ ТА ФІСКАЛЬНОЇ ПОЛІТИК В УМОВАХ КРИЗИ

**Анотація.** Викликана поширенням світом коронавірусу COVID-19 світова криза 2020 року призвела до скорочення української економіки, спричинивши зниження добробуту суспільства. Для подолання наслідків кризи органи монетарної та фінансової влади вдалися до потужних стимулів, які передусім були направлені на підтримку вразливих верств населення і підприємств, що найбільше постраждали від запроваджених карантинних обмежень, а також на забезпечення фінансової стабільності банківської системи. Обмеженість можливостей уряду в мінімізації негативних наслідків кризи потребували досягнення найвищої ефективності від монетарної та фінансової політик, водночас найвища ефективність грошово-кредитної та бюджетно-податкової політик може бути досягнута лише за умови належної координації між органами монетарної та фінансової влади.

Досліджено особливості проведення і напрям здійснення монетарної та фінансової політик до розгортання кризових процесів в Україні та визначено фактори, що стримують ефективність політик: тінізація економіки; перманентний бюджетний дефіцит; надмірні витрати на обслуговування державного боргу; домінування немонетарних чинників інфляції при ухваленні рішень щодо монетарної політики. Описано антикризові заходи монетарної та фінансової влади та здійснено їхній аналіз. Визначено, що неактивність фондового каналу емісії призвела до значного розбалансування середовища процентних ставок в Україні та до зростання вартості державного запозичення на внутрішньому ринку, що стало результатом неналежної координації монетарної та фінансової політик. Установлено, що домінування держави в банківській системі України негативно впливає на банківське кредитування в період кризи, а програма уряду із стимулювання кредитування стримує зниження процентних ставок за кредитами через ринкові механізми.

Для забезпечення стійкого післякризового економічного відновлення і розвитку запропоновано забезпечити поступове зниження витрат на обслуговування державного боргу; здійснити перехід на контрциклічну фінансову політику, що дозволить здійснювати експансивну монетарну політику; реалізувати заходи, направлені на зниження концентрації держави в банківському секторі та проводити кредитування реального сектору економіки, а не уряду через державні банки; здійснювати стимулювання кредитування через монетарні, а не фінансові механізми.

**Ключові слова:** монетарна політика, фінансова політика, координація монетарно-фінансової політики, економічний розвиток, центральний банк, коронакриза, Україна.

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**Introduction.** In 2020, the world entered a global crisis caused by the spread of SARS-CoV-2 coronavirus, which led to a pandemic of a cute respiratory disease COVID-19. The peculiarity of this global crisis, which got its name from the catalyst virus–coronacrisis, was not of a financial or economic nature. Governments in most parts of the world have been forced to take unprecedented anti-pandemic measures to curb the spread of the virus to minimize the negative effects on public health by introducing lockdowns, closing borders and restricting movement within countries, and imposing hard restrictions in most industries and economic sectors. The practice of remote work has become widespread and has begun to be used in cases where its implementation is possible. Such complex measures have led to a significant decline in economic activity and rising unemployment. The duration of the crisis itself and the negative economic impact will depend mainly on the vaccination of the population with further entrance to the phase of economic recovery.

To support economies, the authorities responsible for monetary and fiscal policies in both developed and developing countries have resorted to unprecedented stimulus. In addition, given the vulnerability of developing countries, the International Monetary Fund (here in after — the IMF) has provided support to a total of 86 countries [1]. Monetary and fiscal stimulus was primarily aimed at mitigating the negative economic effects of the restrictions and supporting households and businesses, and was accompanied by increased government borrowing to cover budget deficits and the wide spread use of non-traditional monetary policy instruments.

The developing countries to which Ukraine belongs had a limited capacity of measures to support their economies. Therefore, in order to achieve the highest positive effect from fiscal and monetary stimulus, effective coordination between monetary and fiscal policies has become critical.

**Literature review and the problem statement.** The coordination between fiscal and monetary policies is being actively studied in the scientific community. Most researchers believe that coherence between monetary and fiscal policies is an on-alternative phenomenon in the long run and will have a positive effect on economic prosperity, while policy inconsistencies create additional risks to economic development and have a negative effect on economic growth. Moreover, researchers draw attention to possible inflationary risks in the case of long-term dominance of fiscal policy over monetary policy.

V. A. Muscatelli, P. Tirelli, and C. Trecroci [2] demonstrated that the strategy of interaction between monetary and fiscal policies should primarily depend on the types of shocks that affect the economy and argue that counter cyclical fiscal policies, which are widely used in practice, can be welfare-reducing if fiscal and monetary policy rules are inertial and not coordinated.

Assessing the supporting role of fiscal policy to monetary policy in shock stabilization, T. Kirsanova, S. J. Stehmann and D. Vines [3] came to the conclusion that in conditions when both policy-makers are benevolent, the best outcome possible to achieve when monetary policy does nearly all of the stabilization. Nevertheless, if fiscal authority discounts the future, or aims for an excessive level of output, this will lead to welfare losses: after an inflation shock there will be excessively tight monetary policy, excessive fiscal expansion, and a rapid accumulation of public debt.

M. Bassetto, and T. J. Sargent [4] examined the challenges faced by officials of the United States in trying to separate fiscal and monetary policies and concluded that despite such attempts, monetary and fiscal policies eventually became coordinated, so it is proposed that it is better for both policies to be coordinated or consolidated rather than separated.

M. Franta, J. Libich, and P. Stehlík [5] studied the interaction between monetary and fiscal policies in six developed countries, and point out that the possibility of inflationary shock should not be underestimated in the case of long-term dominance of fiscal policy over monetary policy.

The coordination of monetary and fiscal policies in a small open economy was investigated by R. D. Worrell [6], who came to the conclusion that the interaction between monetary and fiscal policies can be realized provided that the central bank be able to make decisions on monetary policy independently from government bodies responsible for fiscal policy. This will, for instance, ensure controlled inflation.

M. Pasichny [7] also points out that the harmonization of fiscal and monetary policies is appropriate to support sustainable endogenous economic growth. At the same time, when coordinating fiscal and monetary policies, it is necessary to assess the potential impact of fiscal instruments on the dynamics of the consumer price index, and at the same time monetary instruments on budget revenues and interest rates on government bonds for budget deficit funding and service public debt.

In the study of the coordination of monetary and fiscal policy in Ukraine, S. Mishchenko, S. Naumenkova, V. Mishchenko, V. Ivanov, and G. Lysenko [8] pointed to the fact that fiscal policy has taken dominance over monetary policy in recent years, as well as the lack of their proper coordination in 2009—2017.

In the study of the relationship between monetary and fiscal policies in Ukraine, I. Lukyanenko and P. Dadashova [9] stated that in a crisis, only if monetary and fiscal policies are coordinated, it is possible to stop the economic decline and create conditions for economic growth. Moreover, assessed that, based on historical experience, the optimum combination for Ukraine envisages contractionary fiscal policy and expansionary monetary policy.

Anti-crisis measures of monetary and fiscal policy in the context of the COVID-19 pandemic in some countries, including Ukraine, were considered by A. Krasota and A. Yarovoy, to draw attention to the fact that the National Bank of Ukraine (here in after — NBU), in contrast to other central banks, did not resort to unconventional monetary policy measures [10].

An analysis of monetary policy during the COVID-19 pandemic was accomplished by S. Arzhevitin [11], which indicates that monetary policy during the crisis period, despite low inflation, remained contractionary, in as much the key policy rate was significantly higher than the current inflation level. In addition, S. Arzhevitin stated that in order to enlarge the effectiveness of monetary policy instruments, it is necessary to ensure the proper coordination of fiscal and monetary policies.

S. Kolodii, M. Rudenko, L. Gariaga, I. Kochuma and S. Kolodii investigated how the increase of social standards and in particular the increase of the minimum wage, during the corona crisis will affect the monetary policy. They came to the conclusion that such a decision could lead to a rise of inflation above expectations in the future. In the paper, the authors stated that such decisions should be consistent with strategic objectives of both policies [12].

**The aim of the present article** is to determine the effectiveness of monetary and fiscal policies and their coordination during the COVID-19 pandemic in Ukraine, and to provide practical recommendations regarding improvement of both policies and their coordination to ensure economic recovery and development.

**Research results.** For a greater level of understanding the specifics of the monetary and fiscal policies during the corona crisis in Ukraine, it is firstly necessary to assess their vector and goals in the pre-crisis period.

For a long time, monetary policy in Ukraine was characterized as tough: high key policy rate and real interest rates; constant absorption of liquidity from the banking system through NBU certificates of deposit; limited growth in the money supply; strict requirements for banks on mandatory reserves. On the one hand, this was due to the need for inflation reduction, which was significantly higher than the main principles of monetary policy would suggest [13]. On the other hand, this contributed to the strengthening of the role of the key policy rate in the transmission mechanism of monetary policy by linking it to permanent access instruments. Before the transition to inflation targeting, the key policy rate had almost no real power in the conduction of monetary policy in Ukraine.

In 2019, inflation started to slow down, which was caused primarily by the appreciation of the local currency against the background of foreign speculative capital entering Ukraine and the decline in world energy prices. Following the postulate of inflation targeting and in response to increasing deflationary pressure, in mid-2019 the NBU began a gradual reduction of the key policy rate. At the end of 2019, inflation entered the target range set by the central bank, and in early 2020 the consumer price index was below the target, to which the NBU in response announced a further reduction in the key policy rate.

Prior to the pandemic, the NBU announced a change in the mandatory reserves requirements: since March 2020, only foreign currency should be used as a basis to maintain minimum required reserves. As conceived by the central bank, such a practice would help reduce the cost of loans in the local currency and facilitate the de-dollarization of the economy [14]. Thus, given the changes announced by the NBU, it can be stated that Ukraine has entered a corona crisis at the stage of easing monetary policy.

Before Ukraine faced the coronavirus crisis, fiscal policy could be characterized as multi-pronged. First of all, this can be seen due to the multidirectional nature of fiscal policy measures in terms of strategic areas, as well as the presence of structural problems, which were reflected in the effectiveness of fiscal policy: significant shadowing of the economy; inefficient administration of taxes and fees; permanent deficit of the pension fund; excessive subsidies and subsidies to the population; high costs of public debt service.

Measures aimed at solving the above-mentioned structural drawbacks were proposed through tax reform with the objective to improve the mechanisms of tax administration: increasing the fiscalization of business transactions by introducing obligatory usage of registrars of settlement transactions, the implementation of electronic excise stamps, the improvement of portal account of tax payers, and the implementation of a plan to combat the base erosion and profit shifting (BEPS).

Another measure aimed at reducing state budget expenditures to cover the pension fund deficit was the pension reform: raising the retirement age for women and providing the possibility of retirement in the condition of a certain retirement experience.

Prior to the crisis, the budget deficit for 2020 was projected at 2.1% of GDP [15], which is lower than the Maastricht Treaty on Economic and Monetary Union recommendation by 3 % [16] and in line with the IMF requirements in memorandum, signed by IMF and Ukraine [17, p. 64]. The planned state budget deficit is a constant phenomenon on for Ukraine, although since 2016 there has been a strong tendency to decline, reducing from 3.7% to 2.3% in 2019 (Fig. 1a).

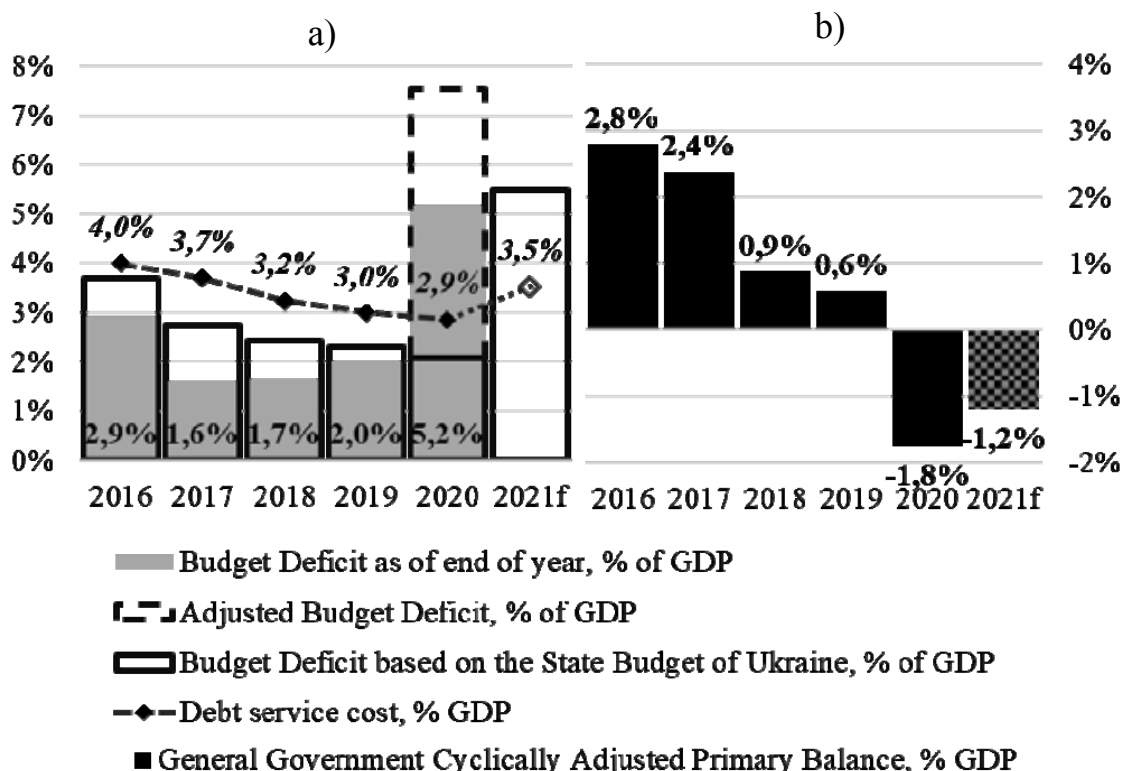


Fig. 1. Dynamics of planned and actual budget deficit and the cost of servicing public debt to GDP

Source: completed by the authors according to the source [18; 19].

Long-lasting budget deficit indicates on continuous expansionary fiscal policy and creates additional inflationary pressures and contemporaneously creates risk of fiscal dominance upon condition of the absence of institutional independence of the central bank. At the same time, the assessment of the budget deficit, carried out on the basis of cyclically adjusted primary balance, vide licet decreased by debt service expenditures fiscal balance and net of cyclical factors, allows us to assess the essence of fiscal policy in 2016—2019 as contractionary. Thus, one of the key factors shaping the budget deficit in Ukraine is the high cost of public debt service (Fig. 1b).

Although starting from 2016, there has been a gradual decrease in public debt service expenditures relative to GDP, as of the end of 2020 the indicator remained at 2.9%, which can be assessed as significant (see Fig. 1a). While reducing the cost of public debt service should be a strategic goal of the Ministry of Finance of Ukraine (here in after — the Ministry of Finance), in the medium-term strategy for public debt management for 2019—2022 published by the government, reducing public debt service costs is not directly set among the main goals [20].

After the first detected cases of coronavirus disease in Ukraine, in mid-March 2020 the government imposed quarantine, followed by the closure of the state border and mandatory self-isolation upon arrival in Ukraine, restricting movement and introducing lockdown measures. Such measures have resulted in lowering economic activity, rising unemployment and increasing

deflationary pressures, and therefore monetary and fiscal policy measures were primarily aimed to overcome these consequences.

The NBU's response was consistent: given the gradual easing of monetary policy announced before the coronacrisis, the regulator's actions were expected for economic agents.

Following the schedule for the monetary policy decision-making meetings of the board, the NBU has twice cut the key policy rate by 2 percentage points in April and June 2020 [21]. Thus, the key policy rate reached its historically lowest level since Ukraine's independence. Along with the key policy rate cut, the central bank shrank the interest rate corridor for standing facilities from  $\pm 2$  p.p. to  $\pm 1$  p.p. [22]. On the one hand, this allowed banks to obtain cheaper funding to maintain liquidity and had a positive impact on financial stability. On the other hand, it allowed banks to receive higher income by placing free liquidity in overnight certificates of deposit with the NBU.

In order to provide banks with funds to support lending activity, the NBU introduced a long-term refinancing mechanism with a floating interest rate, where the basis is key policy rate with initial maturity for up to 5 years. Long-term refinancing loans required from banks collateral in the form of government bonds or foreign currency [23]. Subsequently, the NBU expanded the list of possible collateral for long-term refinancing loans and included corporate bonds issued under government guarantees and municipal bonds [24]. At the same time, such a mechanism became not so much a stimulus for lending to the real sector of the economy, but rather an opportunity to expand the financing of the state budget deficit by banks.

An additional central bank's measure was the intensification of operations with both standard instruments of bank liquidity management and refinancing, by increasing the frequency of operations and expanding the maximum term of weekly refinancing operations from 30 to 90 days. In addition, to provide the banking system with sufficient liquidity, the NBU conducted extra refinancing tenders during the market disruptions in March 2020.

Pursuing a stimulating monetary policy, the NBU limited itself to traditional monetary policy instruments: while central banks in developed countries and in some developing countries resorted to conventional monetary policy instruments, in particular, quantitative easing and directed lending. The NBU saw significant inflationary risks of using non-standard monetary policy mechanisms, and therefore direct support of the individuals and business was implemented through fiscal rather than monetary stimulus measures.

Fiscal policy measures were primarily aimed at raising social standards, helping vulnerable groups and the temporarily unemployed, as well as providing direct support for businesses affected by quarantine restrictions.

In order to ensure the financing of additional expenditures and taking into account the expected decline in state budget revenues, changes in the law on the state budget provided for the expansion of the budget deficit to 7.5% of the updated projected GDP in 2020 [25].

The government approved additional payments to medical workers, made payments to socially vulnerable groups, expanded unemployment benefits, and increased transfers to the Pension Fund of Ukraine.

To support local businesses, the government provided tax preferences, while the tax burden was temporarily reduced: in particular, the application of most penalties for violation of tax legislation was limited, the introduction of PPO was postponed for entrepreneurs with a simplified taxation system, and the annual income limits for individual entrepreneurs were increased [26]. Moreover, the Ukrainian parliament has decided to reduce the value added tax on some products in the agricultural sector from 20% to 14%.

The state program «Affordable loans 5—7—9%»<sup>1</sup>, which was designed to stimulate expansion of existing business as well as appearance of new business, creating of new jobs and ultimately push economic growth, was expanded. In particular, the maximum loan amount has been increased, the list of economic sectors that can count on the reimbursement of the part of

<sup>1</sup> The «Affordable loans 5—7—9%» program was introduced by the Ministry of Finance of Ukraine and is implemented through the Entrepreneurship Development Fund of Ukraine, which aims to stimulate lending to micro, small and medium-sized businesses in a framework of interest expenses on bank loans compensation through state budget.

interest expenses from the state budget of Ukraine has been expanded. As part of the expanded program, an anti-crisis package was introduced, which considered additional support to business via providing the possibility of refinancing current debt at 0%. This helped to reduce the dollarization of the economy, as Ukrainian companies were able to refinance their debt in foreign currency to local currency under more favourable conditions, along with a reduction of currency risks.

The above-mentioned program has become popular among both businesses and banks. Since the launch of the program in February 2020 and until April 2021, as refinancing loans at 0% were disbursed almost UAH 16.25 billion, as anti-crisis loans at 3% were disbursed almost UAH 16.65 billion, and under standard «5—7—9%» conditions were disbursed UAH 5.29 billion [27]. Although the implementation of such measures allowed companies to significantly reduce their loan servicing costs and banks to obtain higher interest income, fixing a higher interest margin than under standard market conditions, in general, the program significantly slowed down the reduction of the cost of lending in the Ukraine.

This was primarily due to the fact that the interest rate on the program «Affordable loans 5—7—9%» is formed as the sum between the Ukrainian index of interest rates on retail deposits (UIRD) for three months and the recommended by the Ministry of Finance maximum margin — 7 p.p. for microenterprises, 6 p.p. for small businesses and 5 p.p. for medium-sized enterprises [28]. Therefore, all banks that are authorized to disburse loans under the program «Affordable loans 5—7—9%» lend on the same conditions and do not have adequate motivation to lend in local currency outside the program at an interest rate that would be competitive. At the same time, enterprises are not motivated to take loans outside of the program «Affordable loans 5—7—9%», at a market interest rate that will be higher than under the program «Affordable loans 5—7—9%».

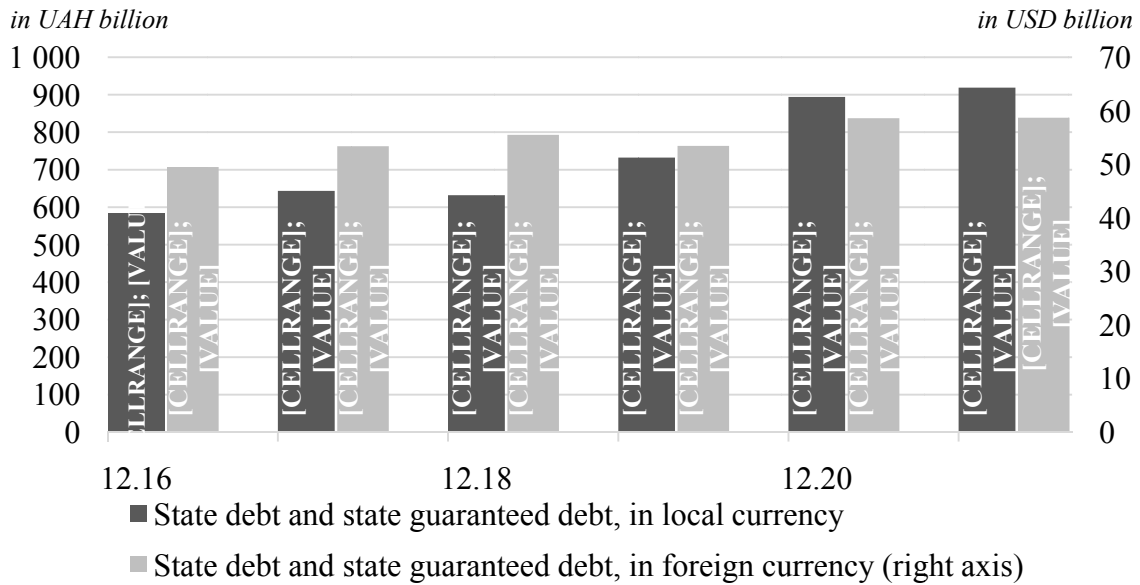
With in the framework of the state program «Affordable loans 5—7—9%», in March 2020 an additional framework of a loan guarantee mechanism was introduced in order to provide access to loans for micro, small, and medium-sized enterprises that do not have sufficient collateral or an adequate level of equity of fulfil banks' requirements [29].

Another measure to stimulate economic activity was an increase in the minimum wage: the first increase took place in September 2020, the second in January 2021, and the last is scheduled for July 2021. In general, the minimum wage should increase by 37.6% from the beginning of 2020. Moreover, the new budget declaration set further increase of the minimum wage by an additional 28% until the end of 2023 [30]. On the one hand, the increase in the minimum wage leads to an increase in labour costs for public sector employees, while, on the other hand, expanding the tax base. The result of the growth of the minimum wage, despite the compensatory effect of additional tax revenues, will ultimately be an increase in budget expenditures. An additional effect, which is not yet quantifiable, will be the increase in inflationary pressure due to higher inflation expectations in the current and coming years [31].

In order to cover expected budget deficit, the Ministry of Finance began with accumulation of public debt: in 2020, public debt and government-guaranteed debt in the local currency increased by 22.1%, while in foreign currency in the US dollars equivalent by 9.7%. The debt increase is expected to exceed the past four years' average level: 12.2% in local currency and 3.9% in foreign currency in the US dollars equivalent (*Fig. 2*).

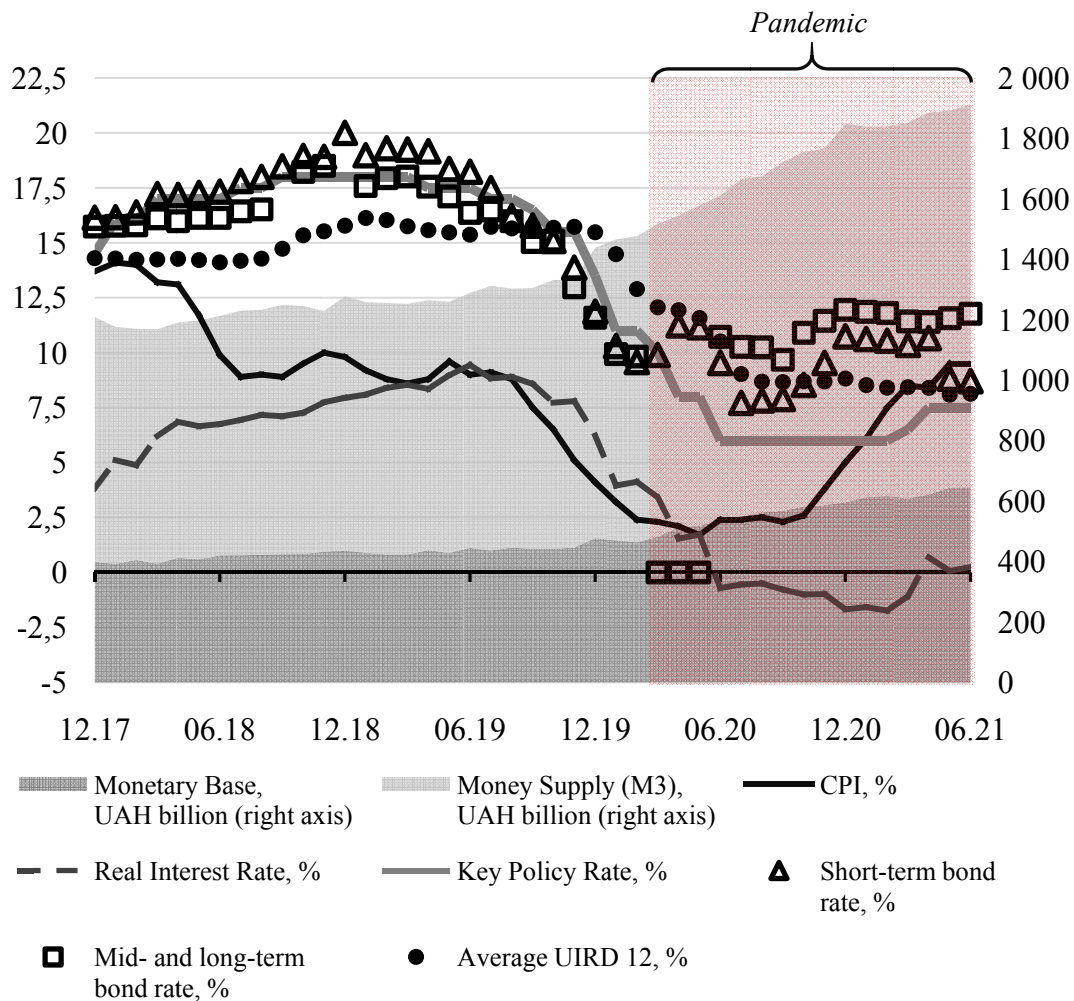
The boost of government spending and the refore further expansion of the budget deficit, as well as volatility in the financial markets of developing countries, led to the need to increase interest rates by the Ministry of Finance to attract additional funding in the primary market through the issuance of new government bonds (*Fig. 3*).

One of the main indicators of effective coordination between fiscal and monetary policy is the consistency of the interest rate environment development. Before the outbreak of the pandemic, there was a strong positive correlation between the key policy rate and the rate on issued government bonds in the primary market in Ukraine. Nevertheless, when the pandemic hit, the gap between interest rates on government bonds with maturities over 1 year and the key policy rate began to grow and reach its maximum of almost 100% at the end of 2020.



**Fig. 2. Dynamics and growth of state and state-guaranteed debt innational and foreign currencies**

Source: completed by the authors according to the source [18].



**Fig. 3. The main determinants of monetary tightness and interest rates in Ukraine**

Source: completed by the authors according to the source [32].

Following economic theory, the yield on government bonds should be an indicator of the risk-free interest rate. In spite of that, Ukrainian practice testifies to the distortion of such logic: the yield on government bonds significantly exceeds the rates on term deposits of individuals and interest rates on loans to enterprises, while the pandemic factor and adjusted plan regarding attraction of additional funds to the state budget creates a favourable environment for investors to push interest rates upward (*Table*).

Table

**The difference between the basic interest rates and the NBU key policy rate in percentage points<sup>2</sup>**

Date	NBU Key Policy Rate	Deposits of private individuals			Loans to legal Entities			Domestic Sovereign Bonds		
		All terms	less than 1 year	above 1 year	All terms	less than 1 year	above 1 year	All terms	less than 1 year	above 1 year
12.19	<b>13.5</b>	1.1	0.9	2.4	1.3	1.3	0.9	-1.9	-1.6	-1.9
01.20	<b>11.0</b>	3.0	3.0	3.7	1.6	1.6	1.4	-1.0	-0.7	-1.1
02.20	<b>11.0</b>	1.6	1.6	2.4	0.0	0.0	-0.6	-1.2	-1.4	-1.2
03.20	<b>10.0</b>	1.9	1.9	2.8	4.9	4.9	4.6	-0.1	-0.1	X
04.20	<b>8.0</b>	4.1	4.1	4.7	4.0	4.0	3.7	3.2	3.2	X
05.20	<b>8.0</b>	3.5	3.4	4.3	2.7	2.7	2.4	3.2	3.2	X
06.20	<b>6.0</b>	4.7	4.7	5.1	3.5	3.5	3.0	4.0	3.5	4.7
07.20	<b>6.0</b>	3.7	3.5	4.6	3.0	3.0	2.6	2.1	1.7	4.3
08.20	<b>6.0</b>	3.3	3.2	4.5	2.6	2.6	2.3	2.7	1.8	4.2
09.20	<b>6.0</b>	3.1	3.0	3.8	2.8	2.8	2.3	2.9	1.9	3.7
10.20	<b>6.0</b>	3.0	2.9	3.7	2.6	2.6	2.3	3.0	2.5	4.9
11.20	<b>6.0</b>	2.7	2.6	3.6	2.3	2.3	2.0	3.6	3.5	5.4
12.20	<b>6.0</b>	2.8	2.6	4.0	3.4	3.4	3.0	5.0	4.7	6.0
01.21	<b>6.0</b>	2.5	2.3	3.5	2.2	2.2	1.8	5.3	4.6	5.9
02.21	<b>6.0</b>	2.3	2.1	3.3	1.9	1.9	1.4	5.5	4.5	5.8
03.21	<b>6.5</b>	1.3	1.1	2.5	1.8	1.8	1.3	4.4	3.9	4.9
04.21	<b>7.5</b>	0.1	0.0	1.4	1.0	1.0	0.6	3.6	3.2	3.9
05.21	<b>7.5</b>	0.2	0.0	1.6	1.2	1.2	0.7	3.7	1.3	4.1
06.21	<b>7.5</b>	0.1	-0.1	1.6	1.5	1.5	1.0	4.2	1.2	4.3

+20%   +35%   +50%   +75%

Source: the rate exceeds the NBU Key Policy Rate by: completed by the authors according to the source [32].

Easing monetary policy and significant fiscal stimulus expectedly led to an increase in the monetary base and money supply. The growth of broad money for the year of the pandemic, from March 2020 to June 2021, was 29.5%, while the growth of the monetary base over the same period was 39.2%. In addition, deflated by interpolated inflation expectations of banks, businesses, households and financial analysts in the annual horizon NBU key policy rate entered the negative level in June 2020, which allowed the NBU to assess the monetary policy as expansionary (*Fig. 3*).

The initial issue of money conduct by NBU through currency channel and credit channel, while the stock exchange channel remain edinactive. The NBU adhered to this practice for a longtime, and the crisis did not lead to a revision of this practice. Under such conditions, market

<sup>2</sup> The interest rate on loans and deposits is determined as a moving average for the last 10 business days until the end of the respective month; the interest rate on government bonds is calculated as the weighted average rate of raising funds to the state budget for the corresponding month.

participants, and particularly banks, against the background of growing supply of government bonds in the primary market, unilaterally formed an upward trend in yield rates. Contemporaneously, active participation of the central bank in the security secondary market for government securities would help contain the pressure of over supply and thus limit the growth of the cost of raising government debt. During the active phase of the pandemic, such practice would not lead to a significant inflationary surge, on the one hand, due to low inflation and suppressed business activity in the specified time range, and on the other hand, due to the non-monetary nature of inflation in the post-crisis recovery cycle.

The experience of both developed countries and some developing countries allows us to make a positive assessment of the above-mentioned practice. In the study of the possibility of applying quantitative easing in developing countries, J. Mimirand E. Suneli draw attention to the fact that in the context of anchored inflation expectations and a floating exchange rate regime, quantitative easing will not lead to inflationary shocks and at the same time will have a positive effect on the value of assets [33]. At the same time, the limitation of such operations, both by a predetermined time frame and by volume is crucial, especially given the negative historical experience of fiscal dominance in Ukraine [9].

Despite the reduction of the NBU key policy rate and gradual decrease of rates on term deposits, as well as additional fiscal stimulus in the form of state program for lending promoting «Affordable Loans 5—7—9%», bank lending remained sluggish in 2020 and in the first quarter of 2021. During the first year of the pandemic, total performing loans to legal entities in the local currency increased by only UAH 37 billion, and to individuals—by UAH 16 billion. In contrast, banks’ total portfolio of government bonds increased by UAH 178 billion, which is almost 3.4 times more than the net increase over the same period of loans (Fig. 4).

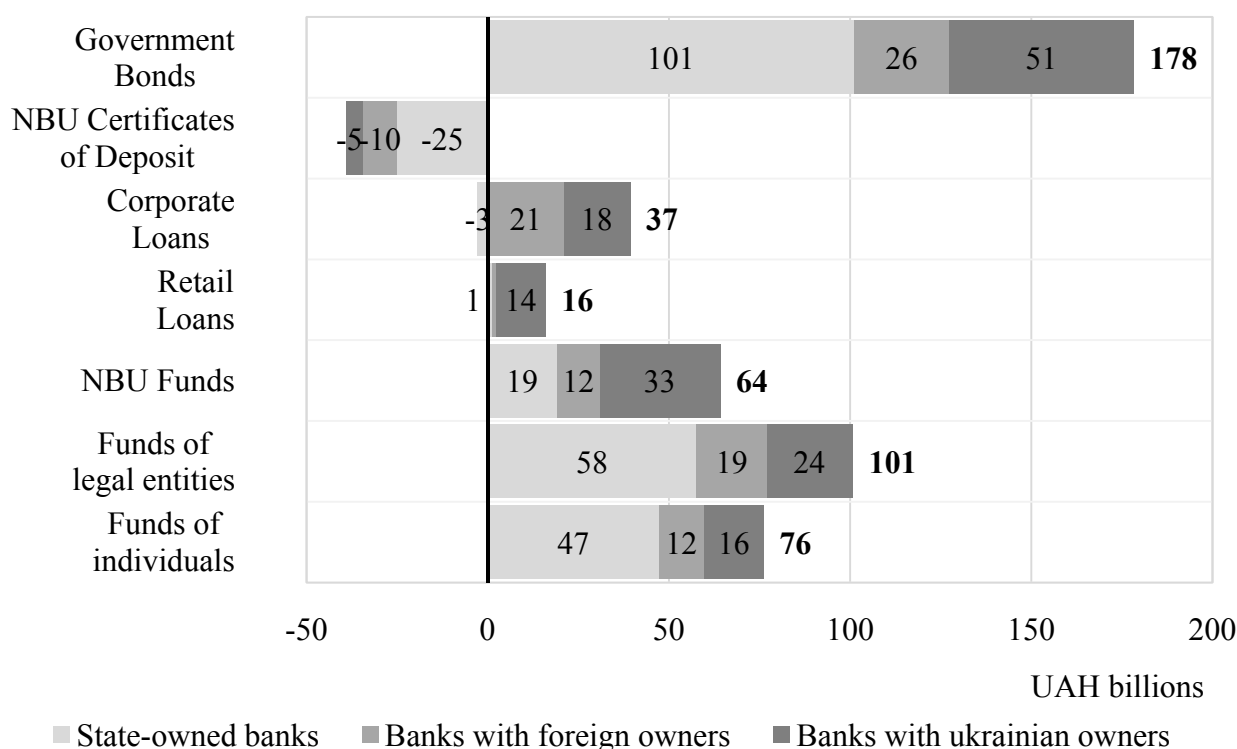


Fig. 4. Change in the main balance sheet positions of banks in the local currency for the first year of the COVID-19 pandemic in Ukraine<sup>3</sup>

Source: completed by the authors according to the source [32].

<sup>3</sup> The basis for calculating the growth of the loan portfolio of enterprises and individuals is performing loans in accordance with the requirements of the NBU Resolution № 351.

One causing leout such reasons why banks prefer red investing in government bonds, rather than lending to the real sector of the economy: high interest rates in the absence of credit risk, the possibility of using government bonds as collateral for long-term refinancing operations from the central bank a take y policy rate during the pandemic, and the notion that banks consider government bonds to be highly liquid assets, according to the methodology for calculating liquidity coverage ratios, which simplifies the management of liquidity risk in during the crisis [34].

In the first year of the pandemic, state-owned banks played a major role in the state's lending: their share in the total growth of banks' government bond portfolio in local currency amounted in almost 57%. More over, the growth of funds of both enterprises and individuals is primarily observed in state-owned banks: by 57.4% and 61.8%, respectively, in the first year of the pandemic (see *Fig. 4*). This was facilitated by both high interest rates and higher confidence by placing funds in state-owned banks, given the negative historical experience, in particular, the liquidation of more than 40% of banks from the market by the central bank in 2014—2016.

According to A. S. Bertai, A. Demirguch-Kunta and H. Heizinga, the main advantage of state-owned banks is their lower procyclicality, or even countercyclicality, which is more typical for developed economies. It is assumed that in times of financial instability, state banks are more active in lending to the real sector of the economy, thus providing adequate support to enterprises and individuals [35]. At the same time, during the first year of the pandemic, state-owned banks in Ukraine did not increase lending to both enterprises and the population. The volume of performing loans in local currency remained virtually unchanged (see *Fig. 4*).

Such a model of state dominance in the banking sector of Ukraine has a destructive effect on competitiveness and weakens the effectiveness of monetary policy, given the shifted centres of influence towards the Ministry of Finance. At the same time, high market shares and trust — both on the part of the population and on that of enterprises in state-owned banks — create the prerequisites for stimulating the economy through lending to the real sector of the economy, rather than financing the government. According to the principles of strategic reform of the state banking sector, lending to small and medium-sized enterprises is envisaged. We therefore assume that, providing support to business should become a strategically prioritized direction for state-owned banks before their partial privatization [36].

In 2021, amidrising consumer prices above the expectations of the central bank, as well as higher inflationary expectations in the future, the NBU raised the key policy rate three times, by only 200 basis points from 6% to 8% [21]. Moreover, the central bank plans to further increase the key rate to 8.5% in 2021. According to the NBU, such increase of the key policy rate will been ough to return inflation to the target range of  $\pm 5\%$  in the second half of 2022.

A further increase in inflationary pressure in 2021—2022 will bestabilized by monetary policy measures, primarily by gradual phasing out of anti-crisis monetary measures [37], while fiscal policy will remains oft. There is a risk that this practice will further imbalance the interest rate environment in the face of the need for additional fund raising in the state budget. At the same time, taking into account the non-monetary nature of the current and expected inflationary pressure, which is primarily driven by the rise in prices on world commodity markets, a tighter monetary policy may lead to a slow down in the post-crisis recovery.

**Conclusions.** Fiscal and monetary authorities have responded to the challenges of the coronacrisis by easing their policies: fiscal policy measures have been directed to support the economy, while monetary policy has been more conducive to ensuring the financial stability of the banking system. An increase of the budget deficit during the crisis created the possibility to finance additional social spending, while easing tax pressure and providing in direct support to enterprises and individuals. Long-term refinancing of banks and reducing its cost allowed banks to increase liquidity in local currency and provide additional funds to the government, primarily for budget deficit coverage. Given the in activity of the central bank's stock exchange channel of money issuance, the cost of raising public debt in the domestic market as opposed to the cost of loans and term deposits began rising, indicating alack of proper coordination between monetary and fiscal policies. The excessive costs of the public debt service make it almost impossible to pursue

countercyclical fiscal policy principle in Ukraine in the long run, which in turn increases the risks, particularly inflationary — for the conduction of expansionary monetary policy.

Therefore, we can distinguish the following monetary and fiscal policy measures aimed at ensuring sustainable economic development:

1) Reduction of the public debt service cost should become a strategic and prioritized task for both monetary and fiscal authorities, which in a crisis can be achieved by using a stock exchange money issue channel with strict control of monetary inflation factors and predetermined timeframe and volume of such operations.

2) The principle of countercyclical of fiscal policy should become fundamental for Ukraine. Further easing of monetary policy, subject to neutrality or keeping fiscal policy soft, will not have a significant positive effect on the cost of lending, despite the fact that it will carry additional inflationary risks and thus limit economic growth.

3) The concentration of state-owned banks in the banking system creates additional risks and can negatively affect the effectiveness of the transmission mechanism of monetary policy, given their focus on lending to the government, rather than the real sector of the economy, as well as shifted decision-making centres towards the Ministry of Finance; financing the real sector of the economy through state banks during the crisis will contribute to the post-crisis recovery and economic growth of Ukraine. Therefore, it should be apriority strategic direction for the Ministry of Finance.

4) Incentives for lending should be provided not through fiscal policy instruments, such as compensation of enterprises' interest expenses from the state budget, but through monetary policy easing.

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