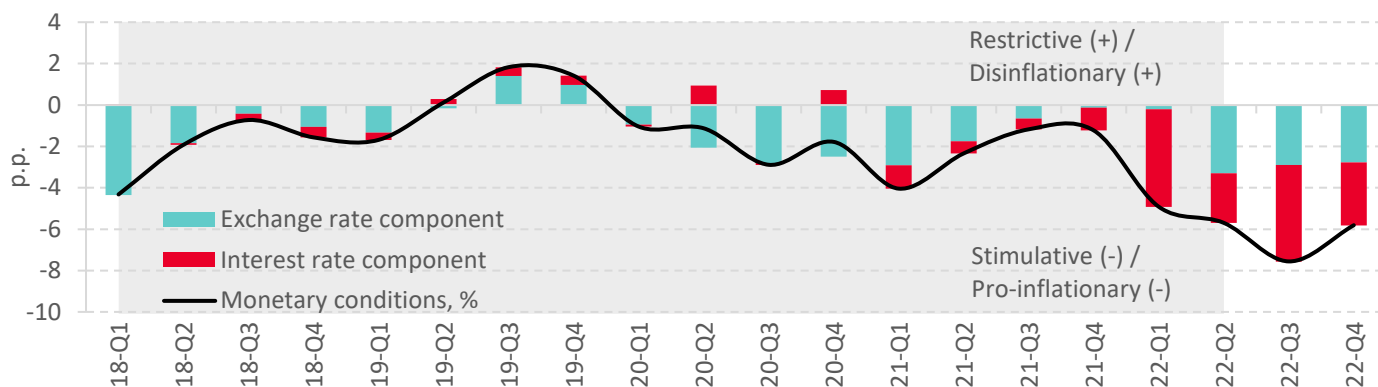


Pro-inflationary monetary conditions intensified in Q2 and are likely to continue until late 2022

Monetary conditions assessed as a mix of deviations of the real interest rates in Belarusian rubles and the real effective exchange rate of the Belarusian ruble from their equilibrium levels were supportive and pro-inflationary in Q2-2022 (Figure 1). Loose monetary conditions shaped due to the “sluggish” response of the National Bank to the inflationary shock when it used interest rate policy measures and a significant weakening of the Belarusian ruble against the Russian ruble. Undervalued Belarusian ruble made a positive impact on the foreign trade balance in Q2, but this maintained high intensity of inflationary processes. In turn, the softness of the interest rate policy of the National Bank was hardly manifested in the lending dynamics: the credit impulse remained negative in Q2 in the context of higher lending risks and uncertainty about the prospects for the Belarusian economy. We expect the pro-inflationary monetary conditions will continue in the second half of 2022.

Figure 1. The nature of the monetary conditions of the Belarusian economy



Source: BEROC's calculations based on the BEROC's Quarterly Prediction Model (QPM) for Belarus.

Note: Positive monetary conditions values indicate their restraining-economic-activity and disinflationary nature, and negative monetary conditions values indicate their stimulating-economic-activity and pro-inflationary nature. We use one of the possible ways to assess monetary conditions, and its results critically depend on the type of the selected macroeconomic model (QPM), its structure, and parameter calibration. We are aware of the limitations of our approach.

The Monetary Environment Review Bulletin presents an expert analysis of the monetary and foreign exchange rate policies and the resulting monetary conditions in the Belarusian economy. The bulletin reviews the actions under the monetary and forex policies, their impact on the economy, the nature of monetary conditions, and provides their short-term forecast. The methodological basis for the analysis is the Quarterly Projection Model (QPM) for the Belarusian economy. The Quarterly Projection Model (QPM) was developed by the BEROC experts, and, as of September 2022, it is in the pilot phase.

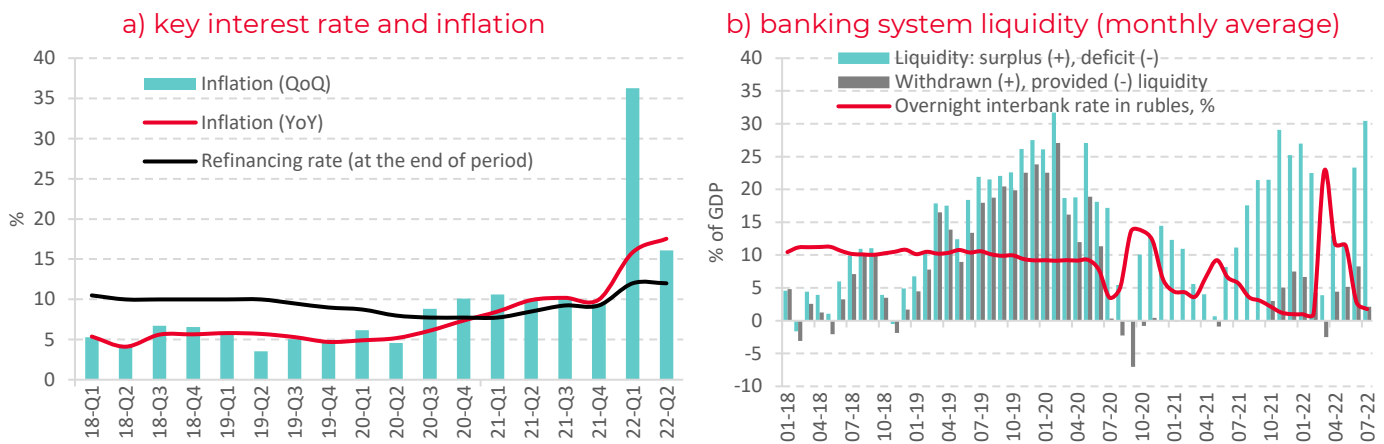
Neither BEROC nor its representatives shall be liable for using the information contained in this bulletin. While every care has been taken in preparing this material, neither BEROC nor any of its representatives make any warranty or assume any responsibility or liability as to the accuracy, completeness or credibility of the information contained herein. BEROC will not be liable for any losses and/or damages of any kind arising from using the information provided in the bulletin.

1. Monetary policy: measures, direction, nature

The National Bank prioritized supporting economic activity over actively curbing inflation in the first half of the year

The National Bank responded rather weakly to the inflationary shock in March: a key interest rate increases in March by 2.75 percentage points up to 12% kept it noticeably lower than the consumer prices growth rate (Figure 2.a). The key interest rate did not change in Q2 despite a persisting high inflation. At that, the National Bank bought about \$0.7 billion of foreign currency at the stock exchange in Q2 and another \$0.32 billion in July by issuing Belarusian rubles. Therefore, the liquidity surplus of the banking system increased, and only 65% of the initial demand was withdrawn at the deposit auctions of the National Bank in Q2 (auction operations have been suspended since July 6). As a result, the interbank market rate (hereinafter referred to as the interbank rate) approached zero in June-August (Figure 2.b).

Figure 2. Dynamics of the key interest rate, inflation and banking system liquidity



Source: The BEROC’s calculations are based on the data by Belstat and the National Bank of Belarus.

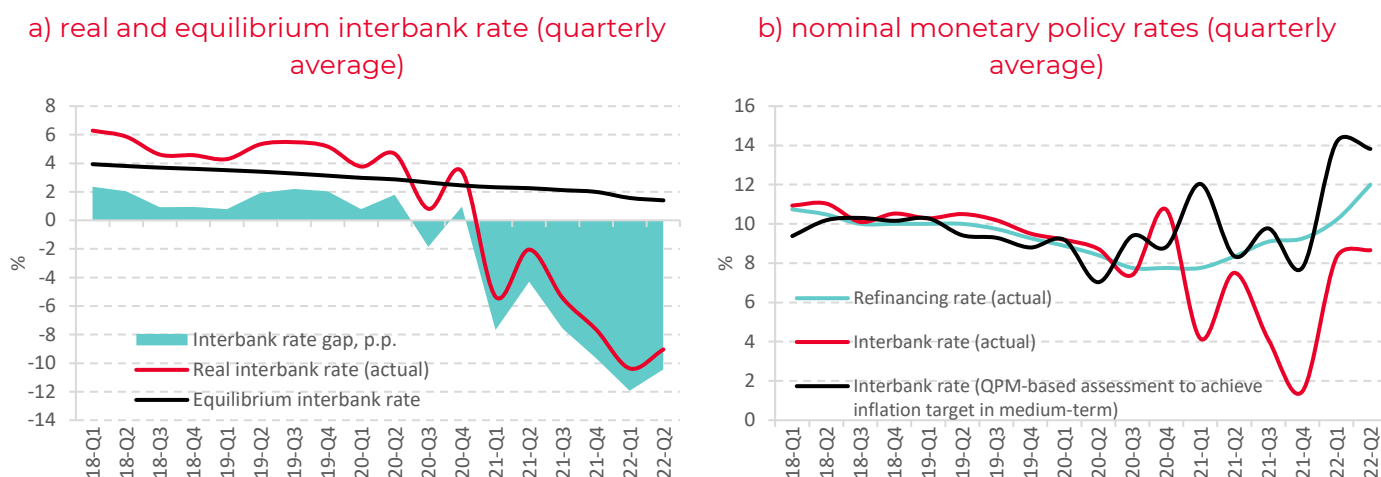
Note: hereinafter, YoY is the growth rate in the last month of the quarter vs the last month of the corresponding quarter of the previous year; QoQ is the annualized growth rate in the last month of the quarter vs the last month of the previous quarter, seasonally adjusted. The X13 procedure in the JDemetra+ app was applied to make a seasonal adjustment. As new data are published, the indicator dynamics in previous periods can be updated. The annualized price increase is calculated as a seasonally adjusted price increase per quarter raised to the fourth power (an annual inflation equivalent).

The interest rate policy of the National Bank in Q2-2022 through to early Q3-2022 was soft

Key interest rates and interbank market rates were below their equilibrium values in Q2 through to early Q3 (Figure 3.a). Since the National Bank de facto does not control the interbank rate, the money market in the context of a strong liquidity surplus in Q2-Q3 is balanced by a low rate and remains dysfunctional.

Supporting the economy in the context of a steep GDP fall and a happened inflationary shock is usually an acceptable policy. Calculations under the BEROC’s Quarterly Projection Model (QPM) show that in Q2-2022 the best balance between output and inflation considerations would be to maintain the interbank rate at around 14% instead of dropping it (Figure 3.b). Such a rate would still lead to a negative real rate and continued issuance. However, this would mitigate the risks of inflation fixing and inflation expectations at higher levels.

Figure 3. Nature of the interest rate policy of the National Bank



Source: The BEROC calculations are based on the BEROC Quarterly Projection Model (QPM) for Belarus.

Note: Here and below, real rates are calculated by adjusting nominal rates for the projected annual inflation in the coming quarter calculated under the Quarterly Projection Model (QPM). The QPM specification assumes that the National Bank does not fully control the interbank rate: it is affected by non-sterilized foreign exchange interventions. As a result, the actual rate may deviate from the rate compliant with achieving the medium-term inflation target. The latter is modeled in the QPM by adding a premium to the neutral interbank loan rate, which is determined based on the expected deviation of inflation from the target value and the current position of the economy in the business cycle considering the rate inertia.

Interest rates for the Belarusian ruble market loans and term deposits are assessed under the QPM as somewhat soft on average

Taking higher inflation into account, the average interest rate on fixed-term Belarusian ruble deposits of households and organizations in Q2 was negative in real terms, below its equilibrium level estimated by the QPM (Figure 4.b).¹ A lower average deposit interest rate is mainly due to the low — vs inflation — profitability of corporate deposits. This is a segment where banks have started lowering interest rates proactively in late Q2 against the backdrop of a growing liquidity surplus.² The return on household deposits in Q2 was close to the actual and expected inflation (estimated under the QPM): the real interest rate was close to the equilibrium level. However, the household deposit interest rate could fall below the equilibrium level already in July.³

The real average interest rate on new Belarusian ruble market loans to households and organizations was assessed as slightly positive in Q2 and by ≈1 p.p. below its equilibrium level (Figure 4.a). According to available data, this mainly depends on the retail lending interest rate.⁴ However, it is likely that the rate calculated by the National Bank is significantly affected by installment repayments and grace periods, which can translate into low rate values in statistical accounting. Based on the market offers of banks, nominal rates on household loans in Q2 were generally above 20%, and this could moderately contain lending.

¹ The nominal average interest rate on new term Belarusian ruble deposits of households and organizations averaged 12.7% in Q2: 11.4% for organizations and 18.5% for households.

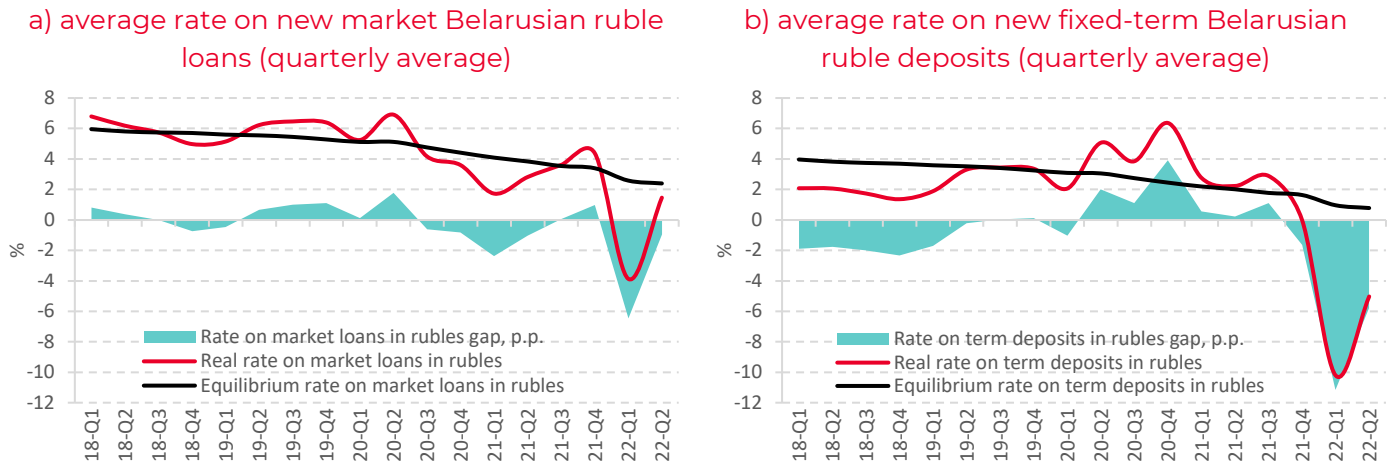
² The nominal interest rate on term deposits of organizations in Belarusian rubles fell from a peak of 13.1% (in April) to 5.1% (in July).

³ The nominal interest rate on household deposits in Belarusian rubles fell from a peak of 18.9% (in April) to 15.6% (in July).

⁴ The nominal average interest rate on new market Belarusian ruble loans to organizations and households averaged 19.2% in Q2: 19.9% to organizations and 13.9% to households.

The lending interest rate in the corporate segment in Q2 can be characterized as somewhat soft, close to neutral. Unlike a deposit interest rate case, banks are not inclined to promptly lower the cost of borrowing for businesses even in the context of a significant liquidity surplus as risks and uncertainties are elevated.

Figure 4. The nature of real interest rates on Belarusian ruble loans and time deposits of banks

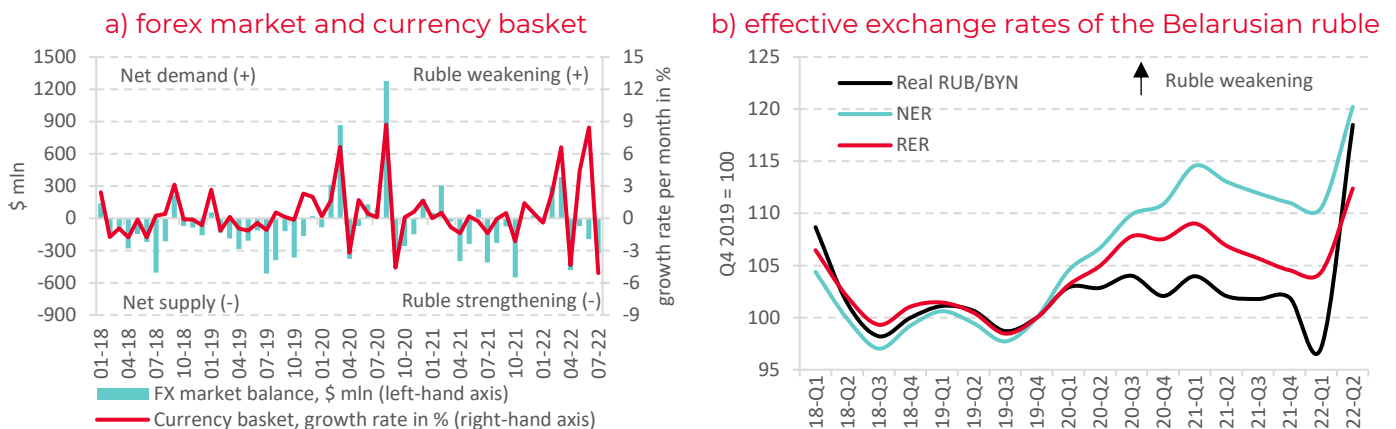


Source: The BEROC calculations are based on the BEROC Quarterly Projection Model (QPM) for Belarus.
Note: Real interest rates in Figures 4.a and 4.b have been calculated on the basis of average nominal interest rates between organizations and households (according to the National Bank) and expected inflation.

2. Forex policy: measures, direction, nature

Atypical landscape of Q2: a significant depreciation of the Belarusian ruble with a net supply of foreign currency in the domestic market

Figure 5. The state of the forex market and the dynamics of the Belarusian ruble exchange rates



Source: The BEROC’s calculations are based on the data by the National Bank of Belarus.
Note: Figure 5.a shows a basket of 3 currencies (US dollar, euro and Russian ruble) from January 2018 to June 2022, and a basket of 4 currencies (US dollar, euro, Russian ruble, and Chinese yuan) from July 2022 onwards.

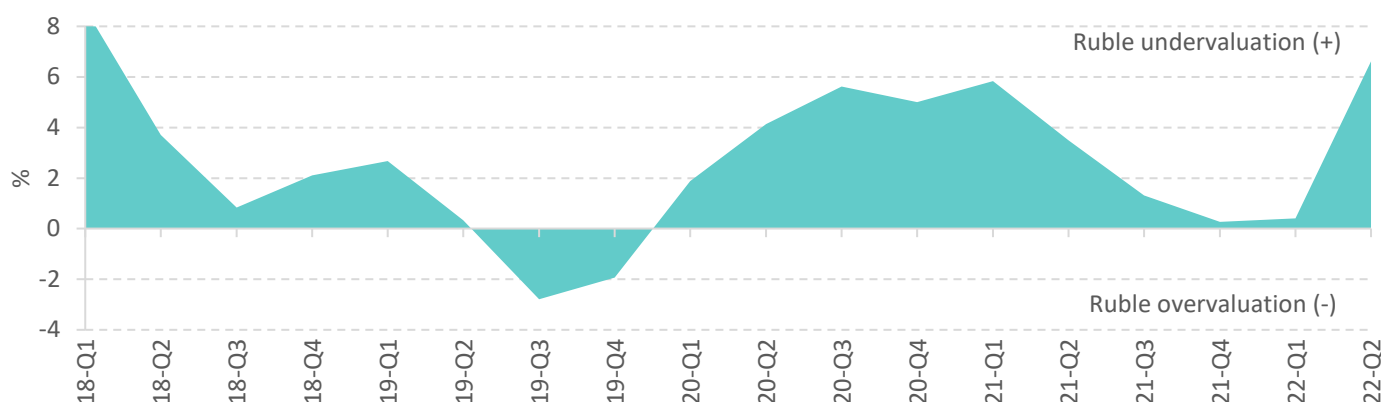
The Belarusian ruble weakened against a foreign currency basket in Q2: its average value exceeded the Q1 value by 6.1% in April-June. The basket rose in price due to the weakening of the Belarusian ruble against the Russian ruble by 21.7%, which more than just offset the strengthening against the US dollar and the euro (by 5.5% and 10.7%, respectively). The Belarusian ruble heavily depreciated against the foreign currency basket in May-June, and this occurred against the backdrop of a net supply of foreign currency on the market due to a dropping demand of the population for foreign currency and an increased foreign currency supply from non-residents (Figure 5.a).

Due to that, in terms of the nominal effective exchange rate, the Belarusian ruble depreciated against foreign currencies by 8.8% (Q2-2022 vs Q1-2022), and the Belarusian ruble depreciated against foreign currencies by 7.7% in terms of the real effective exchange rate (Figure 5.b).

In general, the forex rate behavior was atypical in Q2-2022, and this gave reasons to believe that the National Bank prevented the strengthening of the Belarusian ruble against the US dollar below 2.50 USD/BYN against the backdrop of a strong and rapid strengthening of the Russian ruble against the US dollar in May-June. Most likely, the National Bank allowed an excessive weakening of the Belarusian ruble against the Russian ruble and the foreign currency basket in May-June in order to smooth out the potential impact of the high volatility of the USD/BYN exchange rate on the behavior of the population and organizations. Already in July-August, the RUB/BYN exchange rate and the foreign currency basket value sharply corrected against the backdrop of the weakening Russian ruble against the US dollar and the maintained net supply of foreign currency on the Belarusian market.

Depreciation of the Belarusian ruble in Q2 was excessive: the QPM estimates indicate that it is undervalued by about 6–7% relative to the equilibrium level of the real effective exchange rate (Figure 6). The undervalued Belarusian ruble supported net exports, but had a pro-inflationary effect.

Figure 6. Deviation of the real effective exchange rate from the equilibrium level (based on the QPM)



Source: The BEROc calculations are based on the BEROc Quarterly Projection Model (QPM) for Belarus.

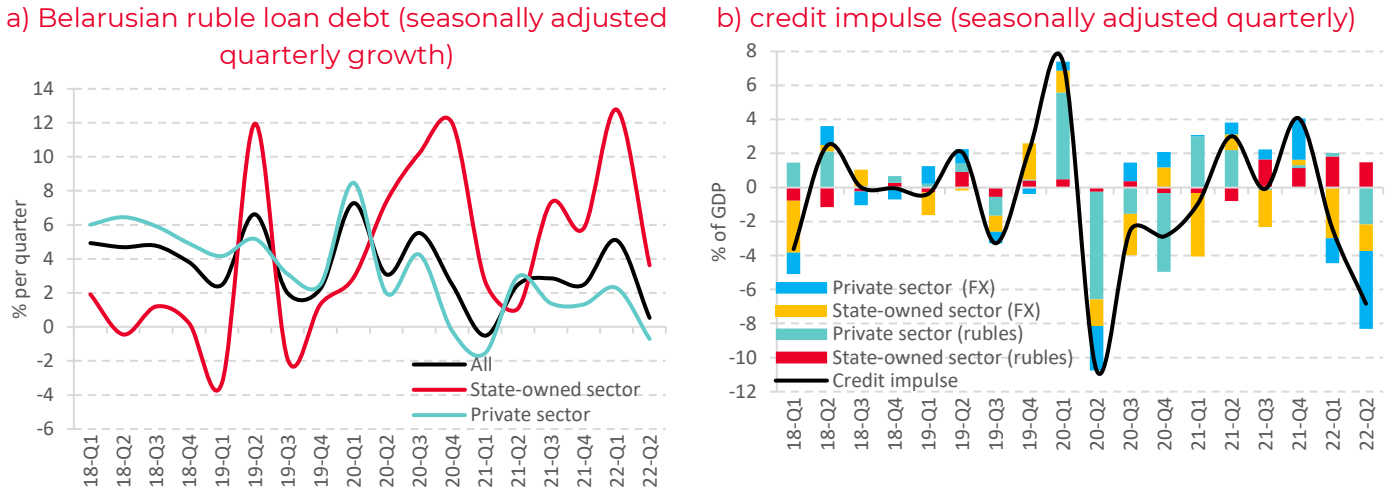
3. Impact of the monetary conditions on the credit and deposit market

Soft monetary conditions in Q2 had little effect on the dynamics of lending to the economy

The credit debt in Belarusian rubles hardly increased in nominal terms and decreased in real terms in Q2 (Figure 7.a). The credit impulse, which reflects the change in the scope of issued loans issued, was also negative in Q2, both in the Belarusian ruble segment and in the foreign currency segment (Figure 7.b).

The negative credit impulse appeared mainly due to the reduced scope of loans provided to the private sector (both households and businesses). Lending to the private sector was constrained by the limited lending supply by banks amid high risks and tight non-price conditions in Q2. In the case of household lending, the level of interest rates was also a barrier. Lending in Belarusian rubles to the public sector continued to grow in Q2 (Figure 7.b), which was due to the government support provided in the form of directed loans and the conversion of the currency of liabilities into Belarusian rubles.

Figure 7. Loans dynamics and credit impulse



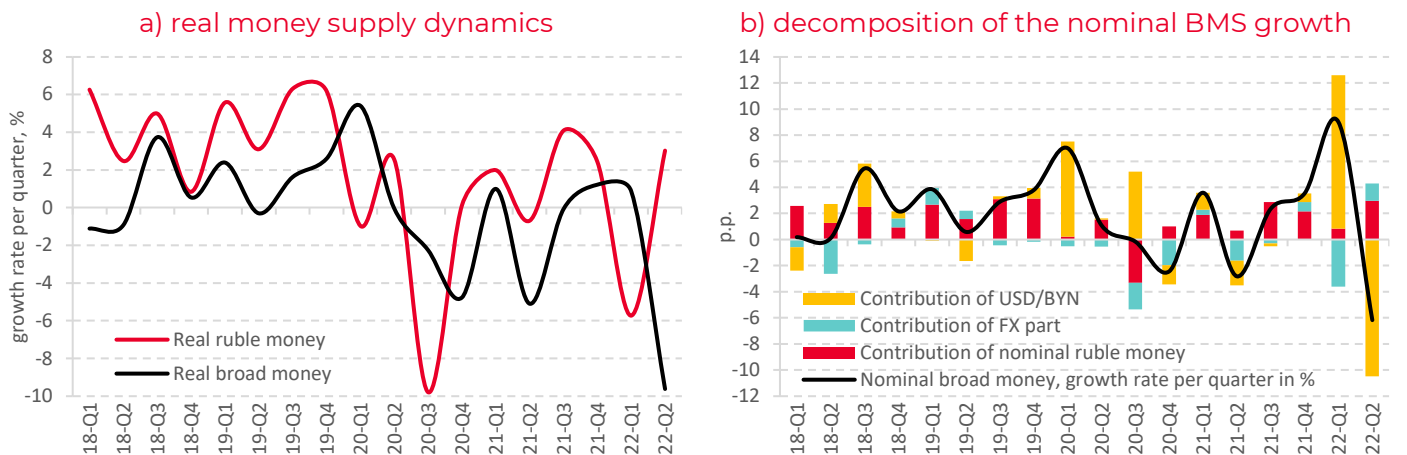
Source: The BEROC’s calculations are based on the data by the National Bank of Belarus.

Note: The credit impulse has been calculated as follows: $ci_t = 100 * (\frac{cr_t}{ngdp_t} - \frac{cr_{t-1}}{ngdp_{t-1}})$ where ci_t is the credit impulse during period t ; cr_t is the seasonally adjusted scope of newly issued loans during period t ; $ngdp_t$ is the seasonally adjusted volume of the nominal GDP during period t . The X13 procedure in the JDemetra+ app was applied to make a seasonal adjustment. As new data are published, the indicator dynamics in previous periods can be updated.

Negative credit impulse limited money supply growth in Q2

The average broad money supply (BMS) decreased both in nominal and real terms in June vs March (Figure 8.a). Such dynamics is due to the revaluation of the currency component of the BMS due to the adjustment-strengthening of the Belarusian ruble against the US dollar (Figure 8.b). The Belarusian ruble money supply (RMS) showed moderate recovery growth in Q2 (Figure 8.b). Against the backdrop of close-to-equilibrium interest rates on household deposits, their fixed-term deposits grew by 7.8% in Q2. However, over 70% of this growth was ensured by increasing interest income and family capital.

Figure 8. Average money supply dynamics (seasonally adjusted)



Source: The BEROC’s calculations are based on the data by the National Bank of Belarus and Belstat.

Note: The X13 procedure in the JDemetra+ app has been applied to make a seasonal adjustment. As new data are published, the indicator dynamics in previous periods can be updated. The real money supply growth has been calculated by deflating the nominal increase (the last month of the quarter vs the last month of the previous quarter) by the quarterly change in the Consumer Price Index.

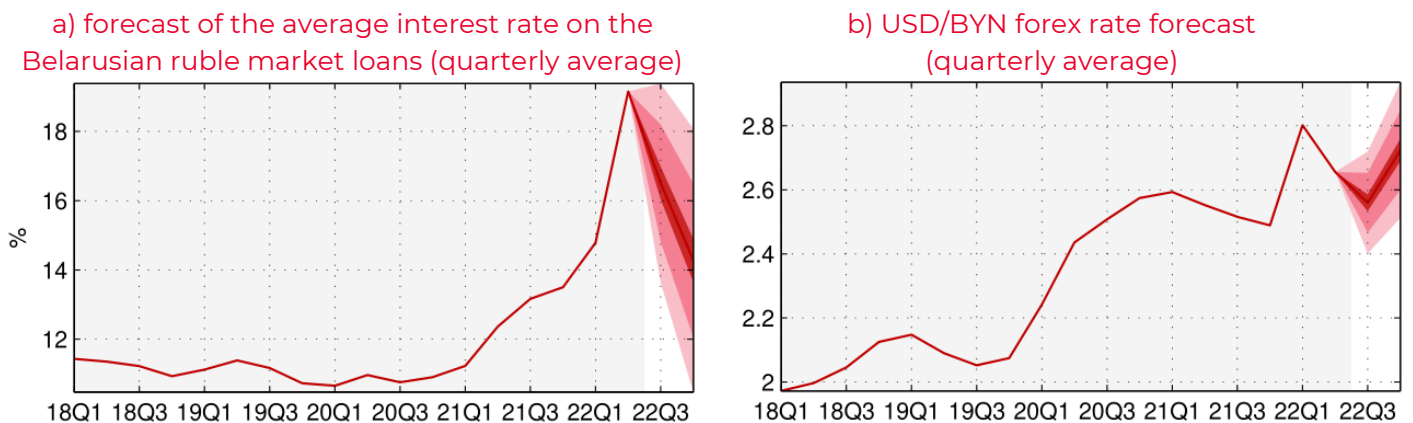
The authorized capital of banks grew by more than BYN 3 billion in Q2. This was mainly because the government replenished the authorized funds of state-owned banks (they increased by BYN 2.55 billion in Q2). To do this, public authorities increased the budget deficit and issued government bonds. Some of these bonds (BYN 1.33 billion) were bought out by the National Bank on the secondary market. Banks could repay part of the “COVID-19” loans to the National Bank thanks to the gained liquidity: the National Bank’s Belarusian ruble claims to banks decreased by BYN 0.92 billion in Q2.

There was likely another iteration of this kind in July: government securities in the National Bank's portfolio grew by 0.76 billion Belarusian rubles in one month, while banks' credit liabilities to the National Bank decreased by 0.57 billion Belarusian rubles. This practice has not yielded any significant lending growth yet. However, this contributes to higher inflationary risks.

4. Monetary conditions short-term forecast

Monetary conditions will remain soft and pro-inflationary for the remainder of this year if there are no new shocks (Figure 1)

Figure 9. Interest rate and foreign exchange rate forecast (based on the QPM)



Source: BEROC’s calculations based on the BEROC’s Quarterly Prediction Model (QPM) for Belarus.

Note: The ranges in the figure correspond to the 15%, 50% and 75% confidence intervals.

It is very likely that the refinancing rate will remain at the current level of 12%, and the dynamics of the interbank loan rate will be close to zero still

Suspension of liquidity control auction operations since July 6 gives grounds to believe that the National Bank will continue to prioritize supporting economic activities over curbing inflation. Therefore, if the economy is not affected by new shocks, the refinancing rate will remain at 12%, and the interbank market will remain dysfunctional.

Interest rates on the Belarusian ruble loans and term deposits will continue declining

Lowering interest rates in the lending and deposit market is a consequence of the loose monetary policy and the increased liquidity surplus in the banking system. In the deposit market, deposit interest rates for organizations are more actively lowered, since the behavior of the population is more sensitive to changes in the profitability of deposits in comparison with firms. It is quite likely that the downward dynamics of the interest rates in the lending market will be less pronounced than in the deposit market due to high risks and uncertainties (Figure 9.a).

An option of decreasing non-price lending conditions is not excluded, since a large liquidity surplus is associated with the possibility of losses. Softer borrowing conditions may somewhat revive lending; however, in the context of a structural downturn and elevated inflationary expectations, this contains the risk of accelerated inflation and its fixation at high levels. It is important to note that interest rates on Belarusian ruble loans to businesses are currently not constraining for lending. Excessive interest rate cuts will not help spur a sustained expansion of business activities that are being held back by institutional limitations.

Undervaluation of the Belarusian ruble will get smaller by the end of this year

At present, it is difficult to answer the question of whether the National Bank will continue pursuing its forex rate policy stepping aside from the stated [rules](#). It is unlikely that the peak value of the foreign currency basket (4 currencies in the basket worth of 0.2953) reached on July 4 will get higher in the coming months given the weakness of imports, exports supported by the price factor, and reducing real incomes of the population. Estimates based on the QPM show that if the National Bank continues its current forex rate policy and the dynamics of the Russian ruble against the US dollar are still in the range of 60–70 USD/RUB, the Belarusian ruble will remain undervalued in terms of the real effective exchange rate; however, the degree of this undervaluation will decrease by the year-end due to adjustment-strengthening of the Belarusian ruble to the Russian ruble ([Figure 1](#)). At the same time, exchange rate dynamics are still under devaluation risks primarily due to the uncertainty about the physical volumes of exports, new manifestations of sanction restrictions and the probability of excessive monetary policy easing.

Explainers

Quarterly Projection Model (QPM)

This is a semi-structural macroeconomic model based on the principles of new Keynesianism; it belongs to the class of dynamic stochastic general equilibrium models. Unobserved variables in the QPM (e.g., equilibrium (trendy) components of economic indicators) are estimated through the multivariate Kalman Filter. The QPM has been widely used for macroeconomic analysis, forecasting and monetary policy designs in central banks, including [the National Bank of the Republic of Belarus](#). The Quarterly Projection Model (QPM) used to draft this document was developed by the BEROc experts, and, as of September 2022, it is in the pilot phase.

QPM indicators

Monetary conditions

This is an indicator of the state of monetary conditions. It is a combination of gaps between the real effective exchange rate (with the opposite sign) and real interest rates. Positive values of monetary conditions indicate their constraining nature for economic activity, and their negative values indicate their stimulating nature for economic activity.

Output gap

This is a deviation of a real GDP from its potential value. A potential GDP is such a GDP value that leads neither to additional inflationary nor disinflationary pressures. A positive output gap indicates excess demand in the economy, and it is an indicator of inflationary pressure. The opposite is true for a negative output gap.

Interest rate gap

This is a deviation of the real interest rate from its neutral level. A positive gap in the interest rate indicates that the nature of the interest rate policy is restraining to economic activity, while a negative gap in the interest rate indicates that the nature of the interest rate policy is stimulating to economic activity.

Equilibrium (neutral) interest rate

This is the level of the real interest rate corresponding to the growth rate of the potential GDP and the equilibrium real effective exchange rate.

Real effective exchange rate gap (REER gap)

This is a deviation of the real effective exchange rate of the Belarusian ruble from its equilibrium level. A positive real effective exchange rate gap indicates an undervaluation of the Belarusian ruble, while a negative real effective exchange rate gap indicates an overvaluation of the Belarusian ruble.

Equilibrium real effective exchange rate

This is the level of the real effective exchange rate that makes neither additional pro-inflationary impact nor disinflationary impact.