## The risks of a strong acceleration in price growth in 2024 are increasing despite continued low inflation in Q3-2023

Annual inflation in September updated its historical minimum value of 2.0% (YoY), and the annualized quarterly increase in consumer prices (seasonally adjusted) remained low: 5.3% (QoQ) in July–September 2023. Blanket price controls continued to prevent the increased inflationary pressures (due to domestic demand and wages) from being translated into actual price increases.

Given the overheating of the economy and increasing external price pressures, inflation will accelerate in Belarus in Q4-2023 to 5–6% (YoY) at the end of 2023. The effects of excessively stimulating domestic economic policy will increase in 2024: inflation is projected at 8–10% (YoY) by the end of 2024 (Figure 1). To prevent the growth of macroeconomic imbalances, it is feasible to move to a gradual easing of price regulation policies and to tightening monetary conditions in Q4-2023.

Figure 1. Dynamics and forecast of consumer inflation in Belarus, % (YoY)
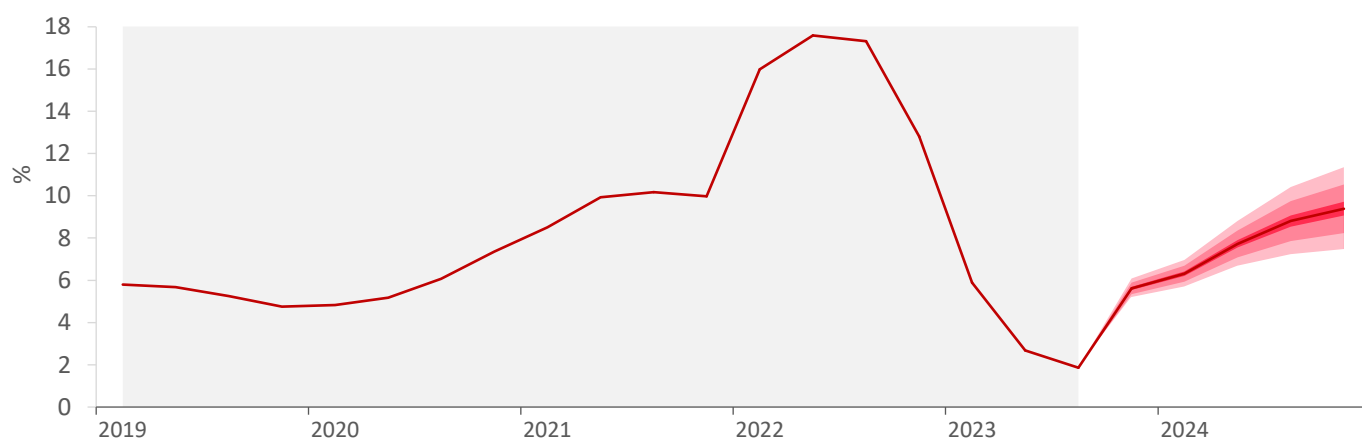
Source: The BEROC's calculations are based on the BEROC's Quarterly Projection Model (QPM) for Belarus.
Note: The figure shows a seasonally adjusted indicator. The X13 procedure in the JDemetra+ app was applied to make a seasonal adjustment. As new data are published, the indicator dynamics can be updated. The ranges in the figure correspond to the 15%, 50% and 75% confidence intervals.
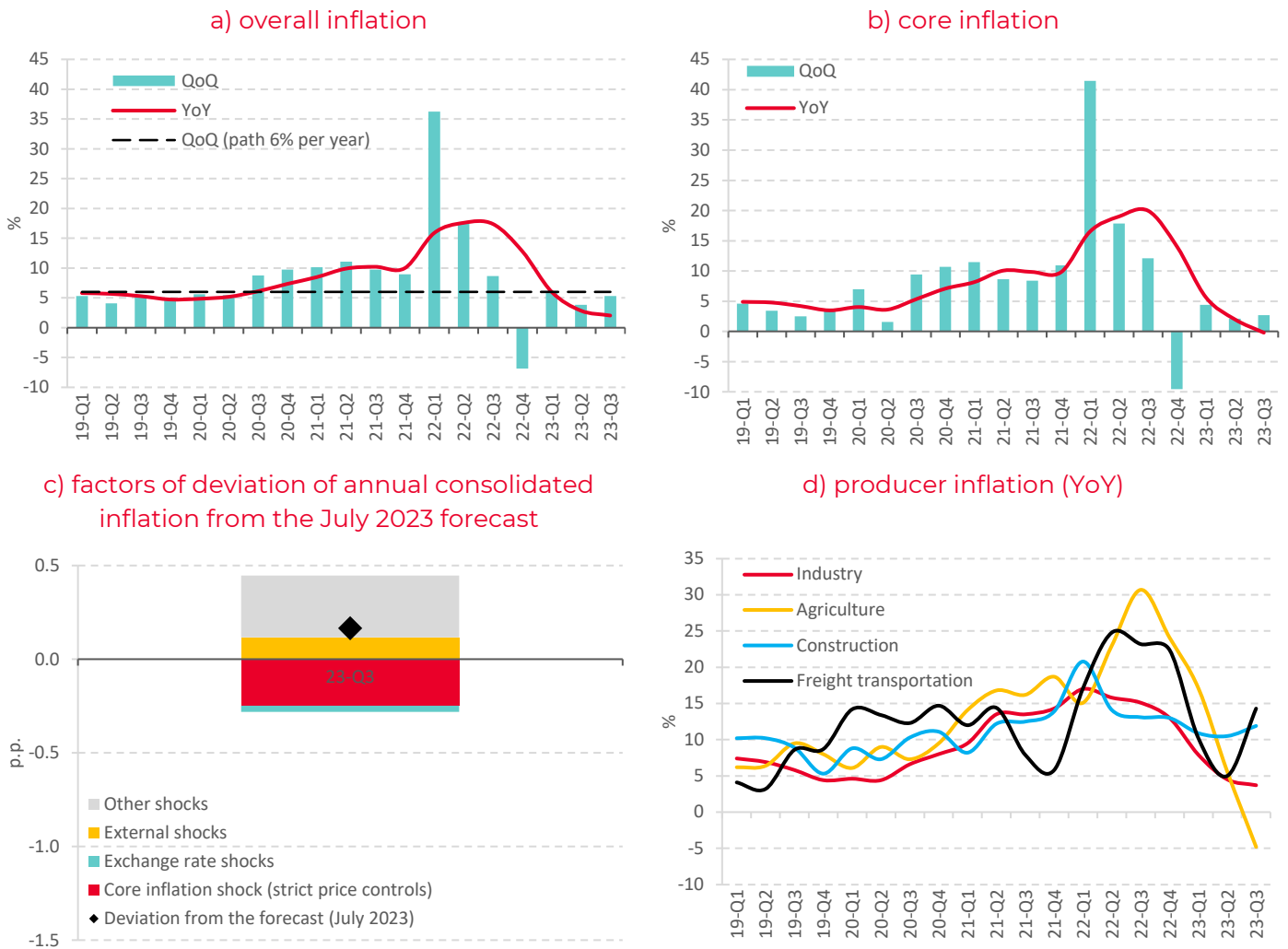
1 Dynamics of inflationary processes

Inflation remained below the 6% annualized trajectory in Q3-2023

Consumer prices increased by 5.3% (annualized and seasonally adjusted) in Q3-2023 (hereinafter referred to as "% (QoQ)").[i] The quarterly price growth increased compared to the previous period (Figure 2.a), but it was due to administratively regulated and volatile components of the consumer basket. Since quarterly price growth in Q3-2023 remained significantly lower than in the same period last year, annual inflation (based on the Consumer Price Index (CPI)) rewrote its historical minimum value and reached 2.0% in September 2023 (% (YoY)).[ii]

Annual inflation deviated by ≈0.2 p.p. upward versus the July forecast trajectory

The deviation from the forecast is mainly due to a stronger acceleration of non-core inflation than expected in July, including due to a significant increase in volatile prices for fruits and vegetables (contributions of other shocks are presented in Figure 2.c). The preservation of blanket price controls by the government continued curbing inflation to a slightly greater extent than projected in July 2023.

Figure 2. Dynamics of consumer and producer inflation

a) overall inflation

b) core inflation

c) factors of deviation of annual consolidated inflation from the July 2023 forecast

d) producer inflation (YoY)

Source: The BEROC's calculations based on the data from Belstat, QPM BEROC.
Note: Hereinafter, YoY is the growth rate in the last month of the quarter versus the last month of the corresponding quarter of the previous year; QoQ is the annualized growth rate in the last month of the quarter versus the last month of the previous quarter, seasonally adjusted.

Core and median inflation remained extremely low in Q3-2023

Core inflation was 2.7% (QoQ) in Q3-2023, while the median inflation was 1.0% (QoQ) (Figure 2.b; Figure 3.a). The distribution of changes in prices for components of the consumer basket remained atypical for Belarus; however, the share of cheaper items decreased from ≈44% in Q2-2023 to ≈35% in Q3-2023 (Figure 3.b). The dynamics of core and median inflation continued to be distorted by strict price controls: these indicators — in the current environment — are not indicators of sustainable price pressure.

Figure 3. Dynamics of median inflation and distribution of relative price growth


a) median inflation (QoQ)   b) price increment distribution (QoQ)
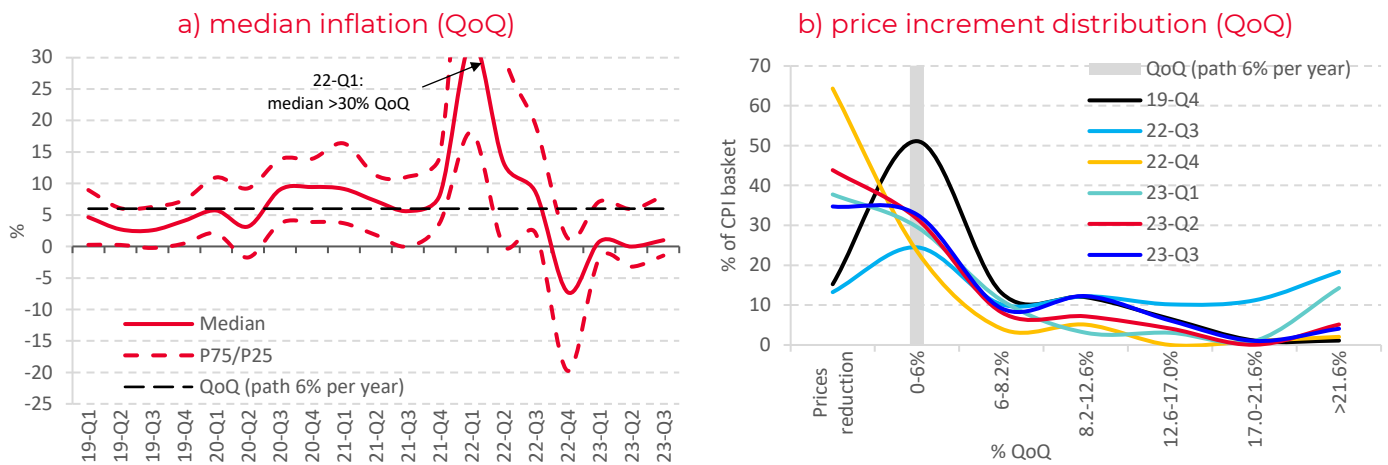
Source: The BEROC's calculations are based on the Belstat data.
Note: Median inflation and price increment distribution are calculated using data from 98 aggregated commodities in the CPI basket. P75 and P25 are the 75th and 25th percentiles, respectively (prices for 25% of goods rise faster than the inflation of the 75th percentile, and prices for another 25% of goods rise slower than the inflation of the 25th percentile).

Suppressed growth in non-food prices limited inflation

Non-food prices increased by 2.2% (QoQ) in Q3-2023 (Figure 4.a). At the same time, half of the consolidated product items fell in price (Figure 5.b) despite the increase in pro-inflationary pressure from expanding domestic demand and the tense situation in the labor market. Strict government price controls continued to limit the capacity of manufacturers and retailers to translate costs into prices.

Figure 4. Dynamics of inflation and prices of aggregated CPI components (seasonally adjusted)

a) QoQ   b) December 2019 = 100
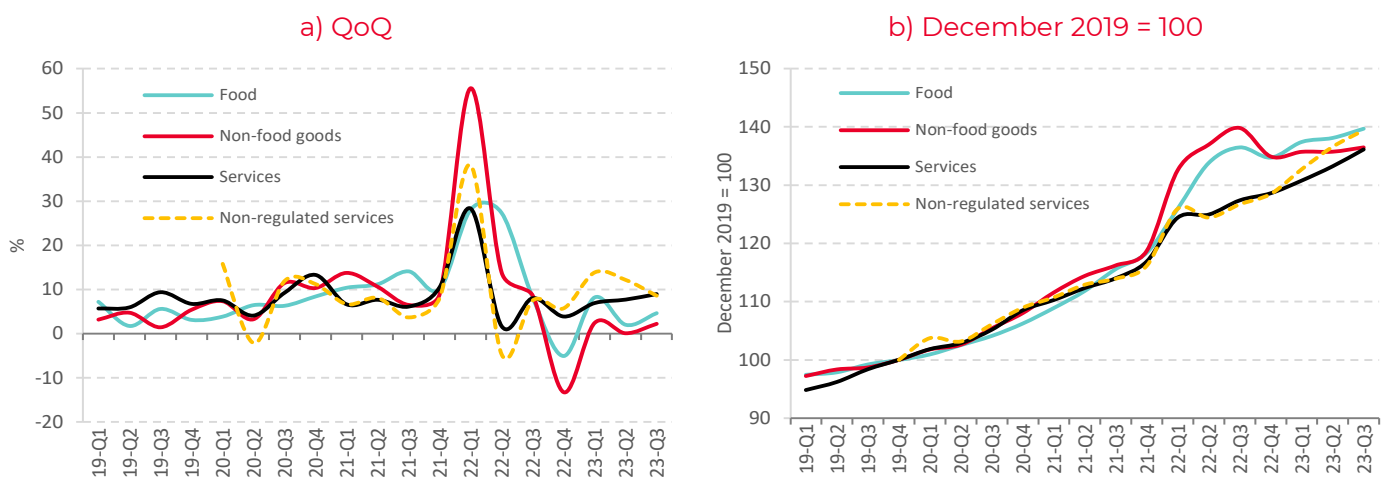
Source: BEROC's calculations based on the Belstat data.
Note: QoQ (quarter-on-quarter) is the annualized growth rate in the last month of the quarter vs the last month of the previous quarter, seasonally adjusted.

Food inflation accelerated due to volatile and government-regulated items

Food prices increased by 4.7% (QoQ) in Q3-2023 (Figure 4.a). The decisive contribution was made by the accelerated increase in prices for fruits and vegetables (by ≈29% (QoQ)), which could be associated with a lower harvest of certain vegetables and fruits in 2023 versus 2022. The rise in prices for tobacco products (by more than 70% (QoQ)) amid increased excise taxes and in public catering prices (by almost 8% (QoQ)), which could be explained by high consumer demand, also had a significant impact (Figure 5.a).

Figure 5. Price dynamics for individual consumer basket items (seasonally adjusted)

a) food prices

b) non-food prices

c) service prices

d) price ratio in Russia and Belarus
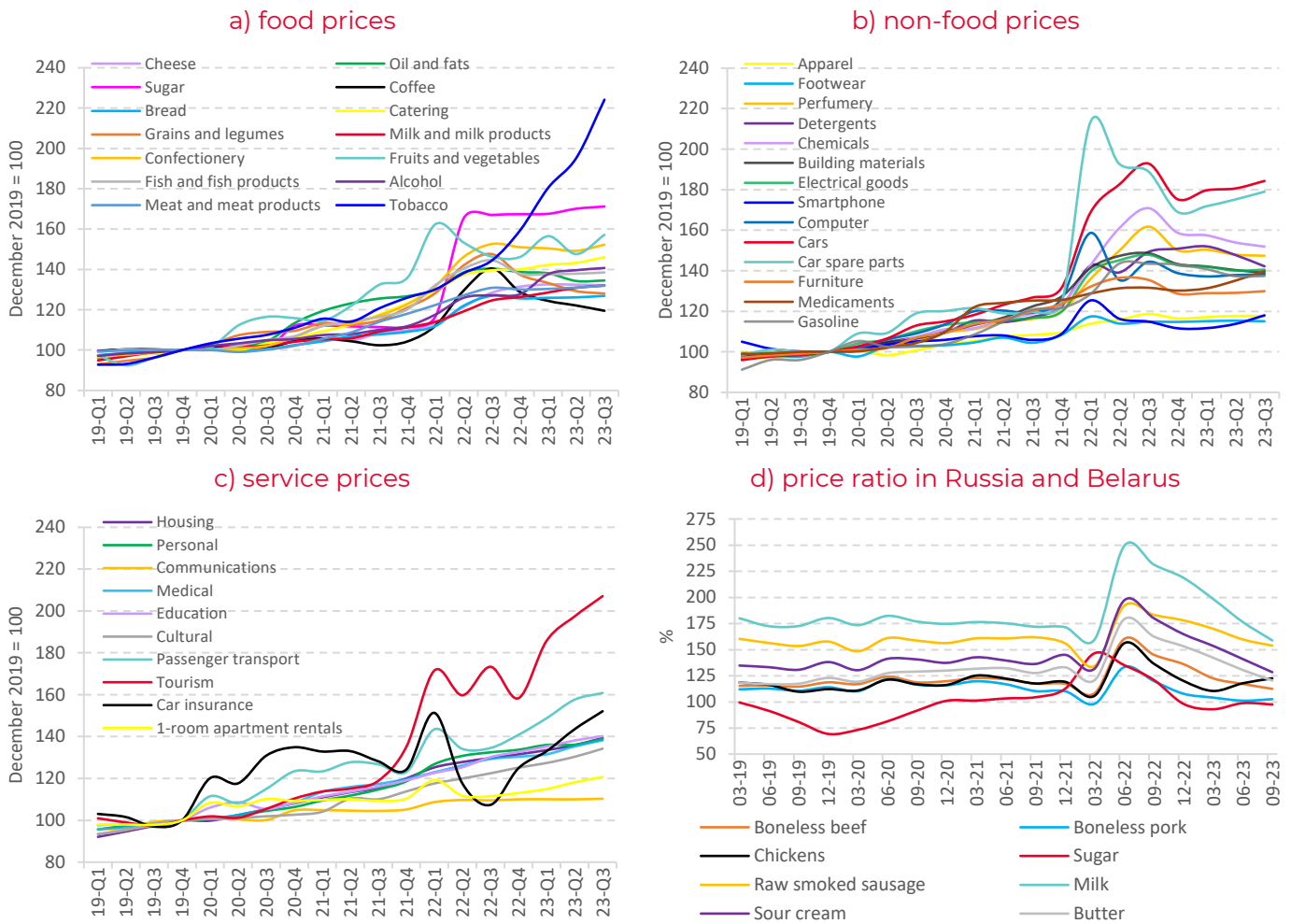
Source: The BEROC's calculations are based on the data by Belstat, the National Bank of Belarus, and Rosstat.
Note: The ratio of prices in Russia and Belarus has been calculated as the ratio of the average price in Russia — recalculated at the average official foreign exchange rate of the Belarusian ruble to the Russian ruble — to the average price of goods in Belarus, multiplied by 100.

Services continued a frontal rise (Figure 5.c), remaining to be an inflation driver

Inflation in the services sector is estimated at 9% (QoQ) in Q3-2023. Price growth for unregulated services — which is a proxy for persistent inflationary pressure — remained high and close to 9% (QoQ), but it slowed down compared to the first half of 2023 (Figure 4.a). The slowdown of the service market inflation is mainly explained by the weakening price dynamics of extremely volatile components (air travel, international rail transportations, and tourism) and health resort services. Probably, the decrease in the growth rate of prices for the specified components was impacted by the heavy strengthening of the Belarusian ruble against the Russian ruble in Q3-2023.

Overall, inflation in unregulated services remained high in Q3-2023 (Figure 4.a). At that, the price level in the considered segment of the consumer basket significantly deviated upward from the price level for non-food products (Figure 4.b). Such dynamics of price indices may indicate the persistence of pro-inflationary pressure in the Belarusian economy, the transformation of which into actual inflation in the goods segment was suppressed by blanket price controls. At that, an increase in the scale of discrepancies in price levels for unregulated services and non-food products may signal that the inflationary overhang is accumulating, which may result in an accelerated rise in prices for goods once the government regulation relaxes.

2 Inflation drivers

No significant inflationary pressure on the Belarusian market from the external sector was observed in Q3-2023; however, the risks of its intensification have increased

Global demand pressure on prices eased in Q3-2023: according to S&P Global PMI, the number of companies reporting high demand as a reason for price increases decreased in September 2023 to one of the lowest levels since early 2021. In the context of weakening global demand for goods, there was no pressure on prices from global supply chains in Q3-2023 (Figure 6.b).

Figure 6. Global commodity prices and price pressures in supply chains

a) commodity prices

b) supply chain pressure indices
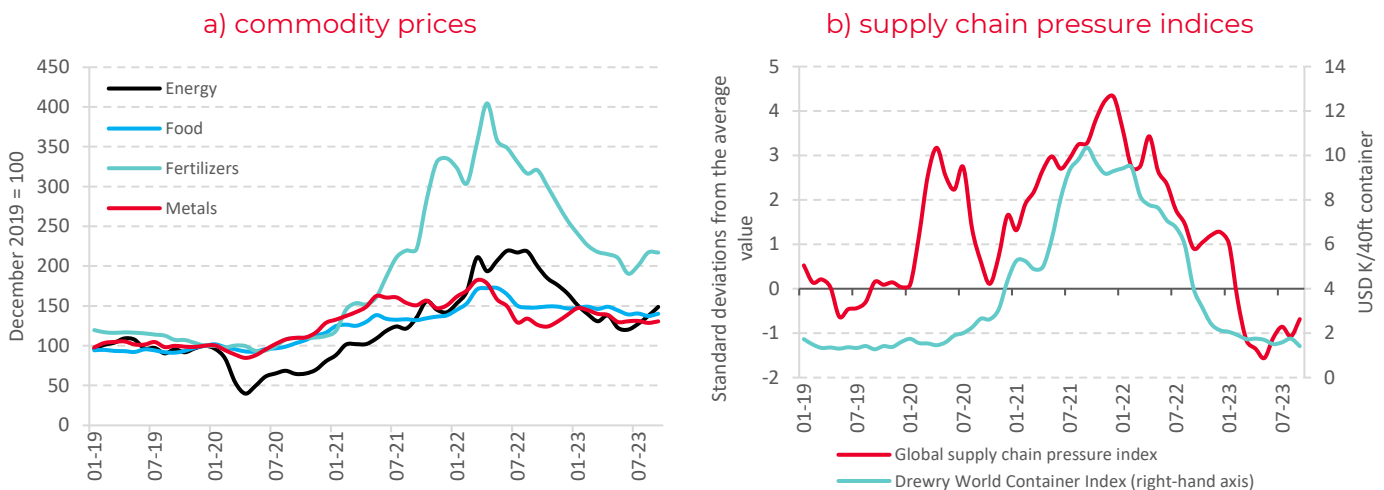
Source: World Bank, Federal Reserve Bank of New York, Drewry World Container Index, Drewry Supply Chain Advisors.
Note: The World Container Index is for the last week of the month.

On the supply side, global price pressure continued in Q3-2023. Changes in the labor market caused by the COVID-19 pandemic continue reflecting in higher labor costs, especially in developed countries. In addition, commodity prices rose on average by 4.8% in Q3-2023 versus Q2-2023 (calculated based on the World Bank US dollar index). The cost of raw materials increased because of the 8.6% increase in US dollar prices for energy commodities in Q3-2023, while non-energy goods fell in price by 2.2% (Figure 6.a).

The threat of escalating hostilities in the Middle East increases the risks of higher energy prices in the short run. The direct inflationary impact on the Belarusian market will be limited due to regulating fuel prices on the domestic market and the continued benefits enjoyed by Belarusian oil refiners due to the discounted Russian Urals oil price versus the Brent oil price. Nonetheless, indirect pro-inflationary effects are possible due to the persistently elevated global inflation (Figure 7).

Figure 7. Global inflation

a) September 2023 (YoY)

b) June 2023 (YoY)
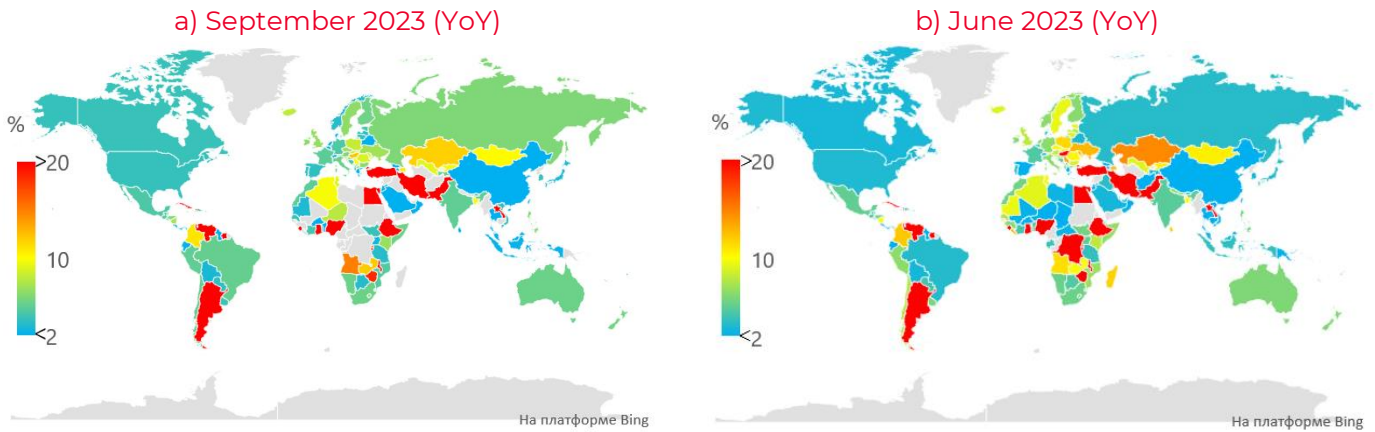
Source: Trading Economics, national statistical agencies.
Note: YoY (year-on-year) is the growth rate in the last month of the quarter vs the last month of the corresponding quarter of the previous year.

Price growth in Russia accelerated significantly in Q3-2023, and it will become an inflationary pressure factor in Q4-2023 in Belarus

The Q3-2023 inflation in Russia is estimated at about 11% (QoQ): this is almost twice as high as in the previous quarter (Figure 8.b). The shortage of workers, the overheating of domestic demand by a large-scale fiscal impulse and the weakening of the Russian ruble were the main price pressure factors in Russia. The above factors will continue to influence inflation in Russia in Q4-2023, which will keep it significantly elevated versus the Bank of Russia's target of 4%. In Q3-2023, the pro-inflationary impact of Russia on the Belarusian market was largely neutralized by the strengthening of the Belarusian ruble against the Russian ruble (Figure 8.a); in Q4-2023, an external price pressure will increase, since the local minimum rate of the RUB/BYN exchange rate was most likely exhausted in Q3-2023.

Figure 8. Decomposition of core inflation in Belarus and inflation in Russia

a) core inflation decomposition, QPM-based (QoQ, logarithmic data)

b) inflation (QoQ) in Belarus and Russia
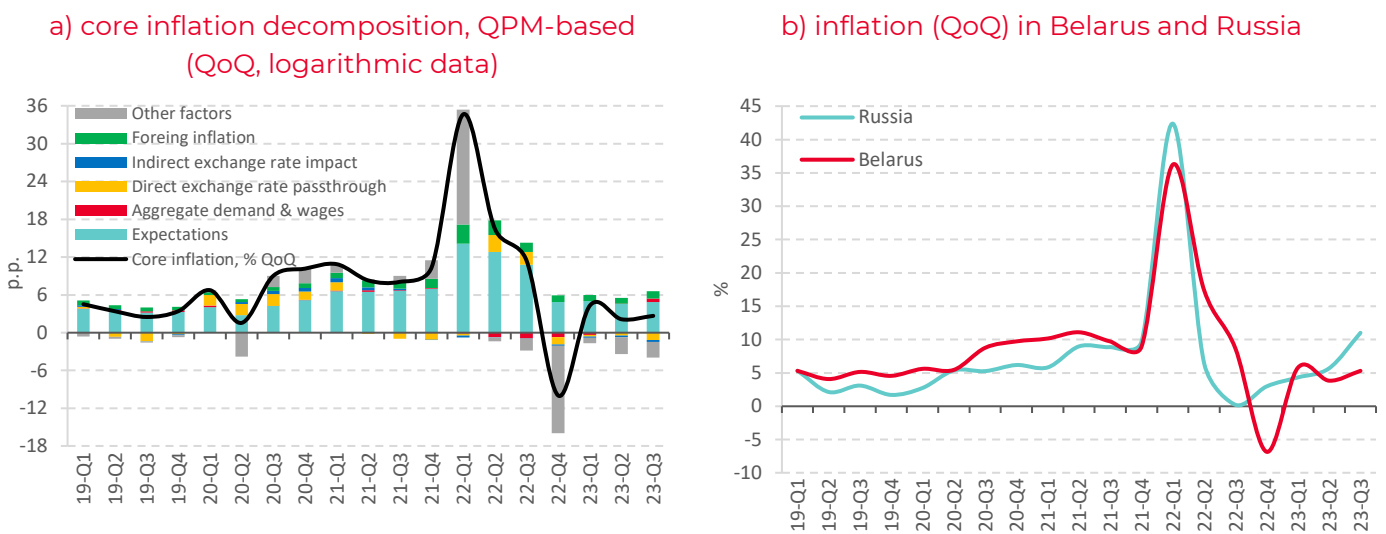
Source: The BEROC's calculations based on QPM BEROC, the data from Belstat and Rosstat.
Note: The contributions of the factors are calculated taking momentum into account; QoQ (quarter-on-quarter) is the annualized growth rate in the last month of the quarter vs the last month of the previous quarter, seasonally adjusted.

## Blanket price controls continued being the main limiter of inflation

The QPM-based decomposition of core inflation indicates that the negative contribution of the factors not explained by the model (which considers the state price regulation impact) to the annualized core inflation value remained significant in Q3-2023 (Figure 8.a). Strict price regulation continued to largely suppress the translation of price pressures into actual price increases, but contributed to the inflationary overhang accumulation.

The state of the exchange rate is considered to be disinflationary in Q3-2023

The Belarusian ruble in nominal terms (measured through the nominal effective exchange rate) appreciated by 4.7% on average in Q3-2023 versus the previous quarter (Figure 9.b), and in terms of a basket of foreign currencies, it appreciated by 2.4%. The Belarusian ruble appreciated by 7.7% against the Russian ruble, while its value decreased against the US dollar, euro and Chinese yuan. The QPM-based estimates show that the exchange rate had a direct disinflationary impact on inflation in Belarus in Q3-2023 (Figure 8.a).

In addition, there was no indirect pro-inflationary impact of the foreign exchange rate on price dynamics associated with the equalization of the price ratio for traded goods within Belarus and in trading partner countries in Q3-2023 (Figure 8.a). In Q3-2023 on average, the Belarusian ruble is estimated to be overvalued versus the equilibrium of the real effective exchange rate (Figure 10.b), and the ratio of prices for traded goods in Russia and Belarus fell below its average 2021 level for most of the items under consideration (Figure 5.d).

Figure 9. Household inflation expectations and dynamics of the Belarusian ruble exchange rates

a) annual inflation expected by households   b) Belarusian ruble exchange rates
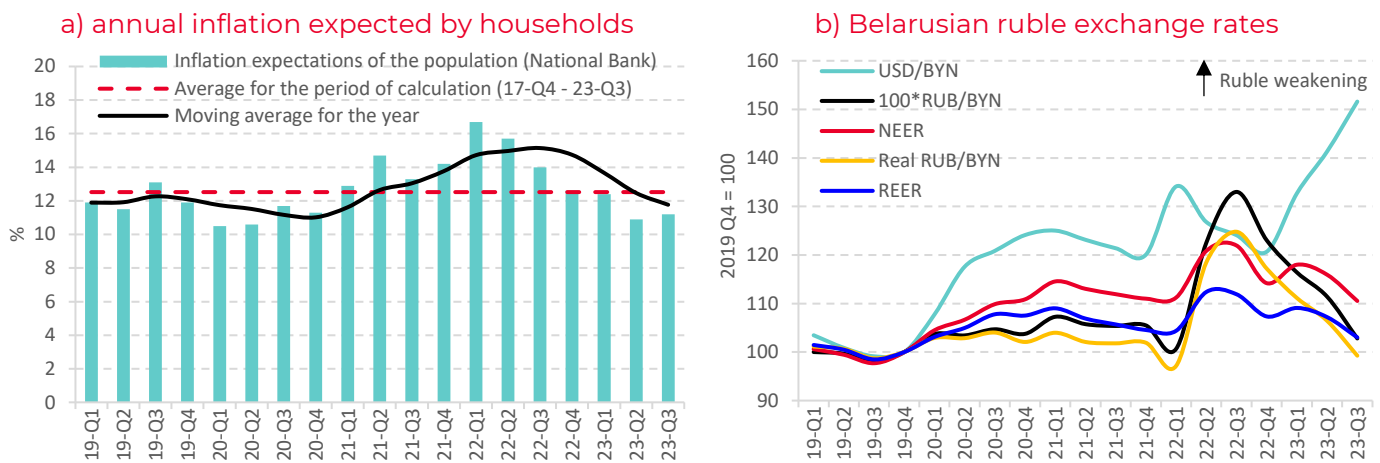
Source: The BEROC's calculations are based on the data by the National Bank of Belarus.
Note: These are the Nominal Effective Exchange Rate (NEER) and the Real Effective Exchange Rate (REER) of the Belarusian ruble.

Inflation expectations slightly increased in Q3-2023, but remained at their historically low levels

The annual price increase expectation of households was 11.2% in September 2023, growing from the 10.9% expectation in June 2023. Higher expectations are likely due to the weakening of the Belarusian ruble against the US dollar and euro. At the same time, inflation expectations remained noticeably below their average: comparably low expectations were observed in the first half of 2020 (Figure 9.a). QPM also generated similar estimates: the contribution of expectations (estimated within the model) to core inflation remained below the 2021-2022 values (Figure 8.a).

Pro-inflationary pressure from domestic demand increased in Q3-2023

According to preliminary estimates, GDP grew by ≈1.5–1.8% in Q3-2023 versus the previous quarter (seasonally adjusted). As a result, the positive output gap widened, and GDP could exceed its equilibrium by more than 2% (based on QPM; Figure 10.a). The widening of the positive output gap indicates overheating of the Belarusian economy in the context of excessive monetary and fiscal stimulus. There is a generating pressure to increase production costs and selling prices due to the limited ability of producers of goods and services to adjust to higher demand.[iii]

Figure 10. Dynamics of internal inflationary pressure indicators
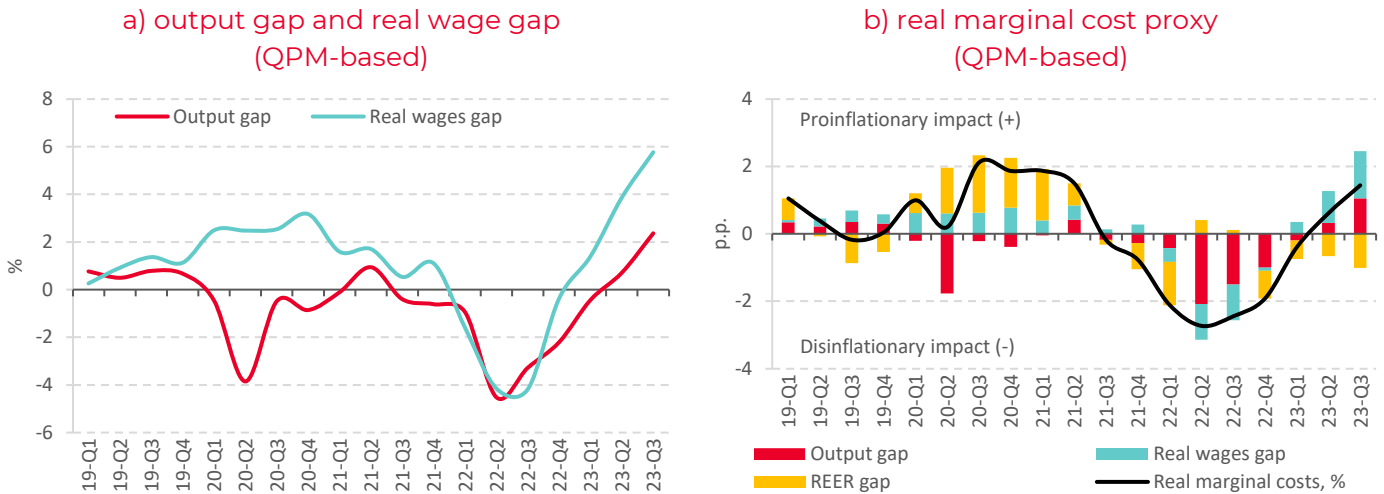
a) output gap and real wage gap (QPM-based)

b) real marginal cost proxy (QPM-based)

Source: The BEROC's calculations are based on the BEROC's Quarterly Projection Model (QPM) for Belarus.
Note: The gaps are re-evaluated once data are available. The real effective exchange rate gap (REER gap) is adjusted for the deviation of relative prices (the ratio of the core CPI to the composite CPI) from the trend.

Wage dynamics become increasingly threatening for inflation

Real wages continued to grow actively in Q3-2023, and their size significantly exceeded the equilibrium (or inflation-neutral) level (Figure 10.a). The rapid growth of wages is explained both by the influence of imbalances in the labor market (shortage of workers) and — very likely — by administrative stimulation (including budgetary methods). The level of wages is becoming increasingly pro-inflationary (Figure 10.b), and its potential negative impact on prices — when government control over prices is getting easier — will increase if large-scale monetary and fiscal stimuli are sustained for a long time.

3 Monetary conditions

Monetary conditions remained stimulating in Q3-2023

The National Bank did not change the refinancing rate and did not regulate the liquidity of banks with market instruments. The liquidity surplus in the banking system remained significant, which supported the nominal rate of the Belarusian ruble interbank market rate of about 1–2%. In this environment, average nominal interest rates on time Belarusian ruble deposits and market loans in Belarusian rubles remained near their historically low levels.

Real interest rates in the credit and deposit market remained below their equilibrium on average as estimated through QPM (Figure 11.a).[iv] Loose monetary conditions supported high growth rates of lending in Belarusian rubles (Figure 11.b). It is noteworthy that there were signs of weakening growth of new loans in Q3-2023, given the overheating economy, but their volume remained significant. In Q3-2023, money supply growth continued to outpace the potential GDP growth in Belarus, which is an additional sign of the inflationary overhang accumulation. In the structure of the Belarusian ruble money supply, the share of cash and current accounts in Q3-2023 remained near its maximum value for twenty years: about 59%.

Figure 11. Monetary conditions

a) components of monetary conditions (QPM-based)

b) debt on BYN loans and M3 (monthly increase, seasonally adjusted)
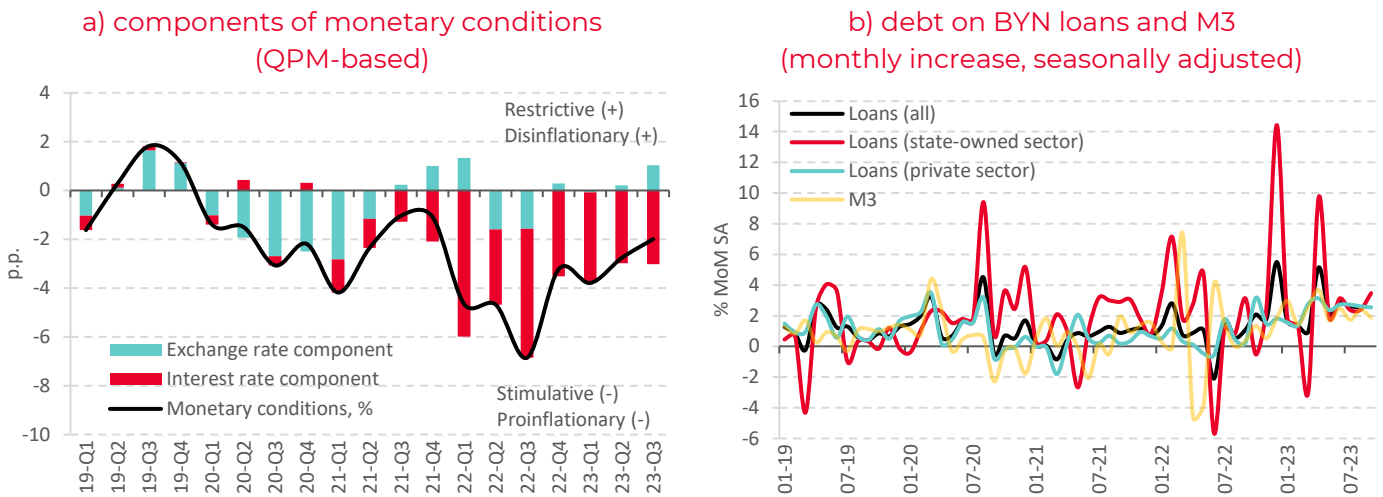
Source: The BEROC's calculations based on QPM BEROC, data from the National Bank of Belarus.
Note: The dynamics of monetary conditions may change once new data are available.

The Belarusian ruble was overvalued in Q3-2023 versus the equilibrium real effective exchange rate (Figure 11.a)

Significant strengthening of the Belarusian ruble against the Russian ruble resulted in the overvaluation of the Belarusian ruble. This helped limit the pro-inflationary consequences of accelerating price growth in Russia for the Belarusian market. At the same time, the competitive advantages of Belarusian manufacturers in the Russian market continued weakening. The impact of the overvalued Belarusian ruble on exports was not pronounced in Q3-2023 largely due to the continued high demand from the Russian military-industrial complex and the operation of adjusted supply schemes for potash fertilizers and petroleum products channeled through Russia.

4 Short-term forecast

Inflation will accelerate to 5—6% (YoY) by the end of 2023

Overheated domestic demand and a significant increase in wages create an environment for increasing costs, which will translate into rising consumer prices (Figure 12.a). In Q4-2023, an additional pro-inflationary impact will be caused by accelerated price growth in Russia and the expected weakening of the Belarusian ruble against a basket of foreign currencies amid deteriorating foreign trade. In addition, in October-November 2023, the shock of the October-November 2022 price decline will be excluded from the annual inflation estimate, which will increase this indicator sharply (Figure 12.b).

Figure 12. Inflation forecast for Belarus
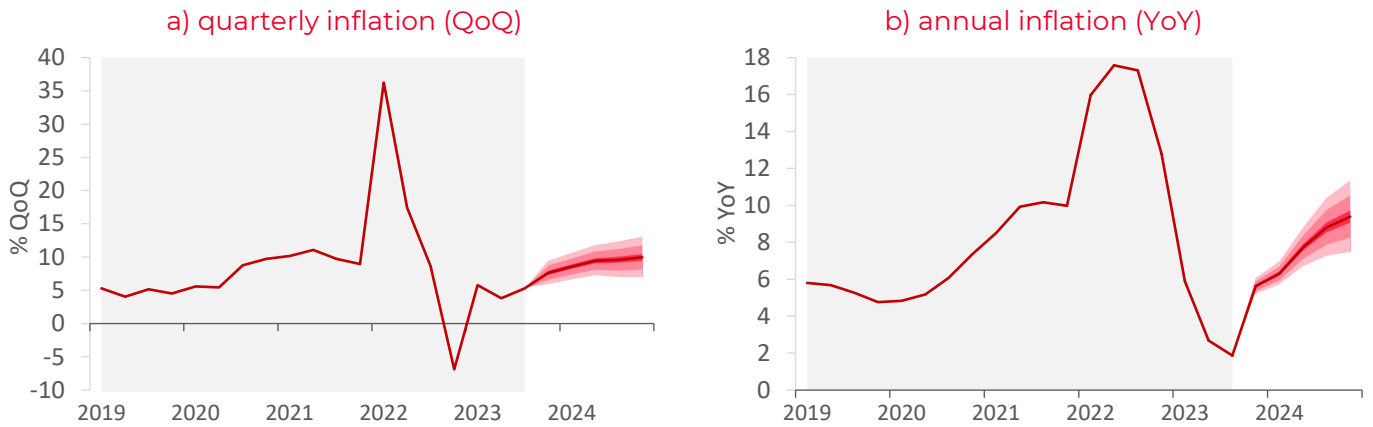
a) quarterly inflation (QoQ)   b) annual inflation (YoY)

Source: The BEROC's calculations are based on the BEROC's Quarterly Projection Model (QPM) for Belarus.
Note: YoY (year-on-year) is the growth rate in the last month of the quarter versus the last month of the corresponding quarter of the previous year; QoQ (quarter-on-quarter) is the annualized growth rate in the last month of the quarter versus the last month of the previous quarter, seasonally adjusted. The Figure shows seasonally adjusted indicators. The ranges in the figure correspond to the 15%, 50% and 75% confidence intervals.

Inflation will accelerate to 8—10% (YoY) in 2024

Translation of market factors into consumer prices will be extended over time if the current price regulation system preserves. The largest pro-inflationary effects generated by excessively stimulating domestic economic policy in 2023 are projected to appear in the second half of 2024. Price pressure from inflation in Russia will remain, but it will weaken in the second half-year of 2024 as the price growth rate slows down in Russia. The contribution of the Belarusian ruble exchange rate to inflation will remain positive due to the weakening of the Belarusian ruble against a basket of currencies.

The baseline scenario assumes that the current price regulation system will continue running in 2024

At the same time, government agencies may be more "willing" to agree to raise selling prices against the backdrop of increasing pressure on manufacturers' costs and a likely deterioration in the financial standing of retailers. The baseline scenario assumes that the accumulated inflationary overhang will not materialize in 2024 rapidly.

The baseline forecast scenario assumes that monetary policy will continue to focus on supporting economic activity, and inflation risks will be of secondary importance

If there are no major shocks, monetary conditions will remain stimulating in 2024. At the same time, the baseline scenario assumes that against the backdrop of accelerating inflation, the National Bank will strive to its levers to prevent even more loosing monetary conditions versus 2023. These tools could include raising reserve requirements for banks, tightening prudential standards to limit lending, and, less likely, returning of the National Bank to actively regulated liquidity in the banking system. Due to the time lag between the adoption of monetary policy measures and their maximum effects on prices, achieving the 6% inflation target by the end of 2024 solely through monetary levers will require a significant tightening of monetary conditions as early as 2023, which appears hardly realistic.

5 Forecasting risks

A prolonged combination of excessively loose monetary policy and blanket price control will lead to the accumulation of a large-scale inflationary overhang

If prices remain highly inflexible in response to changing economic conditions and the scope of monetary stimulus for business activity remains unchanged or expands in 2024, the threat of macroeconomic and financial destabilization will become very likely. It is difficult to project when this will happen, but the negative effects will include a large-scale price surge, a sharp tightening of monetary policy and an economic downturn that may be associated with a banking crisis. An example of such a crisis was the events of 2011; however, the situation is significantly different today because of the currently flexible exchange rate. In Q3-2023 on average, the Belarusian ruble was overvalued in terms of the real effective exchange rate, but the scale of the overvaluation was small in contrast to the late 2010 — early 2011. In this regard, the likelihood of a dramatic devaluation of the national currency seems small even if the risk described above materializes.

Pro-inflationary risks from Russia remain relevant

The threat of stronger negative effects of fiscal stimulus on price stability in Russia and the threat of the Russian ruble exchange rate dynamics (stronger than assumed by the baseline scenario) appear to be quite significant. If this risk materializes, this will lead to a larger price pressure in Belarus and to weakening of the Belarusian ruble in 2024.

Supply chain disruptions may have pro-inflationary consequences

Both the tightening of supply approaches of intermediary countries and the deterioration of the financial standing of Belarusian enterprises can lead to sharp disruptions in both import and export flows. Materialization of this threat — among other things — will lead to a heavier price pressure in Belarus.

The likelihood of accelerating global inflation has increased

The threat of military conflicts to expand in different parts of the world has also increased recently, and these conflicts bear stagflationary consequences for the global economy. For Belarus, materialization of such a scenario is fraught with increased external inflationary pressure.

Risks of lower inflation versus the baseline forecast are associated with a continued tight price controls approach

Strict price controls by the government may continue into 2024, as this tool is now the de facto sole regulator of inflation. In the context of overheating economy, delaying the exit from strict state regulation will be associated with ever greater potential costs in the form of an inflationary surge and a sharp tightening of the monetary policy in the future.

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. 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 QPM used in the preparation of this material has been developed by the BEROC experts. See: Quarterly Projection Model for Belarus: Methodological Aspects and Practical Applications.

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.

Wage gap

This is deviation of real wages from their equilibrium level. A positive gap indicates that wages are above the level corresponding to the potential GDP, and it is an indicator of inflationary pressure. The opposite is true for a negative 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.

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.

Real marginal costs

This is approximation of the incremental costs of producing an additional unit of output. Real marginal costs are a combination of output, wages, and real effective exchange rate gaps. Output and wage gaps approximate the costs of domestic producers, while the real effective exchange rate gap approximates the costs of importers. Positive values indicate a pro-inflationary pressure, and negative values indicate a disinflationary pressure.

Notes

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[i] 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). All quarterly inflation values in the Bulletin (unless indicated otherwise) are presented as annualized (annual equivalent).

[ii] Significant discrepancies in annual inflation indicators have been recorded since March 2023. Official annual inflation figures published by Belstat were 6.03% in March, 4.73% in April, 3.70% in May, 2.86% in June, 2.69% in July, 2.29% in August, and 2.04% in September 2023. The estimated values based on the Consumer Price Index published by Belstat (December 1990 = 100) (and monthly inflation rates with two decimal places) were 5.84% in March, 4.57% in April, 3.53% in May, 2.68% in June, 2.46% in July, 2.08% in August, and 1.87% in September 2023. Average discrepancy between the two indicators was 0.185 p.p., while the discrepancy did not exceed 0.06 p.p. (absolute value) during the period from January 2020 to February 2023. Possibly, when calculating annual inflation, Belstat began to use monthly inflation rates for 2022 that were different from those published, but there was no explanation provided by this statistical agency.

[iii] According to the Ministry of Economy of Belarus, production capacity utilization in the industrial production sector in September 2023 reached its highest level since 2013: 70%. According to Belstat, the number of people employed in the economy decreased by 1.6% (YoY) in January–August 2023 after a 1.6% decrease (YoY) in 2022. The ratio of the number of unemployed (according to Belstat) to the number of vacancies (according to the Ministry of Labor and Social Protection) dropped to 1.4 unemployed per vacancy (seasonality adjusted) in Q3-2023. By contrast, the indicator averaged 1.9 in 2022, 2.2 in 2021, 2.7 in 2020, and 2.5 in 2019.

[iv] Expert opinions were introduced into QPM in Q4-2022 and in Q1—Q3-2023 to correctly assess the deviation of real interest rates from their equilibrium (neutral) levels. This is because the introduction of a new price control system led to ad-hoc price reductions in Q4-2022, which significantly reduced rational inflation expectations estimated in QPM directly. Since rational expectations are used in the model to calculate real interest rates, their sharp decline has sharply increased the real interest rate estimates. Nonetheless, nominal interest rates on Belarusian ruble loans and deposits in the period under review rewrote their historical lows several times: lending was growing rapidly, and the share of "fast" money in the money supply structure reached its maximum for the first time in more than twenty years. To eliminate the ad-hoc impact of price declines on the estimates of the monetary conditions, the impact of the core inflation shock on the change in rational inflationary expectations in the period under review was evaluated and the estimates of the deviation of real interest rates from their equilibrium (neutral) levels were adjusted for the scale of this impact.