Belarus Economy Monitor:
trends, attitudes and expectations

Inflation Review

November 2022

https://beroc.org
beroc@beroc.by

In Belarus, inflationary pressures eased in Q3-2022, but risks of persistent runaway inflation are high

In Q3-2022, inflation was 9.2% QoQ (annualized, seasonally adjusted), which was 1.7 times less than in Q2. Annual price growth slowed down to 17.4% (YoY) in September. The weakening of domestic demand and adjusting strengthening of the Belarusian ruble against the foreign currency basket since its peak in early July reduced inflationary pressure in the economy. Higher yield of agricultural crops had a disinflationary impact in Q3. Despite the inflation slowdown, its rates remained elevated due to the disruption of production, logistics and financial chains, and due to the persistent undervaluation of the Belarusian ruble against the Russian ruble. Tighter price regulation can lead to a temporary slowdown in annual inflation to 14–16% (YoY) by the end of 2022. At the same time, there are higher risks of a shrinking product range, deterioration in the properties of goods and services, and accelerated price growth once the regulation eases. Given the probable continuation of loose monetary policy next year, inflation may remain elevated in 2023 (Figure 1).

Figure 1. Dynamics and forecast of consumer inflation in Belarus, % (YoY)

Source: BEROC's calculations based on the BEROC's Quarterly Prediction 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.

The Inflation Review Bulletin is an expert analysis of inflationary processes in the consumer market. The bulletin depicts the dynamics of price indices, analyzes the drivers of inflationary processes, assesses the nature of monetary conditions, and provides a short-term inflation 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 November 2022, it is in the pilot phase.

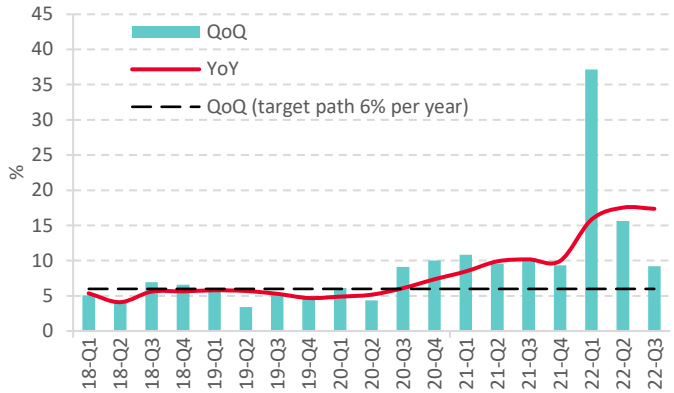
1 Dynamics of inflationary processes

Price pressure eased in Q3-2022, but inflation remained high

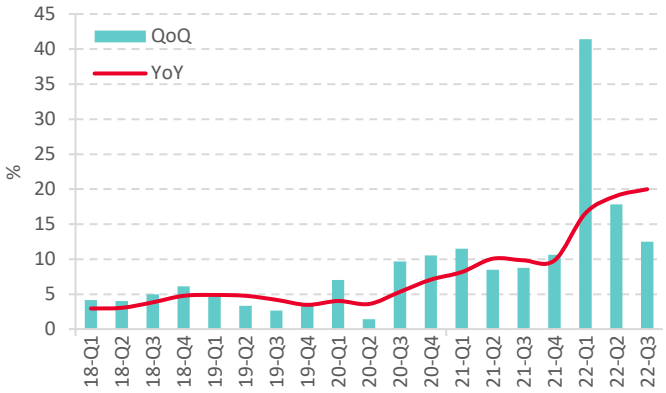
In Q3, annualized inflation was 9.2%, seasonally adjusted (hereinafter referred to as "%, QoQ").[1] Quarterly price growth continued to slow down and dropped to the values of the second half of 2020-2021 (Figure 2.a). As a result, annual inflation decreased from 17.6% in June to 17.4% in September (hereinafter referred to as "%, YoY"). The inflation slowdown was largely due to a decreasing growth of regulated prices and decreasing costs of fruits and vegetables. The core inflation dynamics had a less pronounced slowing down trend in Q3 (Figure 2.b).

Figure 2. Dynamics of overall and core inflation

a) overall inflation;



b) core inflation.



Source: BEROC's calculations based on the Belstat data.

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.

Slowdown in food prices is a key factor for lowering inflation

In Q3, food inflation was estimated at 7.8% (QoQ) following 26.1% (QoQ) in March-June (Figure 3.a). Seasonally adjusted price growth slowed down for 26 out of 28 large items of food products in the consumer basket. Such dynamics was largely facilitated by the new crop harvest, which turned out to be relatively high (Figure 7). Nonetheless, despite the slowdown in food inflation, prices decreased in Q3 only for fruits and vegetables: their prices dropped by over 12% (QoQ). Prices for 27 other aggregated commodity items continued growing (once seasonally adjusted) mostly at high rates: there was a median price increase of 13.7% (QoQ). This indicates that inflationary pressure persists due to the increased costs of producers in the economy as a whole due to higher transportation, logistics and financial costs, as well as due to the undervaluation of the Belarusian ruble against the Russian ruble.

[1] 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). In the bulletin, all quarterly inflation values are presented as annualized (annual equivalent).

Growth in prices for non-food products slowed down from 13.6% (QoQ) in Q2 to 9.7% (QoQ) in Q3

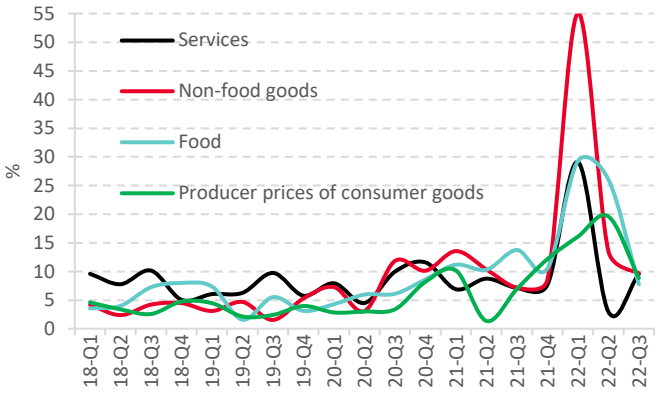
The weakening of consumer demand and the strengthening of the Belarusian ruble against the US dollar and the euro hold back inflation in the non-food segment. At the same time, even against the backdrop of the improving business sentiment,[2] price adjustment was limited in Q3: only 7 out of 48 aggregated non-food items in the consumer basket got cheaper over the quarter. Costs of cars, detergents, perfumery and cosmetics, building materials, computers and other goods with a high import content continued rising (Figure 3.b). This may indicate the pressure of the increased costs due to restructuring of transportation and logistics chains, and settlement and payment procedures.

Consumer service prices rose by 9.6% (QoQ) in Q3: this price increase pace was significantly higher than in Q2 when it was 2.9% (QoQ)

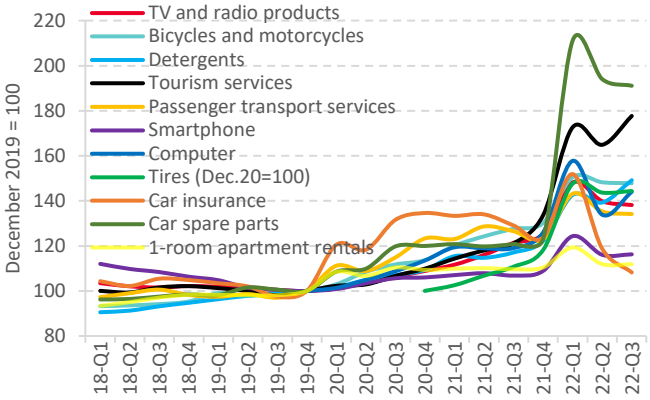
The slowdown (versus Q2) in the pace of the Belarusian ruble strengthening against the US dollar and the euro led to a significant weakening of the downward price dynamics in passenger transportations, car insurance, and apartment rentals (Figure 3.b). Most of the other consolidated items of services continued rising in prices (once seasonally adjusted), and this was especially seen in such service sectors as education, tourism and hotels, and banking. Probably, in the case of banking services, there was an impact of sanctions and changes in the operating conditions in the banking sector.

Figure 3. Dynamics of inflation components and consumer goods producer prices

a) QoQ;



b) prices for selected consumer goods and services (seasonally adjusted).



Source: BEROC's calculations based on the Belstat data.

Sustained price pressure indicators lowered in Q3-2022

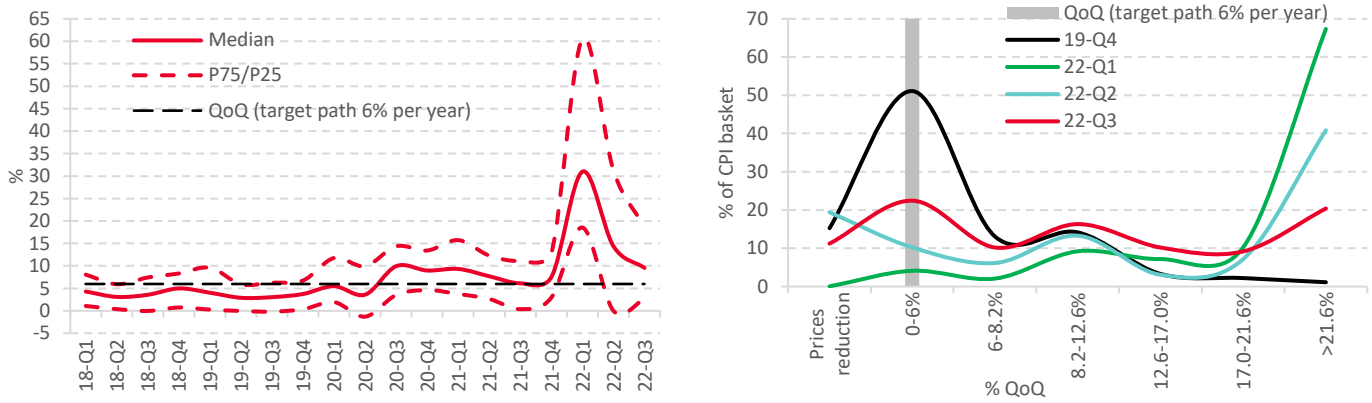
Core inflation in Q3 is estimated at 12.5% (QoQ) versus 17.8% (QoQ) in Q2, and median inflation is estimated at 9.5% (QoQ) in Q3 versus 14.4% (QoQ) in Q2 (Figure 2.b; Figure 4.a). The dynamics of the indicators points to the weakening of inflationary pressure in the consumer market; however, the core and median inflation rates exceeded the targets. The cost dynamics of the consumer basket components remained heterogeneous in Q3; however, the dispersion of price growth rates decreased (Figure 4.a).

[2] See: Economic sentiment and expectations of firms (BEROC, 2022).

The share of consolidated items in the consumer basket decreased noticeably, the prices for which grew at an extremely high rate in Q3 (Figure 4.b). However, at the same time, 66% of the components continued to rise in price at a rate exceeding the target trajectory of 6% (QoQ). The share of consolidated items, the prices for which decreased or grew at a rate not exceeding 6% (QoQ), was 33.7% in Q3, which is only 4.1 p.p. higher than in Q2. By contrast, the share of such consolidated items averaged 69% in 2019, 44% in 2020, and 42% in 2021.

Figure 4. Dynamics of median inflation and distribution of relative price growth

a) median inflation (QoQ); b) price increment distribution (QoQ).



Source: BEROC's calculations based on the Belstat data.

Note: Median inflation and price increment distribution are calculated using data from 98 aggregated commodities in the consumer price basket. P75 and P25 are the 75th and 25th percentiles, respectively (prices for 25% of goods rise faster than the inflation for the 75th percentile, and prices for another 25% of goods rise slower than the inflation of the 25th percentile).

2 Inflation drivers

Price pressure from commodity markets continued to ease in Q3

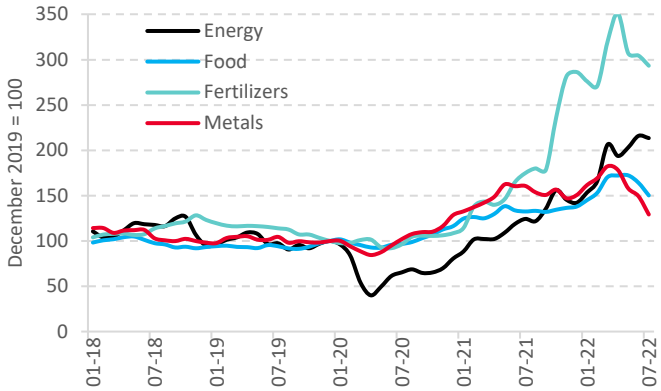
The World Bank US dollar price index for non-energy goods decreased by ≈13% in Q3 versus Q2, and it was only 2.6% higher than in Q3-2021. Monetary policy tightening in developed countries, gradual "cooling" of the global business activity, and increased fears of an imminent global recession contributed to a downward adjustment in commodity prices in July-September (Figure 5.a). The resumption of deliveries from Ukraine gave an additional impetus to reducing the cost of food on the global market. Nonetheless, the risks of failures in the exports of grain, oils and other commodities from Ukraine have increased in autumn, which may lead to high volatility in food prices.

According to the World Bank, energy prices rose by 2.6% in Q3 versus Q2 and by almost 65% versus Q3-2021 (Figure 5.a). This dynamics is predominantly explained by the rising gas prices in Europe due to a reduction in Russian pipeline supplies (by about 80% (YoY) in September 2022, according to the IMF). The rise in gas prices in Europe has not been affecting prices in Belarus directly: the country has been importing natural gas from Russia at a fixed preferential price of about US $130 per 1,000 m^3. At the same time, an indirect effect may be significant for Belarus: rising prices for consumer and investment imports from third countries — primarily European ones — due to their higher inflation against the backdrop of higher energy costs (Figure 6.a).

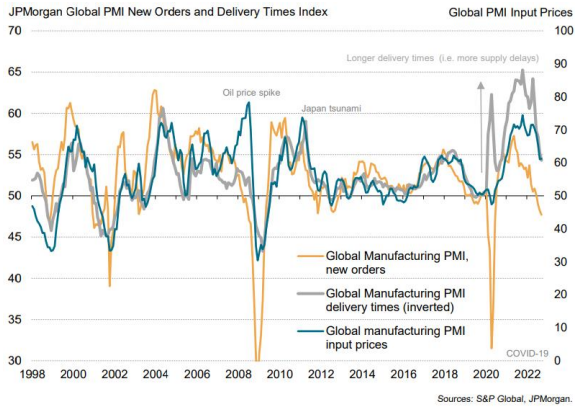
Global oil prices adjusted downward in Q3 amid weakening global business activity, but remained over 30% higher than the last year's prices. Adjustments of oil quotations prevented a fuel price increase in Belarus in Q3. This could be also facilitated by the agreements with Russia on applying a reverse excise duty to Belarusian refineries.

Figure 5. World commodity prices and global supply delays

a) commodity prices;



b) demand, costs, and shipment delays.[3]

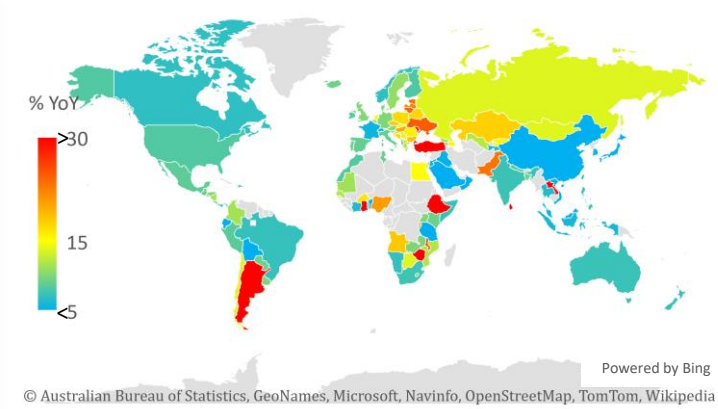


Source: World Bank, S&P Global, JPMorgan.

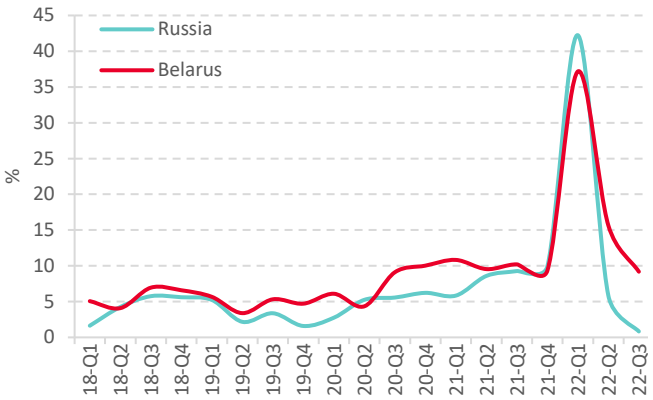
Industrial producers' cost growth rates slowed down globally in Q3 amid weakening business activity, adjustments of commodity prices, and lower container shipping costs (Figure 5.b). The situation with delivery delays showed signs of getting back to normal in Q3: the inverted Delivery Time Index remained higher than the 50 points threshold in Q3; nonetheless, it significantly decreased versus the previous period (Figure 5.b).

Figure 6. Global inflation dynamics

a) global inflation, September 2022 (YoY);



b) inflation (QoQ) in Belarus and Russia.



Source: Trading Economics, national statistical agencies, BEROC's calculations.

[3] PMI (Purchasing Managers Index) is a survey-based indicator of a business environment in a particular industry. PMI and its sub-indices are calculated based on monthly surveys of purchasing managers. PMIs are calculated as diffuse indices, and they range from 0 to 100, where readings above 50 indicate an increase versus the previous month, and readings below 50 indicate a decrease versus the previous month. Data source: S&P Global, JPMorgan (https://ihsmarkit.com/research-analysis/week-ahead-economic-preview-week-of-10-october-2022.html).

Inflation has slowed down significantly in Russia, the key trading partner of Belarus

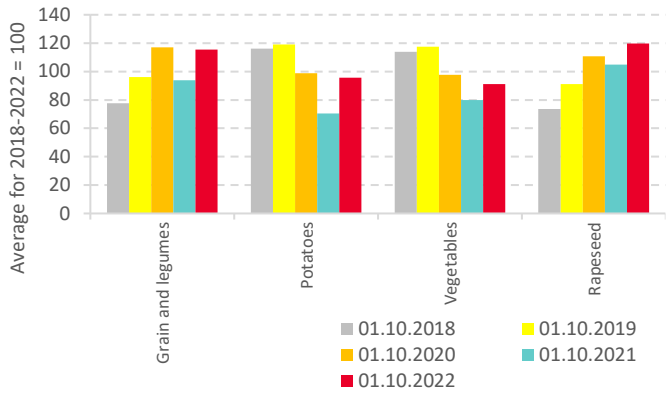
Price growth in Russia lowered from 5.8% (QoQ) in Q2 to 0.8% (QoQ) in Q3. At the same time, there was deflation from June to August in Russia amid weak consumer demand, the strengthening of the Russian ruble, and higher crop yields. The slowdown in price growth in Russia could help reduce inflation imported to Belarus. The inflation slowdown turned out to be noticeably more pronounced in Russia than in Belarus (Figure 6.b). Such a discrepancy in the dynamics of price indicators can be explained by the pro-inflationary effect of the undervaluation of the Belarusian ruble against the Russian ruble, and by a larger-scale monetary policy easing in Belarus.

Higher agricultural crop yields contributed to curbing inflation in Q3

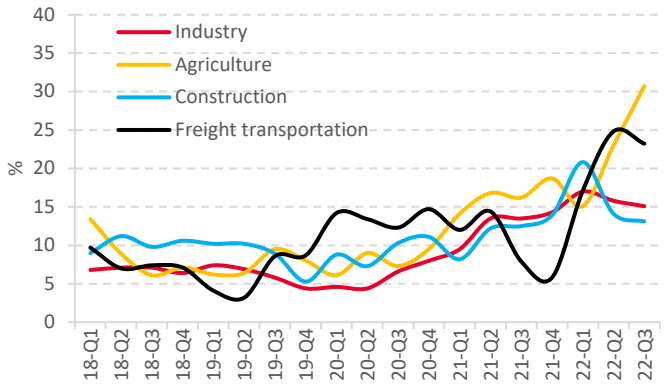
Gross grains and legumes yields increased by 23% as of October 1, 2022 versus October 1, 2021; gross potatoes yield increased by 35.8%; gross vegetables yield increased by 14.3%; and gross rapeseed yield increased by 14.1% (Figure 7.a). At that, it is important that crop productivity has also increased: yielding capacity of grain and legumes has increased by 19.5%; yielding capacity of potatoes has increased by 15.1%; yielding capacity of vegetables has increased by 18%, and yielding capacity of rapeseed has increased by 15.1%. At the same time, the disinflationary impact of higher agricultural crop yields in Q3 was largely offset by the undervaluation of the Belarusian ruble against the Russian ruble and by the increased costs of Belarusian producers (Figure 7.b).

Figure 7. Gross crop yield and producer inflation in Belarus

a) gross yield;



b) producer inflation (YoY).



Source: BEROC's calculations based on the Belstat data.
Note: Gross crop yield is standardized, and it takes the October 1 average for 2018-2022 as a reference equal to 100.

Domestic economic activity remained disinflationary

The Belarusian economy could have rebounded from the local trough in Q3-2022. According to preliminary estimates, the seasonally adjusted GDP[4] grew by 1–1.5% versus Q2-2022. This growth can be considered as a slight adjustment after a rapid fall of 6.5% in Q2 versus Q1.

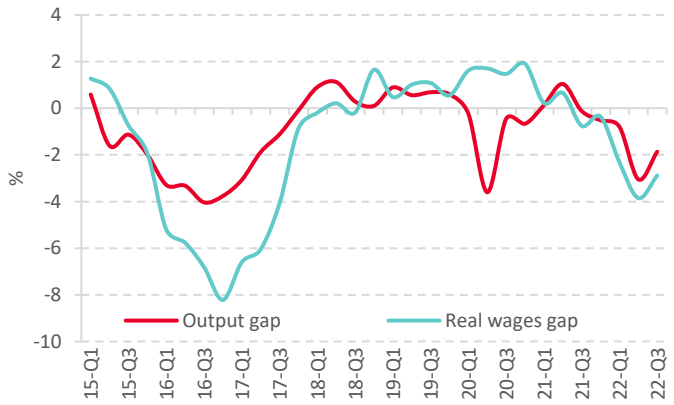
[4] Near the turning points (i.e., a reversal of the GDP dynamics), various seasonal adjustments can lead to different diagnostics of the GDP dynamics on the recent observations. The GDP growth in Q3-2022 is estimated using the X13 procedure in the JDemetra+ software application. The corresponding procedure is applied for the seasonal adjustment of variables in QPM BEROC, and the corresponding seasonally adjusted GDP series is used in this bulletin. However, other seasonal adjustment procedures can generate different results near turning points. E.g., the seasonal adjustment procedure used under the BEROC quarterly economic review indicates a continuing GDP decline in Q3-2022.

The recovery of economic activity was facilitated by a partial reorientation to Russia of the exports affected by sanctions, by the resumption — albeit much smaller versus last year — of supplies of potash fertilizers and oil products to the global market, by keeping soft monetary conditions, and by higher agricultural crop yields.

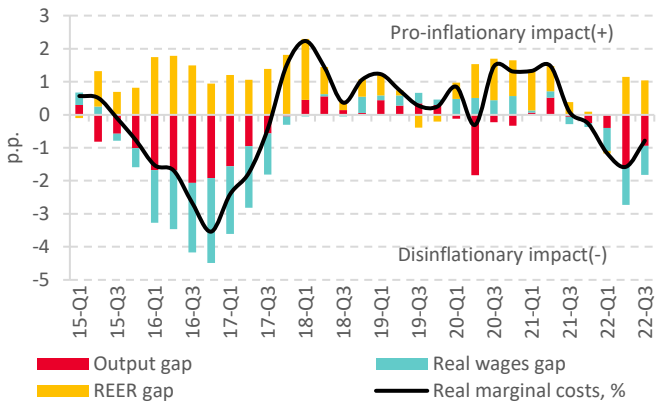
The GDP growth recovery led to narrowing the negative output gap from about 3% in Q2 to about 2% in Q3 (based on QPM; Figure 8.a). In general, this indicates a persisting weak aggregate demand in July-September and its disinflationary effect (Figure 8.b). The obtained QPM results correlate with the survey indicators: low demand became the Top 1 barrier in the ranking of the growth barriers to SME business activity in August 2022.[5]

Figure 8. Dynamics of indicators of internal inflationary pressure[6]

a) output gap and real wages gap (QPM-based);



b) real marginal cost proxy (QPM-based).



Source: BEROC's calculations based on the BEROC's Quarterly Prediction Model (QPM) for Belarus.
Note: The gaps are re-evaluated once data arrives. 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.

In Q3, real wages increased by about 1% (seasonally adjusted) versus the previous period amid a restrained output growth and, probably, government support provided to the public sector. The adjustment dynamics turned out to be weak: real wages remained below their equilibrium level; this indicates a persisting disinflationary cost pressure on labor (Figure 8.b).

Inflation expectations remained high in Q3

According to the National Bank data, in September 2022, the population expected a price increase of 14% within the following 12 months. Inflation expectations decreased by 1.7 percentage points since the previous survey in June, but still remained above the levels of previous years: 13.8% on average in 2021; 11% in 2020; 12.1% in 2019. The indicator dynamics is generally in line with the SME survey results, which indicate a slight decrease in the projected rise in selling prices while maintaining generally high inflation expectations. [5]

[5] See: Economic sentiment and expectations of firms (BEROC, 2022).

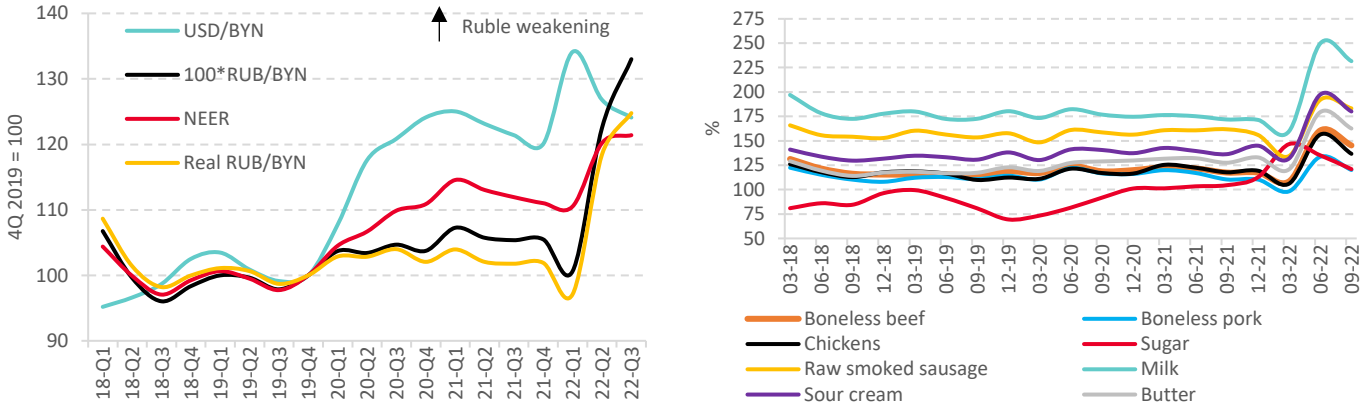
[6] Estimating unobservable indicators is subject to an extremely high degree of uncertainty in the current context since it is difficult to isolate structural and cyclical factors of change in macro variables. Estimates can become more accurate in a few quarters once the economic activity recovery trajectory becomes clearer.

The exchange rate factor was still pro-inflationary in Q3 mainly due to large price differentials between the markets of Belarus and Russia

On average, the nominal effective exchange rate of the Belarusian ruble (NEER) added 1% in Q3 to the average value in Q2 (Figure 9.a). Such dynamics mainly reflects the effects of a significant weakening of BYN against RUB at the end of Q2, which led to a high average RUB/BYN value in Q3. As a result, the Belarusian ruble weakened on average against the Russian ruble in real terms over Q3 (Figure 9.a). This was seen in the persisting significant price disparity between Russia and Belarus, which had a pro-inflationary effect on the Belarusian market (Figure 9.b). The impact of this factor could be one of the reasons for the continued high growth rates of prices for meat and meat products (over 12% (QoQ) in July-September), milk and dairy products (≈20% (QoQ)), cheese (≈25% (QoQ)), and other food products supplied to Russia.

Figure 9. Dynamics of the Belarusian ruble exchange rates and price disparity in Russia and Belarus

a) Belarusian ruble forex rates; b) price ratio in Russia and Belarus.



Source: BEROC's calculations based on the data by Belstat, Rosstat, National Bank.
Note: NEER is the nominal effective exchange rate of the Belarusian ruble. The price disparity is 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.

Production and logistics gaps remained a significant pro-inflationary factor in Q3

In August 2022, among the 7 barriers of the ranking of business growth barriers to SMEs, five barriers were factors related to the challenges in logistics, settlements and payments. Top 3 through to Top 7 barriers were supply chain disruptions, shortages of raw materials and components, production chain disruptions, supply chain challenges, and payment challenges due to the imposed sanctions.[7] The impact of these factors increases the costs of producers and suppliers (Figure 7.b), thus maintaining an increased inflationary background in the consumer market as well. It is noteworthy that the prices of the investment goods' producers continued growing most rapidly among the segments of manufacturers of industrial products in Q3. This probably indicates the challenges in establishing intermediate and investment product supplies to Belarus.

[7] See: Economic sentiment and expectations of firms (BEROC, 2022).

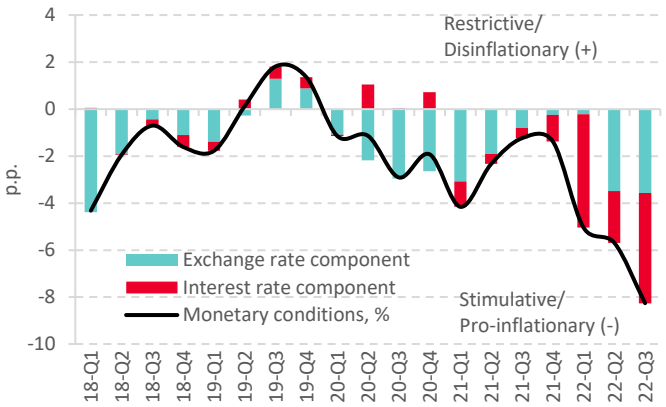
3 Monetary conditions

Monetary conditions remained soft and pro-inflationary in Q3

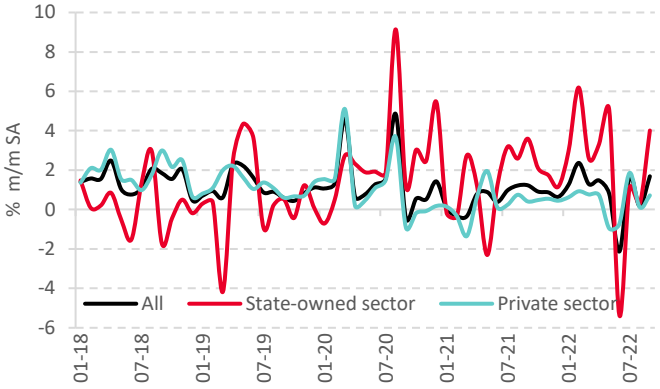
A significant liquidity surplus remained in the banking system in Q3, and the National Bank suspended operations to regulate it. As a result, the interest rates in the interbank and credit-deposit markets reduced noticeably and remained well below their equilibrium levels as estimated by using the QPM (Figure 10.a). At that, the impact of low rates (relative to equilibrium rates) on lending was limited in Q3 (Figure 10.b). It is likely that lending activity continues to be constrained by the uncertainty of investments in business expansion in the current environment and by the limited credit supply from banks amid high risks. As far as retail deposits were concerned, lowered interest rates slowed down the growth of fixed-term Belarusian ruble deposits (excluding accrued interest) to 0.5% on average per month in July-September versus 1.1% in April-June. At the same time, foreign currency deposits grew against the backdrop of decreasing attractiveness of deposits in Belarusian rubles.

Figure 10. Monetary conditions

a) components of monetary conditions (QPM-based);



b) ruble loan debt (monthly increase, seasonally adjusted).



Source: BEROC's calculations.
Note: The dynamics of monetary conditions may change once new data arrives.

The Belarusian ruble remained undervalued on average in Q3

The Belarusian ruble remained undervalued by about 7% on average in Q3 (relatively to the equilibrium level of the Real Effective Exchange Rate according to the QPM (Figure 10.a)). As a result, the foreign exchange rate factor retained its pro-inflationary influence, at the same time contributing to the strengthening of the price competitiveness of Belarusian exporters. It should be noted that the undervaluation of the Belarusian ruble could decrease in the end of Q3 due to a significant strengthening of BYN against RUB. It is quite likely that this contributed to the weakening of the FX factor pressure on prices already in September.

4 Short-term forecast

Tighter price regulation in Belarus significantly complicates inflation forecasting and increases forecasting uncertainty

The base scenario of the forecast suggests that strict adherence to the moratorium on price increases will be short-term (from several months to half a year). Subsequently, in the face of a growing threat of a shortage of goods and a likely deterioration in the financial standing of organizations and individual entrepreneurs, it is quite possible that the price regulations will be getting softer or the price increase regulatory provisions will be proactively applied upon consent of the government agencies.

Inflation may slow down to 14–16% by the year-end due to tighter price regulation

The "reconfiguration" of production and logistics chains and settlement mechanisms will continue exerting pressures on costs and prices in the remaining months of 2022. The foreign exchange rate factor will retain its pro-inflationary influence due to the undervaluation of the Belarusian ruble against the Russian ruble; however, the degree of this influence may decrease due to adjustment strengthening of BYN against RUB. The disinflationary impact of weakened domestic demand will continue. A relatively high grain harvest in Belarus may also hold prices back. As a result, considering price regulation tightening, inflation is expected to be in the range of 14–16% by the end of 2022 (Figure 1).

Inflation may slow down to 7-11% in 2023

In the baseline scenario, no increase in external inflationary pressure is expected next year; and the scenario of a slowing down global economy or even its entry into recession looks more and more likely. Domestic economic activity is expected to be subdued, but its disinflationary impact may reduce. It is plausible that attempting to hit the GDP growth target, the issuance lending to the economy will remain significant, and monetary conditions will remain soft. This may lead to bridging the negative output gap from 1.5% on average in 2022 to less than 1% in 2023, but at the cost of keeping inflation at elevated levels. The pressure on costs and prices due to the breakage of economic ties with Ukraine, the EU and other countries may ease next year, but it seems problematic to level it fully. Inflationary expectations will also remain high: they may even increase due to the voluntaristic price regulation policy. As a result, inflation will remain above the 6% target in 2023, and it can reach 7–11% by the end of 2023 (Figure 1).

5 Forecasting risks

It is impossible to assess the scale of applying the price increase mechanism through coordinating price increases with the government agencies

It cannot be ruled out that this mechanism will be actively used rather quickly to prevent the escalation of the negative consequences of price freezing and social shocks. However, the degree of price regulation rigorousness is currently unknown, as well as whether it is practically possible to raise prices. A long period of frozen prices for goods and services will result in emerging local — and possibly systemic — deficits. A price surge is likely immediately after the regulation is eased.

Maintaining excessively loose monetary policy in the coming year may lead to a prolonged period of galloping inflation

It is extremely unlikely that the government's target of 3.8% GDP growth in 2023 will be achieved if the sanctions continue and if the Russia's GDP drops by 2–4% next year as projected by international organizations.[8] It is very likely that the government will intensify its pressure on the National Bank attempting to achieve the planned growth rate. One cannot rule out a significant increase in emission financing of the economy and maintaining interest rates on loans and deposits well below their neutral levels. Given the uncertainty of setting up the production and logistics chains, an ultra-soft monetary policy is fraught with fixing a double-digit inflation.

The likelihood of materializing the scenario of a significant weakening of the Russian ruble against the US dollar in 2023 poses the risks of a serious devaluation of the Belarusian currency

Devaluation of the Russian ruble close to 80 RUB per USD or more is probable in the event of a large-scale drop in Russian oil and gas exports due to the sanctions policy of the EU, the US, the UK, and other countries. If such a scenario comes true, the Belarusian ruble may strongly weaken against the US dollar and the euro. At that, due to the need to support the competitiveness of Belarusian goods on the Russian market, the Belarusian ruble exchange rate to the Russian ruble may remain at least close to 4 BYN per 100 RUB.

Active escalation of hostilities in Ukraine can drive up energy and food prices, which will be a pro-inflationary factor for Belarus

Risks may materialize if food supplies from Ukraine and Russia are disrupted and if there is a significant shrinkage in the supplies of energy commodities and metals on the global market. If the risks materialize, they can be partially mitigated by lower global demand for raw materials once a probable global recession scenario comes true in 2023. Moreover, higher degree of isolation of the economies of Belarus and Russia reduces their exposure to shocks in the global commodity markets.

[8] The IMF forecasts a decline in Russia's GDP by 2.3% in 2023; the World Bank forecasts a decline in Russia's GDP by 3.6%; and the EBRD forecasts a decline in Russia's GDP by 3%.

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 Quarterly Projection Model (QPM) used to draft this document was developed by the BEROC experts, and, as of November 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.

Wages 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 wages 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.