Bank of Russia

MONETARY POLICY GUIDELINES FOR 2024–2026

Moscow

Approved by the Bank of Russia Board of Directors on 1 November 2023.

The document was prepared based on statistics as of 20 October 2023.
The data cut-off date for forecast calculations is 26 October 2023.
If any statistics or other important data are released after the cut-off date, they may be included in the document.

The electronic version of the document is available on the Bank of Russia website in the section Publications / Guidelines for the Single State Monetary Policy
(http://www.cbr.ru/eng/about_br/publ/ondkp/).

12 Neglinnaya Street, 107016 Moscow
Bank of Russia website: www.cbr.ru

CONTENTS

List of boxes

INTRODUCTION

In the Monetary Policy Guidelines, the Bank of Russia each year describes the goals of monetary policy and approaches to its implementation and provides its view of the current situation in the economy and forecasts of its development in the medium term.

The main goal of the Bank of Russia's monetary policy is to ensure price stability, that is, steadily low inflation. Ensuring price stability, the Bank of Russia paves the way for a successful transformation of the country's economy that started in 2022 and its balanced growth further on. All else being equal, low and stable inflation enables companies and households better plan their activities and improves the affordability of debt and equity financing, which is critical when access to external financing is limited. When inflation is low and stable, households' incomes and savings are protected against a significant unpredictable devaluation. Steadily low inflation increases confidence in the ruble as a currency for international settlements and contracts.

Beginning from 2015, the Bank of Russia has been implementing its monetary policy following the inflation targeting strategy. The analysis carried out within the Bank of Russia's Monetary Policy Review proves the efficiency of this strategy as it increases public welfare and helps successfully overcome crises. According to the findings of the studies, the effective parameters of monetary policy are generally in line with the current economic developments. Besides, there is room for a possible adjustment of certain parameters of monetary policy in the future.

The objective of monetary policy remains unchanged – maintaining annual inflation close to 4%. The inflation target is effective on a permanent basis. The choice of the inflation target in 2015 was reasonable, which is confirmed by the findings of the Monetary Policy Review. In addition, the studies prove that, by the end of 2021, the Russian economy had formed prerequisites for reducing the inflation target in the future. However, given the dramatic alterations in the economic environment in 2022, the Bank of Russia should consider this issue more cautiously. After inflation stabilises close to 4% and the overall economic uncertainty decreases, the Bank of Russia will assess the reasonableness and possible time of a decrease in the inflation target. If the Bank of Russia makes a decision to lower the inflation target, it will be announced in advance so as to mitigate the costs for switching to a new level of the target.

Implementing its monetary policy, the Bank of Russia influences price movements through the key rate and the signal regarding further decisions thereon. This effect is ensured through a long chain of interconnections known as the transmission mechanism. Changes in the key rate translate into the dynamics of credit and deposit rates, securities prices, and the ruble exchange rate. In turn, changes in these indicators influence economic agents' decisions on savings, consumption, and investment. All these factors ultimately create domestic demand in the economy, which influences price dynamics. It takes time for monetary policy decisions to be transmitted to price dynamics through the above chain of interconnections. Therefore, making its monetary policy decisions, the Bank of Russia relies on the macroeconomic forecast that makes it possible to estimate what conditions should

form in the economy to ensure the inflation rate of close to 4%. Building its forecast, the Bank of Russia relies on macroeconomic models.

The Bank of Russia pursues the floating exchange rate regime. A floating exchange rate smooths out the impact of external factors on the economy and helps it adjust to a changing external environment. In such conditions, the central bank is able to pursue a monetary policy that is independent of other countries. Currently, amid the effective capital controls, the movements of the ruble exchange rate to a greater extent depend on the ratio between importers' demand for foreign currency and exporters' supply of foreign currency. As the economy adapts to the enacted foreign sanctions, the effect of capital flows on the dynamics of the exchange rate is becoming stronger, while staying less significant than before. The capital controls are policy measures employed to maintain the stability of the financial sector. The restrictions that are still in place are predominantly of non-economic and bilateral nature.

The Bank of Russia seeks to promptly communicate the information on its monetary policy to the fullest extent possible. This helps form a more predictable environment for decision making. The studies within the Monetary Policy Review show that, over the period of inflation targeting, the Bank of Russia's monetary policy has become much more transparent, which has increased confidence in it. The Bank of Russia's communications were crucial for stabilising the situation in financial markets during crisis periods. The Bank of Russia is going to enhance its communications in the next few years, expanding the scope of information it provides and making it more targeted.

The years 2022–2023 were a period of the transformation of the Russian economy. This transformation resulted from unprecedented trade and financial restrictions imposed by a number of foreign states. Nevertheless, the economy's adaptation to these restrictions was progressing faster than assumed in the Bank of Russia's baseline scenario in MPG 2023–2025. The Russian economy demonstrated significant flexibility and capability to promptly adjust to extensive changes. Companies managed to find new suppliers and sales markets and rearrange their logistics and settlements. Segments focusing on domestic demand were developing. Import substitution continued.

By the middle of 2023, the recovery of the Russian economy completed. Output in industries focusing on domestic demand generally exceeded the pre-crisis level of late 2021. In addition to the external sanctions on imports, the situation in the labour market was also hindering further expansion of output. Staff shortages became more acute, and the unemployment rate dropped to a record low. Another structural constraint in the labour market was workers' low interregional and intersectoral mobility. Moreover, domestic demand was steadily growing, driven by increasing private demand, while public demand stayed high and the Government was expected to increase the fiscal stimulus. Rising consumer activity was supported by quickly increasing lending, higher real wages, and people's adaptation to the new structure of supply in product markets. Companies' high profits and positive business sentiment, including because of fiscal stimulus measures, supported high investment demand. Strong domestic demand, coupled with a limited increase in supply, was pushing up prices.

High domestic demand also caused elevated demand for imports. As foreign currency earnings contracted because of the imposed sanctions, higher demand for imports was one of the factors weakening the ruble. The pass-through of the ruble depreciation to prices was exacerbated by the rise in households' and businesses' inflation expectations.

The combined effect of the proinflationary factors sped up current inflation, including its trend component. In order to return the economy to a balanced growth path, limit the deviation of inflation from the target in 2023 and ensure the return of inflation to the target of close to 4% in 2024, the Bank of Russia raised the key rate in July–October 2023, including at its unscheduled meeting in August. Overall, the key rate was increased by 7.5 pp to 15% per annum.

In its baseline scenario, the Bank of Russia assumes that the geopolitical conditions will stay nearly the same and the effective restrictions will remain in place over the forecast horizon. Seeking to lower inflation, the central banks of advanced economies will pursue tight monetary policies for a long time. This will slow down the growth of the world economy, which will limit the demand for Russian exports.

The transformation of the Russian economy will continue, but its growth rates will be more moderate than in 2023, considering the completion of the recovery stage. In 2026, it will return to a balanced growth rate of 1.5–2.5%. The expansion of the Russian economy might speed up beyond the forecast horizon, driven by new production interrelations to be formed in the economy, an increase in the number of workers, enhancement of workers' skills, higher efficiency of the use of available capital, and the commissioning of new production facilities. Annual inflation will slow down to 4.0–4.5% in 2024 and stay close to 4% further on. To reduce inflation to the target in 2024 and stabilise it close to 4% further on, the Bank of Russia will need to pursue tight monetary policy for quite a long period. According to the Bank of Russia's estimates, the key rate will average 9.9% per annum in 2023, 12.5–14.5% per annum in 2024, and 7.0–9.0% per annum in 2025. In 2026, the key rate will average 6.0–7.0% per annum, which is in line with the range of the Bank of Russia's estimates of the long-term neutral rate.

The main risks to the Russian economy are associated with a deterioration of the geopolitical situation in the world economy in general. In view of this, the Bank of Russia considers two alternative scenarios. Compared to the baseline scenario, the Stronger Fragmentation scenario assumes a more significant fragmentation of the world economy and intensifying sanction pressure on the Russian economy. Along with the above, the Risk scenario assumes a possible worsening of the situation in the financial sector, which might provoke a global financial crisis. According to the Bank of Russia's estimates, the materialisation of risks under these two scenarios will speed up inflation in 2024 and require tighter monetary policy, as compared to the baseline scenario. Consequently, inflation will return to the target later than under the baseline scenario.

An important factor that will influence the economy under any of the scenarios in the coming years is fiscal policy. Therefore, preparing its macroeconomic forecast and making its key rate decisions, the Bank of Russia takes into account the planned fiscal policy measures. Responsible and well-balanced fiscal policy relying on the fiscal rule is critical to maintain macroeconomic stability. If the budget deficit expands even more, inflation risks might rise and, accordingly, the Bank of Russia might need tighter monetary policy to ensure inflation of close to 4%. If the fiscal stimulus turns out to be smaller than currently estimated, the return to neutral monetary policy will be faster.

Under any scenario of future developments both in the Russian economy and abroad, the Bank of Russia will pursue its monetary policy considering its core function stipulated by the Constitution of the Russian Federation, which is to protect the ruble and ensure its strength. In accordance with Federal Law No. 86-FZ, dated 10 July 2002, 'On the Central

Bank of the Russian Federation (Bank of Russia)', this function shall be performed by maintaining price stability that is crucial for the transformation and development of the Russian economy, including for creating conditions for balanced and steady economic growth.

These Guidelines have the following structure.

Section 1 describes the goals and principles of the Bank of Russia's monetary policy, as well as the interaction of monetary policy with other state policies. This section includes three boxes covering the results of the Bank of Russia's Monetary Policy Review, the format of the Bank of Russia's inflation target, and the neutral interest rate.

Section 2 offers a retrospective overview of the Bank of Russia's monetary policy from late 2022 until now. The section includes the box describing how the results of the monitoring of businesses are used for the purposes of monetary policy.

Section 3 focuses on the baseline and alternative forecast scenarios of the Bank of Russia. The section also comprises boxes describing the effect of fiscal policy on the economy, enhancement of model-based approaches, and an economic equilibrium.

Section 4, as always, covers the operational procedure of the Bank of Russia's monetary policy: its operational objective and system of instruments, as well as the factors influencing the trends and forecast of the banking sector liquidity. The section includes the box about the transformation of liquidity providing mechanisms.

The document also contains appendices and boxes addressing both the theoretical aspects of monetary policy, given the Russian specifics, and the most relevant economic issues.

1. MONETARY POLICY GOALS, PRINCIPLES AND INSTRUMENTS

MONETARY POLICY: ITS GOAL AND CONTRIBUTION TO ECONOMIC DEVELOPMENT

In accordance with the Constitution of the Russian Federation, the key function of the Bank of Russia is to protect the ruble and ensure its strength.[1] Pursuant to the Federal Law 'On the Central Bank of the Russian Federation (Bank of Russia)', the main goal of the Bank of Russia's monetary policy is to protect the ruble and ensure its strength by maintaining price stability, including for creating conditions promoting balanced and sustainable economic growth.[2] Price stability implies steadily low inflation.

In 2023, the large-scale transformation of the Russian economy continued. This transformation resulted from unprecedented external trade and financial restrictions imposed by a number of foreign states in 2022. Russian companies were transforming their operations, searching for new sales markets and suppliers, and changing output, product ranges and prices. Besides, Russian businesses demonstrated high flexibility and the capability to promptly adjust to the changed environment. The Government of the Russian Federation and the Bank of Russia implemented anti-crisis measures which significantly supported domestic enterprises. As a result, their adaptation to the new conditions was progressing faster, while the actual decline in the economy turned out to be less notable than expected at the outbreak of the crisis. The transformation of the economy will continue in the next few years. As before, the main objective of the Government is to support this process in order to limit the decrease in the economy's potential and promote balanced economic growth in the future. Nevertheless, it is essential not to replace private sector initiatives with public sector ones, continuing to preserve the market economy fundamentals.

Implementing its monetary policy, the Bank of Russia contributes to the development of conditions that will foster the transformation by ensuring price stability, that is, low and stable inflation. Low and stable inflation improves the affordability of domestic borrowings, which is crucial amid the restrictions on external financing. Without low and stable inflation, it would be impossible to ensure steady and affordable interest rates as investors, including banks, always seek to receive returns on their investments. They include the inflation premium in credit rates. When inflation is low and stable, interest rates form at a lower level and volatility of interest rates (especially long-term ones) decreases. Furthermore, investors tend to expand their activity when they are able to predict the economic environment that is formed by setting and achieving clear targets (including the inflation target). Investors are more inclined to provide financing in a country with predictable economic conditions, while companies can better plan their financing and investments.

Price stability is critical for households as well because it ensures a stable purchasing power of the national currency – the ruble and protects households' incomes and savings

[1] Part 2 of Article 75 of the Constitution of the Russian Federation.

[2] Articles 3 and 34.1 of Federal Law No. 86-FZ, dated 10 July 2002, 'On the Central Bank of the Russian Federation (Bank of Russia)'.

against a significant unpredictable devaluation. After the period of the increased flexibility of relative prices and high inflation associated with the first stage of the structural transformation of the Russian economy, it is critical to bring inflation back to a steadily low level. This will help prevent a considerable deterioration of people's life quality and an aggravation of social inequality.[3] It is crucial to preserve the purchasing power of households' incomes in the conditions of the sanctions when companies are gradually refocusing from external markets on domestic ones.

Low and steady inflation will also increase confidence in the ruble as a currency for international settlements and contracts. The longer the period of price stability is, the more confident counterparties are in the long-term purchasing power of the ruble and the more willing they are to use the ruble in their international business.

By ensuring price stability, monetary policy creates essential conditions, while not the only ones required, for a successful structural transformation of the economy. Monetary policy alone cannot drive changes in the potential of the economy as a result of its transformation.[4] The economy's potential depends on such factors as capital formation, the labour force size, and labour and capital productivity, including as a result of using more efficient forms of labour and innovative technology implementation. Monetary policy can influence the intensity of using these factors, thus reducing a cyclical downturn or overheating in the economy. This is the countercyclical role of monetary policy.

Any attempts to boost economic potential by setting a too low key rate not conforming to macroeconomic developments might provoke long-term negative consequences for price stability and the economy as a whole. In the short run, the effects of such an unreasonable decrease in the key rate might spur accelerated lending growth and a rise in domestic demand. Having no opportunities to quickly ramp up supply in order to meet elevated demand, producers will raise prices and, accordingly, inflation will speed up. Higher inflation will push up interest rates, which will hinder investments and the transformation of the economy.

To address the task of the expansion of production capacities in the economy, it is necessary to implement structural and fiscal policy measures, as well as institutional changes. These measures should encourage private initiative, support innovations, foster the development of alternative and new technologies, facilitate the adaptation, enhance the flexibility of the labour market (including within the programmes for retraining and professional development of workers), and create predictable conditions for economic activity. An efficient implementation of all these measures can ensure a successful transformation of the economy promoting its transition to a new equilibrium with a subsequent increase in its potential growth rates. Furthermore, a crucial prerequisite for economic development is macroeconomic stability achieved through both price stability and responsible fiscal policy (see the subsection 'Monetary policy and fiscal policy').

KEY MONETARY POLICY PRINCIPLES

Implementing the inflation targeting strategy, the Bank of Russia pursues the following key principles in its monetary policy:

[3] For details about the influence of inflation on social inequality, refer to Appendix 3 of MPG 2018–2020 (http://www.cbr.ru/Content/Document/File/48477/on_18-eng.pdf).

[4] For details about changes in the economy's potential during the transformation period, see Section 3 'Macroeconomic scenarios and monetary policy in 2024–2026'.

- setting a permanent public quantitative inflation target;
- implementation of monetary policy in the conditions of a floating exchange rate;
- using the key rate and communication as the main monetary policy instruments;
- monetary policy decision-making based on the macroeconomic forecast; and
- communication transparency.

Pursuing the inflation targeting strategy, the Bank of Russia relies on the world best practices of monetary policy implementation. Currently, this strategy is followed, whether de jure or de facto, by 47 countries and integration associations accounting for, according to estimates, approximately 70% of global GDP (see Appendix 6 'Inflation targeting: cross-country comparisons'). Moreover, the number of emerging market economies where central banks pursue inflation targeting strategies is constantly growing.

The advantage of the inflation targeting strategy is its flexibility. The implementation of monetary policy within this strategy does not provide for the achievement of the inflation target at all costs. To the contrary, seeking to ensure low and stable inflation, monetary policy mitigates the scale of cyclical fluctuations of output, improves the predictability of the economic environment, and thus creates conditions for balanced economic growth.

The studies carried out within the Bank of Russia's Monetary Policy Review[5] in 2021–2023 evidence the benefits of the inflation targeting strategy in the conditions of various challenges. It does not only encourage balanced economic growth, but also helps successfully overcome crises. Despite the multiple shocks over the past period, monetary policy pursued within the inflation targeting strategy promoted an increase in public welfare. According to the findings of the studies, the effective parameters of monetary policy are generally in line with the current economic developments. Nevertheless, there are some aspects that should be discussed and, possibly, adjusted. They are associated with the inflation target and communications (see the subsections 'Setting a permanent public quantitative inflation target' and 'Communication transparency' and Box 1 'Monetary Policy Review results').

SETTING A PERMANENT PUBLIC QUANTITATIVE INFLATION TARGET

The Bank of Russia sets a permanent quantitative inflation target and announces it for households, businesses and financial market participants to take it into account in their planning and decision-making. The Bank of Russia implements its monetary policy to achieve the established inflation target.

The inflation target is the key parameter of the inflation targeting strategy. On the one hand, the target should reflect society's views about price stability and promote the conditions enhancing confidence in monetary policy. On the other hand, the inflation target should be achievable for the central bank and factor in the specifics of the economic environment where it implements its monetary policy. To set the inflation target, the central bank determines its level, type, targeted measure and time horizon.

The objective of the Bank of Russia's monetary policy is to maintain annual inflation close to 4%. The inflation target is effective on a permanent basis. It is set for the annual growth rate of consumer prices, that is, the change in prices for goods and services purchased by households over the past 12 months. The consumer price growth rate is determined based

[5] For details, refer to the Bank of Russia's Monetary Policy Review subsection in the Monetary Policy section on the Bank of Russia website (http://www.cbr.ru/eng/dkp/review_dkp/).

on the Consumer Price Index (CPI) calculated for Russia by the Russian Federal State Statistics Service (Rosstat).

The Bank of Russia chose the inflation target of 4% in 2015 considering the actual specifics of pricing and the structure of the Russian economy, as well as the extensive experience of inflation targeting worldwide. The findings of the studies within the Monetary Policy Review project show that, by the end of 2021, the Russian economy had formed the prerequisites for reducing the inflation target in the future (see Box 2 'The format of the Bank of Russia's inflation target'). However, given the dramatic alterations in the external environment in 2022 and the continuing structural transformation of the economy, the Bank of Russia should consider this issue more cautiously.

After inflation stabilises close to 4% and the overall economic uncertainty decreases, the Bank of Russia will assess the reasonableness and possible time of a decrease in the inflation target. The Bank of Russia will continue discussing the issue of reducing the inflation target with businesses, the analyst and expert community, public organisations, the Government and the Federal Assembly of the Russian Federation. If the Bank of Russia makes a decision to lower the inflation target, it will be announced in advance, a few years before the change, so as to mitigate the costs for switching to a new level of the target.

The type of the inflation target used by the Bank of Russia is a point as it gives the clearest signal to society about the goal of monetary policy amid households' and businesses' persistently elevated inflation expectations and their high sensitivity to fluctuations of prices for certain goods. The results of the Monetary Policy Review prove the relevance of this type of the inflation target for the future (see Box 2 'The format of the Bank of Russia's inflation target').

The wording 'close to 4%' implies that inflation may slightly hover around 4%. These fluctuations are natural and associated with a continuous adjustment of relative prices.[6] Being influenced by multiple factors, prices for goods and services are always changing. As a result, price growth rates can vary across individual product and service markets and in different regions.

Monetary policy is continuously aimed at ensuring an inflation rate of around 4%. However, there can be factors arising over time that might create risks of an inflation deviation from the target. If such factors emerge, the Bank of Russia assesses the reasons behind them and the duration of their potential impact on inflation, in order to make appropriate decisions on monetary policy measures. In a situation where inflation deviates from the target, the Bank of Russia chooses the pace for returning inflation to the target taking into account the scale of the deviation and the influence of monetary policy measures on economic activity (see the subsection 'The key rate and communication as monetary policy instruments').

The sanctions enacted against Russia in 2022 entailed drastic changes in business relations and, consequently, a considerable adjustment in relative prices in a broad range of goods and services. As a result, inflation significantly deviated upwards from the target. To ensure a smoother adaptation of the economy, the Bank of Russia admitted a slower and more gradual return of inflation to the target. The Bank of Russia expects that annual inflation will slow down to 4.0–4.5% in 2024 (see Section 3 'Macroeconomic scenarios and

[6] Relative prices are prices for individual goods and services in the consumer basket relative to the average (overall) level of prices in the economy (presented as CPI dynamics, for instance). In the conditions of considerable shocks, the adjustment of relative prices can be observed in a wide range of goods and services.

monetary policy in 2023–2026'). If there are no new material shocks, further fluctuations of relative prices will be an integral part of economic development. They will be less notable and inflation will hover around 4%.

IMPLEMENTATION OF MONETARY POLICY IN THE CONDITIONS OF A FLOATING EXCHANGE RATE

The Bank of Russia pursues the floating exchange rate regime. This means that foreign exchange rates against the ruble are determined by market forces, that is, the ratio of economic agents' demand for and supply of foreign currency in the foreign exchange market. The Bank of Russia neither sets any targets or limits for the level of the exchange rate or the pace of its movements nor conducts foreign exchange operations to influence the dynamics of the exchange rate.

The floating exchange rate is an essential condition for an efficient implementation of monetary policy within the inflation targeting strategy. It helps the economy better absorb external shocks and the central bank – pursue an independent monetary policy enhancing its ability to smooth the business cycle.[7] As a result, monetary policy ensures low and stable inflation more efficiently.

A floating exchange rate has a stabilising effect on the economy engaged in external trade primarily because it normally helps reduce the scale of overheating or a downturn in economic activity. Specifically, if the national currency depreciates, prices for exported goods and services for foreign buyers go down.[8] This supports the competitiveness of domestic goods and services in the international market, helping offset negative changes in external conditions. Concurrently, in terms of domestic demand (including both consumer and investment demand), a weakening of the national currency makes imported goods and services more expensive, which supports the competitiveness of domestic products in the internal market and promotes import substitution. Contrastingly, a strengthening of the national currency has a similar countercyclical effect on the economy, limiting the risks of its overheating. This is possible through better availability of imported goods and services for domestic buyers. Hence, a floating exchange rate regime ensures a sufficient flexibility of relative prices enabling economic agents to respond to changes in the external environment more quickly and at lower costs.

A higher independence of monetary policy in the conditions of a floating exchange rate increases the central bank's ability to maintain price stability. In particular, when the exchange rate is regulated, interest rates in the economy must follow the global interest rates due to arbitrage. To the contrary, when the exchange rate is not targeted, the central bank is able to adjust monetary conditions in the economy owing to the independent

---

[7] In the conditions of a floating exchange rate, the Russian economy demonstrated higher resilience to external shocks: a smaller decline in GDP in 2015 following the slump in global oil prices and the strengthening of the sanction pressure, in 2020 amid the pandemic-induced global crisis, and in 2022 due to the enactment of the massive and unprecedented sanctions (as compared to the 2008–2009 global financial crisis, for instance).

[8] The magnitude of this effect depends on the currency of a particular foreign trade contract. As the practice of setting prices in the main reserve currencies is widespread in modern conditions, the dynamics of the exchange rate of the national currency has a somewhat smaller countercyclical effect on the economy in the short term. This is because exchange rate fluctuations do not directly cause changes in prices for exports from the perspective of foreign counterparties – buyers and, accordingly, all else being equal, do not lead to changes in the demand for exported goods. Nonetheless, for exporters – sellers in general, movements of the exchange rate influence the amount of foreign currency earnings denominated in the national currency, which, although indirectly, impacts the level of consumer and investment demand in the economy from their perspective.

establishment of interest rates at a level necessary to ensure low and stable inflation. In turn, inflationary pressure triggered by exchange rate movements through the effect of their pass-through to consumer prices is taken into account by the central bank in the course of the implementation of its monetary policy.

Overall, as the exchange rate reflects the state of the country's balance of payments adjusting to objective changes in external trade and financial flows, its regulation, similarly to the administration of domestic prices, distorts the market pricing principles. If the central bank strives to maintain a certain level of the exchange rate of the national currency, it has to search for a short- and long-term equilibrium in the foreign exchange market. However, considering the diversity of market participants, this equilibrium can be achieved more efficiently only through their continuous market interaction.

Besides, the attempts to maintain the nominal exchange rate at a certain level might not correlate with the dynamics of the real exchange rate of the national currency that normally reflect changes in the structure of the economy.[9] If the nominal exchange rate is kept unchanged, this might create favourable conditions for individual industries, but only temporarily and at the expense of other sectors of the economy. Contrastingly, a floating exchange rate regime makes it possible to balance the interests of different economic agents thus helping diversify the economy and enhancing its resilience, which is crucial during the periods of structural economic transformations or elevated uncertainty.

Concurrently, countries – exporters of natural resources whose economic activity is highly dependent on the situation in global commodity markets (including Russia) increase their macroeconomic stability by using instruments, including fiscal rules, that reduce the impact of the external commodity cycle on the internal business cycle. In certain cases, the mechanism of the implementation of a fiscal rule also helps reduce exchange rate volatility stemming from oil price fluctuations. Russia first introduced the fiscal rule mechanism back in 2004 and, later on, was continuously improving it. In 2023, its parameters were modified once again (see the subsection 'Monetary policy and fiscal policy').

In order to prevent the materialisation of financial stability risks amid the blocking of the Bank of Russia's foreign currency accounts and the imposed sanctions, the Bank of Russia restricted cross-border capital flows in early 2022. As risks decreased, the introduced restrictions were eased. The restrictions that are still in place are predominantly of non-economic and bilateral nature. They offset the effect of the external sanctions aimed at incentivising foreign investors to withdraw capital from Russia and prohibiting potential future capital inflows.

In the conditions of a floating exchange rate, the Bank of Russia can conduct operations in the FX market to maintain financial stability. Considering that a part of its foreign currency accounts have been blocked, the Bank of Russia can conduct these operations in available currencies (e.g., in Chinese yuan).

Despite the effective capital controls, the exchange rate of the ruble remains floating. In the new conditions, its movements to a greater extent depend on the ratio of importers' demand for foreign currency and exporters' supply of foreign currency. As the economy adapts to the enacted foreign sanctions, the effect of capital flows on the dynamics of the exchange rate is becoming stronger, while staying less significant than before.

[9] In particular, the real exchange rate in an emerging market economy might strengthen owing to higher labour productivity in tradable sectors causing an increase in relative prices for non-tradable goods (the Balassa–Samuelson effect). Although changes in relative prices might be cyclical as well, this only makes it more complicated for the central bank to determine an equilibrium level of the exchange rate of the national currency.

Capital controls are solely a policy instrument employed to maintain financial stability. The theory and practice of monetary policy generally confirm that a temporary use of capital controls to mitigate risks to financial stability is compatible with the inflation targeting strategy and the floating exchange rate regime. However, if large-scale capital controls remain in place for a long time, this might entail persistent negative implications for the economy and its growth potential.[10]

THE KEY RATE AND COMMUNICATION AS MONETARY POLICY INSTRUMENTS

The key rate is the main instrument of the Bank of Russia's monetary policy. The key rate is an interest rate used by the Bank of Russia to form such monetary conditions in the economy that help keep inflation close to the target. The complex of cause and effect relationships ensuring the effect of the key rate on price changes is the monetary policy transmission mechanism (see Appendix 1 'Monetary policy transmission mechanism in Russia'). The Bank of Russia sets interest rates on the main liquidity management operations at the level of the key rate.[11] Conducting liquidity management operations, the Bank of Russia is seeking to keep overnight money market rates close to the key rate. This is the operational objective of monetary policy (see Section 4 'Monetary policy operational procedure in 2023–2026'). Changes in short-term money market rates influence interest rates on longer-term transactions. These changes in turn translate into the dynamics of credit and deposit rates, securities prices and the ruble exchange rate. Changes in price parameters in various segments of the financial market influence economic agents' propensity to consume, save and invest. This factor determines domestic demand in the economy that impacts price movements.

The introduction of the sanctions by a number of foreign states in 2022, the anti-crisis measures adopted, and the adjustment of the Russian economy to them decreased the efficiency of the transmission mechanism. As the economy adjusted to the enacted restrictions and the implemented response measures, the effectiveness of the transmission mechanism restored. This process will progress further. However, until the sanctions and the capital controls introduced in response to them are eased, the effect of the key rate on the ruble exchange rate will remain indirect. Previously, a key rate decision translated into the exchange rate directly through prices for financial instruments, whereas now a change in the key rate, at first, influences domestic demand and only then, through import dynamics, has an effect on the ruble exchange rate.

Key rate changes influence demand and price trends to the fullest extent, although not instantaneously but with a time lag. As estimated by the Bank of Russia, this process takes from three to six quarters. Accordingly, if inflation deviates from the target, the Bank of Russia can ensure its return to the target over a horizon from 12 to 18 months. The Bank of Russia chooses the path for bringing inflation back to the target depending on actual economic developments.

The Bank of Russia Board of Directors makes its key rate decisions on a regular basis, specifically eight times a year, in accordance with the pre-approved and publicly available

[10] For details, refer to Box 3 'Capital controls and inflation targeting' in MPG 2023–2025 (http://www.cbr.ru/Content/Document/File/139699/on_eng_2023(2024-2025).pdf).

[11] The minimum interest rate at the Bank of Russia's one-week repo auctions and the maximum interest rate at the Bank of Russia's one-week deposit auctions (interest rates on the main operations carried out by the Bank of Russia to regulate the banking sector liquidity) are set at the level of the key rate. Nevertheless, the actual interest rate as of the end of the auctions might slightly deviate from the key rate within the interest rate corridor.

schedule (see the Calendar of key rate decisions for 2024). Drastic changes in the situation and a rise in uncertainty about further developments might require prompt decisions on the key rate.[12] In this case, the Bank of Russia Board of Directors may hold unscheduled meetings. Decision-making according to the schedule is essential to increase the predictability of the key rate path. Key rate decisions made according to the schedule become effective on the next business day. If a key rate decision is made at an unscheduled meeting, the Bank of Russia may specify its effective date in the related press release.

Given the time-lag effect of monetary policy measures on the economy, **the Bank of Russia relies on sustainable economic trends and long-term factors when making its decisions on the key rate**. The Bank of Russia revises the key rate if current trends evidence a long-lasting deviation of inflation from the target over the forecast horizon or there are long-acting factors that are highly probable to cause such a persistent deviation. Assessing how long these factors may last, the Bank of Russia relies on the macroeconomic forecast (see the subsection 'Monetary policy decision-making based on the macroeconomic forecast'). Where the existing deviation of inflation from its target results from the effect of temporary factors and inflation is expected to return to the target in the short run, it is unreasonable to employ monetary policy measures. A change in the key rate in response to short-term factors might pull inflation away from the target in the opposite direction, which does not conform to the task of maintaining inflation close to 4%.

Nonetheless, short-term factors, if they affect inflation expectations, might cause a longer-lasting deviation of inflation from the target. Inflation trends are largely driven by inflation expectations, as they guide economic agents when they make decisions on purchases, wage levels, and pricing. When inflation expectations are steady and anchored to the inflation target, consumers limit their purchases of goods in response to a short-term acceleration of price growth since they are confident that inflation is to slow down and return to the target. They do not raise additional loans and do not rush to use their savings as their expectations about a longer-run real interest rate remain unchanged. Therefore, when inflation expectations are anchored, higher prices are a factor limiting demand and thus containing a rise in inflation induced by temporary proinflationary factors. Where inflation expectations are not anchored, the situation might be the opposite. In response to a rise in inflation triggered by short-term factors, households might increase the demand for goods, expecting that their prices can soon go up. This process might affect both the goods that have already become more expensive and other products, including staples. Households might use their savings assuming that their purchasing power will decrease. Expecting higher inflation and, accordingly, lower interest rates in real terms in the future, households might opt to raise new loans to pay for current purchases. In this environment, manufacturers can decide to significantly increase prices for a wider range of goods and services. Inflationary pressure will amplify, and the deviation of inflation from the target will become more persistent. Consequently, the situation might require monetary policy measures. Moreover, to bring inflation back to the target, the Bank of Russia might need a stronger monetary policy response than where inflation expectations are not high and are anchored.

[12] For instance, in 2022, due to the rapid changes in external conditions and high uncertainty about the adjustment of the economy to them, the Bank of Russia Board of Directors held additional unscheduled meetings on the key rate in February–May. In August 2023, due to a considerble rise in price stability risks, the Bank of Russia Board of Directors also held an unscheduled meeting on the key rate.

Changing the key rate in response to an inflation deviation from the target, the central bank thus smooths the economic cycle (the countercyclical role of monetary policy). To deliver on the inflation target, the Bank of Russia influences demand trends. When the economy is in a long-term equilibrium, that is, when inflation and inflation expectations are close to the target and output is near its potential, monetary policy should be neither contractionary, nor expansionary for demand and the economy. This means that the central bank should pursue neutral monetary policy maintaining the key rate at a neutral level. A neutral level of the interest rate cannot be measured directly, but can only be estimated based on observed economic indicators. Furthermore, during the period of dramatic changes in the economy, the estimates of the neutral interest rate become more uncertain.

Due to the changed interrelationships with the external world, the neutral rate of interest is largely determined by internal factors, whereas external factors have an indirect impact on it. Considering the changes in the estimates of potential growth rates of the Russian economy, the global neutral interest rate and the country risk premium, as well as more expansionary fiscal policy, the Bank of Russia raised the estimate of the longer-run real neutral interest rate for the Russian economy by 100 bp to 2.0–3.0% per annum. With the inflation target being close to 4% and inflation expectations anchored to the target, this range corresponds to the nominal neutral interest rate of 6.0–7.0% per annum. During the structural transformation of the economy, the estimate of the level of the longer-run neutral interest rate is associated with high uncertainty. The Bank of Russia will reassess the impact of the combination of these factors as it accumulates relevant data (see Box 3 ‘Neutral interest rate’).

The notion of a neutral interest rate is also associated with the notion of a neutral yield curve. In an equilibrium, the yield curve should have a normal shape, i.e., it should be upward-sloping. This implies that long-term interest rates in the economy are higher than short-term ones, since market participants include additional risk premiums in long-term interest rates. Furthermore, when inflation expectations are anchored close to the target, long-term interest rates are more stable and less sensitive to external and internal developments and changes in the key rate which is short-term in nature. When the economy is close to its potential, inflation stays near its target, and the key rate is neutral, this slope of the yield curve suggests that real interest rates for various terms form at such levels that promote neutral monetary conditions in the economy.

In a situation where growth rates and aggregate demand start to exceed the economy’s production capacity, the economy deviates from its potential upwards. In order to prevent its overheating and the resulting deviation of inflation and inflation expectations upwards from the target, the central bank needs to temporarily increase the key rate above its neutral level. In such conditions, monetary tightening helps lower demand and drive the economy back to a balanced growth path and inflation to its target.[13] To the contrary, when aggregate demand decreases below the economy’s production capacity, this entails the materialisation of the risks of the economy deviating downwards from its potential and of inflation – downwards from its target. This situation requires a temporary reduction in the

[13] In 2021, amid the cancellation of a considerable part of epidemic restrictions and the measures implemented to support the economy, domestic demand trended upwards. However, the expansion of demand surpassed the capacities to ramp up output. Companies faced shortages of components and workforce, as well as logistics problems. Consequently, inflationary pressure intensified, and risks of a significant and long-lasting deviation of inflation upwards from the target increased. In this context, the Bank of Russia raised the key rate.

key rate below its neutral level. Monetary policy easing will provide appropriate support to aggregate demand and bring inflation back to the target.[14]

Any key rate decision is accompanied by an explanation of its logic, and, generally, by a signal regarding possible further monetary policy decisions. By its signal, the Bank of Russia announces its intents, the implementation of which depends on the development of the economic situation in line with the Bank of Russia's baseline forecast. The signal is no less important than the key rate decision itself, since it impacts market participants' expectations regarding further moves of the central bank and influences yield curve trends and monetary conditions that are coherent with the Bank of Russia's forecast.

In addition to the signal, the Bank of Russia also publishes the projected path of the key rate. It is published as part of the Bank of Russia's macroeconomic forecast four times a year. The projected path of the key rate is presented as ranges of the average key rate for every calendar year. The ranges of the average key rate published by the Bank of Russia are not the limits of a change in the key rate. During the year, the key rate may be both above or below its annual average. The publication of the projected path of the key rate intensifies the signal having an additional impact on the formation of market participants' expectations and monetary conditions.

The Bank of Russia's explanation of its decisions and communication of its future intentions are an important instrument for managing inflation expectations and their anchoring to the inflation target. Inflation expectations affect both inflation trends and interest rates in the economy. The anchoring of inflation expectations of both households and businesses to the inflation target is crucial to ensure the efficiency of measures implemented by the central bank. Therefore, it is essential that economic agents are confident in monetary policy. To promote this confidence, the central bank should pursue consistent monetary policy and successfully achieve the inflation target and economic agents should comprehend the central bank's policy. In this regard, the Bank of Russia especially focuses on the development of its communication policy, and communication transparency is one of the principles in the implementation of monetary policy (see the subsection 'Communication transparency').

MONETARY POLICY DECISION-MAKING BASED ON THE MACROECONOMIC FORECAST

Considering that monetary policy decisions influence price movements with a time lag, the Bank of Russia uses the macroeconomic forecast in its decision-making. The Bank of Russia's forecast is based on advanced macroeconomic models. The core of the medium-term forecasting system is formed by comprehensive forecasting models covering key interdependencies in the economy at the macro level.[15] They are the basis for identifying the key parameters for a medium-term macroeconomic forecast. These parameters encompass changes in inflation, economic growth, monetary indicators, and the balance of payments. These model-based techniques enable the calculation of the scenario path of key rate movements. In addition to statistics, the input parameters in medium-term forecasting models are based on the findings of short-term forecasts relying on econometric models

[14] In 2020, the slump in the global and Russian economies induced by the coronavirus pandemic entailed risks of an inflation deviation downwards from the target over the forecast horizon. To support domestic demand and maintain inflation close to the target over the forecast horizon, the Bank of Russia cut the key rate and implemented accommodative monetary policy.

[15] For details about developing a macroeconomic forecast and the model-based approaches applied by the Bank of Russia, refer to the Forecasting and Model-based Approaches subsection in the Monetary Policy section on the Bank of Russia website.

and expert opinions. To check forecasts based on various models for consistency and analyse certain relevant issues, the Bank of Russia employs additional ('satellite') models. The Bank of Russia is continuously enhancing its model-based approaches considering recent scientific developments by Russian and foreign experts in macroeconomics and quantitative methods, as well as foreign central banks' best practices (See Box 6 'Enhancement of model-based approaches').

The Bank of Russia conducts an in-depth analysis of a wide range of data when preparing its macroeconomic forecast. The Bank of Russia analyses, among other things, current statistics on the situation in the Russian economy and in global commodity and financial markets, information on economic policies in major foreign countries, and possible changes in fiscal, tax, social and other areas of Russia's economic policy. Relying on this information, the Bank of Russia formulates assumptions for its forecast scenarios – a complex of external and internal economic factors that might have a material effect on the Russian economy and inflation trends, as well as assesses inflation risks.

When developing its macroeconomic forecast, the Bank of Russia takes into account the fact that decisions on monetary policy are always made when there is no complete certainty. There can be various factors of uncertainty, including not only future economic developments and forecast assumptions, but also new information on the past and present situation in the economy. Uncertainty in the course of monetary policy decision-making may also be associated with the specifics of model-based techniques used to build a macroeconomic forecast. Therefore, the Bank of Russia places a high emphasis on the rationale for monetary policy decisions it makes in a changing economic environment. Specifically, this involves the use of a broad range of model-based techniques and forecasting of several different scenarios of developments in the Russian and world economies. This approach enables the Bank of Russia to estimate the robustness of its macroeconomic forecast and monetary policy decisions made based on this forecast. According to the analysis carried out within the Monetary Policy Review, this approach helps implement the optimal monetary policy contributing to an increase in public welfare (see Box 1 'Monetary Policy Review results').

The Bank of Russia follows the conservative approach when assessing the ratio of inflation risks over the forecast horizon, while focusing slightly more on proinflationary factors and risks. This is associated with the specifics of inflation expectations in Russia. Professional market participants' inflation expectations are generally anchored to the target, whereas households' and businesses' inflation expectations remain sensitive to the impact of short-term proinflationary factors. This effect may be especially strong during the period of the transformation of the economy and elevated uncertainty. Moreover, inflation expectations respond to price movements asymmetrically: households and businesses are more responsive to an acceleration of price growth, rather than to its slowdown. In such a situation, underestimation of proinflationary factors and risks might entail persistent and long-lasting deviations of inflation upwards from the target. Therefore, when formulating assumptions for its forecast, the Bank of Russia especially focuses on those drivers of price movements that might push inflation and inflation expectations upwards. This is in line with the intent of the Bank of Russia to make prudent (robust) monetary policy decisions.

Measures pursued in other areas of domestic economic policy, measures of economic policy in major foreign countries, as well as external trade and financial restrictions are important factors considered by the Bank of Russia when building its macroeconomic

forecast. Representatives of the Bank of Russia take part in the work of dedicated committees and working groups for various state policy areas to achieve the correlation and consistency of measures, as well as provide expert opinions on economic issues (see the subsection 'Interaction of monetary policy with other state policies').

COMMUNICATION TRANSPARENCY

Society's understanding of and confidence in the monetary policy pursued are crucial for its efficient implementation. When households and businesses are confident that the central bank is seeking and able to maintain price stability on an ongoing basis, there will be no considerable adjustments in their inflation expectations in response to short-term price fluctuations or the emergence of proinflationary or disinflationary factors. If economic agents comprehend the central bank's decisions and its communication signals, they take them into account to quickly and accurately adjust their expectations about the level of interest rates when making decisions on borrowings, savings, wage indexations and pricing. As a result, the impact of monetary policy on the economy and inflation enhances, and the scale and duration of an inflation deviation from the target decrease.

To promote this understanding and confidence, the central bank should pursue consistent monetary policy, successfully achieve the inflation target, and regularly and proactively communicate the information on inflation, the ratio of risks to price stability, and monetary policy measures to target audiences.

The information communicated by the central bank becomes increasingly important when the economy experiences significant changes. In such an environment, prompt communication of information to society about monetary policy decisions and comprehensible explanations of current economic developments and their potential consequences help reduce uncertainty and stabilise the situation, influencing the behaviour and expectations of households, businesses, and professional market participants.[16]

The Bank of Russia seeks to promptly and amply communicate the information on the goals, principles, measures and results of its monetary policy, as well as on the assessment of the economic situation and its prospects. The monetary policy goals and principles are communicated annually in the Monetary Policy Guidelines. On the day when the Board of Directors makes its key rate decision, the Bank of Russia issues a press release with the analysis of the factors behind the decision made and carries out the Bank of Russia Governor's live press conference.[17]

Furthermore, the Bank of Russia publishes its medium-term macroeconomic forecast four times a year (in February, April, July, and October), along with its press release on the key rate. The Bank of Russia is gradually expanding the number of indicators in the forecast. The Bank of Russia's Monetary Policy Report is also issued four times a year: it provides a detailed view of the Bank of Russia regarding current economic developments and its medium-term forecast that are the basis for the key rate decisions made.

---

[16] For example, in 2020 when the coronavirus pandemic caused a significant deterioration in the world and Russian economies, the Bank of Russia used additional formats of more frequent communication, holding weekly press conferences of the Bank of Russia Governor on the current economic situation and issuing the analytical review Financial Pulse focusing on monetary policy issues, among other things. In 2022, after foreign states enacted large-scale sanctions, the Bank of Russia created the section Financial Market Protection Measures on its website in addition to the usual forms of communications. The section is promptly updated as the regulator makes new decisions. Besides, the Bank of Russia launched its Telegram channel.

[17] In the case of unscheduled meetings on the key rate (not included in the released schedule), there can be no press conference of the Bank of Russia Governor.

The Bank of Russia issues its regular commentaries on inflation dynamics and inflation expectations, main macroeconomic trends, monetary conditions and the monetary policy transmission mechanism, the results of the monitoring of businesses (including the Business Climate Index), and the state of the balance of payments.[18] In addition to economic materials based on recent data, the Bank of Russia also publishes findings of a range of economic research on its website and analytical articles[19] in specialised economic journals.

The Bank of Russia takes efforts to enhance the outreach of its monetary policy and make the communication more targeted, including at the regional level.

The Bank of Russia's communication policy takes into account the specifics and needs of various target audiences. The Bank of Russia selects the most appropriate communication channels and tools, the complexity of information, and the extent and format of its communication. Targeted communications are especially important for forming expectations of households and the non-financial sector as these groups (in contrast to professional financial market participants) generally have lower motivation and opportunities to access and process specialised economic information.

The Bank of Russia also takes efforts to help mass media better understand monetary policy-related issues. To this end, the Bank of Russia explains its monetary policy decisions in the course of press conferences, gives interviews and promptly provides comments on inquiries from mass media.

To expand the coverage and improve the targeting of its communications, the Bank of Russia is actively developing its communication policy at the regional level. On its website, the Bank of Russia publishes regions' profiles[20] providing a general description of each region and the sectoral structure of their economy, as well as the main social and economic indicators. The analysis of consumer price movements is released for the federal districts and individual regions in the form of information and analytical commentaries. Before each meeting of the Board of Directors, the Bank of Russia publishes the report Regional Economy: Commentaries by Bank of Russia Main Branches.[21] It comprises statistics, findings of surveys, and analysis of the economic situation in Russian regions. The Bank of Russia Board of Directors considers this information when discussing its key rate decisions.

After each decision on the key rate, the Bank of Russia holds a series of meetings with representatives of the analyst and academic community, companies, and banks. Such meetings are held both at the federal level and in regions. The main objectives of these meetings are to provide details about the monetary policy stance, answer the questions, and receive feedback from the audience.

The Bank of Russia publishes a broad range of materials, from research papers to educational videos for various audiences, including schoolchildren. The Bank of Russia uses both in-person forms of communication (meetings, panel discussions, press conferences,

[18] The commentaries are available in the Analytics subsection of the Monetary Policy section (http://www.cbr.ru/eng/dkp/analytic/) and in the Macroeconomic Bulletins subsection of the Research section (http://www.cbr.ru/eng/ec_research/mb/) on the Bank of Russia website.

[19] Research papers are published in the Research section (http://www.cbr.ru/ec_research/) and in the Bank of Russia's Monetary Policy Review subsection of the Monetary Policy section (http://www.cbr.ru/dkp/review_dkp/) on the Bank of Russia website.

[20] Regions' profiles are published on webpages of the Bank of Russia's regional branches.

[21] The report is available in the Analytics subsection of the Monetary Policy section (http://www.cbr.ru/eng/dkp/analytic/) on the Bank of Russia website.

interviews on federal and regional TV and radio, and lectures at schools and universities) and remote ones (online conferences and lectures). In addition to its publications in traditional mass media, the Bank of Russia continuously provides information and explanations in its social media accounts. There is a pool of bloggers who take part in the Bank of Russia's press conferences and carry out live streams in their channels and discussions of topical issues concerning monetary policy. On its webpage in YouTube, the Bank of Russia posts Bank of Russia executives' interviews, videos on the economic situation and monetary policy decisions, as well as educational videos. In its Telegram channel, the Bank of Russia promptly reports its decisions, posts new materials published on its website, as well as Bank of Russia executives' interviews and speeches.

An important area of the Bank of Russia's efforts promoting society's understanding of its decisions, including on monetary policy, is improvement of financial literacy among households. The Bank of Russia actively participates in the development and implementation of the Strategy for Improving Financial Literacy and Developing Financial Culture[22] and continues to develop its own financial literacy website Financial Culture (fincult.info).

Considering the findings of the Monetary Policy Review, the Bank of Russia plans the following steps to enhance its communication policy:

- Increase the number of disclosed macroeconomic forecast indicators and publish the codes of econometric forecast models.
- Start releasing details about the discussion of its key rate decisions, including alternative decisions and the rationale behind them.
- Develop and use a permanent set of the indicators of trend inflation for regular communication.
- Expand the use of the practice of multi-layered communication when the same material is adapted to target various audiences.
- Help mass media and bloggers better understand monetary policy-related issues.
- Continue its efforts aimed at enhancing financial literacy among households.

INTERACTION OF MONETARY POLICY WITH OTHER STATE POLICIES

In accordance with the legislation, the Bank of Russia is responsible for several areas of economic policy. Along with monetary policy, these areas comprise the development of and ensuring the stable functioning of the banking sector, the financial market and the National Payment System. The correlation and consistency of measures taken by the Bank of Russia in all the areas are achieved through their discussion at the meetings of the Bank of Russia Board of Directors and through the participation of representatives of various areas of the Bank of Russia's activities in the work of dedicated committees and working groups within the Bank of Russia.

MONETARY POLICY AND FINANCIAL SECTOR STABILITY POLICY

The Bank of Russia adheres to the principle of independent targets and instruments for monetary policy and financial sector stability policy. Basically, the Bank of Russia uses monetary policy and the key rate as its core mechanism to bring inflation to the target,

[22] In October 2023, the Government of the Russian Federation approved the Strategy for Improving Financial Literacy and Developing Financial Culture Until 2030 prepared by the Russian Ministry of Finance and the Bank of Russia with the engagement of the expert community and representatives of the country's and regions' leading universities.

while financial sector stability is secured through other mechanisms. First of all, this is the regulation of credit and other financial institutions (microprudential regulation), supervision, and financial resolution measures aimed at ensuring the recovery of operations of the banks and financial institutions that lost their financial stability and at preserving depositors' and creditors' funds. Secondly, these are macroprudential policy measures helping prevent the accumulation of excessive risks at the level of individual segments of the financial system and mitigate the probability of crisis events and their adverse economic consequences, thus maintaining the stability of the financial system as a whole.

The stability of the financial sector is crucial for the efficient functioning of the monetary policy transmission mechanism. Only a stable financial sector is able to ensure smooth processing of payments and the transformation of savings into investment. By limiting the accumulation of systemic risks, it is possible to reduce the probability of financial crises and increase the degree of certainty for financial market participants. In the case of adverse developments in financial markets, including due to external factors, macroprudential policy easing enables the financial sector to perform its core functions stably and helps mitigate negative effects on the real economy.[23] All this promotes confidence in the national financial sector, its attractiveness for all groups of participants, and, consequently, positively influences the level of risk premiums, the depth and liquidity of financial markets, and the financial sector expansion and development.

In most cases, changes in microprudential regulation influence long-term and structural aspects of financial institutions' operations; therefore, relevant decisions are made irrespective of medium-term monetary policy decisions. Furthermore, changes in microprudential regulation (in contrast to macroprudential regulation) are generally introduced on a continuous basis and do not depend on a particular stage of the financial and economic cycle. In view of the above, normally they do not have any effect on the monetary policy environment. The only exception is rare cases where microprudential regulation might be significantly altered. The adjustment of the financial sector to such changes might impact the conditions of the implementation of monetary policy. The Bank of Russia takes this impact into account when making its decisions and, where needed, can adjust certain parameters of monetary policy operations.

Macroprudential policy decisions are largely associated with cyclical fluctuations in the financial sector. Therefore, macroprudential measures take into account the effect of monetary policy decisions on macroeconomic indicators. In turn, macroprudential policy measures can impact the monetary policy environment, including lending trends and interest rates in individual segments. Therefore, making its decisions both in the area of macroprudential policy to limit systemic risks and in the area of monetary policy, the Bank of Russia takes into account their mutual impact. Nonetheless, the Bank of Russia implements these two policies independently, without coordinating the stances of these policies.

Other measures aimed at ensuring stable functioning of the financial sector can also influence the monetary policy environment. Thus, liquidity provision to credit institutions

[23] Specifically, in 2022–2023 amid the unprecedented sanction pressure and elevated volatility in the financial market, the Bank of Russia implemented measures to maintain financial stability, steady the situation in the financial market, and ensure the continuity of financial institutions' operation, including regulatory easing, the release of the capital buffer, and the cancellation of or decreases in the macroprudential buffers. All this made it possible to stabilise the situation. More details on the measures adopted are available on the Bank of Russia website.

within financial resolution measures shifts the structural liquidity balance in the banking sector. The Bank of Russia takes these changes into account when setting limits on operations to absorb or provide liquidity, thereby mitigating their potential effect on the operational procedure of monetary policy and on monetary conditions.

The Bank of Russia normally changes the key rate only in response to macroeconomic developments affecting inflation. If the probability of the materialisation of systemic risk rises considerably, the Bank of Russia can use the key rate to calm the situation in financial markets and maintain the stability of the financial sector as a whole. By using the key rate for these purposes, the Bank of Russia, among other things, contributes to the stabilisation of economic agents' exchange rate and inflation expectations, which is a critical factor for ensuring price stability.[24]

The analysis of the Bank of Russia's experience over 2014–2022 carried out within the Monetary Policy Review shows that the current approach to implementing monetary policy and financial stability policy helps efficiently mitigate arising financial risks and prevent their accumulation, ensuring stable functioning of the financial system (see Box 1 'Monetary Policy Review results'). The Bank of Russia will continue to take efforts aimed at maintaining the resilience of the financial sector, which will make the transmission of monetary policy decisions to the economy more efficient and help attain the inflation target.

MONETARY POLICY AND FINANCIAL MARKET DEVELOPMENT

The financial market development policy implemented by the Bank of Russia jointly with the Government of the Russian Federation promotes the accessibility of financing for a wide range of economic agents and creates conditions for investment activity growth and national economic development. The financial market is a key element to transmit the key rate signal to the economy. The larger the size and liquidity of the financial market, the stronger and quicker the transmission of the key rate to the dynamics of economic indicators.

Following the dramatic changes of 2022, the Russian financial market is gradually adjusting to the operation in the new environment and continues to provide the entire range of services to households and businesses. However, as foreign participants had exited the Russian financial market, its liquidity remains limited. Nevertheless, all the channels related to price movements in the financial market are gradually restoring the effectiveness of their transmission, although it is still decreased.

As the transformation of the economy progresses, the financial market will be changing, which will influence the implementation of monetary policy. Specifically, considering the enacted restrictions, investments in foreign securities might be expected to become less attractive and the proportion of Russian assets in household savings might increase. Besides, the percentage of securities in household savings has been trending upwards in recent years. The development of these trends will strengthen the role of the Russian capital market in the financing of the structural transformation, while the transmission of key rate decisions to the economy through the channels associated with the financial

[24] The Bank of Russia raised the key rate to ensure financial stability in 2014 and 2022. A higher key rate helped increase households' propensity to make ruble savings and reduce the outflow of funds from the banking sector. As the situation stabilised, the Bank of Russia lowered the key rate step by step. In March 2020, at the outbreak of the coronavirus pandemic, the Bank of Russia paused the cycle of monetary policy easing, keeping the key rate unchanged. Among other factors, this decision took into account financial stability risks amid rising uncertainty and trends in financial markets.

market might become more efficient. Another important factor accelerating payments and settlements and improving the affordability of financing, thus making the transmission mechanism more efficient, will be the continuing digitalisation of the financial market (see Appendix 1 'Monetary policy transmission mechanism in Russia').

Policy measures jointly implemented by the Government of the Russian Federation and the Bank of Russia will also foster the development of the country's financial market. These measures are detailed in the Russian Financial Market Development Programme (see also Appendix 8 'Financial market development'). Measures aimed at increasing the role of the financial market in the transformation of the Russian economy will be especially important in the medium term. Thus, in June 2023, the Bank of Russia introduced incentive-based regulation to support lending for projects promoting Russia's technological sovereignty and the structural adaptation of the country's economy. Banks with a universal licence are able to reduce the load on capital for targeted loans issued to finance such projects. The eligibility criteria of projects covered by the new regulation were approved by the Government of the Russian Federation. The implementation of the incentive-based regulation will promote the financing of the investment projects that are vital for the country's economy. According to estimates, as banks will receive additional capital, the overall growth of their potential for lending might reach up to ₽10 trillion.

To promote the development of the capital market and strengthen its role in the transformation of the economy, it should become more attractive for various categories of investors and issuers. To increase domestic investors' interest in the capital market, the regulator plans to create a new type of individual investment accounts encouraging long-term investment in securities and financial instruments, launch a long-term savings programme and develop the system of unit-linked life insurance. Moreover, the Bank of Russia is developing a package of measures to protect retail investors. To increase the attractiveness of the Russian financial market for investors from friendly states, the Bank of Russia implemented the option of remote identification for non-residents and their admission to exchange trading and is carrying out an experiment in partnership financing. The expansion of trade links and the creation of the related infrastructure will also encourage investors from friendly jurisdictions to enter the Russian financial market. The consulting infrastructure of certain market participants and their groups might also become an important driver of the advancement of the capital market. As companies gradually resume information disclosure and the system of audit develops further, this will increase confidence and interest in the market.

The continuing digitalisation of the market will also help attract retail investors. The key measures comprise the introduction of the regulation of open APIs in the financial market for the implementation of the Open Finance model and the advancement of the Digital Profile and the Unified Biometric System. The introduction of the digital ruble will improve the affordability of financial services and reduce fees for payments in the economy. The Bank of Russia will be introducing the digital ruble gradually, which will allow market participants to adapt to the new conditions. The extent of the influence of the digital ruble on the financial system, the economy in general and monetary policy will depend on shifts in economic agents' demand for the existing forms of money towards the digital ruble (see Appendix 7 'The impact of the digital ruble on monetary policy').

As the measures aimed at the development of the financial market are implemented, the Bank of Russia will evaluate their effects on the financial market and monetary conditions and, where necessary, factor in this influence when making its monetary policy decisions.

MONETARY POLICY AND FISCAL POLICY

Fiscal policy has a significant effect on the conditions of the implementation of monetary policy, including the banking sector liquidity, the ruble exchange rate, aggregate demand, the structure of the economy, and trends in prices for goods and services. The nature and specifics of this impact depend on budgeting approaches, the structure of budget expenditures, their effectiveness, and how they are distributed over time.

A significant easing of fiscal policy may induce proinflationary pressure in the economy, while budget consolidation has a disinflationary effect. A timely and proportionate response of monetary policy will help limit the risks of an inflation deviation from the target and mitigate the economy's deviation from a balanced growth path. In particular, a fiscal stimulus increase causes a rise in aggregate demand. If the economy lacks capacities to meet higher demand, inflationary pressure might intensify. Considering these risks, the central bank has to decrease the credit stimulus proportionately, tightening monetary policy. This helps bring aggregate demand in line with the economy's potential and avoid an acceleration of inflation and its deviation from the target. Government expenditures, specifically investment in the development of a number of important industries, may contribute to the expansion of the economy's production capacity and the transformation of its structure. This influence of government expenditures on the economy's potential is gradual and long-term. In the short run, these expenditures boost demand and might intensify inflationary pressure and require monetary policy measures.

Price trends might be influenced by tax policy measures. A change in indirect taxes generally causes a one-off adjustment of prices and does not require any monetary policy response. Contrastingly, where inflation expectations fluctuate due to alterations in tax policy, a situation might require a monetary policy response in order to limit the risks of an inflation deviation from the target.

Overall, responsible and well-balanced fiscal policy is critical to maintain price stability. An important component of well-balanced fiscal policy is a fiscal rule. It reduces uncertainty in the economy and increases macroeconomic stability, including by ensuring price stability. In resource-rich countries, a fiscal rule helps limit the impact of the commodity cycle on the economy by stabilising the dynamics of aggregate demand and inflation. This is achieved by tying budget expenditures to revenues earned with a certain equilibrium level of the environment in the commodity market, as well as by creating reserves. The funds accumulated during a period of high commodity prices can be used to support aggregate demand during a period of low prices and decreasing revenues. This makes it possible to alleviate a crisis period for the economy. If aggregate demand in the economy is less dependent on the external economic environment and is more stable, this is a favourable condition for the implementation of monetary policy. Furthermore, the use of a fiscal rule reduces fluctuations in the real effective exchange rate caused by changes in the commodity market. This increases the competitiveness of domestic goods and helps create the conditions in the country favouring the development of manufacturing in non-commodity sectors.

Finally, a fiscal rule is the key element for ensuring the stability of public finance and is aimed at preventing an excessive increase in public debt. Predictable fiscal policy and

stability in public finance are essential to enhance confidence in macroeconomic policy as a whole. As a result, the macroeconomic risk premium included in interest rates and capital costs decreases. As confidence in macroeconomic policy strengthens, inflation expectations go down and become anchored, which provides more flexibility to the central bank in the implementation of its monetary policy.

After the suspension in 2022, the fiscal rule was relaunched in early 2023. In view of this, the Bank of Russia resumed its operations to buy (sell) foreign currency in the domestic FX market. The Bank of Russia conducts operations with the Chinese yuan, considering the expansion of its proportion in foreign trade settlements, the increase in the amount of transactions with this currency in the FX market and the blocking of the Bank of Russia's USD and EUR accounts. In order to mitigate the impact of these transactions on exchange rate fluctuations, the Bank of Russia buys (sells) foreign currency in the market uniformly during each trading day of a month. The Bank of Russia conducts these operations depending on the liquidity level in the FX market.

Similarly to how the Bank of Russia factors in fiscal policy decisions in the course of the implementation of its monetary policy (see Box 5 'Fiscal policy in 2023–2026 and its impact on the economy'), the Ministry of Finance and the Ministry of Economic Development of the Russian Federation, in turn, take into account the inflation target and the effect of monetary policy on the economy and price movements when preparing a draft federal budget and a social and economic development forecast. The correlation and consistency of monetary policy and fiscal policy measures are achieved owing to the continuous communication between the Bank of Russia and Russia's Ministry of Finance and Ministry of Economic Development. Namely, they hold regular joint meetings to cross-check estimates and factors impacting key macroeconomic indicators and to discuss macroeconomic forecast assumptions and scenarios. Furthermore, consistent communications on related topics are also essential to enhance confidence in monetary policy and fiscal policy.

Overall, the use of the fiscal rule in conjunction with the implementation of monetary policy within the inflation targeting strategy creates a synergistic effect. Their combined contribution to ensuring demand and price stability is greater than when only one of the said elements is part of the country's economic policy.

MONETARY POLICY AND OTHER STATE POLICIES

A range of measures implemented by other government authorities also help support price stability. First and foremost, these are measures taken by federal and regional state authorities to reduce the impact of supply-side factors on price movements. These factors are events not associated with monetary policy that might induce irregular changes in supply (e.g., a poor harvest, disruptions in product supplies, phytosanitary restrictions on food imports). The said factors might provoke considerable fluctuations of inflation. The impact of these factors might either diminish in the short term or be longer-lasting. Specifically, they might adversely affect inflation expectations, provoke secondary effects, and prolong the period of elevated inflation.

There are various groups of instruments used to mitigate the negative impact of supply-side factors on inflation. These instruments can be roughly classified into permanent mechanisms and ad hoc measures. The first group includes the regulation of prices and tariffs for infrastructure companies' goods and services, customs duty mechanisms, programmes aimed at enhancing the efficiency of the economy and promoting competition, and state authorities' powers to control prices for socially important goods in certain

circumstances. The introduction of regulated prices and tariffs depending on the inflation target is essential to support price stability.

The second group comprises temporary instruments that can be employed when external conditions of the functioning of the economy worsen. In particular, measures taken to support the transformation of the Russian economy are becoming increasingly important in the current conditions of the sanctions. These are measures implemented to facilitate business operations, including by optimising administrative burden on businesses, simplifying customs, certification and transportation procedures, and accelerating digitalisation processes, the mechanism of parallel imports and programmes for subsidised lending to certain industries. These measures will help weaken inflationary pressure from supply-side factors causing a decline in output and a rise in costs.

In exceptional circumstances, a short-term disinflationary effect can be achieved by imposing price or mark-up caps in certain market segments. However, in the long run, direct administrative regulation of pricing might result in a contraction of the supply of goods subject to such regulation, a reduction in manufacturers' investment, and a worsening of consumer sentiment.

The Bank of Russia carefully monitors the actual and planned measures of the state authorities and discusses their effects with businesses, the financial community and government authorities. Besides, the Bank of Russia provides its expertise to analyse product and service markets and proposes ways to address problems. At the regional level, the Bank of Russia's regional branches regularly communicate on these issues with local public authorities. The Bank of Russia will continue to assess the effect of the adopted measures on the economy and take them into account when preparing its macroeconomic forecast and making its monetary policy decisions (see Appendix 4 'One-off supply-side inflation factors').

BOX 1. MONETARY POLICY REVIEW RESULTS

In 2021, the Bank of Russia launched the Monetary Policy Review[1] – a comprehensive analysis of the monetary policy pursued in Russia during the period of inflation targeting. The Review was carried out to assess how efficient the selected regime was and how well the current monetary policy parameters conformed to the changing environment.

At the first stage, Bank of Russia specialists carried out studies in six blocks of topics (work streams):

- Work stream 1. Inflation target format.
- Work stream 2. The operational procedure of monetary policy.
- Work stream 3. Retrospective assessment of the effectiveness of monetary policy.
- Work stream 4. Communication as an instrument of monetary policy.
- Work stream 5. Monetary policy and financial stability.
- Work stream 6. New challenges to monetary policy.

In spring 2023, the Bank of Russia carried out a cycle of meetings with the expert community to discuss the preliminary results of the studies. Later on, some of the studies were enhanced considering the feedback. In May 2023, the Bank of Russia published research reports and analytical notes by Bank of Russia specialists and the consultation paper summing up the findings of the studies and analysis on its website.

As information transparency is crucial for efficient implementation of monetary policy, at the second stage, the Bank of Russia discussed the findings of the studies with representatives of public organisations, businesses, the academic community, and government authorities in all Russian regions.[2] To this end, in May–June 2023, the Bank of Russia held a series of meetings at its main branches with the online participation of representatives of all Russian regions. These meetings provided a more thorough understanding of society's perception of inflation and the Bank of Russia's monetary policy. In July 2023, the findings of the studies were discussed at the Bank of Russia's Financial Congress.[3] The results of the public consultations regarding the Monetary Policy Review will be presented in a special report in autumn 2023.

The findings of the studies and the results of the public consultations were taken into account in the course of preparation of this document. Nevertheless, the discussion within the Monetary Policy Review will continue.

Work stream 1. Inflation target format

The concept of an inflation target covers its level, format (the type of a target), the targeted measure – the price index, and the time horizon. The findings of the studies regarding the main elements of the target format are as follows.

Level. By the end of 2021, the Russian economy had formed the potential for reducing the inflation target in the future. This is proven by both the results of model-based calculations for the Russian economy and the analysis of the factors for setting the inflation target (including in the global practice). However, the events of 2022, the increased uncertainty about external conditions, and the ongoing structural transformation of the economy require significant adjustments to the assessment of the possibility of reducing the target at the current stage. Therefore, it is reasonable to carry out additional analysis and hold a comprehensive discussion of possible time for this step.

---

[1] The information on the Bank of Russia's Monetary Policy Review, including the studies and analytical notes, is available in the Bank of Russia's Monetary Policy Review subsection of the Monetary Policy section on the Bank of Russia website (http://www.cbr.ru/eng/dkp/review_dkp/).

[2] Brief video reports on the meetings in Russian regions are posted on the Bank of Russia's webpage in YouTube.

[3] Video records of the sessions of the Financial Congress are available on the website (http://ifcongress.ru/en).

Type. As households' and businesses' inflation expectations remain elevated and are highly sensitive to fluctuations of prices for certain goods, a point as the type of the target is a justified choice as it gives the clearest signal to society about the goal of monetary policy.

Measure. The Consumer Price Index (CPI) as a measure for inflation targeting is the best possible option. It is in line to the fullest extent possible with the main criteria that are critical to promote confidence in the measure: a clear and transparent measurement method, reliability, measurements by an independent institution, prompt publications, a low probability of revision, a long history of measurements, and compliance with the international standards. The disadvantages of the CPI are its high volatility and sensitivity to the impact of one-off factors. Nevertheless, the use of trend components of inflation to analyse price dynamics helps decrease the effect of these disadvantages.

Time horizon. If given without additional explanations, the wording 'on a permanent basis' used by the Bank of Russia in conjunction with the target level and type might be perceived as an excessively rigid commitment to maintain inflation close to 4% at any moment. Besides, any change in the time horizon set for the format of the inflation target should always imply the commitment to return inflation to the target taking into account the time lags of monetary policy.

Based on the results obtained and the discussions held, the Bank of Russia made the decision to maintain the inflation target at the level of close to 4%. The inflation target is effective on a permanent basis. After inflation stabilises close to 4% and the overall economic uncertainty decreases, the Bank of Russia will assess the reasonableness and possible time of a decrease in the inflation target. The Bank of Russia will continue discussing the issue of reducing the inflation target with businesses, the analyst and expert community, public organisations, the Government and the Federal Assembly of the Russian Federation. If the Bank of Russia makes a decision to lower the inflation target, it will be announced in advance, a few years before the change, so as to mitigate the costs for switching to a new level of the target (see Section 1 'Monetary policy goals, principles and instruments' and Box 2 'The format of the Bank of Russia's inflation target').

Work stream 2. The operational framework of monetary policy

The analysis shows that the monetary policy operational procedure developed by the Bank of Russia is in line with the world practice and takes into account the specifics of the Russian economy, banking sector and money market. It enables the Bank of Russia to manage IBL rates whatever the situation with liquidity might be and effectively achieve the operational objective of its monetary policy. RUONIA, which is the operational benchmark of monetary policy, forms close to the Bank of Russia key rate. The average spread between RUONIA and the key rate is smaller than the standard percentage of a key rate change (0.25 pp). Thus, by managing RUONIA, the Bank of Russia can influence other interest rates in the economy. A significant change in liquidity supply driven by fiscal flows and cash in circulation during certain periods might cause an expansion of the spread between RUONIA and the key rate, but this effect is limited in terms of both its duration and scale.

The Bank of Russia will continue to enhance its monetary policy operational procedure as the advancement of the payment infrastructure and the structure of Russia's banking sector and financial sector as a whole progresses, taking into account the best practices of the largest central banks. Currently, the Bank of Russia is transforming the standard liquidity providing mechanism into the main and additional ones (see Section 4 'Monetary policy operational procedure in 2023–2026').

Work stream 3. Retrospective assessment of the effectiveness of monetary policy

According to the findings of the studies, the monetary policy pursued over 2015–2021 can be generally described as close to the optimal one in terms of its contribution to the expansion of public welfare. Combined with the fiscal rule, it helped reduce volatility of output and inflation and thus increased public welfare.

Over the past period, the Bank of Russia managed to ensure price stability during periods when there were no unexpected negative external shocks and to bring inflation back to the target in the case of its deviation caused by such factors. Annual inflation slowed down to 4% in 2017 and averaged 4.2% over 2017–2021. After the surge in 2022, inflation started to decelerate quickly. The Bank of Russia forecasts that given the monetary policy pursued, inflation will return to 4% in 2024.

Ensuring low inflation, the Bank of Russia promoted necessary conditions for the development of the Russian economy. During a rather long period of steadily low inflation, the macroeconomic risk premium was decreasing. Inflation expectations edged down as well. As a result, borrowings were becoming more affordable for both companies and people. Overall, lending to the economy was expanding faster than nominal GDP. Households' and businesses' confidence in the ruble as a store of value increased over the past period, which resulted in dedollarisation of banks' balance sheets. Generally, the Russian economy became more resilient to external shocks. The combination of the inflation targeting strategy (with a floating exchange rate) and the fiscal rule largely helped limit the decline in the Russian economy over the crisis periods in 2020 and 2022, as compared to previous crises before the introduction of inflation targeting and the fiscal rule.

Work stream 4. Communication as a monetary policy instrument

The studies show that, over the period of inflation targeting, the Bank of Russia's monetary policy has become much more transparent, which has increased confidence in it.

The Bank of Russia's communications were crucial for stabilising the situation in financial markets during the periods of shocks (2014, 2020 and 2022) and helped anchor analysts' inflation expectations at the target of close to 4%. Besides, an important focus in enhancing communication with the professional community is increasing the predictability of key rate decisions to strengthen confidence in monetary policy.

According to the studies, the main reason for a lower predictability of monetary policy decisions is the Bank of Russia's information advantage. In other words, professional market participants believe that the Bank of Russia has additional information on inflation drivers and/or possesses more precise models / expertise to forecast inflation. If the central bank releases more granular information on model-based and analytical approaches, as well as details about the discussion of its key rate decisions, such transparency can improve the predictability of these decisions.

It is also crucial to adjust and enhance the efficiency of communication on monetary policy to a wider audience, including because of the rapid changes in the media environment and the information landscape. The studies show that only people having a degree in economics are able to comprehend the information in the Bank of Russia's key rate press releases and the Governor's statements. To increase households' confidence further, it is essential to continue efforts towards a better understanding of monetary policy. Specifically, the Bank of Russia should focus on improving people's financial literacy and make its materials easier to understand. Providing more comprehensive information in this area to mass media and bloggers can also improve the understanding of monetary policy issues.

Considering the findings of the studies and the discussion, the Bank of Russia made a decision on further improvement of its communication (see the subsection 'Communication transparency' in Section 1 'Monetary policy goals, principles and instruments').

Work stream 5. Monetary policy and financial stability

The analysis of the Bank of Russia's experience over 2014–2022 shows that the current approach to implementing monetary policy and financial stability policy helps efficiently mitigate arising financial risks and prevent their accumulation, ensuring stable functioning of the financial system. Normally, the Bank of Russia differentiates between the goals and instruments of monetary policy and those of financial stability policy. Monetary policy instruments, including the key rate, help ensure price stability, while the resilience of the financial sector is maintained through microprudential and macroprudential tools, supervision, and financial resolution measures. Besides, the Bank of Russia takes into account the mutual influence of these two policies. If the probability of the materialisation of systemic risk rises considerably, the Bank of Russia can use monetary policy instruments, including the key rate, to calm the situation in financial markets and support the stability of the financial sector as a whole. The Bank of Russia's experience evidences that the set of its monetary policy tools is sufficient to perform the last-resort creditor's function. The advancement of the prudential regulation system continues, including in response to changes in the situation in the financial market.

Considering the findings of the analysis, the Bank of Russia preserves its approach to ensuring the interaction between monetary and financial stability policies (see Section 1 'Monetary policy goals, principles and instruments').

Work stream 6. New challenges to monetary policy

The trends that have developed in the world economy in recent years, such as deglobalisation, decarbonisation, demographic shifts, and others, might complicate the implementation of monetary policy in the future. Moreover, the Russian economy will be affected by the sanctions and the structural transformation process. As a result, supply shocks might occur more frequently than before. This will be accompanied by demand-side changes. Demographic shifts, the development of the green economy, expanding opportunities in the financial industry, and other processes will cause changes in consumption, saving and investment patterns. The studies carried out by the Bank of Russia show that the inflation targeting regime helps address various shocks, including supply shocks, and create conditions for the progressive development of the economy. Responsible fiscal policy is crucial for monetary policy in achieving the inflation target and, accordingly, maintaining a balanced and steady growth path in the economy.

BOX 2. THE FORMAT OF THE BANK OF RUSSIA'S INFLATION TARGET

Setting the format of the inflation target, including its level, type,[1] time horizon and price index,[2] is a fundamental issue within the inflation targeting strategy. However, choosing an inflation target that would be optimal[3] for the national economy is a complex task. On the one hand, the inflation target should reflect society's views about price stability and promote the conditions enhancing confidence in monetary policy. On the other hand, the target should be reasonably achievable for the central bank and factor in the specifics of the economic environment where it implements its monetary policy.

Besides, the effectiveness of the inflation targeting strategy also depends on how consistent the central bank is in pursuing the inflation target established. When the inflation target is adjusted often or when inflation deviations from the target are long-lasting or frequent, this might intensify the uncertainty of economic conditions for households, businesses, and financial market participants and decrease confidence in the central bank's monetary policy. Hence, central banks generally select inflation targets and their format very carefully (for details about setting inflation targets worldwide, see Appendix 6 'Inflation targeting: cross-country comparisons').

Inflation target level

Switching to the inflation targeting regime in 2015, the Bank of Russia set the goal of its monetary policy as lowering inflation to 4% in the medium term and keeping it close to this level further on. The Bank of Russia chose this target considering the actual specifics of pricing and the structure of the Russian economy, as well as the extensive experience of inflation targeting worldwide. Specifically, the rate of 4% conformed to the median level of EMEs' inflation targets, but was slightly higher than in countries with a stable and predictable macroeconomic environment, long-term experience of maintaining price stability, strong confidence in monetary authorities, and low inflation expectations. Such countries normally set their inflation targets in the range from 1% to 3%.

The Bank of Russia estimated that it might be very hard to continuously maintain inflation below 4% in Russia due to high and unanchored inflation expectations among various groups of economic agents who had multi-decade experience of high and volatile inflation, insufficient maturity of its market mechanisms, and low sectoral diversification of the domestic economy. Moreover, the rate of 4% was generally close to the inflation level in Russia's main trading partners. Besides, the Bank of Russia chose the inflation target of close to 4%, considering that this rate would mitigate the risks of deflation trends in certain product markets.

The studies[4] carried out in 2021–2023 within the Monetary Policy Review prove that the inflation target of 4% chosen by the Bank of Russia at the initial stage of inflation targeting was generally reasonable. In addition, by the end of 2021, the Russian economy had formed prerequisites for reducing the inflation target in the future. This is proven by the following:

1) Over the past years of inflation targeting, the Bank of Russia has made a leap forward in strengthening confidence in its monetary policy. Professional market participants' inflation expectations have been anchored at the target beginning from 2017. Besides, even where

---

[1] An inflation target can be set as a point, a point with a range of permissible deviations, or a target range.

[2] This means an index used by the central bank in inflation targeting (a target index).

[3] Technically, an optimal format can imply such a format of an inflation target through which monetary policy can mitigate public welfare losses from price fluctuations amid cyclical changes in the economy.

[4] Meshcheryakov, A., Sukhomlinov, A. and Glazova, A. Inflation Target Format. Bank of Russia. Comprehensive analytical note. 2023.

households' and businesses' inflation expectations are not anchored, they do not prevent central banks from targeting lower inflation in the economy since the real sector's inflation expectations even in countries having a successful and long-term experience in maintaining price stability tend to be very adaptive.

2) Model-based assessments for the Russian economy relying on 2015–2021 data also prove that there is room for reducing the inflation target. These assessments include both those based on the New Keynesian DSGE Model[5] calibrated for the Russian economy and econometric assessments based on cross-country comparisons.[6]

3) According to surveys,[7] an inflation rate of 4% or lower is a level perceived as 'comfortable'[8] by the absolute majority of Russian people and businesses.

4) A lower inflation level would intensify the risks of deflation in the Russian economy. The decrease in inflation over the years of inflation targeting was also accompanied by a reduction in the variance of inflation and the size of relative price fluctuations. Nevertheless, there is still room for a further decrease in costs from price fluctuations in the Russian economy.

5) In the current conditions, the issue of the effective lower bound (ELB) and zero lower bound (ZLB) of the key rate does not seem significant for the Russian economy in the context of selecting an inflation target. In other words, it is hardly probable that setting a lower inflation target might cause exhaustion of room for the key rate's response to disinflationary shocks.

6) In terms of its structural specifics and the extent of its diversification, Russia's economy is quite similar to those countries, including EMEs, that are targeting lower inflation.

7) A lower inflation target in Russia would conform to the level of inflation targets in Russia's trading partners to a greater extent, even considering the growing share of EMEs in Russia's trade structure as a result of the structural transformation.

Nevertheless, it is important to stress that setting a lower inflation target in the economy (provided that the economy has formed prerequisites for this) does not involve a trade-off for monetary policy between output and inflation in the long run. This is because, in the conditions of full flexibility of prices existing over a long-term horizon, monetary policy does not affect the dynamics of real variables, first of all output. However, costs for the economy might arise at the stage of the transition to a lower target, that is, in the short term. Such costs could be mitigated or avoided by announcing a lower target in advance (several years before the actual reduction) to promote a gradual adjustment of economic agents' inflation expectations, by pursuing consistent monetary policy stabilising inflation at the target and ensuring high information transparency, and by enhancing the coordination between the government and the central bank at the stage of the transition, including to factor in the inflation target when developing fiscal policy parameters.

However, at the current stage of the dramatic alterations in external conditions and the continuing structural transformation of the Russian economy, the Bank of Russia needs to be more cautious when considering the issue of reducing the inflation target. After inflation stabilises close to 4% and the overall economic uncertainty decreases, the Bank of Russia will assess the reasonableness and possible time of a decrease in the inflation target. The Bank of Russia will continue discussing the issue of reducing the inflation target with businesses, the

---

[5] Glazova, A. Optimal Level of Inflation Target, ZLB, and Equilibrium Real Interest Rate. Bank of Russia. Working paper. 2023.

[6] Meshcheryakov, A., Sukhomlinov A. and Kolosov, A. Factors Determining the Choice of Inflation Target Levels: Theory and Global Practice. Bank of Russia. Working paper. 2023.

[7] InFOM's household surveys (March and October 2022 and February 2023); the Bank of Russia's monitoring of businesses (February and October 2022) (http://www.cbr.ru/eng/analytics/dkp/inflation_expectations/).

[8] An inflation level perceived as 'comfortable' means that price fluctuations in the economy do not have a significant impact on households' and businesses' economic decisions, including both long-term and current decisions, any longer.

analyst and expert community, public organisations, the Government and the Federal Assembly of the Russian Federation. If the Bank of Russia makes a decision to lower the inflation target, it will be announced in advance, a few years before the change, so as to mitigate short-term costs associated with switching to a new level of the target.

Inflation target type

The type of the inflation target used by the Bank of Russia is a point. From the moment of the transition to inflation targeting, the Bank of Russia has been explaining the choice of a point by a short-term experience of low and steady inflation, insufficient confidence in monetary policy, and elevated inflation expectations. Potential risks of using target types with a range identified by the Bank of Russia included the likelihood of perception of the upper bound of the range as a 'trade-off target' and of misunderstanding by economic agents of the function of a monetary policy response that could increase volatility of inflation and interest rates. The Bank of Russia has been using the wording 'close to 4%' to convey the idea that inflation fluctuations are natural and inflation cannot be exactly 4% at any moment.

The studies[9] within the Monetary Policy Review prove that there are no prerequisites in the Russian economy for changing the type of the inflation target. The earlier rationale for choosing a point remains relevant overall, while the risks of using target types with a range are still justified, considering the specifics of the implementation of monetary policy.

Academic papers do not provide any convincing evidence that inflation targets set as a range more efficiently help anchor inflation expectations.[10] Besides, the econometric assessments[11] based on cross-country comparisons show that switching from a point to a range amid rising volatility might be unreasonable and involve negative effects on confidence, which is critical in the context of the considerable proinflationary shocks that occurred in the Russian economy in 2021–2022. Besides, switching from one type of the target to another might involve considerable costs as economic agents in Russia have generally adapted to the current type of the target over the previous years of inflation targeting. Finally, the Bank of Russia's explanations of the rationale behind its monetary policy decisions and the expected inflation path are highly transparent, which enables it to continue using the point. The use of the point will also improve the predictability of fiscal policy parameters.

The time horizon of the inflation target (or the horizon for its achievement)

The time horizon of the inflation target (or the horizon for its achievement) is a period when monetary policy is to stabilise inflation at the target. It is essential for the central bank to emphasise that such a horizon is set in order to promote confidence in monetary policy, considering the problem of nominal wages and price rigidity in the short term and the time-lagged effect of monetary policy on inflation.

Since 2017, the Bank of Russia has been using the wording 'close to 4% on a continuous basis' as the full description of the inflation target. The phrase 'on a continuous basis' added to the level and type of the target is to emphasise that the 2015–2016 disinflation period ended and the target of 'close to 4%' applies on an ongoing basis rather than as of the end of a calendar year.

---

[9] Meshcheryakov, A., Sukhomlinov, A. and Glazova, A. Inflation Target Format. Bank of Russia. Comprehensive analytical note. 2023.

[10] In practice, central banks tend to believe that target types set as a point address this task more efficiently.

[11] Magzhanov, T. and Meshcheryakov, A. What Determines the Choice of Inflation Target 'Width'? Bank of Russia. Working paper. 2023.

Taking into account the analysis[12] carried out within the Monetary Policy Review, the Bank of Russia considers it reasonable to preserve the focus on the continuity of the inflation target, but to specify this separately from the level and type of the target (see Section 1 'Monetary policy goals, principles and instruments'). By specifying separately the time horizon of the target together with additional explanations of its meaning, the Bank of Russia will help the public better understand the principles ot its monetary policy.

Measure for inflation targeting

The price index targeted by the central bank (the target index) should conform to several fundamental criteria which are critical to strengthen confidence in the monetary policy pursued. First of all, the target index should be transparent, that is, its measurement method should be simple and clear to the general public. Second, the target index should be reliable, that is, it should not cause any doubts among economic agents regarding the accuracy of its calculation at any stages from collecting raw data to deriving the result. Third, the target index should be relevant, that is, economic agents should really use it as a gauge forming their view of changes in the cost of living, making their consumption, saving and investment decisions, negotiating for wages, and developing their business plans. Finally, the target index should also meet a number of more practical requirements, namely, it should be calculated by an institution independent of the central bank, published frequently and promptly with a low probability of its subsequent revisions, preferably have a long history of measurements, and comply with the generally accepted international standards.

The studies[13] carried out within the Monetary Policy Review show that the headline CPI conforms to the above criteria to the greatest extent. Moreover, almost all inflation targeting central banks worldwide prefer the CPI as the targeted measure. The problem of volatility of the headline CPI associated with the impact of one-off factors can be addressed by implementing a flexible approach to inflation targeting when central banks additionally analyse a wide set of trend inflation measures adjusted for one-off factors.

Taking into account the findings of the analysis, the Bank of Russia considers it reasonable to continue using the CPI as the target index while maintaining a flexible approach to inflation targeting. The Bank of Russia will also expand further the regular practice of using various trend inflation measures, including the core CPI, in its official communication.

[12] Meshcheryakov, A., Sukhomlinov, A. and Glazova, A. Inflation Target Format. Bank of Russia. Comprehensive analytical note. 2023.

[13] Kuzmina, Z., Plushchevskaya, Yu., Zhemkov, M., Meshcheryakov, A., Kolosov, A. and Shemyakina, K. Choice of Indicator for Inflation Targeting. Bank of Russia. Analytical note. 2023.

BOX 3. NEUTRAL INTEREST RATE

In modern macroeconomics, the neutral rate of interest[1] is the level of the interest rate that supports the economy at full employment (the output is at its potential, and unemployment is at its 'natural' level) while keeping inflation steadily at the target level. The nominal neutral rate is the total of the real neutral rate and expected inflation. Where inflation expectations are anchored to the target, expected inflation coincides with the central bank's target (for the Bank of Russia, the annual target is 4%).

The neutral rate is deemed to be a benchmark for assessing a monetary policy stance. It is also considered to be a benchmark for longer-run average interest rates in the economy.[2]

The real neutral rate is determined by the economy's structure, the level of risks associated with investment in financial and non-financial assets, and economic agents' risk appetite. In particular, the following key factors may be highlighted:

1. Total factor productivity growth. The faster is the increase in total factor productivity, the higher is the neutral rate, as, all other things being equal, businesses make larger investments and, accordingly, are willing to pay more for raising additional capital.

2. Demography. The structure of the population and changes in its size, both in general and of individual age groups, influence both economic growth rates (and, consequently, investment activity) and the saving ratio. Thus, if the proportion of middle age groups with a high saving ratio increases in the population structure, the neutral rate will go down.

3. Financial sector maturity and regulation. A higher maturity of the banking sector and capital markets contributes to the growth of the saving ratio in the economy and, accordingly, helps decrease the neutral rate. This effect is also facilitated when economic agents extend their planning horizon, thus making the future more important than the present, which encourages savings owing to an increase in the supply of financial capital.

4. Neutral rate levels in other economies. The neutral rate in an open economy with free capital flows will be comparable with the neutral rate in the global financial market (the external interest rate), adjusted for a country risk premium and an inflation volatility premium. A country premium characterises the differences in economic agents' perception of sovereign credit risks and the predictability of economic conditions in a particular country as compared to the environment in the key economies determining the level of the global neutral rate.

The neutral rate is a non-observable value that cannot be measured directly, but can only be approximated on the basis of a range of observable economic indicators and their dynamics.

---

[1] The concept of the neutral rate of interest was originated by the Swedish economist Knut Wicksell in 1898. He defined the neutral rate as a level of the real interest rate ensuring equal demand for and supply of capital. In other words, this is an interest rate equalling the marginal productivity of capital. Wicksell also argued that a change in current interest rates in the economy relative to their neutral level could influence price growth rates. Nearly 100 years after Wicksell's publication, as increasingly more countries switched to inflation targeting, his concept of the neutral rate of interest has taken a central place in economic discussion.

[2] Economists distinguish between the longer-run neutral rate (or the trend interest rate) and the shorter-run neutral rate. In this case, we only refer to the longer-run neutral rate that depends on structural factors. The shorter-run neutral rate hovers around the longer-run neutral rate, being affected by cyclical factors (e.g., the external environment, current business activity, and fiscal policy measures). The shorter-run neutral rate is also impacted by the extent of the anchoring of inflation expectations to the inflation target and other factors. This is the shorter-run neutral rate that should be referred to when discussing the current monetary policy stance. Quantification of the shorter-run neutral rate is quite complicated, even in economies with a much longer inflation targeting history than in Russia. Moreover, central banks do not announce the results of such quantifications (refer to, e.g., Brainard, L. What Do We Mean by Neutral and What Role Does It Play in Monetary Policy? / Remarks delivered at the Detroit Economic Club. Detroit, Michigan. 2018). However, making monetary policy decisions, central banks do factor in the direction and extent of the current deviation of the shorter-run neutral rate from the longer-run rate and the future dynamics of the former.

The first group of assessment methods is based on macroeconomic models that rely on structural interconnections between key economic variables (output, inflation, the key rate, and exchange rates) and, depending on their past dynamics, generate a range of estimates for non-observable values, including for the neutral rate. In order to obtain robust estimates using these methods, it is necessary to have extended (20–30 years) data series for the economy in question with no significant changes in the structure of the economy or the monetary policy regime.

The other group of methods is based on the above interconnection between the neutral rate in an open economy and the neutral rate in the key economies. These methods, however, are rougher and assess financial investors' perception whether interest rates in a certain country are adequate (considering all risks) compared with interest rates in the key economies. Essentially, they measure the relative attractiveness of financial assets denominated in the national currency. These estimates cannot directly take into account the specifics of the economy in question. Therefore, they only give an approximate view of the interconnection between interest rates, inflation and economic growth. Accordingly, when these methods are used, the final estimate largely depends on the assumptions regarding the nature and the size of the country premium in relation to the global neutral rate. This is exacerbated by the uncertainty of neutral rate estimates for the key economies that are used as the basis for the calculations.

The range of the resulting estimates of the longer-run neutral rate may be very wide. Furthermore, the confidence intervals in EMEs are wider than those in advanced economies due to both lower availability of extended data series and higher flexibility of the internal macroeconomic environment and country risk premiums. Ruch (2021)[3] demonstrates that the uncertainty about the level of the neutral rate in EMEs is twice as large, on average, as the rate of uncertainty seen for estimates in advanced economies (estimates of the standard deviation are as large as 1.4 pp in EMEs, compared to 0.6 pp in advanced economies). The author also notes that the uncertainty surrounding estimates for commodity-exporting EMEs is more than 40% higher than that for commodity-importing EMEs.

When the economy undergoes dramatic changes, the uncertainty about neutral rate estimates increases manifold. Thus, during the coronavirus pandemic, many central banks discontinued updating their neutral rate estimates stressing the material impact of the existing shocks on potential GDP and the impossibility to provide reliable estimates in the conditions of elevated uncertainty.[4] Other central banks expanded the confidence intervals and increased the degree of approximation of the estimates published today. A number of papers[5] note that, during large-scale structural changes, the estimate of the neutral rate can be a useless tool to gauge the monetary policy stance: standard data on inflation and banks' financial conditions may provide more information about the current phase of the economy.

According to the most part of the research published until 2022, the quantitative estimates of the level of the longer-run real neutral rate for Russia are close to the range from 1% to 3%. For example, Kreptsev et al. (2016)[6] forecast 1.0–3.2% (various models), the IMF (2019)[7] – 1–3%

---

[3] Ruch, F. U. Neutral Real Interest Rates in Inflation Targeting Emerging and Developing Economies. Policy Research Working Paper 9711. The World Bank. June 2021 (http://openknowledge.worldbank.org/bitstream/handle/10986/35831/Neutral-Real-Interest-Rates-in-Inflation-Targeting-Emerging-and-Developing-Economies.pdf?sequence=1&isAllowed=y).

[4] For instance, the Federal Reserve Bank of New York suspended the posting of regular updates of the estimates of the neutral rate of interest using the Laubach-Williams and Laubach-Holston-Williams models from 30 November 2020.

[5] Refer to, e.g., Neutral interest rates: phantoms worth chasing? Article. ING Think (http://think.ing.com/articles/neutral-interest-rates-phantoms-worth-chasing).

[6] Kreptsev, D., Porshakov, A., Seleznev, S. and Sinyakov, A. The Equilibrium Interest Rate: Estimates for Russia. Bank of Russia. Working Paper Series. No. 13. 2016.

[7] International Monetary Fund. Russian Federation – Staff Report for the 2019 Article IV Consultation.

(various models), and Isakov (2019)[8] – 1.5–2.5% (various parameters). Drobyshevsky et al. (2021)[9] conclude that the neutral rate of interest for Russia had been continuously decreasing from 5% in 2016 and reached the level of 1% in 2020. Research by Porshakov and Sinyakov (2019)[10] determines the range of neutral rate estimates in the Russian economy using a complex of approaches to estimation based on both structural and econometric methods. The findings suggest that, according to strict definitions, the equilibrium real rate estimates in Russia all have wide confidence intervals and are highly sensitive to various model parameters (the derived values are given in a range from negative to positive ones).

In the new conditions, it has become more difficult to estimate the neutral rate of interest relying on the previous models due to the changed interrelationships with the external world, including the foreign sanctions enacted against the financial sector, and the capital controls introduced by Russia in response to offset the impact of the sanctions. Global factors have become less important in the estimates of the neutral rate, whereas the potential growth rate, that depends on the pace of the accumulation of production factors, the growth of factor productivity and the pace of technological progress, is playing a greater role.

Hence, today, the long-term level of the real neutral rate for the Russian economy is determined based on several main factors. First, a lower potential growth rate of the national economy, compared to 2017–2019, has a downward effect on the estimate of the neutral rate. Second, changes in external conditions and the sanctions imposed, limited participation of the Russian economy in the global capital markets, and rising uncertainty about the prospects of business projects, compared to the period before 2022, caused an increase in the risk premium, thus putting upward pressure on the neutral rate. Third, the persistence of external inflation, coupled with higher policy rate paths in advanced economies, suggests a higher external neutral rate, compared to the pre-pandemic period, driving up the estimate of the neutral rate for Russia as well. Fourth, more expansionary fiscal policy than expected is also putting upward pressure on the neutral rate. Considering the above factors, the updated estimate of the longer-run real neutral rate for the Russian economy is 2.0–3.0% per annum, which corresponds to the nominal neutral rate of 6.0–7.0% with the inflation target of close to 4%.

It should be stressed that this range is also a part of a wider confidence interval of neutral rate estimates. The Bank of Russia will assess the overall effect of these factors as it accumulates relevant information.

---

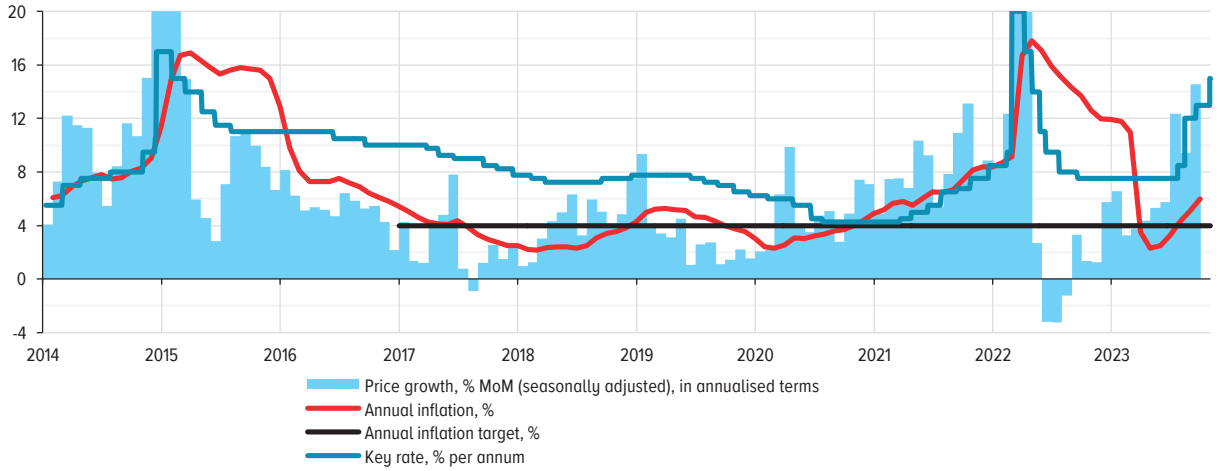
[8] Isakov, A. and Latypov, R. The Ibsen Manoeuvre: Yet Another R* Estimate. VTB Capital Research Alert, (Very) Technical Brief series. 15 July 2019.

[9] Drobyshevsky, S., Trunin, P., Sinelnikova-Muryleva, E., Makeeva, N. and Grebenkina, A. Estimating a neutral real interest rate in Russia during inflation targeting. Voprosy Ekonomiki. No. 9. 2021.

[10] Porshakov, A. and Sinyakov, A. (2019). Estimates of the Equilibrium Interest Rate for Russia: Is 'Navigating by the Stars' Useful? Russian Journal of Money and Finance. 78 (4), pp. 3–47.

2. MONETARY POLICY ENVIRONMENT AND CORE MEASURES IN LATE 2022 AND 2023

BANK OF RUSSIA KEY RATE AND INFLATION *Chart 2.1*



Sources: Rosstat, Bank of Russia.

Late 2022–2023 H1: maintaining the key rate at 7.5% per annum amid the gradual rise in current inflation pressure from decreased levels

The Russian economy was quickly adapting to the changed environment. Companies were finding new suppliers and sales markets, rearranging their logistics and settlements, and developing import substitution and parallel imports. Businesses continued to implement investment projects, including those supported by the Government. Growth in households' incomes and a faster expansion of retail lending contributed to the recovery of consumer demand. Public demand trended upwards. In these conditions, the pressure on prices, including the trend component, was gradually intensifying. Making its key rate decisions from late 2022 to mid-2023, the Bank of Russia forecast that inflation would be somewhat higher than 4% as of the end of 2023, considering the adjustment of relative prices associated with the structural transformation of the economy. All decisions were aimed at returning inflation to the target in 2024.

Annual inflation slowed down from high levels to below 4%. By the end of 2022, annual inflation slowed down to 11.9%, and in spring 2023, it decreased below 4% due to the high base effect.[1] In March–April, the highest price growth rates recorded in the spring months of 2022 were excluded from the calculation of annual inflation. Beginning from May, the annual rate started to go up as current inflationary pressure was growing and the low monthly rates of summer–autumn 2022 dropped out of the calculation. In April, the Bank of Russia forecast that inflation would be in the range of 4.5–6.5% as of the end of 2023. The Bank of Russia assumed that inflation might exceed the target, considering the need for further structural transformation of the economy and the resulting adjustment of relative prices. Nevertheless, the Bank of Russia remained determined to return inflation to the target in 2024. Considering that the annual inflation rate largely characterised the

[1] For details, see Statistical tables.

CERTAIN INDICATORS OF CURRENT PRICE PRESSURE *Table 2.1*

	2022 Q3	2022 Q4	2023 Q1	2023 Q2	2023 Q3
CPI, % QoQ SAAR	-0.4	2.8	4.5	5.1	12.2
Core CPI, % QoQ SAAR	0.9	0.7	2.6	5.7	9.6

Sources: Rosstat, Bank of Russia calculations.

price dynamics over the past period, the Bank of Russia especially focused on the factors of current inflationary pressure when making its decisions.

Current inflationary pressure was gradually intensifying from autumn 2022. Current price growth rates turned positive in 2022 Q4, while staying low. They were close to 4% in annualised terms in 2023 Q1 and exceeded this level in Q2. Besides, persistent price pressure[2] was steadily increasing throughout 2023 H1.

One of the main factors accelerating current inflation was the recovery of consumer demand that became steadier from the middle of Q1. Furthermore, although households' inflation expectations declined from their peaks, they stayed elevated compared to the levels during the years when inflation had been close to the target. Businesses' price expectations were also high, but their dynamics remained diverse. Some industries raised their expectations, whereas others lowered them.[3] In March, faster growth in consumer lending became yet another factor intensifying price pressure.

As consumer demand bounced back, companies were passing through their rising costs to output prices to a greater or lesser extent. The ruble weakening due to worsening foreign trade conditions was also pushing prices higher. The impact of exchange rate movements during that period was weaker than usual. In the first place, this was associated with high stocks of some product groups that companies, being wary of supply problems, had accumulated earlier when the ruble was stronger. The stocks of the high harvest of 2022 were limiting food price growth. The recovery of supply driven by fast adaptation to the new environment also helped temper inflation.

By mid-2023, neutral monetary conditions actually became accommodative. Yields on short-term OFZ bonds were close to the key rate, whereas yields on long-term bonds were rising gradually and, from February, were staying around or slightly above 11%. These dynamics were associated with persistent uncertainty, elevated inflation expectations, and a growing amount of government loans.

Credit and deposit rates were adjusting to OFZ yields and the Bank of Russia's communication on a possible key rate increase amid gradually rising inflationary pressure. Interest rates edged up slightly by the end of 2023 Q2. Besides, in spring, banks eased their policies with regard to non-price conditions, offering new credit products to their clients more actively.

Credit activity, especially in the corporate segment, remained high. Amid the transformation of their operations, companies were substituting foreign currency loans from foreign and Russian banks for ruble loans. The corporate loan portfolio was expanding at a double-digit pace. Companies engaged in large investment projects were actively raising bank loans and bond loans. The surge in lending, the substitution of external debt for domestic loans, and the conversion of foreign currency loans from Russian banks into

[2] For details about various inflation measures, see Appendix 2 'Inflation indicators used by the Bank of Russia'.

[3] For details, see Appendix 5 'Households' and businesses' perception of inflation and inflation expectations'.

ruble loans were the reasons why the growth rate of ruble money supply hit a record high. It was also driven by advance payments made to cover government expenditures in late 2022 and the actual increase in expenditures during 2023.

Consumer demand was rebounding at a modest pace until the middle of Q1. Households' propensity to save remained high. Retail lending was expanding moderately showing mixed trends. Mortgage lending continued to increase fast. Growth in consumer lending was slower due to borrowers' and creditors' more cautious behaviour and partially because of the implemented macroprudential measures.[4]

By the end of spring, as a result of a further steady improvement in consumer sentiment, credit activity in the retail segment trended upwards, including in mortgage and unsecured consumer lending.[5] Households' propensity to save was going down gradually. Nevertheless, the inflow of households' funds into banks, both current accounts and long-term deposits, continued to increase. The percentage of ruble funds in the overall structure was growing. Foreign currency deposits decreased as households were switching to ruble savings and transferring a part of their funds to foreign banks. In the middle of 2023, foreign currency deposits accounted for about 10% of the portfolio. In the new conditions, the demand for money was going up and its structure was changing: a more active use of rubles for savings and payments was yet another driver of the fast increase in money supply.

The economy was restoring and quickly adapting to the new conditions. GDP declined by 2.1% as of the end of 2022, which was much more optimistic than predicted in spring 2022. The economic situation in 2023 was better than assumed in the baseline scenario of MPG 2023–2025. Taking into account the more positive economic statistics, the upward revision of the earlier made estimates, the progressing adaptation of the economy, and growing budget expenditures, the Bank of Russia was improving its GDP forecast. In April, it was raised to 0.5–2.0%.

Domestic demand was rebounding actively, partially substituting external demand, which became a key structural change. An indicator of the active economic recovery was surging imports. Despite the difficulties with supplies, many companies managed to find alternative suppliers and arrange parallel imports, including of investment goods.

The contribution of fiscal policy, including through government investment, to the expansion of aggregate demand was growing. In late 2022, Russia's Ministry of Finance increased its estimate of the budget deficit for 2022 from 0.9% to 2.0% of GDP. In 2023 H1, the effect of fiscal policy was becoming stronger. Forecasting the economic situation and pursuing its monetary policy, the Bank of Russia was relying on the medium-term path of federal budget and budget system expenditures announced by the Ministry of Finance of the Russian Federation.

The structural changes continued to influence supply as well. Output dynamics remained diverse, but, overall, businesses continued to quickly adapt to the new conditions. Business activity trended upwards. The Bank of Russia's Business Climate Index stayed close to its ten-

[4] Specifically, the introduction of macroprudential limits on unsecured consumer loans (microloans) for 2023 Q1 (refer to the press release of the Bank of Russia, dated 21 November 2022) and their extension for 2023 Q2 (refer to the press release of the Bank of Russia, dated 20 February 2023).

[5] In order to avoid accumulation of related risks, the Bank of Russia tightened the requirements for lending to borrowers with high debt service-to-income ratios and raised the risk weight add-ons for unsecured consumer loans (refer to the press release of the Bank of Russia, dated 22 May 2023, and the press release of the Bank of Russia, dated 23 June 2023), as well as increased the macroprudential requirements for mortgage loans and extended these requirements to subsidised loans (refer to the press release of the Bank of Russia, dated 20 February 2023 and the news of the Bank of Russia, dated 26 May 2023).

year highs.[6] Segments focusing on domestic demand were developing. Import substitution continued. From late 2022, utilisation rates of production capacities were growing. The challenging situation in the labour market was still the key constraint on a further increase in supply. The labour market became tighter, and staff shortages were becoming more acute. Labour demand was rising because of new production facilities launched within import substitution, among other reasons. Unemployment continued to go down.

External conditions remained challenging for the Russian economy. Geopolitical tensions and sanction pressure were rising. A key constraint on Russia's external trade during this period was the introduction of the embargo and the price cap for Russian crude. Russia's trade partners were becoming more concerned about the secondary sanctions. Moreover, the situation in the world economy was generally worse than anticipated. In particular, economic growth in China, after its active recovery in 2023 Q1, slowed down. Business sentiment in global financial markets deteriorated due to difficulties in the US and European banking systems. The risks of a recession in the world economy slightly increased.

Expectations of weaker growth in the largest economies worsened the situation in most markets for Russian exports, including commodities. Nevertheless, despite the difficulties with exports because of the sanctions, companies were partially redirecting supplies to new sales markets. As of the end of 2022, export dynamics surpassed the expectations. However, in 2023 Q1, the value of exports started to decline due to the tightening of the sanctions and lower global prices for commodities.

The Bank of Russia estimated that external conditions would continue to affect the Russian economy through the demand for exports and export prices and quantities, although that impact would only be due to the sanctions.

Proinflationary risks were stronger than disinflationary ones and continued rising. The Bank of Russia considered that the main risks that could cause an inflation acceleration above the forecast were a more intense effect of the earlier ruble weakening, further tightening of the sanctions, deviation of fiscal policy normalisation from the announced path, growing tightness in the labour market, high and unanchored inflation expectations, and the gap between supply and increasing demand.

Disinflationary risks were weaker. They included the possibility of steadily high propensity to save among households, a longer period that consumers could need to adjust to the new structure of supply, stronger effects of expanded supply in certain product markets, and a longer-lasting impact of high stocks of agricultural products.

The Bank of Russia's key rate decisions were aiming to bring inflation back to 4% in 2024. Considering the need for the structural transformation of the economy and the related adjustment of relative prices, the Bank of Russia forecast a rise in inflation above the target in 2022 and 2023. The baseline scenario presented in April assumed that inflation will range from 4.5% to 6.5% in 2023 and return to the target in 2024. Taking this into account, the key rate was kept at 7.5% per annum from September 2022 to July 2023. Nevertheless, the Bank of Russia emphasised that proinflationary risks and persistent price pressure were rising. In February, the Bank of Russia raised the forecast path of the key rate for 2023 and 2024 and toughened its signal regarding its future decisions. In June, the Bank of Russia again toughened its signal admitting the possibility of a key rate increase at its upcoming meetings.

[6] For details, see Box 4 'Monitoring of businesses and the use of its findings for the purposes of monetary policy'.

July–October 2023: key rate increases to 15.0% per annum amid materialisation of considerable proinflationary risks

As assessed by the Bank of Russia, the Russian economy recovered to pre-crisis levels by mid-2023 and deviated upwards from a balanced growth path. Growing demand was surpassing the potential to ramp up supply, which was seriously aggravating persistent inflationary pressure and affecting the ruble weakening through elevated demand for imports. The Bank of Russia noted a considerable acceleration of current inflation, including its trend components. Such a situation required a prompt monetary policy response to bring inflation back to the target in 2024 and stabilise it close to 4% further on. The Bank of Russia was increasing the key rate in July–October, including at the unscheduled meeting in August. Overall, the key rate was raised by 7.5 pp to 15.0% per annum. The October forecast also assumes a higher path of the key rate to stabilise inflation at the target.

Annual inflation was speeding up. Annual inflation edged up from 4.3% in July to 6.0% in September. The acceleration was associated with intensifying current price pressure. Considering this rise, the Bank of Russia was adjusting its inflation forecast upwards. According to the October forecast, inflation will speed up to 7.0–7.5% by the end of 2023, slow down to 4.0–4.5% in 2024, and stabilise close to 4% further on.

Current inflationary pressure was intensifying. Current price growth rates, including the majority of trend inflation measures, exceeded 4% in annualised terms back in June. Over July–September, average price growth (seasonally adjusted) sped up to 12.1% in annualised terms. The same measure of core inflation increased to 9.6%. Price pressure was rising predominantly due to the steady expansion of domestic demand surpassing the capacities to ramp up supply. In such conditions, it was easier for companies to pass through their rising costs, spurred by staff shortages among other factors, to prices. The growth of domestic demand was also affecting the ruble exchange rate through elevated demand for imports. As a result, the pressure of the ruble weakening on prices intensified. Moreover, the dynamics of the ruble exchange rate were influencing inflation expectations. Households' inflation expectations remained high. Businesses' price expectations continued to rise, coming close to the highest levels of recent years. This in turn was accelerating the pass-through of a weaker ruble to prices.

As a result of the key rate increases, monetary conditions were tightening, but credit activity stayed high. After the unscheduled meeting of the Bank of Russia Board of Directors in August, short-term yields were up, and the OFZ yield curve flattened, suggesting that monetary conditions became moderately tight. Yields on OFZ bonds and credit and deposit rates continued to rise after the further key rate increases as well. Nevertheless, lending growth rates, especially in the corporate and mortgage segments, remained high in July–September.[7] This was primarily associated with high inflation expectations in the economy. The key rate decisions had a less notable effect on the mortgage segment because of the large scale of government subsidised lending programmes. Concurrently, market-based mortgage lending and unsecured consumer lending already started to adjust

[7] The Bank of Russia is closely monitoring the quality of the bank loan portfolio. To limit borrowers' and banks' risks, the Bank of Russia additionally raised the macroprudential risk-based buffers for mortgage loans (refer to the press release of the Bank of Russia, dated 28 July 2023).

to higher interest rates. Unsecured consumer lending was also affected by the approved macroprudential measures.[8]

The Russian economy deviated upwards from a balanced growth path. The recovery of the economy completed. Domestic demand continued to surge, driven by increasing private demand, while public demand stayed high and the Government was expected to increase the fiscal stimulus. Consumer demand was pushed up by high lending growth rates, rising real wages, and households' adjustment to a new product range. However, the constraints on the further expansion of supply persisted and even strengthened. The external restrictions in trade and finance hindered the expansion of output in sectors focusing on exports. Contrastingly, output in most industries focusing on domestic demand bounced back to pre-crisis levels or surpassed them. However, labour market tightness limited the potential to further ramp up output. Staff shortages were becoming more acute. In August, unemployment dropped to a new record low of 3.0% (seasonally adjusted). The problem of staff shortages was exacerbated by workers' low geographical and intersectoral mobility. Companies monitored by the Bank of Russia reported that the utilisation rates of their production capacities reached peak levels.

In October, the Bank of Russia revised its GDP forecast for 2023 upwards to 2.2–2.7% considering the actual statistics and the surge in demand.

Exports contracted in annualised terms, whereas imports continued to expand. The annual growth rate of exports was adversely affected by a slower expansion of the world economy, the sanctions, and decisions to voluntarily reduce exports. Nevertheless, driven by higher oil prices, the dynamics of the value of exports improved in Q3 compared to Q2. The good grain harvest and the redirection of supplies to new markets also supported exports. The demand for imports was high, as aggregate demand in the economy expanded, although its annual growth slowed down. Changes in the balance of trade were the main reason for the ruble weakening from the beginning of 2023. Nonetheless, after the reversal of the trend and the key rate increases in August–October, the exchange rate stabilised.[9]

Proinflationary risks soared and remained high. The main risks to the October baseline forecast of inflation are a further increase in inflation expectations or their persistently elevated level, as well as a potential expansion of the gap between rising demand and the capacities to ramp up supply. According to the Bank of Russia, the gap might widen due to elevated growth rates in lending and households' lower propensity to save, as well as a further aggravation of the problem of staff shortages. In the conditions of limited labour resources, labour productivity might increase more slowly than wage growth. Proinflationary risks also include a worsening of external conditions.

The baseline scenario presented by the Bank of Russia in October relies on the approved decisions of the Russian Government regarding the medium-term path of budget expenditures. As estimated by the Bank of Russia, if the budget deficit expands further,

---

[8] To limit the increase in households' debt service-to-income (DSTI) ratios, the Bank of Russia reintroduced tighter restrictions on lending to borrowers with high DSTI ratios (refer to the press release of the Bank of Russia, dated 31 August 2023).

[9] According to the Bank of Russia's assessment, the requirement for repatriation and selling of export earnings by a number of companies introduced by the Executive Order of the Russian President 'On the Mandatory Sale of Foreign Currency Earnings Received by Certain Russian Exporters Under Foreign Trade Contracts' can speed up the sale of foreign currency by companies, improve the liquidity situation, and decrease short-term volatility in the market. In the longer run, the ruble exchange rate will be impacted by the fundamentals, including monetary policy tightening and the dynamics of the balance of trade.

proinflationary risks might rise again, which could require tighter monetary policy to be able to bring inflation back to the target.

Disinflationary risks are associated with a quicker slowdown of the expansion of domestic demand and a stronger ruble amid increasing prices for Russian exports and export quantities.

To return inflation to the target and stabilise it at 4% further on, it is necessary to maintain tight monetary conditions in the economy for a long period. In July 2023, the Bank of Russia raised the key rate by 1 pp to 8.5% per annum. As price stability risks soared, the Bank of Russia increased the key rate again at the unscheduled meeting of the Board of Directors in August, namely by 3.5 pp to 12.0% per annum. In September, the key rate was raised by 1 pp to 13% per annum. In October, the Bank of Russia increased it to 15% per annum. This was needed to further tighten monetary policy to be able to limit the deviation of inflation and bring it back to the target in 2024. An important factor behind this decision was fiscal policy easing for the next three years. In its October forecast, the Bank of Russia raised the path of the key rate, expecting to return it to its neutral range[10] of 6.0–7.0% per annum no earlier than in 2026.

[10] For details, see Box 3 ‘Neutral interest rate’.

BOX 4.
MONITORING OF BUSINESSES AND THE USE OF ITS FINDINGS FOR THE PURPOSES OF MONETARY POLICY

The Bank of Russia, just as many foreign central banks, conducts regular surveys of non-financial companies (monitoring of businesses) to provide information and analytical support for the monetary policy decision-making process. The Bank of Russia relies on the results of the monitoring when making its key rate decisions to comprehensively assess the current economic situation and future developments, taking into account expert opinions of executives of nearly 15,000 industrial, construction, transportation and storage, agricultural, trade and services companies all over Russia. Based on the results of the monthly surveys, the Bank of Russia tracks the dynamics of business and investment activity both in the economy in general and across various industries. Companies take part in the monitoring on a voluntary basis. This cooperation is based on the mutual exchange of information. The Bank of Russia provides analytical data to enterprises prepared based on a summary of surveys for them to use this information for the development of their business.

Over the 25 years of the monitoring of businesses, the Bank of Russia has built trust-based relationships with respondents. Urgent and industry-specific issues are discussed in the course of personal meetings or telephone talks with business executives. The Bank of Russia thus receives unique recent data from primary sources enabling it to make well-informed monetary policy decisions, which is crucial during periods of turbulence in the economy and drastic shifts in the domestic and external markets, as well as when access to official statistics is limited. Businesses wishing to participate in the monitoring are welcome to fill in the application on the Bank of Russia website or call to the regional branches of the Bank of Russia. The questionnaires of the survey and the methodology for the monitoring of businesses are available in the Monitoring of Businesses section on the Bank of Russia website.

The Bank of Russia analyses business activity using the Business Climate Index (BCI) that comprises three measures:

- the composite index (composite BCI),
- the present situation index (present BCI), and
- the expectations index (expected BCI).

The composite BCI is calculated monthly based on the balance of business executives' responses regarding actual and expected changes in output and demand. It is a leading indicator of business activity, which is largely because this index covers companies' expectations about output and demand in the next three months and is published earlier than official statistics.

The dynamics of the composite BCI are normally in line with GDP dynamics. However, during periods of turbulence and high uncertainty, its changes are one quarter ahead of GDP dynamics.

The comparison of the BCI and the Key Industry Index (KII) shows that, in most cases, the composite BCI reflects reversal points (trend reversals) earlier than official statistics.

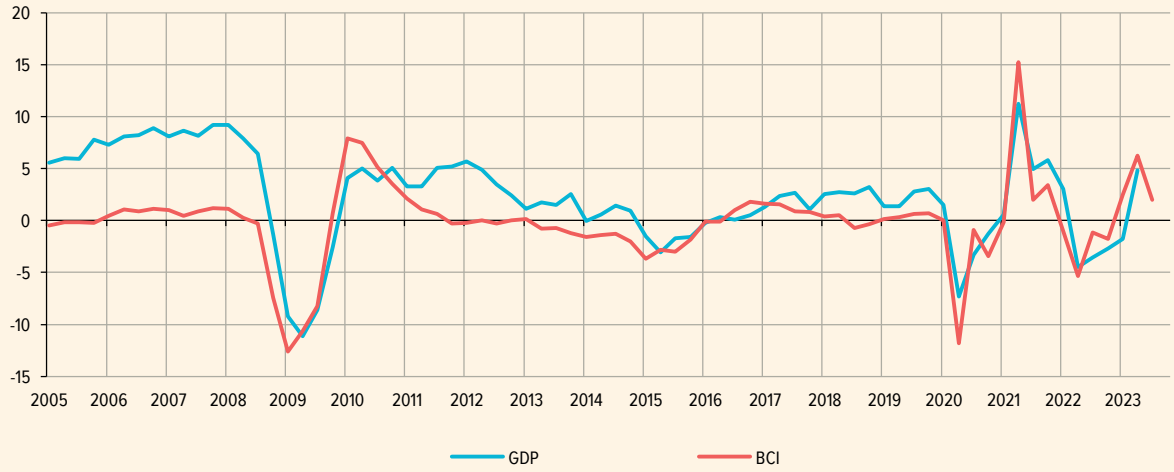
According to the monitoring in 2023, companies were adapting to the changed environment more actively than anticipated. In April 2023, the actual (composite) BCI reached its highest level over the past decade (9.4 points) and, although moving diversely, stayed close to its highs further on.

Nevertheless, analysing the dynamics of the composite BCI and the KII, it would be reasonably likely to assume a slight slowdown in business activity after peaking in March–April 2023.

Industrial enterprises, including manufacturing, construction and wholesale companies, remain the drivers of the recovery of the Russian economy in 2023. Despite the diverse dynamics of the composite BCI in the said industries beginning from July 2023, its levels significantly exceed the average for 2017–2019 when the situation in the economy was relatively stable.

GDP AND QUARTERLY COMPOSITE BCI
(% change YoY and on 2015 base)

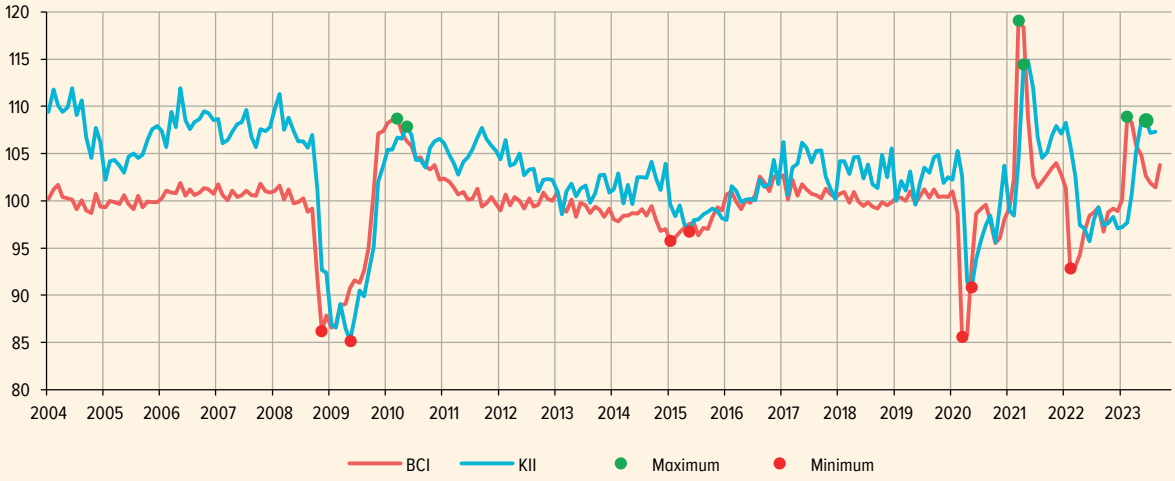
Chart B-4-1



Note. The chart shows the dynamics of GDP (% growth YoY) and of the composite BCI transformed into the indicator compared against the 2015 base. To ensure comparability with GDP dynamics, the quarterly BCI was calculated as the arithmetic mean for the corresponding three months. The calculations relied on the approaches described in the analytical note by Kobzev, A. and Andreev, A. 'Business Activity and Inflation Indicators Based on Monitoring', March 2021.
Source: Bank of Russia.

COMPOSITE BCI (ECONOMY-WIDE) AND KII
(% YoY)

Chart B-4-2



Note. To ensure comparability with the KII dynamics, the BCI was calculated as the ratio to the same month of the previous year.
Source: Bank of Russia.

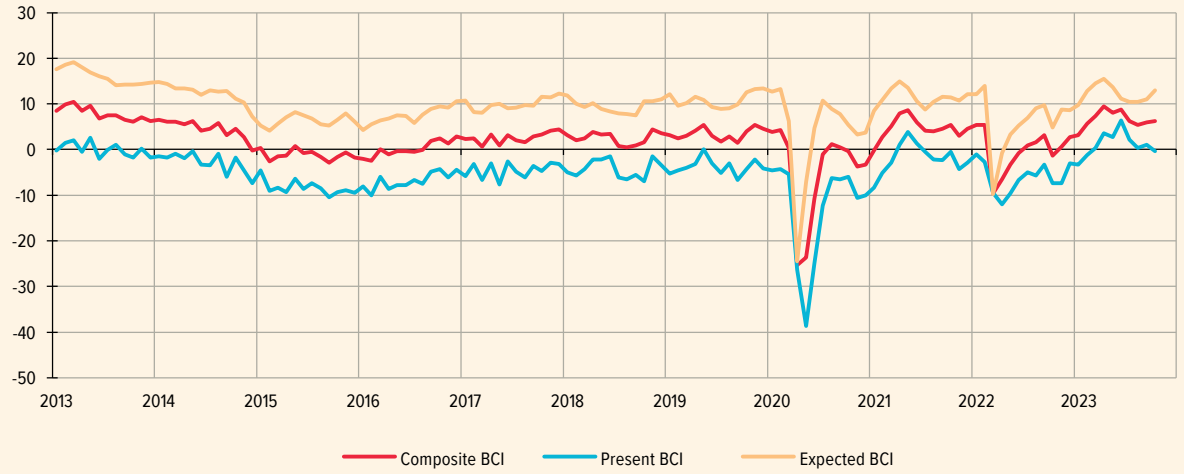
In most cases, the active expansion of output in manufacturing was driven by rising demand for these products because of the refocusing on domestic demand and more extensive import substitution. In particular, the assessments of current demand at enterprises manufacturing consumer and investment goods are close to the 2017 peaks.

Nevertheless, extractive companies' adaptation to the unprecedented tightening of the sanctions is more complicated. Demand has been rebounding since June 2023, while companies have always been optimistic about future output and demand.

Investment activity was restoring in almost all key industries, most actively – during 2023 H1 in construction, manufacturing, water supply, agriculture, and retail. However, investment

BANK OF RUSSIA'S BCI
(points, SA)

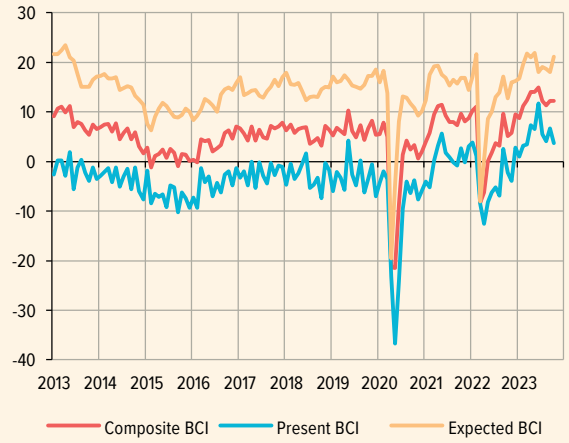
Chart B-4-3



Source: Bank of Russia.

BANK OF RUSSIA'S BCI IN MANUFACTURING
(points, SA)

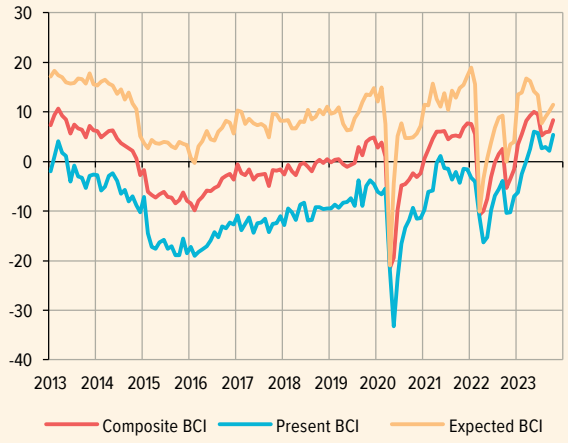
Chart B-4-4



Source: Bank of Russia.

BANK OF RUSSIA'S BCI IN CONSTRUCTION
(points, SA)

Chart B-4-5



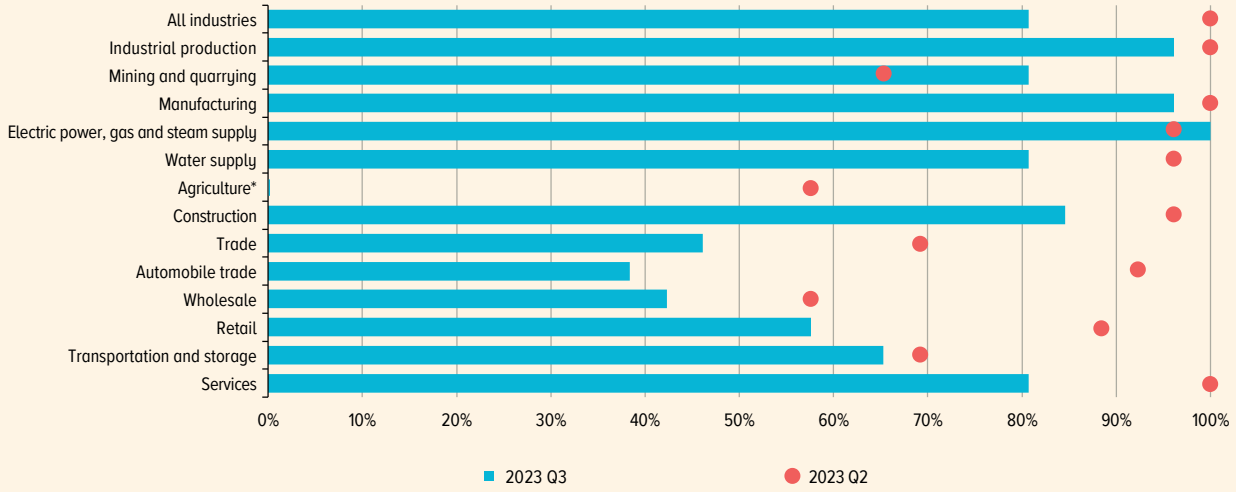
Source: Bank of Russia.

activity was growing slightly more slowly in 2023 Q3 compared to the previous quarter. Capacity utilisation rates in 2023 Q3 stayed close to the peak reached in the previous quarter. Companies continued to build up and upgrade their production facilities.

The further expansion of output in response to the surge in demand will be limited, specifically due to labour market tightness. Many industries are facing more acute staff shortages. This problem remained most severe in manufacturing, agriculture, water supply, transportation and storage. Measures implemented by businesses to address the problem of staff shortages (wage indexations, staff trainings, and others) did not help alleviate the staff deficit, especially in manufacturing, while increasing proinflationary pressure. Therefore, the situation in the labour market is in the focus of the Bank of Russia's attention.

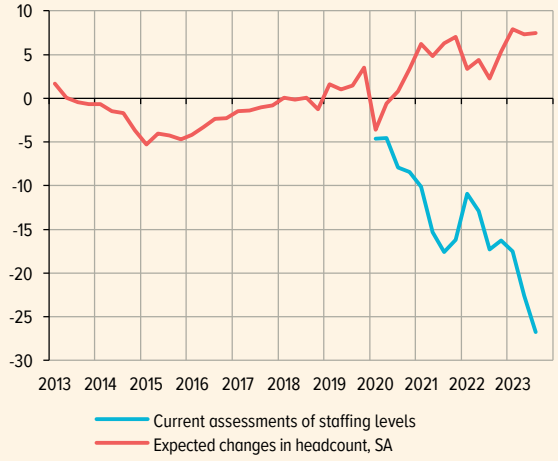
Frequent surveys of a range of companies (about search for new suppliers and sales markets, rearrangement of logistics, staff recruitment, etc.), among other things, helped the Bank of

ASSESSMENTS OF CHANGES IN INVESTMENT ACTIVITY ACROSS INDUSTRIES *Chart B-4-6*
(in percentiles relative to the distribution of values since 2017)



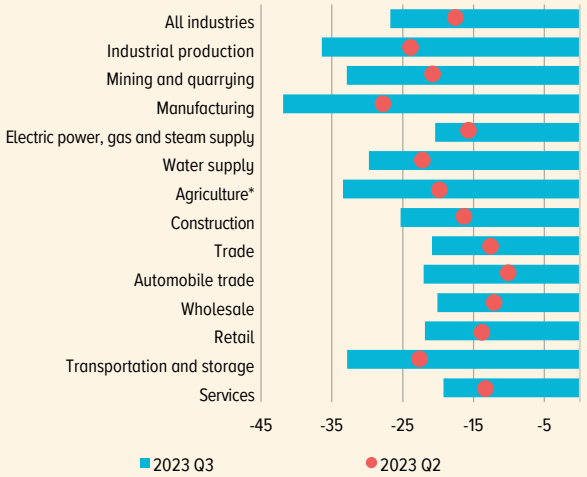
Note. The chart shows the percentiles of the indicators for the current and previous quarters observed from 2017 Q1 through 2023 Q3. The level of the indicator (in percentiles) for the previous reporting period is circled in red, and that for the current reporting period is shown as blue bars. A shift in the indicator to the left relative to the previous date means lower levels of the indicator, and a shift to the right – its higher levels.
** Minimum since 2017 Q1.*
Source: Bank of Russia.

ASSESSMENTS OF COMPANIES' STAFFING LEVELS AND EXPECTED CHANGES IN HEADCOUNT *Chart B-4-7*
(balance of responses, points)



Note. Current assessments / expectations in negative territory mean that most respondents report staff shortages / expect a decline in headcount.
Source: Bank of Russia.

ASSESSMENTS OF COMPANIES' STAFFING LEVELS ACROSS INDUSTRIES *Chart B-4-8*
(balance of responses, points)



Source: Bank of Russia.

Russia gain a more granular understanding of the progress of the economy's adaptation to the unprecedented tightening of the sanctions in 2023.

Factoring in the official statistics and the data of businesses' monitoring on economic and investment activity, in July, the Bank of Russia adjusted its April forecast of the economic development, revising the GDP growth forecast for 2023 upwards from 0.5–2.0% to 1.5–2.5%. In September, this forecast remained unchanged. In October, the Bank of Russia again adjusted the GDP forecast for 2023 upwards to 2.2–2.7% per annum.

Besides, making its monetary policy decisions, the regulator especially focuses on the dynamics of companies' price expectations. This indicator is measured monthly based on business executives' responses to the question of the market questionnaire 'How will prices for the company's finished products (services) change in the next three months?' (possible answers: 'will increase', 'will remain unchanged', and 'will decrease').

Businesses' price expectations are an important indicator of their reaction to the monetary policy stance as they show the general trend and intensity of current inflation processes.[1]

In addition to companies' price expectations, regular and high-frequency surveys cover such issues as the effect of the exchange rate on businesses' operations, their dependence on imported components, and other factors that the Bank of Russia also takes into account when making its monetary policy decisions.

The Bank of Russia will continue to use the findings of the monitoring when preparing its monetary policy decisions, considering that this monitoring provides a broad range of data and leading indicators, and will explore the reasonableness of expanding the list of survey data used in the Bank of Russia's model-based assessments.

[1] For details about companies' price expectations, see Appendix 5 'Households' and businesses' perception of inflation and inflation expectations'.

3. MACROECONOMIC SCENARIOS AND MONETARY POLICY IN 2023–2026

The Russian economy had to face difficulties in 2022: several packages of sanctions, restrictions on payments and settlements in foreign trade, disruptions in established logistics chains, and the termination of supplies of a whole range of goods. All this became a serious challenge for both the real sector and financial and price stability. Forecasts from various organisations and experts assumed a considerable contraction of the economy in 2022–2023. The Bank of Russia's baseline scenario published in the Monetary Policy Guidelines for 2023–2025 predicted that the downturn that had begun in 2022 would continue in 2023 as well. The Fast Adaptation scenario assumed that GDP might grow, but by no more than 1%.

The measures implemented by the Government of the Russian Federation and the Bank of Russia limited the scale of the economic decline and promoted the conditions for a faster rebound of the domestic economy. Companies were able to promptly and flexibly adjust to the new environment and rearrange relevant production processes and business models. As a result, as early as the middle of 2023, output in industries focusing on domestic demand generally exceeded the pre-crisis level of late 2021. The recovery of the economy completed. The Bank of Russia forecasts that GDP growth might reach 2.2–2.7% in 2023. According to the baseline scenario, the expansion will be more moderate in the next few years and the Russian economy will return to a balanced growth path by the end of the forecast horizon.

Although the baseline scenario is the most probable one, it is still a forecast. Its realisation depends on not only the recovery and adaptation processes inside the country, but also external conditions that remain unstable.

On the one hand, the gradual transformation of the status quo in the world economy and relationships formed between states over the previous 30–40 years continues. The era of globalisation based on the division of labour and broad cooperation is giving way to a period where countries are focusing increasingly more on competition and striving to limit competitors' access to their domestic economies and technologies. Regional blocks are replacing a single integrated environment, and the world is becoming increasingly more fragmented. These processes are adversely affecting global trade, notably hindering its expansion.

On the other hand, there are still problems accumulated during the post-pandemic recovery that need to be addressed. Inflation continues to slow down worldwide, while staying considerably above the targets in the majority of economies. However, in contrast to 2021–2022 when central banks were tightening their monetary policies synchronously as inflation pressure was high globally, emerging market and advanced economies' monetary policies are becoming increasingly more divergent in 2023. Compared to advanced economies, inflation and inflation expectations in EMEs turned out to be more sensitive to the earlier monetary policy tightening. Therefore, EMEs' central banks mostly paused policy rate increases. Central banks in advanced economies have to continue tight monetary policy during a long period. If inflation and inflation expectations in these countries respond to the monetary policy tightening as weakly as before, the central banks

will be forced to take more active measures not only to return inflation to the target, but also to restore confidence in their monetary policies. However, fast increases in policy rates have a negative effect on financial market participants holding large portfolios of assets dependent on interest rate risk.

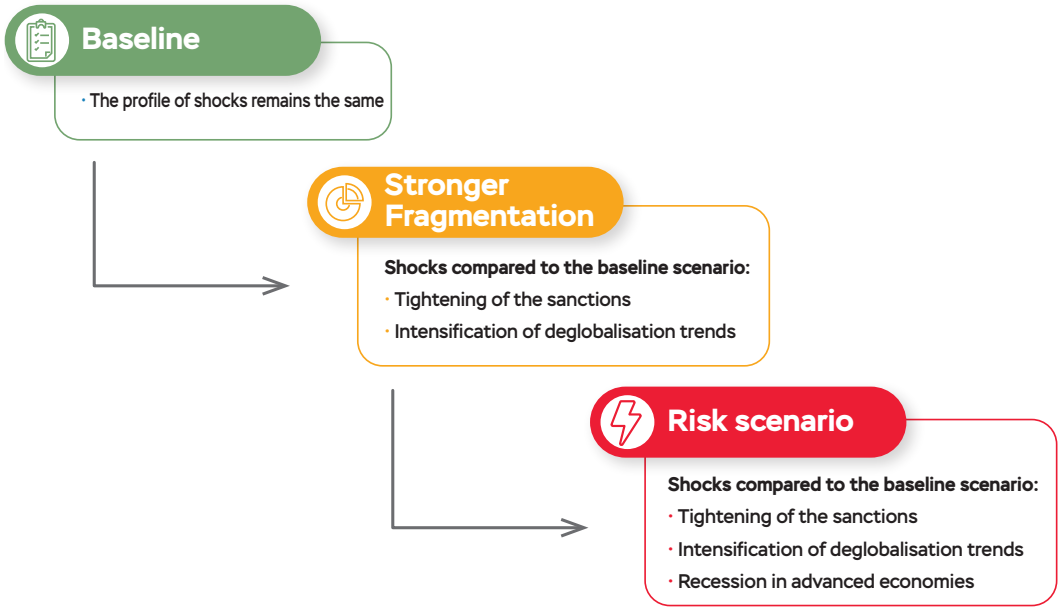
The earlier significant increases in policy rates already took a toll on some US and European banks that had to terminate their business. By the moment, the regulators have managed to limit the resulting risks to financial stability. Nevertheless, the cycle of monetary policy tightening is not over yet. In July 2023, the US Fed raised the funds rate above its peak of 2001. Interest rate risk to global financial market participants remains high. Moreover, the financial situation in EMEs that have accumulated large foreign currency debts is worsening as their debt servicing costs are growing.

Inflation in advanced economies is returning to the targets more slowly than expected, which suggests that there is still uncertainty about future policy rate paths and the time needed for the full transmission of all the effects to the economy and the financial system. It would be hardly possible to identify a moment when interest rate risk might start to materialise globally. Therefore, the probability of a large-scale financial crisis cannot be excluded.

Considering the challenging external conditions, the Bank of Russia presents two alternative scenarios of the medium-term development of the Russian economy, in addition to the baseline scenario. They depend on the composition and intensity of the shocks that might occur in the domestic economy.

- The **Stronger Fragmentation** scenario assumes an intensification of deglobalisation trends. Countries become increasingly more divided, forming regional blocks and relocating a growing number of production facilities back to their territories or friendly and neighbouring states. For the Russian economy, this might not only deteriorate trade conditions in general, but also entail a possible intensification of the sanction pressure.

SCENARIOS ASSUMED IN THE BANK OF RUSSIA'S MACROECONOMIC FORECAST *Chart 3.1*



Source: Bank of Russia.

- The **Risk** scenario combines the entire range of adverse external conditions. Persistently high inflation pressure and the determination to maintain confidence in their monetary policies force advanced economies' central banks to tighten their policies even more. Further rapid increases in their policy rates strengthen the pressure on financial institutions' balance sheets and, ultimately, provoke a global financial crisis. Besides, deglobalisation processes in this scenario become more active as well. Interest rate risk for the financial sector and global borrowers materialises in the conditions where countries are forming regional blocks, which exacerbates the crisis. The sanction pressure on the Russian economy is likely to strengthen under this scenario as well.

A more favourable scenario compared to the baseline one is also possible. For example, if external conditions significantly improve or labour productivity increases faster as a result of the structural transformation, the potential growth rate of the Russian economy might rise. Economic growth rates in 2024–2026 might be higher, and inflation pressure might be lower. In this case, the Bank of Russia will be able to implement monetary policy in 2024–2025 with a lower key rate than in the baseline scenario and to return it to the neutral range faster.

MAIN PARAMETERS OF EXTERNAL CONDITIONS OF THE BANK OF RUSSIA'S FORECAST SCENARIOS *Table 3.1*

	2021	2022	2023 (forecast)	2024 (forecast)	2025 (forecast)	2026 (forecast)
World GDP, % YoY						
Baseline scenario	6.1	3.4	3.1	2.8	2.7	2.6
Stronger Fragmentation	6.1	3.4	3.1	2.4	2.4	2.3
Risk scenario	6.1	3.4	3.1	0.7	0.8	3.4
US GDP, % YoY						
Baseline scenario	5.7	2.1	2.1	1.3	1.3	1.4
Stronger Fragmentation	5.7	2.1	2.1	0.9	1.0	1.1
Risk scenario	5.7	2.1	2.1	-1.9	-1.7	3.4
Euro area GDP, % YoY						
Baseline scenario	5.3	3.4	0.5	1.0	1.0	1.1
Stronger Fragmentation	5.3	3.4	0.5	0.6	0.7	0.8
Risk scenario	5.3	3.4	0.5	-1.1	-1.0	1.6
Chinese GDP, % YoY						
Baseline scenario	8.6	3.1	5.3	4.7	4.6	4.6
Stronger Fragmentation	8.6	3.1	5.3	4.3	4.3	4.3
Risk scenario	8.6	3.1	5.3	3.4	3.3	4.7
US inflation,* % in December YoY						
Baseline scenario	5.0	4.6	3.7	3.0	2.7	2.4
Stronger Fragmentation	5.0	4.6	3.7	3.0	2.7	2.4
Risk scenario	5.0	4.6	3.7	2.6	1.6	1.4
Euro area inflation,* % in December YoY						
Baseline scenario	2.6	5.2	4.2	3.2	2.6	2.3
Stronger Fragmentation	2.6	5.2	4.2	3.2	2.6	2.3
Risk scenario	2.6	5.2	4.2	3.2	1.3	1.3
US Fed funds rate, % as of the year-end**						
Baseline scenario	0.25	3.84	5.3	5.2	4.8	4.2
Stronger Fragmentation	0.25	3.84	5.3	5.1	4.8	4.2
Risk scenario	0.25	3.84	5.3	1.5	0.3	0.6
ECB rate, % as of the year-end**						
Baseline scenario	-0.5	1.4	4.1	4.5	4.1	3.5
Stronger Fragmentation	-0.5	1.4	4.1	4.5	4.1	3.5
Risk scenario	-0.5	1.4	4.1	2.8	0.6	0.3

** Core PCE, USA. Core HICP, euro area.*
*** Fed Funds target rate, the upper bound of the range, Q4 average. ECB deposit facility rate, Q4 average.*
Sources: data from national statistical agencies, US Fed, ECB, Bank of Russia calculations.

However, considering the current conditions when proinflationary risks dominate and significant risks caused by external conditions persist, it would be more important to focus more on the scenarios that might force the Bank of Russia to take more decisive monetary policy actions in order to bring inflation back to 4% and stabilise it at this level.

Whatever the scenario, the Bank of Russia's monetary policy will be aimed at returning inflation to the target of 4%. The complex of measures and decisions made will be adjusted depending on the state of the Russian economy, inflation trends, and the main indicators in financial markets.

BASELINE SCENARIO

In the baseline scenario, the world economy continues to develop within the existing trends, provided there are no new shocks. Inflation continues to slow down globally, although this process somewhat decelerated in Q3 due to rising energy commodity prices. Inflation in a number of EMEs has already decreased quite significantly, enabling central banks to discontinue monetary policy tightening and even shift to policy rate reductions in certain cases. As to advanced economies, inflation is going down more slowly. One of the main reasons is tighter labour markets, especially in services, which pushes up real wages and maintains consumer demand at a high level. Besides, output in advanced economies is already close to its potential or even surpasses it (e.g., in the USA and the euro area). Consequently, core inflation might stay elevated for longer. Central banks in advanced economies will have to pursue tight monetary policy during a longer period.

The growth of the world economy continues to decelerate, while remaining resistant to policy rate increases in the largest countries. PMIs suggest that there is almost no improvements in the situation in manufacturing, whereas the service sector recorded a worsening. Nevertheless, the statistics and Q3 data released in the USA turned out to be above expectations. Increasingly more data evidence that developments in the US economy are consistent with the 'soft landing' scenario. Contrastingly, the statistics released in the euro area are below expectations, while the situation in its major economies, namely in Germany and France, shows almost no improvements (the Composite PMI in these countries still approximates 45). China is demonstrating moderate improvements relative to pessimistic estimates as of the end of the summer, whereas its overall economic growth prospects are slightly worse than historical rates. The real estate sector still poses a material risk to the Chinese economy in the short term.

Prices in commodity markets were moving diversely. In particular, oil, gas and coal prices were growing in recent months because of supply-side constraints (strikes, closures of fields and mines, geopolitical tensions). Conversely, non-energy commodity prices were declining for the most part amid concerns about future global growth. Global wheat prices decreased due to a better forecast of the global harvest and large stocks in Russia. Fertilisers were the only exception, as their pricing is linked to gas prices and, accordingly, was affected by their rise. Moreover, Russian export goods are still sold in the global market at a discount.

The baseline scenario does not assume any significant changes in geopolitical conditions throughout the forecast horizon. The enacted external restrictions on Russian exports, imports, investment, and technology cooperation will stay in effect over the medium-term horizon.

Forecast of the balance of payments

World economy. The Bank of Russia forecasts that, given the actual trends, the Brent crude price will reach $83 per barrel as of the end of 2023. It will be gradually declining in the next few years, following the slowdown of global economic growth, and drop to $70 per barrel at the end of the forecast horizon. The export price for Russian crude will follow the Brent price trend, although its specific levels will depend on the weighted average price for Russian crude grades and the size of the discount. Gas prices in 2024 will still surpass the 2015–2021 average because of higher demand amid stable output, but will start to decline again in 2025–2026 as a result of commissioning of additional large production capacities. Prices for other Russian exports in 2023 will be lower compared to the elevated levels of 2022. Further on, the dynamics are expected to normalise, that is, prices will edge up slightly.

Exports. After peaking in 2022, the value of exports declined in 2023 H1. The forecast takes into account the actual dynamics of gas supplies from early 2023 and Russia's decision to voluntarily cut oil exports. The value of exports will be gradually rebounding in the next few years, primarily driven by an increase in non-oil and gas exports. While staying below the record high of 2022, the value of exports as of the end of the forecast horizon will come close to the 2018–2019 levels.

Imports. The expansion of imports in 2023 H1 was supported by growing domestic demand, driven by consumers' adaptation to the new product range and higher wages. From the middle of 2023 Q3, the earlier ruble weakening and higher interest rates in the economy started to limit the growth of imports. Considering the time lags in the adjustment of imports, these factors will remain a constraint in 2024 as well. In 2025–2026, the value of imports will resume an upward trend as the economy and domestic demand progressively return to balanced growth paths. Nevertheless, due to the sanctions, the imports-to-GDP ratio will remain below the averages recorded before 2022.

Current account. The surplus of the current account will shrink from its record high of $238 billion in 2022 to $60 billion in 2023 due to the contraction of exports amid the recovery of imports. In 2024, the current account surplus will expand, largely because imports will shrink. In the next few years, the surplus will be gradually decreasing because imports will be growing faster than exports.

Forecast of key macroeconomic indicators

GDP. By the middle of 2023, output in industries focusing on domestic demand generally exceeded the pre-crisis level of late 2021. The recovery of the economy completed. Considering the actual data for 2023 H1 and high-frequency indicators for 2023 Q3, the Bank of Russia forecasts that GDP growth will reach 2.2–2.7% in 2023. Its growth rates in 2024–2025 will be more moderate. In 2026, the Russian economy will return to a balanced growth rate of 1.5–2.5%.

The expansion of economic activity in 2023 was largely driven by domestic demand. The contribution of exports will increase slightly in the next few years, but will generally remain less significant than ever before.

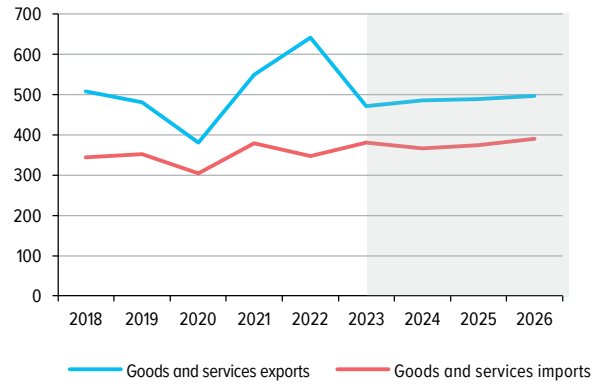
Final consumption expenditure. The rise in household consumption in 2023 H1 exceeded the potential rates, surpassing the level of 2021 Q4 as of the end of 2023 Q2. As assessed by the Bank of Russia, demand in 2023 Q3 still exceeded the level corresponding to a steady economic growth path. According to the Bank of Russia's forecast, household consumption will rise by 5.5–6.5% as of the end of 2023. The contribution of the increase in private

consumption to the output expansion in 2023 is close to the peak of 2015 (a higher level was only recorded in 2021). Considering higher interest rates in the economy, households will mostly prefer to save in 2024. As a result, the growth of household consumption will slow down to 1–2%. In the next few years, households will be gradually increasing demand, and by the end of the forecast horizon, it will bounce back to the growth rate consistent with a balanced economic growth path. After surging in 2023, the contribution of general government consumption to the output expansion will remain at a similar level in 2024. In subsequent years, as fiscal policy normalises, the contribution of the general government sector will be declining, thus increasing room for a rise in private consumption. In 2026, the contribution of aggregate consumption and its components will return to the level corresponding to a balanced economic growth path.

Gross capital formation. Investment has been growing steadily since the middle of 2020. According to Rosstat, fixed capital investment increased by 12.6% over 2023 Q2 in annualised terms, hitting a record high. Capacity utilisation rates stay close to the peaks. According to the Bank of Russia's monitoring of businesses, their expectations about future output and demand had been improving in October for the third month in a row. Investment activity in manufacturing and the electric power industry stays at the peaks recorded in 2017.

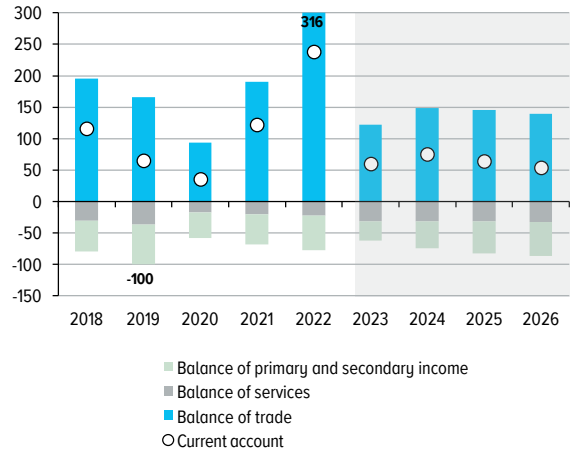
As forecast by the Bank of Russia, the contribution of gross fixed capital formation to the output expansion as of the end of 2023 will be comparable with the peaks of 2021: in addition to increasing private investment, this will be driven also by investment from the NWF in infrastructure projects implemented in the Russian economy. Besides, large investment projects, primarily those of state-owned companies, remain an important positive contributor to output. In 2024, the contribution of investment to the output expansion will be slightly smaller: government investment will remain high, whereas private investment will respond to a decline in demand. In subsequent years, as fiscal policy normalises, the proportion of government investment will be decreasing, whereas private investment will be growing, just as consumer activity. By the end of the forecast horizon, the contribution of investment will stabilise, with the private sector accounting for the largest portion.

EXPORT AND IMPORT FORECAST IN THE BASELINE SCENARIO *Chart 3.2*
(billions of US dollars)



Source: Bank of Russia calculations.

CURRENT ACCOUNT FORECAST IN THE BASELINE SCENARIO *Chart 3.3*
(billions of US dollars)



Source: Bank of Russia calculations.

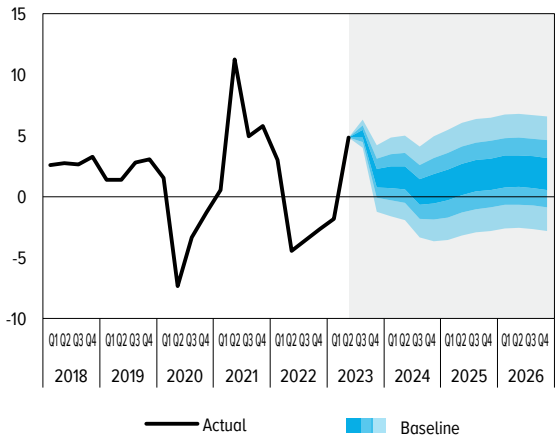
Exports. Exports can shrink by 9.2–10.7% as of the end of 2023. Nevertheless, the negative contribution of exports to the output dynamics will be approximately 1.5 times smaller than in 2022. In the next few years, the expansion of exports will be gradually accelerating, and by the end of the forecast horizon, will reach the rates consistent with a balanced growth path of the economy, considering that its structure will become more domestically focused.

Imports. The expansion of imports depends on domestic demand trends and relative prices for imported goods and services, as compared to those for domestic ones. After the surge by 10.2–11.7% in 2023 simultaneously with the expansion of consumer demand, imports will shrink by 4.5–6.5% in 2024, which will be caused by not only a slower increase in demand, but also a shift towards domestic goods due to higher prices for imports pushed up by a stronger pass-through of the ruble depreciation in 2023. By 2026, imports will stabilise at a long-term steady level corresponding to the new structure of the economy. The economy's greater focus on domestic manufacturing will cause a reduction in the percentage of imports in consumption compared to historical levels.

Inflation. At the end of 2023 H1, rising inflationary pressure became evident across an increasingly wider range of goods and services. Annual inflation continued to accelerate in 2023 Q3, reaching 6.0% in September. In 2023 Q3, current price growth rates averaged 0.96% over a month (SA), which significantly exceeded 0.42% (SA) recorded in the previous quarter and was the maximum since 2015 (except for 2022 Q1). Price growth accelerated in Q3 across the majority of the main product groups, excluding those characterised by elevated price volatility. As a result, all trend inflation measures were up, considerably exceeding 4% in annualised terms.

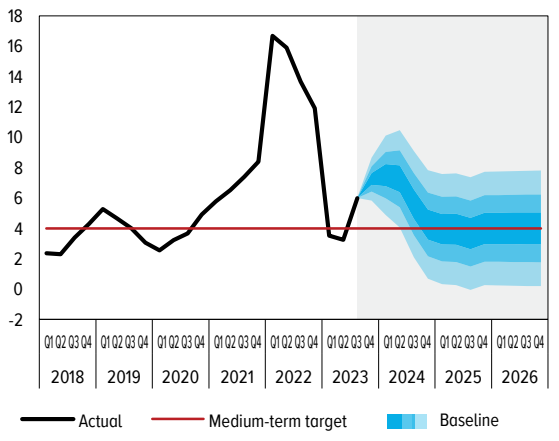
Growing demand surpassing the capacities to ramp up supply remains the major factor of elevated pressure on prices. High domestic demand caused the surge in the demand for imports in ruble terms. Coupled with the contraction of exports, that was the main reason

GDP GROWTH PATH IN THE BASELINE SCENARIO *Chart 3.4*
(% change YoY)



Note. The shaded blue areas over the forecast horizon show the probability of different GDP growth values. The confidence intervals are symmetrical and based on the historical estimates of GDP growth uncertainty. If the situation develops in line with the assumptions of this scenario, GDP growth will reach a rate within the darkest central area only in 25 of 100 cases. Each of the pairs of the lighter areas accounts for 25 of 100 cases. Overall, GDP growth will reach a rate within the blue areas in 75 of 100 cases. In the remaining 25 cases, GDP growth may reach a rate outside the blue areas; over the forecast horizon, this area is shaded in grey.
Source: Bank of Russia calculations.

INFLATION PATH IN THE BASELINE SCENARIO *Chart 3.5*
(% change YoY)



Note. The shaded blue areas over the forecast horizon show the probability of different inflation rates. The confidence intervals are symmetrical and based on the historical estimates of inflation uncertainty. If the situation develops in line with the assumptions of this scenario, inflation will reach a rate within the darkest central area only in 25 of 100 cases. Each of the pairs of the lighter areas accounts for 25 of 100 cases. Overall, inflation will reach a rate within the blue areas in 75 of 100 cases. In the remaining 25 cases, inflation may reach a rate outside the blue areas; over the forecast horizon, this area is shaded in grey.
Source: Bank of Russia calculations.

for the ruble weakening. The pass-through of the ruble exchange rate to prices is not over yet and will continue in the next few months.

Growing demand amid supply-side constraints enables companies to pass on their rising costs to consumers more quickly and to a greater extent. In recent months, the material factors pushing up producer costs across a wide scope of goods and services were rising wages, the ruble weakening, and the increase in cargo transportation prices caused by high motor fuel prices. The rise in labour costs is associated with persistent staff shortages. According to the Bank of Russia's monitoring of businesses, staff shortages became more acute in 2023 Q3 compared to the previous quarter in both the economy in general and all its main industries. The staffing level in 2023 Q3 dropped below the minimum recorded in 2020 Q1. The problem of staff shortages remained most severe in manufacturing.

Households' inflation expectations stay elevated. Companies' price expectations continued to rise in Q3, hitting record highs. In October, analysts again raised their inflation expectations for 2023 and 2024, although their medium-term expectations are anchored close to 4%.

According to the Bank of Russia's forecast, inflation will be in the range of 7.0–7.5% as of the end of 2023. Given the current monetary policy stance, annual inflation will lower to 4.0–4.5% in 2024 and stay close to 4% further on.

Forecast of monetary indicators

Key rate. Medium-term proinflationary risks remain considerable. To steadily reduce inflation and inflation expectations and stabilise inflation at the target, the Bank of Russia will need to keep the key rate at an elevated level for quite a long period. The key rate will average 9.9% in 2023 and 12.5–14.5% in 2024. This level of the key rate will make it possible to offset the proinflationary effect of the increased fiscal stimulus on domestic demand and promote the monetary conditions required for ensuring a balanced expansion in lending and stable disinflationary trends in the economy. The key rate will return to the neutral range by the end of the forecast horizon. Taking into account the increase in the fiscal stimulus for 2024–2026, the Bank of Russia raised its estimate of the neutral rate to 6.0–7.0% in nominal terms.

Banking system's claims on the economy. The forecast growth rate of claims on the economy in 2023 is associated with high credit activity in both the retail and corporate market segments. The main contributor to retail lending is mortgages, the amount of which might hit a new record high in 2023. In 2024, the growth of lending to the economy will slow down to 5–10%, considering the effect of monetary policy offsetting the increased fiscal stimulus and households' higher propensity to save. In 2025–2026, the rise in claims on the economy will stabilise at a level consistent with a balanced growth path.

Money supply. The expansion of money supply in the national definition (M2) in 2023 is driven by faster lending growth and still expansionary fiscal policy, as well as the continuing transfer of funds from foreign currency deposits to ruble-denominated ones. Nevertheless, the influence of these factors will be partially limited by weak dynamics of net foreign assets because of a relatively low surplus of the current account. As a result, the M2 aggregate will grow by 18–21% in 2023. In 2024, the expansion of money supply will slow down, predominantly due to a slower rise in private lending to the economy needed to reduce inflationary effects from the expanded inflow of funds into the economy through the budget channel. The contribution of budget operations to the expansion of money supply will be gradually decreasing in 2025–2026, while claims on the economy will become the

main driver of the increase in money supply. As the potential of the transfer of funds from foreign currency deposits to ruble-denominated ones is depleted, the growth rates of M2 and M2X (broad money) will converge.

THE BANK OF RUSSIA'S FORECAST UNDER THE BASELINE SCENARIO *Table 3.2*

	2021 (actual)	2022 (actual)	2023	2024	2025	2026
Core macroeconomic indicators (% growth YoY, unless indicated otherwise)						
Inflation, % in December YoY	**8.4**	**11.9**	**7.0–7.5**	**4.0–4.5**	**4.0**	**4.0**
Inflation, yearly average, % YoY	6.7	13.8	5.8–5.9	5.8–6.5	4.0	4.0
Key rate, yearly average, % p.a.	**5.7**	**10.6**	**9.9***	**12.5–14.5**	**7.0–9.0**	**6.0–7.0**
Gross domestic product	**5.6**	**-2.1**	**2.2–2.7**	**0.5–1.5**	**1.0–2.0**	**1.5–2.5**
– % change, Q4 YoY	*5.8*	*-2.7*	*1.0–2.0*	*0.5–1.5*	*1.0–2.0*	*1.5–2.5*
Final consumption expenditure	8.0	-0.3	5.5–6.5	(-0.5)–(+0.5)	0.5–1.5	1.5–2.5
– households	*10.0*	*-1.4*	*5.5–6.5*	*(-2.0)–(-1.0)*	*0.5–1.5*	*1.5–2.5*
Gross capital formation	14.1	-4.9	11.2–12.7	(-5.0)–(-3.0)	0.0–2.0	1.0–3.0
– gross fixed capital formation	*9.1*	*3.3*	*7.2–8.7*	*0.0–2.0*	*0.0–2.0*	*1.0–3.0*
Exports	3.3	-13.9	(-10.7)–(-9.2)	1.5–3.5	1.5–3.5	1.0–3.0
Imports	19.1	-15.0	10.2–11.7	(-6.5)–(-4.5)	(-1.5)–(+0.5)	1.0–3.0
Money supply (national definition)	**13.0**	**24.4**	**18–21**	**8–13**	**6–11**	**6–11**
Banking system's claims on the economy in rubles and foreign currency, including:**	**13.9**	**12.0**	**17–20**	**5–10**	**8–13**	**8–13**
– on businesses	*10.7*	*13.2*	*16–19*	*5–10*	*8–13*	*8–13*
– on households, including:	*22.0*	*9.4*	*20–23*	*5–10*	*8–13*	*8–13*
– housing mortgage loans	*26.7*	*17.7*	*24–27*	*7–12*	*10–15*	*10–15*
Balance of payments indicators* (billions of US dollars, unless indicated otherwise)**						
Current account	**122**	**238**	**60**	**75**	**64**	**54**
Balance of trade	190	316	122	149	146	140
Exports	*494*	*592*	*429*	*441*	*444*	*450*
Imports	*304*	*277*	*307*	*292*	*298*	*310*
Balance of services	-20	-22	-31	-31	-32	-33
Exports	*56*	*49*	*42*	*44*	*45*	*47*
Imports	*76*	*71*	*73*	*75*	*77*	*80*
Balance of primary and secondary income	-48	-55	-31	-43	-50	-53
Current and capital account balance	**122**	**233**	**60**	**75**	**64**	**54**
Financial account balance (net of reserve assets)	**59**	**237**	**61**	**61**	**48**	**38**
Net incurrence of liabilities	38	-126	4	23	20	20
Net acquisition of financial assets, net of reserve assets	97	110	65	84	68	58
Net errors and omissions	0	-4	-8	0	0	0
Change in reserve assets	**64**	**-7**	**-9**	**14**	**17**	**16**
Brent crude price, yearly average, $ per barrel	**71**	**99**	**83**	**80**	**75**	**70**

** Given that the average key rate from 1 January through 29 October 2023 was 8.8%, the average key rate from 30 October through 31 December 2023 is forecast in the range of 15.0–15.2%. Additional information on the format of the key rate forecast is available in the methodological note.*

*** The banking system's claims on the economy mean all claims of the banking system on non-financial and financial institutions and households in Russian rubles, foreign currencies, and precious metals, which include loans issued (including overdue loans), overdue interest on loans, credit institutions' investment in debt and equity securities and promissory notes, as well as other forms of equity interest in non-financial and financial institutions, and other receivables under settlement operations with non-financial and financial institutions and households.*

The growth rates of claims are adjusted for foreign currency revaluation. For the purpose of the adjustment for foreign currency revaluation, the growth of claims in foreign currencies and precious metals is recalculated into rubles at the period average RUB/USD exchange rate. Housing mortgage loans, net of claims on such loans acquired by banks.

**** On the basis of the methodology set out in the 6th edition of the Balance of Payments and International Investment Position Manual (BPM6). In the financial account, '+' denotes net lending and '–' denotes net borrowing. Final values may differ from the total of the respective values due to rounding.*

Source: Bank of Russia.

ALTERNATIVE SCENARIOS

STRONGER FRAGMENTATION

The deglobalisation trend started to emerge back in 2018–2019 simultaneously with trade disputes and frictions. In 2022, they were exacerbated further due to intensifying geopolitical tensions. Countries are increasingly seeking to localise their production capacities in their territories and develop partnerships not based on economic rationale (e.g., cost reduction) but rather with neighbouring countries and geopolitical allies (reshoring and friendshoring). All this is reconfiguring supply chains and causing fragmentation of global trade.

Today, all these processes are moderate and gradual. However, high geopolitical tensions in the world and growing competition in many areas, including in the manufacturing of critical goods for the modern economy (e.g., microchips and electronic processors) might intensify countries' division into blocks. Stronger fragmentation might amplify the pressure of the sanctions on the Russian economy.

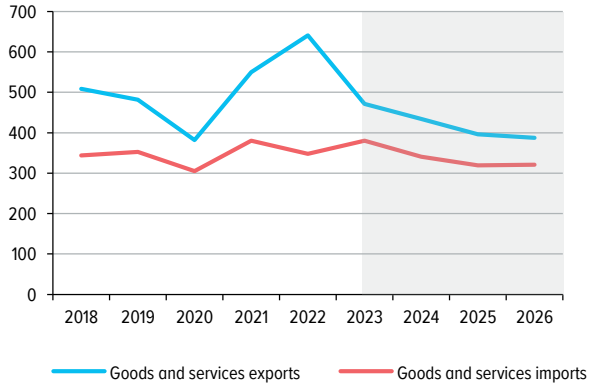
Global growth will be slower over the entire forecast horizon than predicted in the baseline scenario. This will affect the demand for Russian exports. The export price for Russian crude will be declining until 2025 and stabilise further on.

The current account will be affected primarily by contracting exports due to both lower prices and supplies. The reduction in imports will be more moderate, although the import level will be considerably lower than in the baseline scenario until the end of the forecast horizon.

A more significant contraction of exports than in the baseline scenario will limit the GDP growth rate. It will be slightly below zero in 2024 and might rise by up to 1% in 2025. Later on, the economy will return to a balanced growth path. Budget spending will support the economy in 2024, although fiscal policy normalisation will be slower than in the baseline scenario, and the Government will return to the parameters close to those assumed in the baseline scenario in 2025.

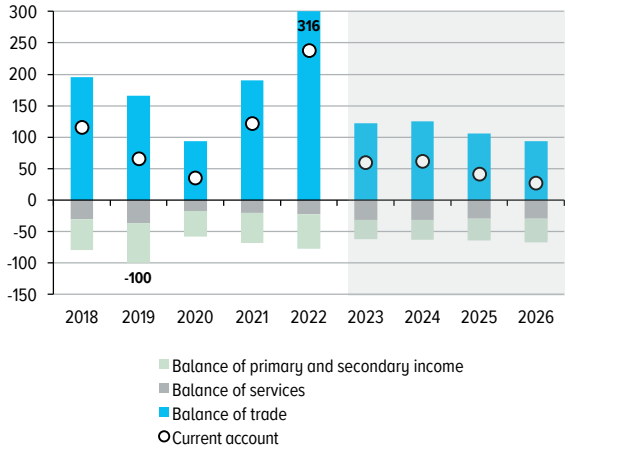
Inflation in 2024 will again rise moderately to 5.0–7.0%, which is close to 2023 rates, mostly because of new supply shocks. The shrinkage of imports due to stronger sanction pressure, coupled with domestic production constraints associated with a shortage of

EXPORT AND IMPORT FORECAST IN THE STRONGER FRAGMENTATION SCENARIO *Chart 3.6*
(billions of US dollars)



Source: Bank of Russia calculations.

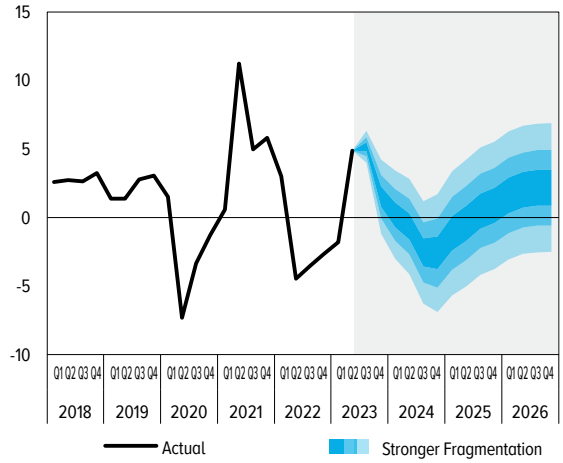
CURRENT ACCOUNT FORECAST IN THE STRONGER FRAGMENTATION SCENARIO *Chart 3.7*
(billions of US dollars)



Source: Bank of Russia calculations.

GDP GROWTH PATH IN THE STRONGER FRAGMENTATION SCENARIO
(% change YoY)

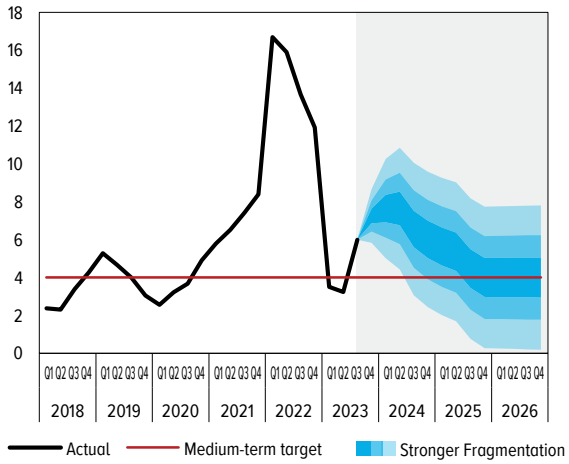
Chart 3.8



Note. The shaded blue areas over the forecast horizon show the probability of different GDP growth values. The confidence intervals are symmetrical and based on the historical estimates of GDP growth uncertainty. If the situation develops in line with the assumptions of this scenario, GDP growth will reach a rate within the darkest central area only in 25 of 100 cases. Each of the pairs of the lighter areas accounts for 25 of 100 cases. Overall, GDP growth will reach a rate within the blue areas in 75 of 100 cases. In the remaining 25 cases, GDP growth may reach a rate outside the blue areas; over the forecast horizon, this area is shaded in grey.
Source: Bank of Russia calculations.

INFLATION PATH IN THE STRONGER FRAGMENTATION SCENARIO
(% change YoY)

Chart 3.9



Note. The shaded blue areas over the forecast horizon show the probability of different inflation rates. The confidence intervals are symmetrical and based on the historical estimates of inflation uncertainty. If the situation develops in line with the assumptions of this scenario, inflation will reach a rate within the darkest central area only in 25 of 100 cases. Each of the pairs of the lighter areas accounts for 25 of 100 cases. Overall, inflation will reach a rate within the blue areas in 75 of 100 cases. In the remaining 25 cases, inflation may reach a rate outside the blue areas; over the forecast horizon, this area is shaded in grey.
Source: Bank of Russia calculations.

imported components, will exacerbate the gap between demand and supply, which in turn will be pushing consumer prices higher.

The Bank of Russia will be forced to implement tighter monetary policy in 2024–2025, with the key rate exceeding the level assumed in the baseline scenario by 1–2 pp. This will help bring inflation back to the target in 2025 and keep it at this level further on, as well as contribute to the return of the economy to a balanced growth path by the end of the forecast horizon.

A higher path of the key rate compared to the one assumed in the baseline scenario will limit the increase in the banking system's claims on the economy in 2024, particularly in unsecured consumer lending. Further on, the growth rates of the banking system's claims on the economy will be coming close to the level predicted in the baseline scenario.

THE BANK OF RUSSIA'S FORECAST UNDER THE STRONGER FRAGMENTATION SCENARIO *Table 3.3*

	2021 (actual)	2022 (actual)	2023	2024	2025	2026
Core macroeconomic indicators (% growth YoY, unless indicated otherwise)						
Inflation, % in December YoY	**8.4**	**11.9**	**7.0–7.5**	**5.0–7.0**	**4.0**	**4.0**
Inflation, yearly average, % YoY	6.7	13.8	5.8–5.9	6.1–7.8	4.5–5.2	4.0
Key rate, yearly average, % p.a.	**5.7**	**10.6**	**9.9***	**14.0–16.0**	**8.5–10.5**	**6.0–7.0**
Gross domestic product	**5.6**	**-2.1**	**2.2–2.7**	**-2.5–(-0.5)**	**-1.0–(+1.0)**	**1.5–2.5**
– % change, Q4 YoY	*5.8*	*-2.7*	*1.0–2.0*	*-2.5–(-0.5)*	*0.0–1.0*	*1.5–2.5*
Final consumption expenditure	8.0	-0.3	5.5–6.5	(-4.0)–(-2.0)	(-2.0)–(-1.0)	1.5–2.5
– households	*10.0*	*-1.4*	*5.5–6.5*	*(-4.0)–(-2.0)*	*(-2.5)–(-1.5)*	*1.5–2.5*
Gross capital formation	14.1	-4.9	11.2–12.7	(-7.0)–(-4.0)	(-1.0)–(+1.0)	2.0–4.0
– gross fixed capital formation	*9.1*	*3.3*	*7.2–8.7*	*(-3.0)–0.0*	*(-0.5)–(+1.5)*	*1.5–2.5*
Exports	3.3	-13.9	(-10.7)–(-9.2)	(-3.5)–(-0.5)	(-3.0)–(-1.0)	(-2.0)–0.0
Imports	19.1	-15.0	10.2–11.7	(-13.0)–(-10.0)	(-8.0)–(-6.0)	(-1.0)–(+1.0)
Money supply (national definition)	**13.0**	**24.4**	**18–21**	**8–13**	**5–10**	**5–10**
Banking system's claims on the economy in rubles and foreign currency, including:**	**13.9**	**12.0**	**17–20**	**2–7**	**7–12**	**7–12**
– on businesses	*10.7*	*13.2*	*16–19*	*3–8*	*7–12*	*7–12*
– on households, including:	*22.0*	*9.4*	*20–23*	*1–6*	*6–11*	*8–13*
– housing mortgage loans	*26.7*	*17.7*	*24–27*	*4–9*	*10–15*	*10–15*
Balance of payments indicators* (billions of US dollars, unless indicated otherwise)**						
Current account	**122**	**238**	**60**	**62**	**41**	**27**
Balance of trade	190	316	122	125	106	94
Exports	*494*	*592*	*429*	*394*	*357*	*346*
Imports	*304*	*277*	*307*	*269*	*251*	*252*
Balance of services	-20	-22	-31	-32	-29	-29
Exports	*56*	*49*	*42*	*40*	*39*	*41*
Imports	*76*	*71*	*73*	*72*	*68*	*69*
Balance of primary and secondary income	-48	-55	-31	-31	-35	-38
Current and capital account balance	**122**	**233**	**60**	**62**	**41**	**27**
Financial account balance (net of reserve assets)	**59**	**237**	**61**	**49**	**25**	**14**
Net incurrence of liabilities	38	-126	4	8	10	15
Net acquisition of financial assets, net of reserve assets	97	110	65	57	35	29
Net errors and omissions	0	-4	-8	0	0	0
Change in reserve assets	**64**	**-7**	**-9**	**13**	**17**	**13**
Brent crude price, yearly average, $ per barrel	**71**	**99**	**83**	**80**	**75**	**70**

** Given that the average key rate from 1 January through 29 October 2023 was 8.8%, the average key rate from 30 October through 31 December 2023 is forecast in the range of 15.0–15.2%. Additional information on the format of the key rate forecast is available in the methodological note.*

*** The banking system's claims on the economy mean all claims of the banking system on non-financial and financial institutions and households in Russian rubles, foreign currencies, and precious metals, which include loans issued (including overdue loans), overdue interest on loans, credit institutions' investment in debt and equity securities and promissory notes, as well as other forms of equity interest in non-financial and financial institutions, and other receivables under settlement operations with non-financial and financial institutions and households.*

The growth rates of claims are adjusted for foreign currency revaluation. For the purpose of the adjustment for foreign currency revaluation, the growth of claims in foreign currencies and precious metals is recalculated into rubles at the period average RUB/USD exchange rate. Housing mortgage loans, net of claims on such loans acquired by banks.

**** On the basis of the methodology set out in the 6th edition of the Balance of Payments and International Investment Position Manual (BPM6). In the financial account, '+' denotes net lending and '–' denotes net borrowing. Final values may differ from the total of the respective values due to rounding.*

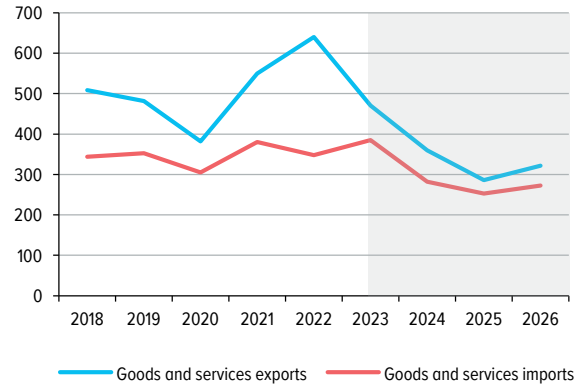
Source: Bank of Russia.

RISK SCENARIO

The pace of monetary policy rate increases by advanced economies in the current cycle has already become one of the fastest on record. Besides, these countries' central banks have been raising their policy rates after a nearly 15-year period of close-to-zero rates. Generally, the long period of low policy rates was forcing financial market participants to search for returns, that is, actively purchase high-risk assets to increase total returns on their portfolios. Moreover, in 2023 H1, market participants were actively buying additional high-risk assets. In June–July, the demand for hedging assets dropped to the minimum level over at least ten years. When interest rates grow, such assets become the most vulnerable – they are the first to depreciate and, if the situation worsens, might quickly become worthless. Concurrently, an increase in interest rates might also entail a decline in the value of traditional and reliable assets, such as government bonds or real estate. This in turn might also cause financial stability risks. If a financial institution's assets are concentrated in long-term fixed-rate securities and their value starts to decline, whereas its liabilities (e.g., deposits) have shorter maturities and their interest rates are growing, declining earnings and rising costs begin to exert pressure on the financial institution's profit.

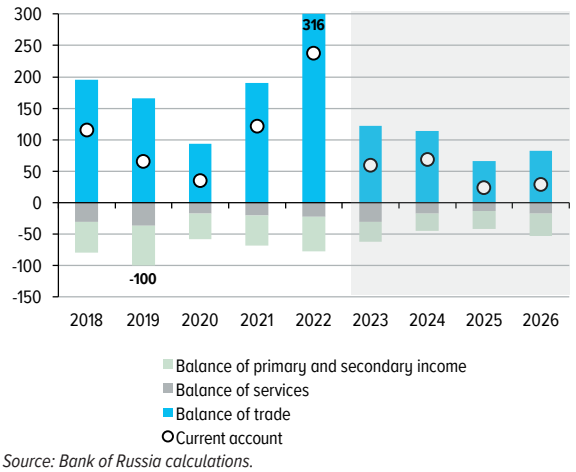
Together, this means that higher interest rates lead to materialisation of interest rate risk. A depreciation of assets might partially reduce financial institutions' capital and consequently worsen their financial position. As a result, the range of counterparties wishing to provide repayable funds to one another will contract and clients' trust will decrease. When the value of assets exposed to interest rate risk is high, as well as if changes in interest rates are significant, this process might pervade the entire financial system. A large number of non-bank financial institutions that were purchasing considerable amounts of assets on credit during the period of low interest rates might start to rapidly sell their assets at reduced prices in order to limit possible losses, thus creating financial stability risks. Their investors might behave in a similar way, selling their stakes in these institutions. This process might be aggravated through fintech companies exposed to all types of risks characteristic of any other financial institutions. Although the proportion

EXPORT AND IMPORT FORECAST IN THE RISK SCENARIO *Chart 3.10*
(billions of US dollars)



Source: Bank of Russia calculations.

CURRENT ACCOUNT FORECAST IN THE RISK SCENARIO *Chart 3.11*
(billions of US dollars)



Source: Bank of Russia calculations.

of fintech companies in economies is still small, their financial problems might increase clients' distrust towards the financial sector and amplify the systemic effects. Moreover, higher interest rates might increase debt servicing and refinancing costs, which might have implications for reserve currencies not only in a particular country but also in the international capital market. This in turn exacerbates credit risks and unrecoverable losses for financial institutions.

If interest rate risk materialises for several large market participants, this might increase uncertainty and cause a domino effect that might entail a global crisis, the scale of which might be comparable with that of the 2007–2008 crisis.

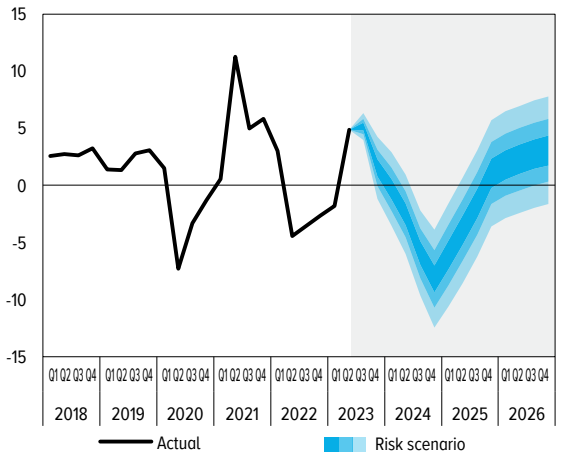
Deglobalisation processes similar to those assumed in the Stronger Fragmentation scenario will only aggravate the negative effects in the financial market. The pressure of the sanctions on the Russian economy will also be more intense.

In the case of this scenario, demand will plummet amid a recession in the two largest economies (the USA and the euro area) aggravated by stronger fragmentation. Oil prices will notably decline as of the end of 2024 and will not bounce back to the level of the baseline scenario even by the end of the forecast horizon.

Due to a slump in exports and a relatively moderate reduction in imports, the current account will contract to $24 billion in 2025 and increase only slightly further on.

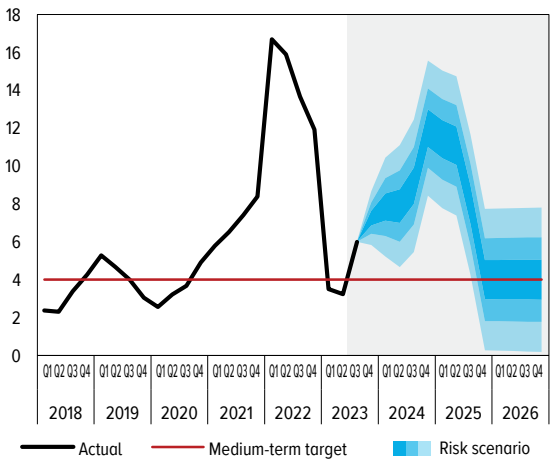
Output in Russia's economy will be shrinking for two years. Consequently, GDP will notably decline, although its lowest level will still slightly exceed the level of 2020. Compared to the baseline scenario, budget spending to support the economy will increase to the level of 2020. In 2026, the economy will be expanding at a recovery pace of 2.0–3.0%. Annual growth in 2026 Q4 will also reach 2.0–3.0%. The economy will return to a balanced growth path after 2026.

GDP GROWTH PATH IN THE RISK SCENARIO *Chart 3.12*
(% change YoY)



Note. The shaded blue areas over the forecast horizon show the probability of different GDP growth values. The confidence intervals are symmetrical and based on the historical estimates of GDP growth uncertainty. If the situation develops in line with the assumptions of this scenario, GDP growth will reach a rate within the darkest central area only in 25 of 100 cases. Each of the pairs of the lighter areas accounts for 25 of 100 cases. Overall, GDP growth will reach a rate within the blue areas in 75 of 100 cases. In the remaining 25 cases, GDP growth may reach a rate outside the blue areas; over the forecast horizon, this area is shaded in grey.
Source: Bank of Russia calculations.

INFLATION PATH IN THE RISK SCENARIO *Chart 3.13*
(% change YoY)



Note. The shaded blue areas over the forecast horizon show the probability of different inflation rates. The confidence intervals are symmetrical and based on the historical estimates of inflation uncertainty. If the situation develops in line with the assumptions of this scenario, inflation will reach a rate within the darkest central area only in 25 of 100 cases. Each of the pairs of the lighter areas accounts for 25 of 100 cases. Overall, inflation will reach a rate within the blue areas in 75 of 100 cases. In the remaining 25 cases, inflation may reach a rate outside the blue areas; over the forecast horizon, this area is shaded in grey.
Source: Bank of Russia calculations.

During the first year of the shock, inflation will soar to 11–13% due to both more severe supply shocks and a weaker ruble. To prevent inflation from spiralling out of control through the secondary effects of inflation expectations, the Bank of Russia will have to raise the key rate significantly, compared to the baseline scenario. As a result, the key rate will average 16–17% per annum over 2024. The cycle of a key rate reduction might start already at the end of 2024. However, this process will be slow because proinflationary risks induced by external conditions will remain high. In 2025, the average of the key rate will be 1.5 pp higher than under the baseline scenario and will still exceed the neutral range even as of the end of the forecast horizon. Such monetary policy will help bring inflation back to the target in 2025 and maintain it close to this level further on.

A higher key rate and rising uncertainty due to a global financial crisis will notably tighten monetary conditions. Lending growth in 2024 will be 6 pp slower than in the baseline scenario, while the retail loan portfolio might even contract. Nevertheless, owing to extensive fiscal support amid a sharp decline in economic activity, the growth rate of money supply during this period will be close to that predicted in the baseline scenario. In 2025, as the key rate is cut progressively and the situation in the world economy improves, lending growth will accelerate, with its rate coming close to the level assumed in the baseline scenario by 2026.

THE BANK OF RUSSIA'S FORECAST UNDER THE RISK SCENARIO

Table 3.4

	2021 (actual)	2022 (actual)	2023	2024	2025	2026
Core macroeconomic indicators (% growth YoY, unless indicated otherwise)						
Inflation, % in December YoY	**8.4**	**11.9**	**7.0–7.5**	**11.0–13.0**	**4.0**	**4.0**
Inflation, yearly average, % YoY	6.7	13.8	5.8–5.9	8.4–10.0	8.2–9.0	4.0
Key rate, yearly average, % p.a.	**5.7**	**10.6**	**9.9***	**16.0–17.0**	**8.5–10.5**	**7.0–8.0**
Gross domestic product	**5.6**	**-2.1**	**2.2–2.7**	**(-6.0)–(-4.0)**	**(-3.5)–(-1.5)**	**2.0–3.0**
– % change, Q4 YoY	*5.8*	*-2.7*	*1.0–2.0*	*(-9.0)–(-7.0)*	*0.0–1.0*	*2.5–3.5*
Final consumption expenditure	8.0	-0.3	5.5–6.5	(-7.5)–(-6.5)	(-4.5)–(-3.5)	2.0–3.0
– households	*10.0*	*-1.4*	*5.5–6.5*	*(-8.0)–(-6.0)*	*(-5.5)–(-4.5)*	*2.0–3.0*
Gross capital formation	14.1	-4.9	11.2–12.7	(-16.0)–(-13.0)	(-2.0)–0.0	3.0–5.0
– gross fixed capital formation	*9.1*	*3.3*	*7.2–8.7*	*(-6.5)–(-3.5)*	*(-3.5)–(-1.5)*	*1.0–3.0*
Exports	3.3	-13.9	(-10.7)–(-9.2)	(-7.0)–(-4.0)	(-6.5)–(-4.5)	1.5–3.5
Imports	19.1	-15.0	10.2–11.7	(-23.0)–(-20.0)	(-11.0)–(-9.0)	4.0–6.0
Money supply (national definition)	**13.0**	**24.4**	**18–21**	**7–12**	**9–14**	**5–10**
Banking system's claims on the economy in rubles and foreign currency, including:**	**13.9**	**12.0**	**17–20**	**(-1)–(+4)**	**6–11**	**7–12**
– on businesses	*10.7*	*13.2*	*16–19*	*0–5*	*6–11*	*7–12*
– on households, including:	*22.0*	*9.4*	*20–23*	*(-5)–0*	*7–12*	*8–13*
– housing mortgage loans	*26.7*	*17.7*	*24–27*	*(-1)–(+4)*	*9–14*	*10–15*
Balance of payments indicators* (billions of US dollars, unless indicated otherwise)**						
Current account	**122**	**238**	**60**	**69**	**24**	**29**
Balance of trade	190	316	122	114	66	82
Exports	*494*	*592*	*429*	*333*	*266*	*297*
Imports	*304*	*277*	*307*	*219*	*200*	*215*
Balance of services	-20	-22	-31	-17	-13	-17
Exports	*56*	*49*	*42*	*37*	*36*	*37*
Imports	*76*	*71*	*73*	*54*	*49*	*54*
Balance of primary and secondary income	-48	-55	-31	-28	-29	-36
Current and capital account balance	**122**	**233**	**60**	**69**	**24**	**29**
Financial account balance (net of reserve assets)	**59**	**237**	**61**	**82**	**42**	**30**
Net incurrence of liabilities	38	-126	4	-9	0	4
Net acquisition of financial assets, net of reserve assets	97	110	65	73	43	34
Net errors and omissions	0	-4	-8	0	0	0
Change in reserve assets	**64**	**-7**	**-9**	**-14**	**-19**	**-1**
Brent crude price, yearly average, $ per barrel	**71**	**99**	**83**	**63**	**49**	**60**

** Given that the average key rate from 1 January through 29 October 2023 was 8.8%, the average key rate from 30 October through 31 December 2023 is forecast in the range of 15.0–15.2%. Additional information on the format of the key rate forecast is available in the methodological note.*

*** The banking system's claims on the economy mean all claims of the banking system on non-financial and financial institutions and households in Russian rubles, foreign currencies, and precious metals, which include loans issued (including overdue loans), overdue interest on loans, credit institutions' investment in debt and equity securities and promissory notes, as well as other forms of equity interest in non-financial and financial institutions, and other receivables under settlement operations with non-financial and financial institutions and households.*

The growth rates of claims are adjusted for foreign currency revaluation. For the purpose of the adjustment for foreign currency revaluation, the growth of claims in foreign currencies and precious metals is recalculated into rubles at the period average RUB/USD exchange rate. Housing mortgage loans, net of claims on such loans acquired by banks.

**** On the basis of the methodology set out in the 6th edition of the Balance of Payments and International Investment Position Manual (BPM6). In the financial account, '+' denotes net lending and '–' denotes net borrowing. Final values may differ from the total of the respective values due to rounding.*

Source: Bank of Russia.

BOX 5.
FISCAL POLICY IN 2023–2026 AND ITS IMPACT ON THE ECONOMY

Fiscal policy is a key factor influencing the dynamics of aggregate demand, inflation and, accordingly, the macroeconomic forecast and monetary policy decisions made by the Bank of Russia based on this forecast. In its estimates, the Bank of Russia relies on the budget projections for 2023–2026 that Russia's Ministry of Finance submitted to the State Duma of the Russian Federation on 29 September 2023 (draft law No. 448554-8) and its own macroeconomic assumptions. In addition, the Bank of Russia takes into account the decision made by the Russian Government to return to the parameters of the fuel damper mechanism effective until September 2023.

The Russian Ministry of Finance continues the fiscal policy normalisation strategy in 2023–2025 with a gradual return to fiscal rule-based expenditure budgeting in 2025–2026. The structural primary deficit is expected to remain during the transition period of 2023–2024, amounting to ₽2.9 trillion and ₽1.6 trillion, respectively. Nevertheless, there were no significant amendments to the formula for the maximum amount of federal budget expenditures:

E = Bas. OGR + NOGR + %E + gov.loans + SPD

where E – the maximum amount of federal budget expenditures;
Bas. OGR – basic oil and gas revenues;
NOGR – non-oil and gas revenues;
%E – expenditures for public debt servicing;
gov.loans – the balance of budget-funded and government export loans; and
SPD – structural primary deficit.

Considering the current developments in global commodity and foreign exchange markets, Russia's Ministry of Finance made the decision to adjust the estimate of basic oil and gas revenues (OGR) from 2024 and switch from using a fixed nominal level (₽8 trillion in 2023) to a level depending on the basic equilibrium price for petroleum and gas products and the actual exchange rate of the ruble. Thus, the Ministry is actually returning to the principles of basic OGR budgeting used in the version of the fiscal rule of 2018–2022. The difference from the previous version is in the equilibrium price: Russia's Ministry of Finance assumes oil and natural gas prices of $60 per barrel and $250 per 1,000 cubic metres, respectively, in 2024–2026 with their subsequent annual indexations by 2%. This approach to budgeting OGR makes fiscal rule-based operations insensitive to movements of the ruble exchange rate. According to the Bank of Russia's estimates, the adjustment of basic OGR notably increases their level (0.6–0.8 pp of GDP annually) relative to the fixed level proposed earlier. This expansion in basic OGR is associated with the updated assumptions about the quantities and the exchange rate forecast (the previous estimate of basic OGR totalling ₽8.0 trillion was consistent with the price of $60 per barrel but amid a stronger exchange rate). Following the rise in basic OGR, the federal budget also increases the maximum amount of its expenditures in the next few years.

In 2023–2024, non-oil and gas revenues (NOGR) are forecast to expand, which might be associated with, among other things, a faster rise in nominal demand and profits in the tradable sector of the economy than predicted before, one-off payments, and the end of anti-crisis tax measures.

In 2024, budget expenditures are expected to surge, including because of the adjustment of basic OGR in the configuration of the fiscal rule (with an increase in the maximum amount of expenditures). Besides, an additional amount of spending might be covered from one-off

payments (suspended social insurance premiums and the rescheduling of the unified tax payment not distributed in 2023). The ultimate effect of fiscal policy on aggregate demand and inflation in 2023–2026 will also depend on possible changes in the structure of budget expenditures in terms of the types and items, including in the proportion of government procurements, capital investment, social transfers, and labour remuneration in total allocations.

Estimating the effect of fiscal policy on the economy and inflation, the Bank of Russia is guided by the parameters of the fiscal system as a whole rather than those of the federal budget alone. Hence, the contribution of fiscal policy to the dynamics of aggregate demand, the monetary aggregates, and inflation depends on not only the version of the fiscal rule used at the federal level, but also the budget projections of the constituent territories of the Russian Federation and non-budgetary funds. Investment from the NWF in the projects implemented inside the Russian economy will additionally increase the fiscal stimulus. Budget spending in the conditions of the structural transformation of the economy within the framework of national projects and investment from the NWF in Russian projects might influence not only current economic activity, but also medium-term potential output, which is also taken into account in the Bank of Russia's forecasts.

From August 2023, in addition to regular fiscal rule-based operations, the Bank of Russia resumed the practice of foreign currency sales mirroring investment made from the NWF in rubles. In 2023, sales within the framework of this mechanism will total ₽0.25 trillion. As estimated by the Bank of Russia, in 2024–2026, such foreign currency sales might reach up to ₽0.6 trillion annually. From 10 August 2023, to reduce volatility in financial markets, the Bank of Russia decided not to buy foreign currency in the domestic market to mirror regular fiscal rule-based operations conducted by the Ministry of Finance of the Russian Federation. The decision on foreign currency purchases in the domestic market suspended in 2023 will be made after the Bank of Russia resumes operations mirroring fiscal rule-based regular purchases.

Overall, the new projections of Russia's Ministry of Finance suggest a more considerable fiscal stimulus in 2024–2026 in terms of the non-oil and gas balance, as compared to the previous estimates. The Bank of Russia factored in the updated projections in the baseline scenario of its macroeconomic forecast. If the fiscal stimulus turns out to be smaller than currently estimated, the return to neutral monetary policy will be faster. An additional expansion of the budget deficit might increase proinflationary risks, which will require tighter monetary policy to return inflation to 4% in 2024 and maintain it close to the target in the future.

BOX 6. ENHANCEMENT OF MODEL-BASED APPROACHES

The Bank of Russia's model-based approaches rely on a wide range of models of various classes and focus areas. They include both models for short-term forecasting to analyse current trends and predict the most likely change in certain macroeconomic variables in the next one to two quarters and models for medium-term forecasting to estimate a change in macroeconomic variables in the next three to four years in various scenario conditions and with variations of individual parameters. The methods of these models depend on tasks to be addressed, subject areas and the nature of the data used.[1]

The Bank of Russia is continuously enhancing its model-based approaches considering latest research and developments by Russian and foreign experts in macroeconomics and quantitative methods.

The Quarterly Projection Model (QPM) is one of the main models used by the Bank of Russia to analyse the domestic economy. This model was designed in 2007 within the calibration of the macroeconomic forecasting system and is currently applied to make medium-term projections and prepare recommendations on monetary policy, as well as to carry out scenario analysis and develop stress tests.

Beginning from 2007, the model has been regularly adjusted, responding to changes happening in the Russian economy and new approaches developed in academic macroeconomic analysis.

In 2012–2013, the basic model was expanded to encompass the breakdown of inflation into food products, non-food goods and services, excluding housing and utility services. A specification for the Phillips curve was made separately for each of the above categories of inflation. Such a breakdown helped analyse changes in relative prices for tradable and non-tradable goods considering movements of the real exchange rate.

In 2013–2014, the model was tailored to the inflation targeting regime: the elements accounting for a managed floating exchange rate were replaced with those representing the transmission mechanism of the key rate effect on the economy.

In 2019–2021, the model was expanded to include the block with the public sector, which makes it possible to measure the size of the fiscal stimulus in the economy depending on fiscal policy parameters. In addition, the maturity structure of interest rates was added to the model, which enables direct tracking of the monetary policy transmission to interest rates of various maturities.[2]

In 2022, after a series of external shocks and forced introduction of the capital controls, the model was again adjusted to the new conditions. First of all, the modifications allowed direct modelling of trade flows (i.e., decomposing aggregate output into exports and imports) and adjusting the interrelations between Russian markets and foreign markets (i.e., weakening of the interdependence between the exchange rate and the financial channel and adding a response to a change in the balance of trade and trade conditions in the formula for uncovered interest rate parity).[3]

In 2023, the Bank of Russia introduced two key changes to the model. First, the breakdown into food and non-food goods and services (excluding housing and utility services) was replaced with core inflation and non-core inflation components. Considering the over ten-year

---

[1] For details, refer to the Forecasting and Model-based Approaches subsection in the Monetary Policy section on the Bank of Russia website.

[2] For details on this version of the model, refer to Orlov, A. Quarterly Projection Model for Russia. 2021.

[3] For details on this modification of the model, refer to the Box 'Adaptation of the Quarterly Projection Model to the capital flow control framework' in Monetary Policy Report No. 2 (38). May 2022 (http://www.cbr.ru/Collection/Collection/File/40976/2022_02_ddcp_e.pdf).

period of economic development and the adaptation of the economy to the inflation targeting regime, the previous breakdown into three categories became less relevant to describe inflation dynamics. Concurrently, it was becoming increasingly relevant to differentiate between the trend component of inflation demonstrating consistent price growth in the economy and short-term fluctuations triggered by one-off factors in individual markets. One of the metrics of the trend component of inflation is core inflation, i.e., inflation adjusted for the effects of administrative, seasonal or volatile factors. The Phillips curve in this model is specified only for core inflation. Movements of non-core inflation components are set out separately. These components in the Bank of Russia's QPM include fruit and vegetables, petroleum products, regulated services, and other volatile components. Non-core components are modelled based on autoregressions with the convergence towards the inflation target taking into account certain additional elements and adjustment for a deviation of relative prices.

Second, the model was expanded to include the block of the labour market covering wage and unemployment variables. Besides, the model was complemented with a multi-level production function as a deeper analysis of the interrelations between labour market indicators requires structural modelling of production factors and supply-side factors. Specifically, the model sets out separately a production function for domestically oriented output and a production function for the export sector's output (with a breakdown into the oil and gas and the non-oil and gas sectors).

The production functions describe companies' choice between labour, capital and intermediate imports considering their relative costs and expenses for an additional increase in a particular production factor. Besides, costs are assumed to grow in the following order: import costs, capital costs, and then labour costs. Domestically oriented output requires all the three factors, while the output of non-oil and gas exports – only labour and capital. The output of oil and gas exports does not require details for the production function and is modelled exogenously.

Domestically oriented supply and finished imports cover domestic demand that, in turn, depends on the level of interest rates in the economy, the fiscal stimulus, labour incomes and trade terms. The export sector's output responds to trading partners' demand.

Employment, unemployment, and real wages depend on the level of companies' demand for labour (considering wage rigidities and specifics of the Russian labour market). In turn, inflation is influenced by maximum actual costs incurred by manufacturers of domestic goods and importers and reflects the ratio between demand and supply in the economy, including the demand for and supply of the production factors.[4]

The labour market is a key factor influencing price dynamics in any economy. The QPM is only one of the models used to prepare a medium-term forecast. However, its expansion by adding the block covering the labour market improves the understanding of the main interconnections in the Russian economy and enriches the analysis of economic dynamics when preparing the materials for the discussion of a key rate decision by the Bank of Russia Board of Directors.

[4] For details on the model, refer to the Annex to Monetary Policy Report No. 3 (43). July 2023 (http://cbr.ru/Collection/Collection/File/45192/2023_03_ddcp_e.pdf).

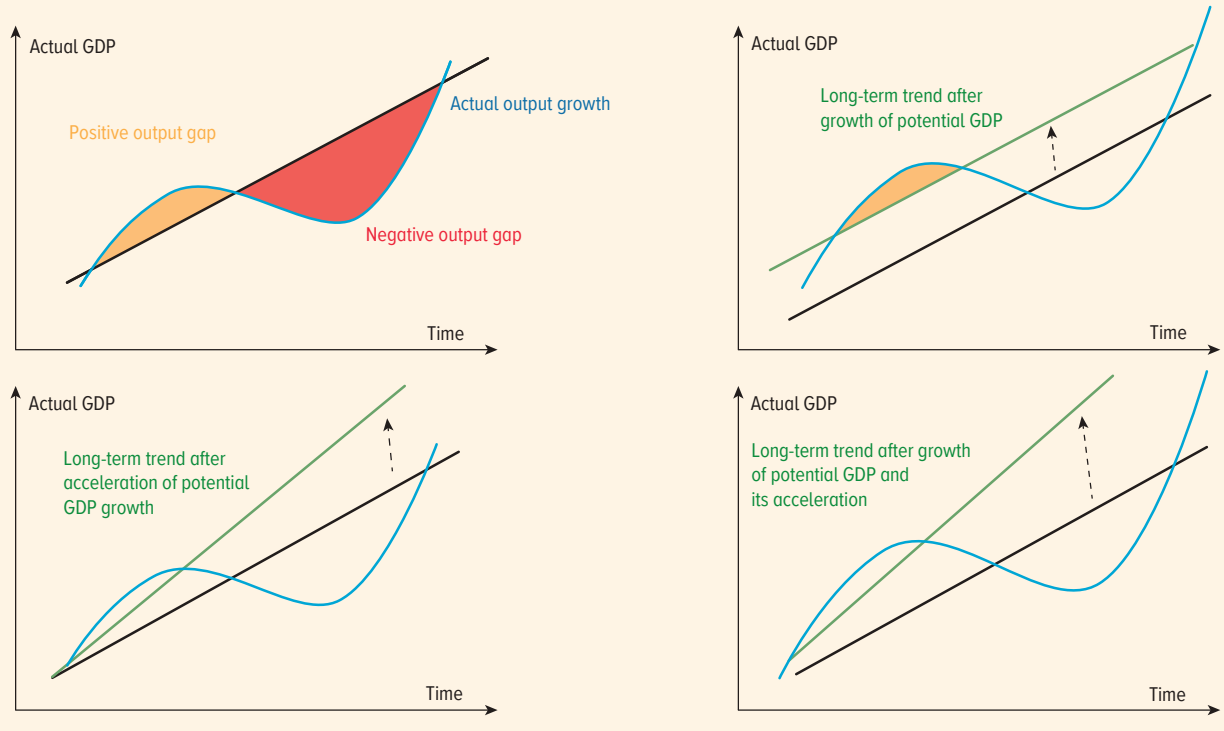
BOX 7.
THE CONCEPT OF AN ECONOMIC EQUILIBRIUM AND DEVIATIONS OF KEY MACROECONOMIC VARIABLES FROM IT

The concept of a long-run equilibrium in the economy is widely applied in the context of macroeconomic policy. In a long-run equilibrium, all key economic indicators grow at a constant pace determined by fundamental factors. In other words, a long-run equilibrium does not imply any specific point, but rather a steady path of economic development. When the central bank implements its monetary policy under the inflation targeting regime in a long-run equilibrium, consumer prices rise at a pace consistent with the inflation target and economic growth rates are equal to potential.

If there is no external influence, the economy can remain in a long-run equilibrium for an indefinite period of time. Various internal and external cyclical shocks (e.g., rising commodity prices, new technologies, an increase in budget expenditures, changes in consumer preferences, declining demand for exports, and so on) might cause a short-term deviation of the economy from its equilibrium which is called a gap. Such a gap may occur when economic growth rates, unemployment, the exchange rate, and other macroeconomic indicators deviate from their long-run equilibrium values.

Economic publications most often refer to an output gap. This is a non-observable variable showing how much actual output has deviated from potential output. Potential output in turn is the level of output that the economy is able to generate with the full utilisation of the production factors under the existing resource, technological and institutional constraints. In central banks' practice, the relevant concept of potential output is a level of output creating neither proinflationary nor disinflationary pressure, i.e., a level ensuring that inflation stays at the target, provided there are no new shocks. Potential output is not constant, but is changing depending on the dynamics of the production factors (e.g., labour force growth, the embrace of innovative technologies, or the commissioning of new equipment) and the pace of technological

LONG-TERM TREND (POTENTIAL GROWTH RATE) *Chart B-7-1*



Source: Bank of Russia.

advancement. Therefore, another characteristic of the economy is the growth rate of potential output, or the pace of changes in potential output over time.

If the actual growth rate of output exceeds its potential due to the effect of cyclical shocks, this forms a positive (proinflationary) output gap in the economy. As supply expands not sufficiently compared to demand when the output gap is positive, the economy faces elevated inflationary pressure. Price growth starts to exceed the inflation target, and the central bank has to raise its policy rate to ensure that demand returns to an equilibrium with supply. Contrastingly, when the actual increase in output is below the potential pace, the output gap is negative (disinflationary), and price growth is slower as compared to the inflation target. In this case, the central bank needs to reduce the policy rate to drive demand upwards to the level of supply.

When the economy experiences large-scale structural transformations, this might change both the level and the growth rate of potential output. For instance, new technologies might significantly speed up the expansion of potential output, and the commissioning of a new large plant – increase its level. The effect of structural factors alters a long-run equilibrium, and the estimate of the output gap in the new conditions might turn out to be both above and below the previous one. However, the central bank's response is limited only to the part of the output gap that shows the deviation of the actual growth rate from a new equilibrium trend. Monetary policy measures (and other instruments available to the central bank) are not sufficient to return the economy to the earlier long-term trend. The long-term trend of the economy depends on the level of technological development, the demographic structure, institutional specifics, and other factors.

The estimates of the output gap are among the factors considered by the Bank of Russia when developing its monetary policy. A response of macroeconomic policy, including monetary policy, to the shocks occurring in the economy helps mitigate their implications for the economy and ensures its prompt return to a long-run equilibrium.

The concept of an equilibrium and gaps is mostly applied to real indicators – output fluctuations relative to its potential are also referred to as a business cycle. However, in actual life, the economy comprises both real and financial indicators. It is also possible to estimate an equilibrium and a gap for financial indicators – the gap in the total credit-to-GDP ratio is used most frequently.[1] Financial measures are also considered to have their own cycle which is imperfectly synchronised with the business cycle.

The main assumption is that consumer price dynamics (that is, factors creating inflationary pressure) and financial asset price dynamics might become desynchronised and change incoherently or, in some cases, even diversely. Fluctuations of prices for financial assets and other financial variables might in turn cause imbalances accumulating in the financial system and 'bubbles' to be followed by financial crises. Thus, a financial boom is frequently accompanied by a positive supply shock, which reduces prices, while simultaneously increasing the value of assets in the financial market. This in turn eases monetary conditions and boosts lending. However, real assets cannot grow as fast as financial markets which, on top of that, might be driven by speculations. Creating new or increasing existing business lines is a time-consuming process that depends not only and not so much on the level of nominal interest rates, but also on various non-financial factors (availability of personnel – specialists and executives, accessibility of the network of suppliers of raw materials, relevance and scalability of offered

[1] For research on this issue at the Bank of Russia, refer to Deryugina, E. and Ponomarenko, A. Real-time determination of credit cycle phases in emerging markets (http://cbr.ru/Content/Document/File/87556/wps_17_e.pdf). Working Paper Series. No. 17. January 2017; Deryugina, E., Ponomarenko, A. and Rozhkova, A. When are credit gap estimates reliable? (http://cbr.ru/Content/Document/File/87587/wp34_e.pdf). Working Paper Series. No. 34. July 2018; Kozlovtseva, I., Ponomarenko, A., Sinyakov, A. and Tatarintsev, S. Financial Stability Implications of Policy Mix in a Small Open Commodity-Exporting Economy (http://cbr.ru/Content/Document/File/87571/wp42_e.pdf). Working Paper Series. No. 42. June 2019; Ponomarenko, A. and Tatarintsev, S. Incorporating financial development indicators into early warning systems. Working Paper Series. No. 58. July 2020 (http://cbr.ru/Content/Document/File/111729/wp-58_e.pdf).

products, overall sentiment about prospects, and others). At a certain moment, a surplus of financial resources entails a decrease in borrower selection criteria that become a mere formality. When borrowers whose financial standing was not verified make up a large share, any change in financial conditions might cause a surge in unrecoverable loans. Consequently, the 'bubble' bursts provoking a financial or credit crisis.

In this case, accommodative monetary conditions are tightening independently of monetary policy. Financial institutions promptly introduce additional lending criteria not only for new borrowers, but also for each other, setting limits on the amount of funds that may be raised in the interbank market. Thus, a credit crisis is accompanied by a crisis of confidence and rising uncertainty. To ensure the economy's return to its potential, it is necessary to ease monetary conditions and support business and consumer sentiment. Therefore, the central bank cuts its policy rate and, where needed, provides additional funding to banks (on a repayable basis), offsetting the decrease in the efficiency of interbank lending.

Thus, the financial system might exacerbate the economy's deviation from an equilibrium and might be even an original source of such a deviation. However, this connection is not always unambiguous and not totally one-way because of the mutual influence of the financial and real sectors. Similarly to other central banks, the Bank of Russia takes into account the state of the financial sector when developing macroprudential policy to a greater extent. Nevertheless, when preparing its monetary policy decisions, the Bank of Russia also assesses the economy's deviation from its potential (the output gap) by considering the situation in the financial sector as an essential element of the analysis and an important indicator of the economy's deviation from an equilibrium

4. MONETARY POLICY OPERATIONAL PROCEDURE IN 2023–2026

OPERATIONAL OBJECTIVE AND INSTRUMENT SYSTEM OF MONETARY POLICY

Within the inflation targeting strategy, the Bank of Russia influences economic activity and price movements predominantly through the interest rate channel. Using the system of monetary policy instruments, the Bank of Russia translates key rate changes into interbank market rates that in turn influence other interest rates in the economy.

The operational objective of monetary policy is to keep overnight money market rates close to the key rate. The operational benchmark of monetary policy is RUONIA (Ruble Overnight Index Average) which is the weighted interest rate on unsecured overnight interbank ruble loans (deposits). This rate was chosen as the operational benchmark for a number of reasons. In contrast to the secured segment of the money market, IBL market participants are solely credit institutions. Conducting liquidity providing and absorbing operations, the Bank of Russia influences the liquidity amount, i.e., the balances of banks' correspondent accounts with the Bank of Russia. Thus, the level of IBL rates depends only on market participants' need for liquidity providing and absorbing operations and the Bank of Russia's supply of liquidity. In addition, transactions carried out in this segment of the money market do not require collateral, while its availability for credit institutions and value do not influence the level of interest rates. Owing to the specifics of its calculation, RUONIA is resilient to outliers and effectively reflects the cost of short-term borrowings by the most reliable market participants.[1]

To achieve the operational objective of its monetary policy, the Bank of Russia employs a system of instruments that encompasses required reserves, auctions, and standing facilities to provide and absorb liquidity.

Required reserves within the inflation targeting strategy is a monetary policy instrument enabling the central bank to manage money market interest rates without conducting liquidity providing and absorbing operations on a daily basis or repeatedly. Credit institutions' obligation to keep a certain amount of funds in their correspondent accounts helps ensure the predictability of their demand for liquidity. Besides, the effective mechanism of required reserves averaging enables banks to flexibly manage their liquidity without borrowing and depositing funds in the market at increased or, to the contrary, decreased interest rates.[2]

If the predicted amount of funds in credit institutions' correspondent accounts turns out to be higher or lower than the level needed to comply with the reserve requirements, the Bank of Russia carries out auctions to either absorb or provide liquidity, respectively, at interest rates that are close to the key rate. The Bank of Russia determines the type of an auction and the amount of funds to be absorbed (provided) based on the liquidity

---

1 For details, refer to Yatsyk, O. et al. Bank of Russia's Monetary Policy Operating Procedure. Analytical note. 2023.

2 The mechanism of averaging assumes that credit institutions should maintain the required amount of funds in their correspondent accounts not every evening, but on average over an averaging period (four to five weeks) // for details, refer to Yatsyk, O. et al. Required Reserves in the Bank of Russia. Analytical note. 2023.

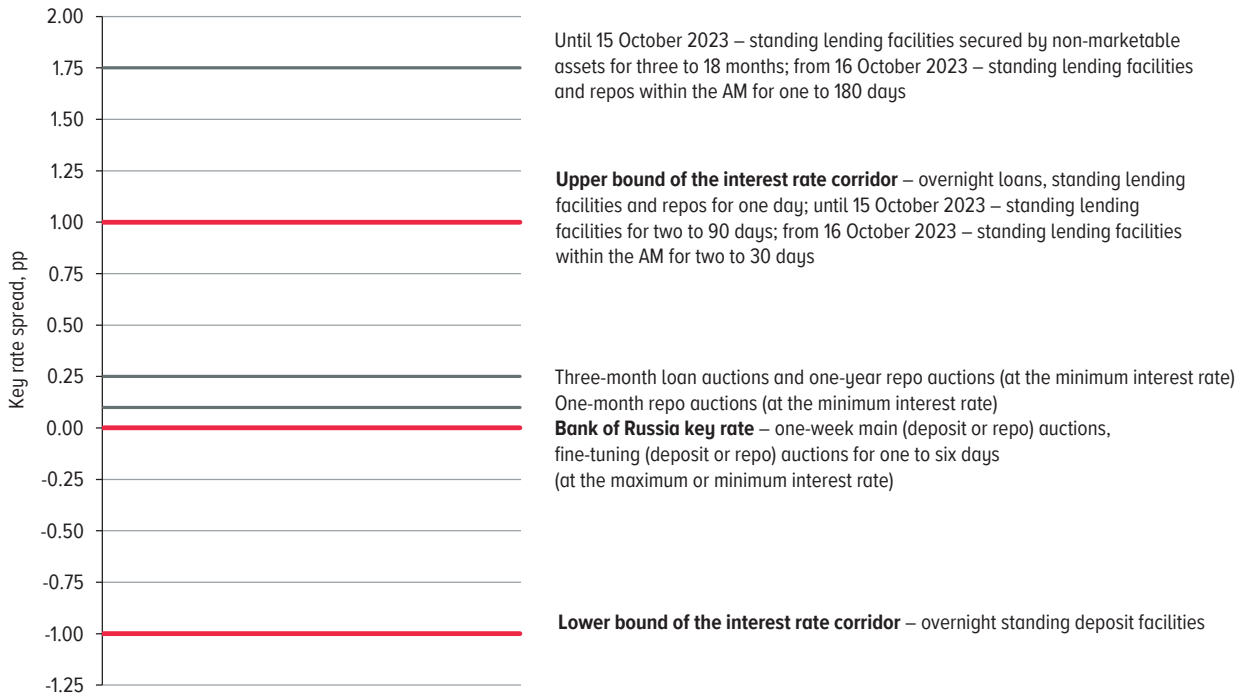
forecast. As a result, IBL rates form within the Bank of Russia's interest rate corridor, the bounds of which depend on interest rates on overnight standing facilities – deposits, loans, and repos. Accordingly, the key rate is in the middle of this corridor. As opposed to auctions, standing facilities are initiated by credit institutions and allow banks to raise or provide liquidity at guaranteed interest rates, whenever they need to. Hence, interest rates on standing facilities limit volatility of money market rates. The interest rate corridor is 200 basis points wide, thus helping avoid excessive volatility of money market rates, while still encouraging banks to conduct transactions with each other in the first place, rather than with the Bank of Russia.

One-week deposit and repo auctions are the main operations to regulate liquidity. If the banking sector has a surplus of liquidity, the Bank of Russia absorbs it through deposit auctions. When there are temporary imbalances in the money market that might cause a deviation of RUONIA from the key rate, the Bank of Russia carries out one- to six-day fine-tuning deposit or repo auctions. When there are imbalances in the distribution of funds across banks or in the maturities of their assets and liabilities, the Bank of Russia conducts one-month and one-year repo auctions in order to decrease volatility of money market rates.

The system of the Bank of Russia's monetary policy instruments also comprises instruments to provide or absorb liquidity for longer periods. Specifically, if there is a significant and steady structural liquidity surplus, the Bank of Russia can partially absorb it by issuing three-month coupon bonds.

The Bank of Russia continues to enhance the system of its monetary policy instruments. In 2023, the Bank of Russia transformed the standard liquidity providing mechanism.[3] From

INTEREST RATES ON THE BANK OF RUSSIA'S OPERATIONS *Chart 4.1*



Source: Bank of Russia.

[3] For details, see Box 8 'Transformation of liquidity providing mechanisms'.

16 October 2023, the Bank of Russia's liquidity providing operations refer to two groups – the main and additional mechanisms. The terms of raising funds by banks (interest rates, collaterals, periods) depend on the objectives of these operations.

Considering the said transformation of the liquidity providing mechanisms, the Bank of Russia did not change the requirements for the credit quality of the assets provided as collaterals for repos and secured loans. Nevertheless, in April 2023, the Bank of Russia cancelled the easing granted in February 2022 in relation to the economic activities that might comprise the principal activity of legal entities being borrowers or obligors under loan agreements, the claims on which could be accepted as collaterals for Bank of Russia loans.

In 2023, the Bank of Russia introduced a range of modifications with regard to the use of required reserves. In particular, from 1 July 2023, banks with a universal licence and non-bank credit institutions are allowed to communicate data for calculating required reserves through online accounts, which helps reduce costs and accelerate communication with credit institutions. In addition, the Bank of Russia amended the procedure for calculating the fine for a credit institution's failure to comply with the required reserve ratios. According to the updated procedure, the fine is calculated by doubling the Bank of Russia key rate effective during the period of the non-compliance. This approach takes into account changes in the key rate and more accurately assesses alternative revenues earned by banks failing to keep an adequate amount of required reserves. Previously, the Bank of Russia calculated the fine by doubling the key rate effective as of the date of imposing the fine. In the future, the required reserve mechanism will be adjusted considering the planned introduction of the digital ruble. It is suggested that banks' funds in digital ruble accounts (just as cash in their cash offices) should be included in the amount of funds that is excluded from the calculation of the required reserves in rubles in the amount of up to 100% of the required reserves in rubles calculated before its reduction by the said value (instead of the effective limit of 25%).

In the course of its Monetary Policy Review, the Bank of Russia explored the specifics of the operational procedure and the practice of using required reserves. The findings of these studies were presented to banks' analysts and treasurers, financial market participants, and representatives of research institutes and universities within public consultations. The participants in the discussion confirmed that the established system of monetary policy instruments takes into account the specifics of the Russian economy and financial sector and enables the Bank of Russia to maintain IBL rates close to the key rate whatever the situation with liquidity might be. IBL rates in turn influence other interest rates in the economy and, thus, the Bank of Russia can translate its monetary policy signal into the economy and impact inflation. The theoretical and practical findings of the analysis of the Russian financial sector and money market considering the international experience are available on the Bank of Russia website.[4]

In the next few years, the Bank of Russia will continue to develop its system of monetary policy instruments, taking into account the situation with the banking sector liquidity, the specifics of the financial market, and the payment and financial infrastructure. In particular, the procedure for the functioning of the Bank of Russia Payment System might be amended as a result of the advancement of the Bank of Russia Payment System services, including

[4] For details, refer to Yatsyk, O. et al. Bank of Russia's Monetary Policy Operating Procedure. Analytical note. 2023; Yatsyk, O. et al. Required Reserves in the Bank of Russia. Analytical note. 2023.

the Faster Payments System, and the introduction of the digital ruble. In view of this, the Bank of Russia will adjust the parameters of its liquidity providing instruments to ensure smooth processing of payments and preserve the opportunities for banks to efficiently manage their own liquidity.

USING MONETARY POLICY INSTRUMENTS AND ACHIEVING THE OPERATIONAL OBJECTIVE OF MONETARY POLICY

In 2023, overnight money market rates predominantly stayed in the lower part of the interest rate corridor. The average deviation of RUONIA from the Bank of Russia key rate (the spread) equalled -24 bp in January–September 2023, which exceeds the 2022 level in absolute terms (the 2022 average was -18 bp). However, the spread volatility[5] decreased to 25 bp over January–September 2023 (vs 35 bp over 2022).

The negative spread notably expanded in early 2023 to average -52 bp over the January required reserves averaging period. This was associated with a quite significant increase in the structural surplus at the end of 2022. In December, the NWF's assets were partially converted, and a large amount of budget funds were transferred to banks: a part – directly as budget expenditures, and the other part – as deposits and other transactions of the Federal Treasury (FT). As a result, the surplus of the banking sector liquidity averaged ₽3.4 trillion over the January required reserves averaging period.[6] However, these funds were transferred to a limited number of credit institutions, and the distribution of these funds across the banking sector took some time.

Having reached its peak in absolute terms in early February, the negative spread started to shrink already in the middle of the month. In February–October, the spread averaged -20 bp over the averaging period. This became possible owing to credit institutions' adjustment to the current level of the liquidity surplus and the distribution of budget holders' funds across the banking sector. Besides, the structural surplus contracted due to an outflow of funds from banks resulting from the dynamics of autonomous liquidity factors and higher required reserve ratios.[7] During periods before the meetings of the Bank of Russia Board of Directors when market participants expected a key rate increase, banks raised the demand for standing lending facilities and repos, as well as balances in their correspondent accounts with the Bank of Russia. Such behaviour of banks was

[5] The spread volatility is calculated as a standard deviation of daily values of the spread over a particular period.

[6] The averaging period from 18 January through 14 February 2023. The structural liquidity surplus over the November and December averaging periods (from 16 November through 13 December 2022 and from 14 December 2022 through 17 January 2023, respectively) averaged ₽1.2 trillion and ₽2.3 trillion, respectively. The average value of the liquidity position over a required reserves averaging period enables a more objective assessment (as compared to the analysis of the value as of a specific date) of how long-term factors (namely budget operations and changes in the amount of cash in circulation) influence the banking sector liquidity and reduces the effect of temporary strategies pursued by individual credit institutions to manage balances of funds in their correspondent accounts.

[7] On average, the liquidity balance contracted from a surplus of ₽3.4 trillion to a deficit of ₽0.5 trillion over the required reserves averaging periods in January–October. The required reserves averaging periods from 18 January through 10 October 2023.

MONEY MARKET RATES
(% p.a.)

Chart 4.2

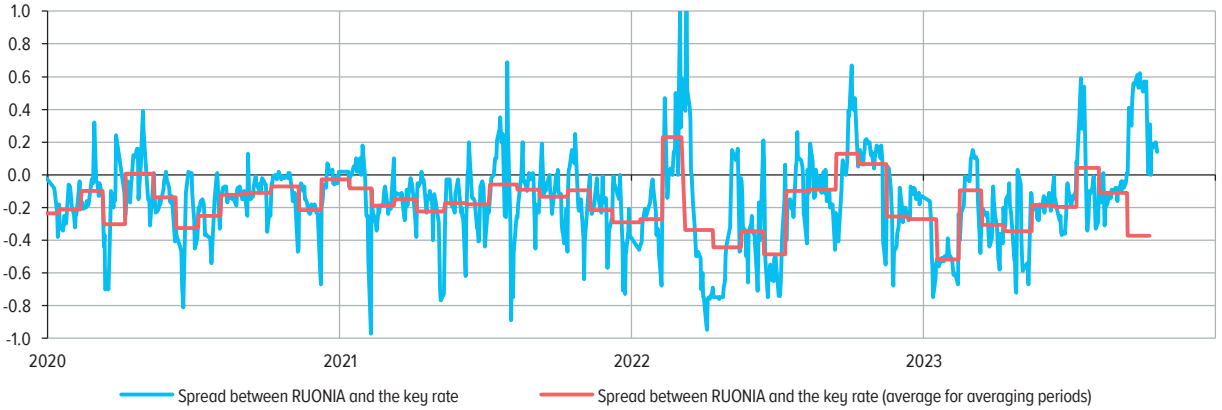
Source: Bank of Russia.

associated with their strategies for required reserves averaging[8] rather than with changes in the liquidity situation. After the key rate increases, credit institutions reduced balances in the correspondent accounts and returned the additional refinancing they had raised.

An important factor causing the outflow of liquidity from the banking sector in 2023 was elevated demand for cash. That deviation from seasonal values could be associated with the financing of economic activity in the new Russian regions where the penetration of payment and banking services is low. Moreover, people there prefer to withdraw part of budget payments as cash. Accordingly, the increase in social payments and money allowances in 2023 could contribute to the rise in the demand for cash. Nevertheless, from mid-August after the Bank of Russia raised the key rate, the outflow of cash slowed down. Owing to

SPREAD BETWEEN RUONIA AND THE KEY RATE
(pp)

Chart 4.3



Source: Bank of Russia calculations.

[8] Throughout an averaging period, banks shall maintain the amount of funds in their correspondent accounts that, on average, should not be below the amount needed to comply with the reserve requirements. If the key rate is significantly raised during an averaging period, banks seek to keep more funds in their correspondent accounts during the period before the increase and reduce the balances during the remainder of the averaging period. To this end, they can raise additional liquidity, including through the Bank of Russia's refinancing operations. Thus, banks are able to slightly reduce their costs for required reserves averaging.

higher deposit rates, funds were partially returned to banks. Overall, the proportion of cash in total money supply changed only slightly from the beginning of the year.

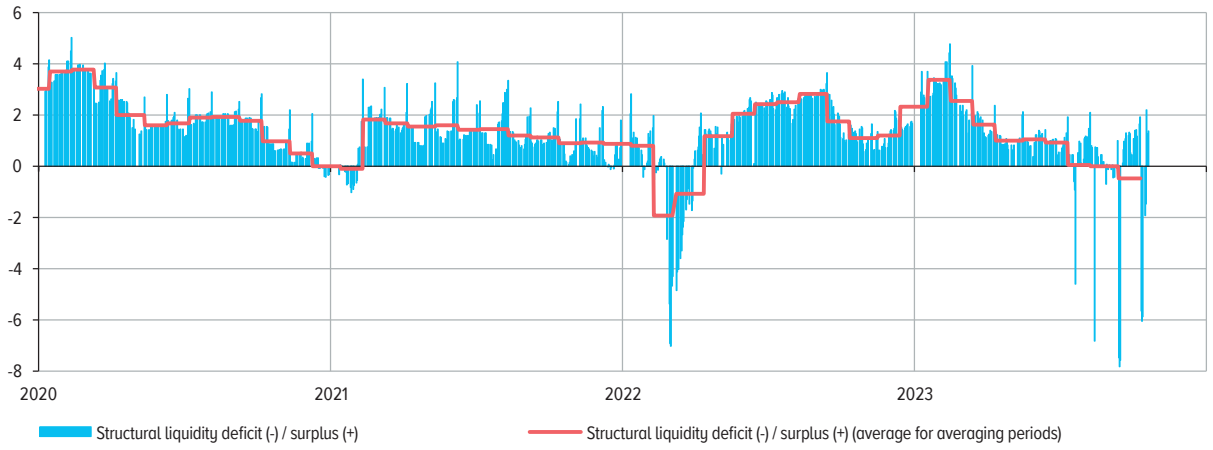
In January–the first half of February 2023, the budget system was increasing spending faster than typically during this period. That was associated with, among other things, advanced funding of a part of budget expenditures and implementation of investment projects. The expenditures were financed from tax payments, revenues from OFZ sales, and a decrease in the FT's deposits with banks. Besides, in the middle of January 2023, Russia's Ministry of Finance resumed foreign currency operations within the implementation of the fiscal rule.[9] In addition, the banking sector received the NWF's resources meant to purchase shares and bonds from a number of companies.[10] As a result, in January–September 2023, budget operations were contributing to the inflow of liquidity into banks.

An additional inflow of the FT's funds into the banking sector formed because of the reduction in the balances in the Treasury Single Account resulting from the development of short-term depositing instruments: at the end of April – overnight accounts, and in early June – top-up bank deposits allowing partial or full deposit repayments ahead of schedule at the FT's initiative on any business day.[11] Depositing funds under such terms decreases the FT's risk of a cash gap and helps more efficiently manage the balance of budget funds.

On the other hand, the outflow of funds from banks was caused by the transfers of credit institutions' funds from C-type accounts to the Deposit Insurance Agency's accounts opened with the Bank of Russia.[12]

BANKING SECTOR LIQUIDITY
(trillions of rubles)

Chart 4.4



Source: Bank of Russia calculations.

9 Fiscal rule-based operations in the foreign exchange market offset the impact of changes in budget revenues on the banking sector liquidity. When oil prices are low, banks' clients make smaller tax payments to the budget, and vice versa. All else being equal, when the level of budget expenditures is fixed, there will be either a budget deficit or a surplus. Accordingly, if there are no foreign currency sales or purchases in the market, this causes an inflow or an outflow of funds into/from credit institutions' accounts. From 10 August 2023 until the end of 2023, the Bank of Russia does not buy foreign currency in the domestic market to mirror regular fiscal rule-based operations conducted by the Ministry of Finance of the Russian Federation.

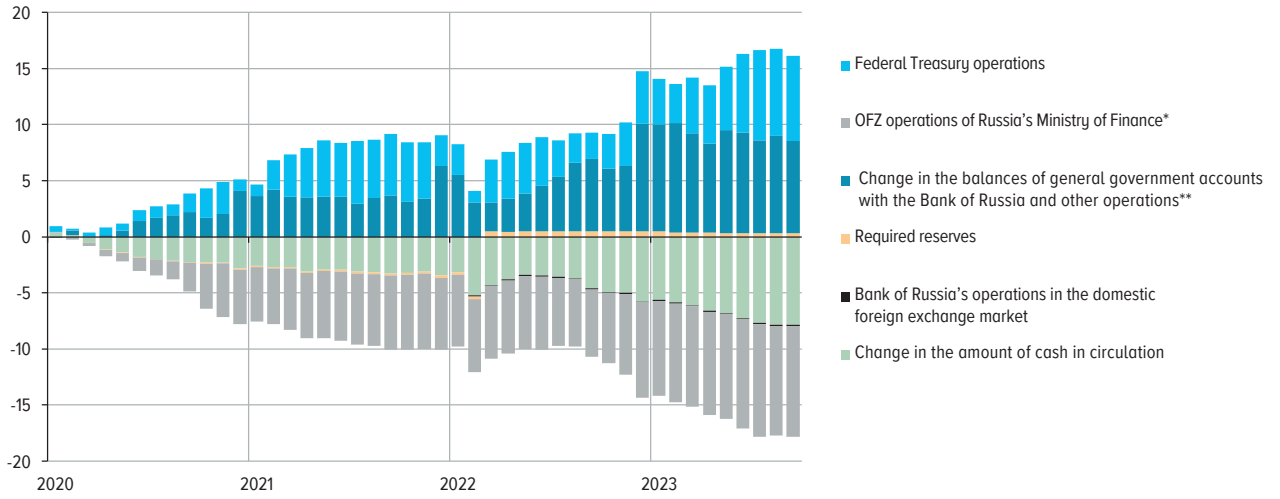
10 From 1 August 2023, the Bank of Russia conducts operations to sell foreign currency that are related to the use of the NWF's resources for their investment in permitted financial assets inside the Russian economy. These operations decrease the inflow of funds into banks through the fiscal channel.

11 The FT first deposited funds in overnight accounts in late April and in top-up deposits on 1 June 2023.

12 Refer to the Bank of Russia Board of Directors' decision, dated 29 December 2022.

FACTORS OF BANKING SECTOR LIQUIDITY
(cumulative, trillions of rubles)

Chart 4.5



** Excluding coupon payments.*
*** Excluding deposit, repo and swap operations of the Federal Treasury and OFZ operations of Russia's Ministry of Finance, including fiscal rule-based operations of Russia's Ministry of Finance to buy (sell) foreign currency in the domestic foreign exchange market, and other operations.*
Source: Bank of Russia.

Considering the dynamics of the structural liquidity surplus and for the purpose of further dedollarisation of credit institutions' balance sheets, the Bank of Russia raised the required reserve ratios beginning from the April averaging period three times in 2023 (namely, from March, April and June). Besides, in the May averaging period, the Bank of Russia applied differentiated required reserve ratios for the first time in relation to liabilities in friendly and unfriendly states' currencies. The latter are subject to the highest ratios. Overall, in 2023, the required reserve ratios for ruble liabilities were raised by 1.5 pp to 4.5% (for banks with a universal licence and non-bank credit institutions), for liabilities in friendly states' currencies – by 0.5 pp to 6%, and for liabilities in unfriendly states' currencies – by 1 pp to 8.5%. According to the results of the regulation of required reserves over September, liabilities in rubles and friendly states' currencies accounted for 84.1% and 6.3%, respectively, in the reservable liabilities. Besides, the amount of credit institutions' reservable liabilities increased by ₽18.3 trillion over the January–September averaging periods. Consequently, the required reserves that credit institutions are obliged to keep in accounts with the Bank of Russia were up by ₽2.3 trillion.

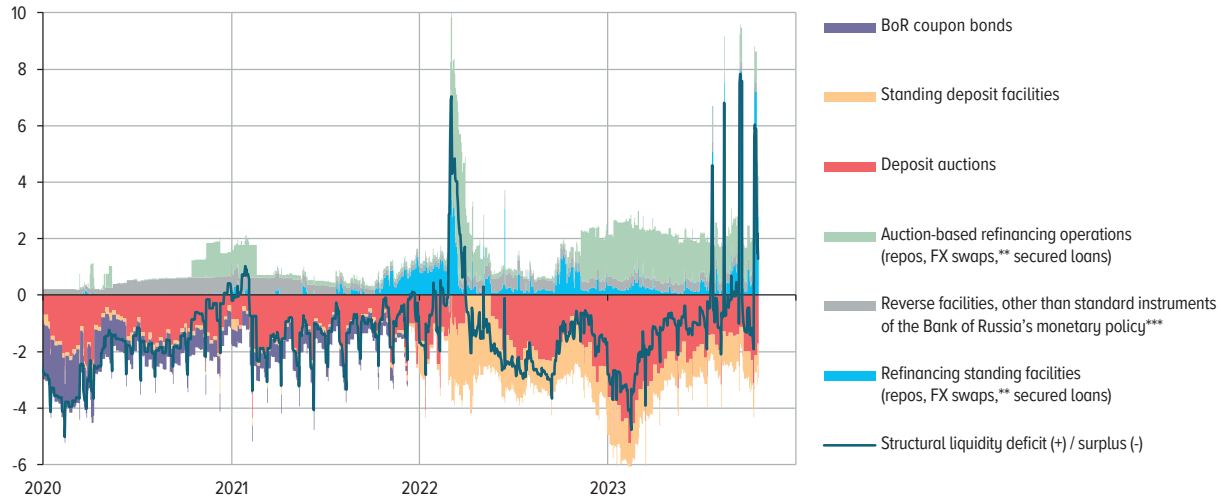
Despite the overall surplus of liquidity, some large banks still needed refinancing at the beginning of the year. Therefore, the Bank of Russia continued to conduct long-term (one-month and one-year) repo auctions in 2023. Besides, in January 2023, the Bank of Russia started to provide liquidity at a floating interest rate linked to the key rate and increased by 0.1 pp within one-month repos.[13] This approach improves the pass-through of the monetary policy signal to the economy.

As imbalances in the distribution of liquidity across the banking sector and banks' need for raising funds from the Bank of Russia decreased, from February 2023, the Bank of Russia started to progressively reduce the limits on one-month repos from the peak of ₽1.5 trillion set in November 2022 to ₽0.1 trillion in July 2023. From August 2023, the Bank of Russia zeroed out the limits on one-year repo auctions. There is no schedule of long-

[13] Previously, floating interest rates were applied only to repos for up to one year and to loans for over one day, including those secured by non-marketable assets.

STRUCTURE OF BANK OF RUSSIA OPERATIONS*
(trillions of rubles)

Chart 4.6



** The Bank of Russia's claims on credit institutions under refinancing instruments / the Bank of Russia's liabilities to credit institutions on liquidity absorbing instruments as of start of business.*
*** The Bank of Russia's specialised refinancing instruments, Bank of Russia loans issued within irrevocable credit lines, and the Bank of Russia's FX swaps to sell foreign currency for rubles.*
**** The Bank of Russia's FX swaps to purchase foreign currency for rubles.*
Source: Bank of Russia.

term repo auctions for 2024. Nevertheless, these operations will remain on the list of the Bank of Russia's monetary policy instruments and, where needed, may be used to provide long-term liquidity to credit institutions.

In this context, the Bank of Russia decreased the maximum amount of funds raised at deposit auctions, on average, from ₽5.5 trillion in January to ₽1.9 trillion in September. Nevertheless, the Bank of Russia continued to hold fine-tuning deposit auctions on the last day of the averaging period. This approach enabled the Bank of Russia to absorb banks' excess liquidity and keep money market rates close to the key rate, which is the operational objective of the Bank of Russia's monetary policy.

In addition to liquidity providing and absorbing operations aimed at managing money market rates, the Bank of Russia can conduct transactions with banks for other purposes. Thus, the Bank of Russia issues loans to aid the priority sectors of the economy. In particular, these are loans at interest rates below the key rate issued to support investment projects, non-commodity exporters, and small and medium-sized businesses. In 2023, the Bank of Russia continued to enhance its specialised refinancing facilities. However, the amount of funds provided within these facilities is still limited. This maintains the effectiveness of the Bank of Russia's interest rate policy. In addition, on 19 January 2023, the Bank of Russia started to conduct FX swaps to sell Chinese yuan for rubles. These transactions are aimed at limiting volatility of money market rates in the conditions of a temporary imbalance in the demand for and supply of yuan liquidity.

LIQUIDITY FORECAST

The liquidity surplus averaged ₽2.3 trillion over the December averaging period[14] and ₽2.8 trillion as of the end of 2022. This was below the Bank of Russia's forecast of ₽3.3–3.9 trillion as of 1 January 2023 presented in the Monetary Policy Guidelines for

[14] The averaging period from 14 December 2022 through 17 January 2023.

2023–2025. The main reasons behind the deviation were a faster-than-expected increase in the demand for cash and larger balances in banks' correspondent accounts exceeding the level needed for uniform averaging of required reserves. Contrastingly, the inflow of funds through budget operations surpassed the forecast.

The increase in the amount of cash in circulation in 2022 Q4 exceeded seasonal dynamics. Cash withdrawals from bank accounts were partly associated with households' demand. When economic uncertainty is rising, households tend to withdraw cash from their bank accounts more actively. A part of this money is then held as liquid savings, whereas the other part is used instead of cashless instruments to make current payments. Nevertheless, elevated demand for cash as such does not accelerate inflation. The overall amount of money supply does not grow, despite cash withdrawals from accounts, but only changes in terms of its composition: funds in bank accounts decrease, whereas households' cash proportionately increases. Therefore, the purchasing power of households' funds remains the same, and the demand for goods and services does not expand. Over time, unused funds can be returned to bank accounts.

Budget expenditures in 2022 Q4 rose year-on-year and were partially covered from the NWF. Due to the changes in the external economic environment and the infrastructure constraints, from the end of January 2022, the Bank of Russia did not mirror the operations with the NWF's resources in the foreign exchange market, due to which they caused an inflow of funds into banks and an increase in the liquidity surplus. The FT deposited temporarily available budget funds with banks. Overall, making its inflation forecast and monetary policy decisions, the Bank of Russia factors in the impact of budgetary operations and the sources of budget deficit financing. Hence, this factor does not involve any additional proinflationary risks either.

The forecast of the liquidity surplus for the end of 2023 is estimated in the range from zero to ₽0.9 trillion. The average liquidity balance over the December averaging period is estimated in the range from a surplus of ₽0.4 trillion to a deficit of ₽0.5 trillion. Depending on the fiscal policy pursued, this amount might vary significantly. In its estimates, the Bank of Russia relies primarily on the plans published by Russia's Ministry of Finance in the draft federal budget for 2023–2026[15] and takes into account the actual practice of recent years. The Bank of Russia's forecast assumes a gradual return to fiscal rule-based expenditure budgeting in 2025–2026. The structural primary deficit is expected to remain during the transition period of 2023–2024. Accordingly, a part of budget expenditures will be covered using the NWF's resources in addition to fiscal rule-based funding. These operations are not mirrored in the foreign exchange market, which is why they will not cause an inflow of liquidity into banks. Contrastingly, fiscal rule-based operations to sell (buy) foreign currency (until 10 August 2023) and operations to sell foreign currency related to the use of the NWF's resources for their investment in permitted financial assets inside the Russian economy (from 1 August 2023) are mirrored in the domestic foreign exchange market.

The amount of cash in circulation is forecast to increase by ₽2.5–3.0 trillion as of the end of the year. Considering this growth, the proportion of cash in total money supply will contract by the end of 2023, as compared to the beginning of the year. However, the forecast growth of this indicator is faster than in previous years.

[15] The draft federal budget for 2023–2026 submitted to the State Duma of the Russian Federation on 29 September 2023 (draft law No. 448554-8). In addition, the Bank of Russia takes into account its own macroeconomic assumptions and the Russian Government's decision to return to the fuel damper parameters effective until September 2023.

The forecast of required reserves takes into account the rise in this indicator over the period under review through the overall expansion of broad money. The above estimate also factors in the increases in the required reserve ratios by the Bank of Russia in 2023. As a result, if banks average their required reserves uniformly, their funds in correspondent accounts with the Bank of Russia will total ₽4.5–4.7 trillion by the end of 2023.

The outflow of liquidity from banks over the entire period under review will be caused by the increase in the amount of cash in circulation. According to the Bank of Russia's baseline forecast, the proportion of cash in total money supply (national definition) will be gradually contracting, including owing to a further expansion of the practice of cashless payments. Besides, banks' required reserves will be growing in line with the overall expansion of broad money.

The effect of budget operations on the banking sector liquidity will decrease owing to operations to buy (sell) foreign currency under the fiscal rule and to mirror the operations related to the use of the NWF's resources for their investment in permitted financial assets inside the Russian economy that are planned to be conducted in the domestic foreign exchange market from 2024. As a result, the situation with liquidity can continue to vary over the three-year horizon. Depending on budget operations and seasonal dynamics of other factors, there might be both a deficit and a surplus of liquidity during certain periods.

BOX 8. TRANSFORMATION OF LIQUIDITY PROVIDING MECHANISMS

From 16 October 2023, the Bank of Russia transformed the standard liquidity providing mechanism[1] into the main and additional ones (MM and AM). The objectives of the operations conducted within the MM and AM differ, just as their key parameters, including interest rates, collaterals, and maturities. Nevertheless, the Bank of Russia will preserve the same approaches to managing the banking sector liquidity, and banks will be able to raise financing as before. The criterion for credit institutions' access to the Bank of Russia's operations, namely a credit rating not below the required level, also remains unchanged and will be the same for both the MM and AM.

Operations within the MM are aimed at achieving the operational objective of monetary policy, i.e., keeping money market rates close to the key rate. As before, liquidity providing auctions will enable the Bank of Russia to regulate the overall amount of the banking sector liquidity. Overnight standing facilities, as before, will reduce volatility of money market rates

MAIN CHARACTERISTICS OF OPERATIONS WITHIN THE MM AND AM *Table B-8-1*

Mechanism	Purpose	Operations		Period	Interest rate	Collateral
Main mechanism (MM)	Managing the overall amount of the banking sector liquidity and achieving the operational objective of monetary policy	Auctions	Repos	1–6 days	Minimum rate: key rate (fixed rate)	Securities put on the Lombard List and accepted as collateral for operations within the MM
				1 week	Minimum rate: key rate (fixed rate)	Securities put on the Lombard List and accepted as collateral for operations within the MM
				1 month	Minimum rate: key rate + 0.1 pp (floating rate)	Federal government, subfederal and municipal bonds
				1 year	Minimum rate: key rate + 0.25 pp (floating rate)	Federal government, subfederal and municipal bonds
			Loans secured by non-marketable assets	3 months	Minimum rate: key rate + 0.25 pp (floating rate)	Claims under loans agreements accepted as collateral for operations within the MM
		Standing facilities	Repos	1 day	Key rate + 1 pp (fixed rate)	Securities put on the Lombard List and accepted as collateral for operations within the MM
			Intraday / overnight loans	1 day	None / key rate + 1 pp (fixed rate)	Securities put on the Lombard List and accepted as collateral for operations within the MM and AM and claims under loans agreements accepted as collateral for operations within the MM and AM
			Lombard loans / loans secured by non-marketable assets	1–30 days	Key rate + 1 pp (floating rate)	Securities put on the Lombard List and accepted as collateral for operations within the MM and claims under loans agreements accepted as collateral for operations within the MM
Additional mechanism (AM)	The Bank of Russia's function as the last-resort creditor is to provide liquidity to certain credit institutions facing a temporary liquidity deficit	Standing facilities	Repos	1–180 days	Key rate + 1.75 pp (floating rate)	Securities put on the Lombard List and accepted as collateral for operations within the AM
			Loans secured by non-marketable assets	1–180 days	key rate + 1.75 pp (floating rate)	Claims under loans agreements accepted as collateral for operations within the AM

[1] The standard mechanism is aimed at achieving the operational objective of monetary policy, encompasses repos in rubles and secured loans issued under particular terms, and differs from specialised refinancing facilities intended to support lending to certain industries, segments and sectors of the economy.

forming the upper bound of the interest rate corridor. The intraday loan from the Bank of Russia is also part of the MM.

Banks will also be allowed to use operations within the AM. Considering a higher cost of raised funds, banks will prefer to use the AM only when they are unable to raise sufficient funds in the money market or through the MM. The AM will replace the urgent liquidity providing mechanism (ULPM). However, as opposed to the ULPM, operations within the AM will be accessible on a permanent basis: credit institutions will only need to comply with additional criteria, submit special reporting, and explain why they need these funds.

The Bank of Russia will also divide all collaterals for liquidity providing operations into two groups, namely for the MM and AM. These two groups will comprise both marketable and non-marketable collaterals. The group of the MM will include securities and claims under loan agreements with the highest credit quality. The remaining securities and non-marketable assets will be in the group of the AM. Considering the special role of the intraday loan for payment processing by banks, it will be allowed to be secured with assets included in both groups.

After the transition to the MM and AM, the Bank of Russia will preserve the countercyclical approach to backing. Besides, the Bank of Russia is not planning any significant changes to the requirements for securities and non-marketable assets for them to be included in the general collateral pool (MM+AM). The countercyclical approach will influence the distribution of assets between the MM and AM. If the banking sector forms or is expected to form a structural liquidity deficit, the Bank of Russia will transfer collaterals from the AM to the MM. To the contrary, if the banking sector faces a liquidity surplus, the Bank of Russia will be able to tighten the requirements for collaterals within the MM transferring part of them to the AM.

ASSETS ACCEPTED AS COLLATERALS FOR OPERATIONS WITHIN THE MM AND AM *Table B-8-2*

	MM	AM*
Assets – transactions	Securities – for repos and loans, non-marketable assets – for loans	Securities – for repos, non-marketable assets – for loans
Securities put on the Bank of Russia Lombard List	• Bonds issued on behalf of the Russian Federation** • Bank of Russia bonds • Corporate,*** subfederal and municipal bonds, provided that: – the bond issue / issuer has at least two credit ratings from credit rating agencies**** – all assigned credit ratings are not be below 'AA-'*****	• Bonds not included in the MM, provided that: – the bond issue / issuer has at least one credit rating from credit rating agencies – all assigned credit ratings are not be below 'A-'****** • Mortgage-backed bonds secured by joint and several suretyship of JSC DOM.RF • Bonds secured by state guarantees of the Russian Federation
Non-marketable assets – claims under loan agreements	• Non-marketable assets, provided that: – the obligor has at least two credit ratings from credit rating agencies – all assigned credit ratings are not be below 'AA-'	• Non-marketable assets not conforming to the requirements of the MM, provided that: – the obligor has at least one credit rating from credit rating agencies – all assigned credit ratings are not be below 'A-' • Non-marketable assets, the obligors in respect of which are legal entities having no credit ratings whose credit risk is assessed according to the Bank of Russia's method at a level corresponding to a credit rating of at least 'A-' • Non-marketable assets, the obligor in respect of which is the Russian Federation

* *Assets accepted for operations within the AM may also be used for intraday and overnight loans related to the MM.*

** *Foreign currency-denominated bonds issued on behalf of the Russian Federation, the centralised recording of rights to which is carried out by foreign depositories, may be used as collateral only for the Bank of Russia's lending operations.*

*** *Corporate Eurobonds, credit institutions' bonds (except mortgage-backed bonds issued by credit institutions), insurers' bonds, and international financial institutions' bonds are not accepted to secure operations within the MM and AM.*

**** *Hereinafter, the credit rating agencies ACRA (JSC), JSC Expert RA, NCR, and NRA LLC.*

***** *Hereinafter, 'AA (-RU)' / 'ruAA-' / 'AA-.ru' / 'AA-/ru/' assigned by ACRA (JSC) / JSC Expert RA / NCR / NRA LLC (with regard to the credit ratings approved for forming collaterals for the MM and AM).*

****** *Hereinafter, 'A- (RU)' / 'ruA-' / 'A-.ru' / 'A-\ru\' assigned by ACRA (JSC) / JSC Expert RA / NCR / NRA LLC (with regard to the credit ratings approved for forming collaterals for the MM and AM).*

After the transition to the new mechanisms, the overall amount of collaterals available to banks will remain almost unchanged. If the Bank of Russia had switched to the MM / AM from the beginning of 2023, banks' overall collaterals could have exceeded ₽20 trillion, with collaterals for the MM and AM accounting for 60% and 40%, respectively. As regards securities held by banks and put on the Bank of Russia Lombard List, nearly 90% of the amount of marketable collaterals will be accepted to secure operations within the MM.

The cost of raising liquidity from the Bank of Russia will remain almost the same after the transition to the MM and AM. Minimum interest rates at repo auctions will remain unchanged. The interest rate on standing facilities within the MM will also equal the key rate increased by 1 pp, while the interest rate on operations within the AM will equal the key rate increased by 1.75 pp. The difference in the cost of raising funds between operations of the MM and AM reflects the difference in returns on respective assets. In addition, the structural liquidity surplus in the banking sector will remain in the next few years. Accordingly, the Bank of Russia will still conduct deposit auctions for the most part. Collaterals in the group of the MM are generally sufficient to fully cover banks' need for raising liquidity. There might be occasional situations where credit institutions might lack sufficient collaterals for the MM and will have to use the AM.

The transition to the MM and AM will increase the flexibility and efficiency of the system of liquidity providing instruments. A specific feature of the Russian banking sector is large-scale liquidity inflows and outflows. Affected by autonomous liquidity factors, credit institutions' need for refinancing might alter abruptly.[2] Besides, Russian credit institutions' collaterals differ quite significantly in terms of both types (securities and claims) and credit quality. Therefore, after the transformation, it is essential for the Bank of Russia to still be able to quickly provide a large amount of liquidity to banks backed by collaterals of various types. Nevertheless, where banks' need for liquidity is not high, the Bank of Russia seeks to provide it if the funds are backed by the highest quality assets. The transition to the MM / AM helps the Bank of Russia to find the right balance between these goals.

[2] Specifically, from 24 February 2022 to 2 March 2022, the Bank of Russia provided approximately ₽8.5 trillion to credit institutions through operations on a repayable basis.

APPENDICES

APPENDIX 1. MONETARY POLICY TRANSMISSION MECHANISM IN RUSSIA

The main goal of the Bank of Russia's monetary policy is to ensure price stability, that is, steadily low and predictable inflation. The core instrument used to achieve this goal is the key rate (see Section 1 'Monetary policy goals, principles and instruments'). The key rate has a direct or indirect effect on all the segments of the financial market and, through them, on savings, consumption, investment and, ultimately, aggregate demand in the economy and the level of prices (Diagram). The complex of interdependencies between economic processes making it possible to impact inflation through changes in the central bank's key rate is called the monetary policy transmission mechanism.

The transmission mechanism is a complex dynamic system. In the first place, price movements in the economy are driven by not only the key rate, but also multiple factors that are not connected with monetary policy, including political, environmental, demographic and technological ones. Making a decision on a key rate change, the central bank takes into account the current state of the factors that are external for monetary policy and their possible changes in the future.

Secondly, just as the economy in general, the transmission mechanism is evolving. This evolution was especially notable in recent years when the extensive changes induced by the coronavirus pandemic and the geopolitical instability of 2022–2023 inevitably affected all economic processes, including the elements of the transmission mechanism. However, even when economic changes are not that significant (e.g., digitalisation and dedollarisation of the Russian economy), they still impact the functioning of the transmission mechanism. Therefore, approaches to pursuing monetary policy might be modified as well to reflect changes in the conditions of its implementation. This Appendix describes either the common patterns of the functioning of the transmission mechanism or specific conditions of its functioning in recent years.[1]

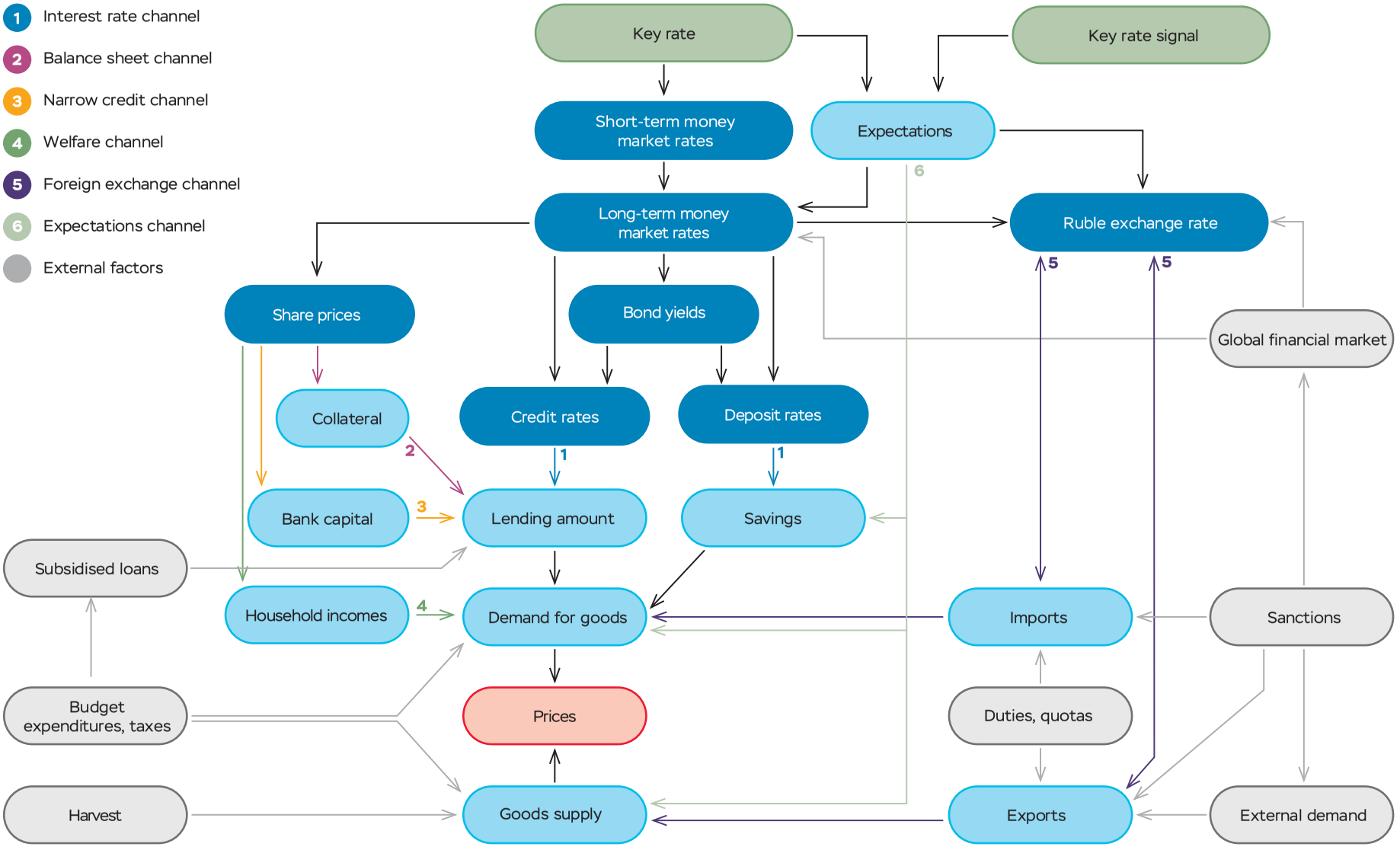
Thirdly, economic processes, including those that are part of the transmission mechanism, are non-linear. Even when changes in economic indicators are similar, they do not always cause comparable changes in respective dependent variables. The effects are often asymmetrical, i.e., the response to a certain increase in a particular indicator might be stronger or weaker than the response to its proportionate decrease. The most widely known phenomenon demonstrating this asymmetry is the ratchet effect when prices grow more quickly and notably, being pushed up by proinflationary factors, than they decrease, being influenced by disinflationary factors. Consequently, a slowdown in inflation can take more time than its acceleration.

In some cases, a particular effect of certain economic variables on others depends on the state of the economy. The influence of monetary policy on economic growth is one of the most important interconnections. Such influence is effective when monetary policy

[1] Previously, there were also specific factors that impacted the functioning of the transmission mechanism and the implementation of monetary policy. These factors were described in the earlier editions of the Monetary Policy Guidelines (http://www.cbr.ru/eng/about_br/publ/ondkp/).

MONETARY POLICY TRANSMISSION MECHANISM IN RUSSIA

Diagram



helps return the economy to its long-term equilibrium (restore economic activity during a recession or cool down an overheated economy) and close the output gap (see Box 7 'The concept of an economic equilibrium and deviations of key macroeconomic variables from it'). Otherwise, monetary policy has an unsteady and, to a certain extent, conflicting effect on economic growth. Thus, when production factors are underutilised, accommodative monetary policy might push down market interest rates in the short term below a neutral level (see Box 3 'Neutral interest rate') and boost economic growth through an increase in the utilisation of production factors. However, if monetary policy remains accommodative for a long period, demand grows faster than capacities to ramp up output, which inevitably accelerates inflation. Higher inflation expectations and estimates of inflation risks, in turn, decrease appetite for long-term investment, limit the accessibility of investment resources for companies, and might ultimately hinder economic activity.

Preparing its key rate decisions, the Bank of Russia takes into account the complex, non-linear and variable nature of the transmission mechanism and analyses its current state.

The impact of the key rate on market rates in the economy

The basic element of the monetary policy transmission mechanism is the effect of the Bank of Russia's key rate on interest rates and yields in the main segments of the Russian financial market. This impact is translated in several stages (Diagram).

At the first stage, a key rate change almost instantaneously alters money market rates, first of all IBL rates. The Bank of Russia manages the banking sector liquidity by absorbing excess liquidity or covering a liquidity deficit (Section 4 'Monetary policy operational procedure in 2023–2026'). This consistently keeps money market rates close to the Bank of Russia key rate.

At the second stage, changes in overnight money market rates are translated into the movements of longer-term money market rates. Banks and other money market participants can choose between multiple sequential overnight transactions and one longer-term transaction. Accordingly, it is not only the current level of overnight money market rates, which depends on the key rate, that influences medium- and long-term interest rates, but also expectations of future changes in this level that are largely determined by the Bank of Russia's statements and forecasts, primarily its signal regarding possible future monetary policy decisions. Expectations of a rise in the key rate push up medium- and long-term IBL rates, whereas expectations of its decrease lower these interest rates.

Normally, large banks and financial institutions operating in the money market are also bond market participants, especially in the segment of risk-free OFZ bonds. These market participants always have a choice between placing funds in the money market or in the securities market. Choosing the option ensuring higher yields, they contribute to the convergence between IBL rates and bond yields. Therefore, most frequently, bond yields change almost simultaneously with IBL rates with comparable maturities. Basically, the levels of IBL rates and OFZ yields diverge due to differences in the liquidity of these instruments (bonds can be sold or pledged by a bank experiencing difficulties with liquidity), their risk profiles (unlike OFZ bonds, IBL involves credit risks), and tax treatment. However, the overall trend and the pace of changes in IBL rates and OFZ yields are comparable in most

cases[2] (divergences in the dynamics might be associated with certain large transactions or differences in the composition of market participants, but they are occasional).

Corporate bond yields normally exceed OFZ yields with comparable maturities by the amount of the premium for credit risk related to a particular issuer. Accordingly, a change in government bond yields is followed by a comparable change in corporate bond yields. However, the dynamics of corporate bond and OFZ yields might diverge due to an adjustment in the assessment of the issuer's risks (like, for instance, in mid-2022 when OFZ yields already returned to the level of early 2022, whereas corporate bond yields still significantly exceeded that level).

As medium- and long-term money market rates and bond yields depend on not only the level of the key rate, but also expectations of its future change, medium- and long-term interest rates often start to change not after, but rather before a key rate change when market participants have strong expectations of an upcoming key rate change. Examples of this were the decline in bond yields in early 2019 or their increase in early 2021, a few months before the respective key rate changes.

The other side of expectations' influence on long-term interest rates is a relatively mild response to a significant key rate increase. Market participants understand that interest rate growth is temporary and the key rate will be cut after inflation risks are mitigated. Accordingly, they take into account the expected reduction setting their long-term interest rates and yields. An example of this was the rise in bond yields in 2022 H1 that was nearly twice as small as the key rate increase.

As assessed by the Bank of Russia, following a 1 pp increase in the overnight IBL rate, IBL rates with maturities of less than one year rise by 0.6–1 pp, IBL rates with maturities from one to three years – by 0.2–0.5 pp, and IBL rates with maturities of over three years – by 0.1–0.2 pp.[3] The longer the time to maturity, the weaker the response of interest rates to a change in overnight IBL rates. This can be because market participants expect the key rate to return to its neutral level in the medium term. The extent of the transmission of key rate changes to longer-term market rates has slightly decreased in recent years, which might be evidence of growing confidence in the Bank of Russia's monetary policy as it accumulates successful experience in reducing inflation.

The transmission of key rate changes to bond yields has been distorted in recent years due to external shocks and rising economic and geopolitical uncertainty. Thus, the lockdown in spring 2020 and intensifying geopolitical tensions in autumn 2022 were accompanied by local peaks in bond yields, although there were no expectations of a key rate increase (in the former case, even despite the key rate cut). The imposition of the sanctions against issuers also caused fluctuations in yields on their bonds. However, the

[2] Hereinafter (including in the Diagram), the most general logic of economic processes is characterised. Alongside the causal relationships described above, there are also less important and weaker interdependencies having an effect only in certain circumstances. Thus, a reduction in short-term IBL rates below the inflation level normally does not cause a comparable decrease in long-term interest rates since investors are not interested in investing funds at an interest rate that does not offset the depreciation of their investment caused by inflation. This is one of the reasons why yields on long-term US Treasuries decreased less significantly than short-term interest rates during the long period when the Fed funds rate in the USA had been kept close to zero.

[3] Hereinafter (unless specified otherwise), the impact of some economic indicators on others is assumed to be symmetrical. For example, if it is written that a rise in an overnight interest rate increases credit rates with maturities of up to one year by 0.6 pp, it is implied that a decline in an overnight interest rate by 1 pp decreases credit rates with maturities of up to one year by 0.6 pp as well. Besides, all estimates are made when all other things are equal, that is, factors influencing the final indicator remain the same.

impact of such shocks on the market situation did not last long, and bond yields soon stabilised. Therefore, these shocks did not hinder the functioning of the monetary policy transmission mechanism.

At the third stage, bond yields and long-term money market rates influence interest rates on bank loans and deposits. Firstly, loans, bonds, and long-term transactions in the money market are interchangeable instruments for banks. Large corporates can raise funds in both the credit and bond markets. Accordingly, credit rates and bond yields should be comparable (adjusted for differences in costs, risk levels, and regulation standards). Secondly, further development of the securities market infrastructure simplifies investment in bonds for individuals. Thus, if deposit rates grow more slowly than bond yields (or decrease faster), some depositors start to prefer bonds, which forces banks to adjust their deposit rates. Thirdly, many large banks offering a diversified range of products set interest rates on their transactions relying on OFZ yields or long-term IBL rates as a reference point (see Box 11 'Transfer curve and formation of interest rates on bank operations').

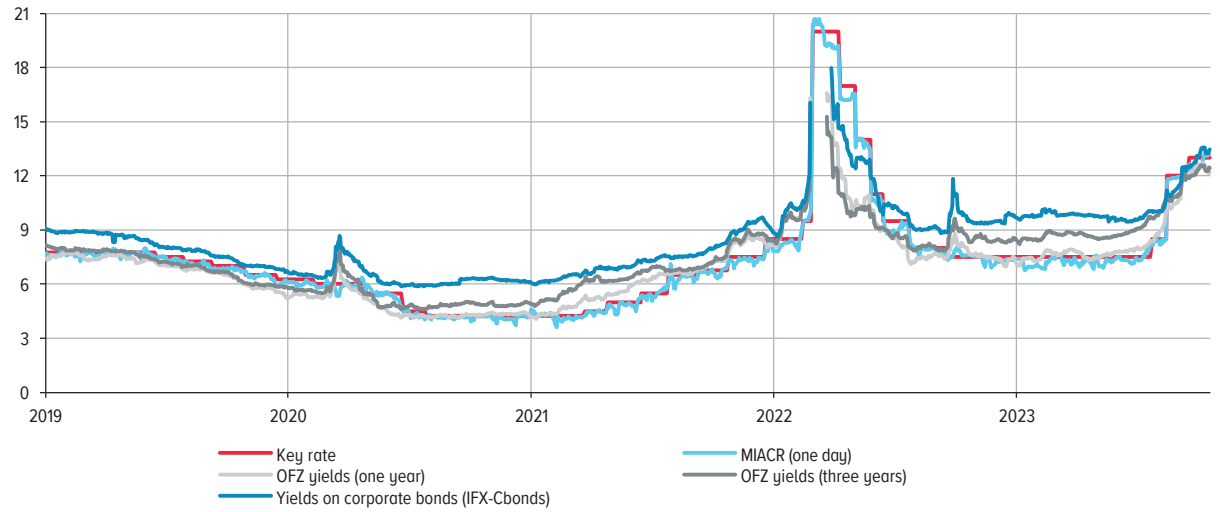
The effect of money market rates and bond yields on credit rates is slower, weaker, and more uneven than the mutual influence of interest rates at the first and second stages. This is associated with individual terms of loan agreements (collaterals, repayment schedules, and covenants) impacting credit rates, a wide use of credit lines (as a result, terms of another tranche depend on not only the current market situation, but also credit line parameters), and a relatively long period before the transaction date (due to which a transaction can actually be conducted several weeks or even months after setting the interest rate). Inflation is a factor limiting the potential for interest rate decreases. Depositors lose interest in deposits not protecting their savings against depreciation caused by inflation. Therefore, banks are unable to respond to a decrease in long-term interest rates by proportionately changing deposit rates (and credit rates financed from raised funds).

The dynamics of deposit rates (and retail loan rates to a certain extent) respond to changes in money market rates and bond yields with a certain time lag because these instruments have a standard nature. Changes in interest rates on these instruments are subject to decisions on banks' interest rate policies. In addition, credit and deposit rates depend on the specifics of banking business that is exposed to interest rate risk (when market rates grow, depositors can withdraw their funds ahead of schedule and deposit these funds at higher interest rates, whereas interest rates on 'earlier' loans remain unchanged; where interest rates go down, borrowers can refinance their loans at lower interest rates, whereas interest rates on 'earlier' deposits remain unchanged). Seeking to avoid materialisation of interest rate risk, i.e., a situation where banks will have to pay high interest on their liabilities while receiving low returns on their assets, banks respond to interest rate increases and decreases asymmetrically. When interest rates go down, banks reduce their credit rates more slowly than deposit rates. To the contrary, when interest rates go up, banks raise their credit rates faster.

There is another factor that has become more important in recent years and is influencing credit rates – subsidised lending programmes that are widely used to support the economy as a whole and its individual industries. Borrowing costs for ultimate borrowers under most large-scale subsidised lending programmes do not depend on key rate changes. Accordingly, the larger the proportion of subsidised loans in market turnover, the weaker the impact of the key rate on credit rates (see Box 9 'Subsidised lending programmes').

MONEY MARKET RATES AND BOND YIELDS
(% p.a.)

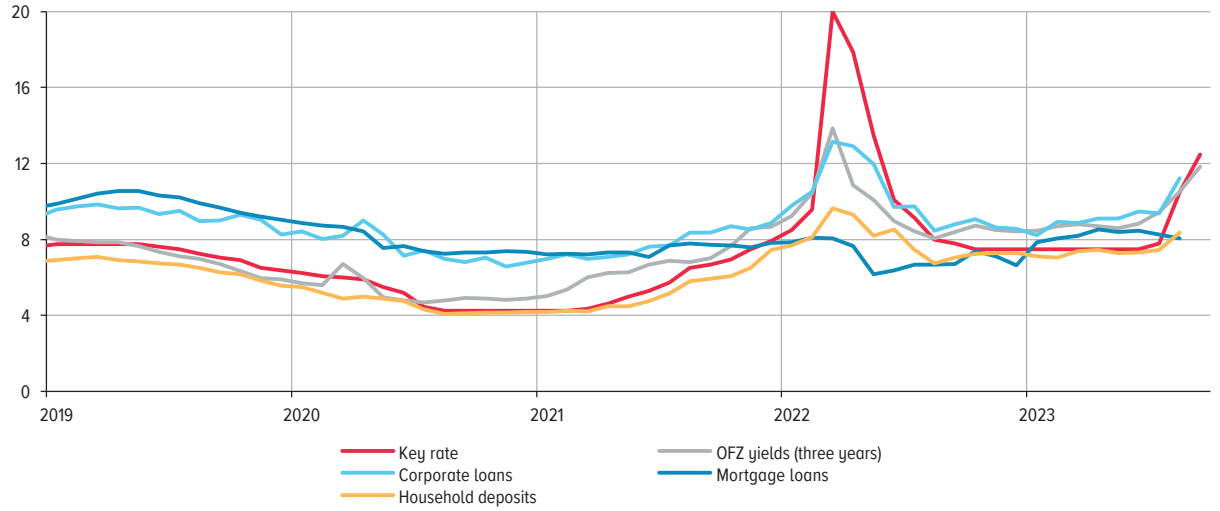
Chart A-1-1



Source: Bank of Russia.

INTEREST RATES ON BANKS' LONG-TERM RUBLE TRANSACTIONS
(% p.a.)

Chart A-1-2



Source: Bank of Russia.

Due to the above specifics, the effect of monetary policy on interest rates on deposits and, particularly, loans might be limited in the short term. However, divergences in interest rates on customer transactions and on money and securities market operations impact the relative attractiveness of financial transactions for banks, increase banks' operations in more attractive market segments, and entail respective adjustments in interest rates. As a result, in the longer term, changes in the key rate or expectations about its level are translated into credit and deposit rates.

Furthermore, the advancement of the Russian financial market can, to a certain extent, accelerate the response of deposit and credit rates to monetary policy changes. As online banking is becoming increasingly widespread and more advanced, agreements

are concluded more quickly; standardisation of loan agreements simplifies transactions and makes the market more heterogeneous; and expansion of aggregators strengthens competition among banks, encouraging them to respond to developments faster.

In particular, according to the Bank of Russia's estimates, in 2018–2023, nearly a half of changes in OFZ yields were transmitted to long-term credit rates (in both the corporate and retail segments of the market) within one to two months.[4] In 2013–2017, this process took up to one quarter. Long-term deposit rates were adjusting to monetary policy changes more slowly, yet slightly faster than in 2013–2017 (namely, during three months, compared to four to five months). The effect on short-term credit and deposit rates was quicker before as well, whereas, now, over 90% of changes in OFZ yields are translated into short-term interest rates within one to two months.

Money market rates, bond yields, and credit and deposit rates form under the influence of monetary policy and, in turn, impact almost any economic agents' decisions affecting aggregate demand in the economy and inflation. Some chains of the cause and effect relationships ensuring this effect are called the transmission mechanism channels of monetary policy.

Interest rate channel of the transmission mechanism

The most important channel of the transmission mechanism in the Russian economy is the *interest rate channel* that is related to the influence of interest rates on decisions regarding consumption, investment, savings.

Credit rates and bond yields affect the affordability of borrowings for households and businesses. The cheaper loans are, the greater number of companies and households will raise loans to purchase investment or consumer goods. Additional demand funded from borrowings pushes up prices in the market for related goods and accelerates inflation. A vivid example was the rise in housing prices in Russia in 2020–2022 due to extensive subsidised mortgage lending programmes.[5]

Interest rates on deposits and savings alternatives influence households' preferences for saving or consumption. The higher returns on savings are, the more households tend to postpone their purchases hoping to buy larger quantities of goods using their returns on savings or save enough money for large purchases.

According to the Bank of Russia's estimates, a change in credit and deposit rates is followed by a co-directional change in the saving ratio within one quarter. Over the course of the year, this effect is gradually strengthening since increasingly more people respond to a steady change in interest rates, making decisions to save or borrow funds.

As inflation risks in Russia have been weakening in recent decades, households are more willing to increase savings and banks – to issue long-term loans to their clients. As a result, the importance of the financial sector in the national economy has been growing progressively. Thus, as of early 2023, banks' claims on organisations and households accounted for 46% and 19% of GDP, respectively (one-third and 1.5 times more, respectively,

---

[4] Hereinafter, the ratio between OFZ yields and average market rates. Certain banks might respond to changes considerably more slowly, and it can take up to three to four quarters for the credit and deposit markets to adjust to the changed situation completely.

[5] According to Rosstat, the price per square metre in new standard apartments covered by the largest subsidised lending programmes doubled over the three years (prices for existing housing soared by 60% over the same period, the average per capita wage rose by 35%, and the consumer price index was up by 27%).

than a decade before). Households' deposits increased less significantly (from 21% to 25% of GDP), which was associated with a surge in private investment in securities.

As the amounts of financial transactions were growing, the interest rate channel of the transmission mechanism was becoming increasingly important because of a rise in potential demand that can influence the dynamics of market rates. Lending became the main source of demand in some market segments. Specifically, mortgage loans backed by shared construction participation agreements issued over 2020–2022 totalled ₽5.4 trillion, which is nearly two-thirds of the amount transferred to escrow accounts over the said period. Car loans issued over the said period totalled ₽2.5 trillion, which is more than 30% of the overall value of cars sold in the domestic market.

The efficiency of the interest rate channel in the corporate segment of the credit market increased even more owing to a wider use of loans at floating interest rates. By the middle of 2023, such loans accounted for nearly a half of the corporate loan portfolio (compared to about one-third in early 2020). A change in the key rate and dependent interest rates has an instantaneous effect on borrowers' interest expenses for loans at floating interest rates, affecting their willingness to increase other expenses, raise additional borrowings, or repay earlier raised loans ahead of schedule.

There have been signs of structural shifts in the Russian financial sector in recent years that impact the efficiency of the interest rate channel of the monetary policy transmission mechanism. On the one hand, households' propensity to save has increased due to rising economic uncertainty, which is weakening the effect of retail loan and deposit rates on consumer demand. The extensive use of subsidised lending programmes during the pandemic period and in 2022–2023 amid the escalation of geopolitical tensions was distorting the functioning of the interest rate channel as interest rates on a considerable proportion of credit transactions did not depend on monetary policy. Accordingly, more significant changes in the key rate could be needed to influence the level of demand in the economy.

On the other hand, the intensifying sanction pressure on the Russian economy entailed a slump in the affordability and accessibility of foreign financial instruments. Russian companies were substituting foreign debts for domestic borrowings, primarily in rubles. The dedollarisation of loans and deposits continued (the increase in Russian banks' assets and liabilities described above was driven solely by ruble transactions, whereas foreign currency transactions declined over the same period). As a result, ruble-denominated financial instruments were becoming increasingly important for Russian companies and households, while returns on these instruments depend on the Bank of Russia's monetary policy. This promoted an increase in the role of the interest rate channel of the transmission mechanism in the national economy.

In the short run, the above effects were offsetting each over to a certain extent. Nevertheless, the factors reducing the efficiency of the interest rate channel were temporary. As the structural transformation of the economy progresses further, consumer activity might restore gradually and the use of subsidised lending might decrease. Concurrently, the factors making the interest channel more efficient are structural and can be expected to remain in the long term and, accordingly, increase the role of the interest rate channel of the transmission mechanism.

Transmission mechanism channels related to interest rates' impact on asset prices

Interest rates driven by monetary policy also influence securities prices. Bond prices directly depend on the market level of interest rates (the higher market rates are, the lower the bond price should be for the fixed coupon to form market yield). The demand for shares (and their price) goes up when market rates go down, driven by both higher affordability of broker loans and expected growth in the economy, companies' revenues and returns on equity investment.

Securities prices impact demand in the economy through several channels simultaneously. Securities can be used to back bank loans. Interest rates on secured loans are normally lower than those on unsecured loans. Besides, banks can issue a secured loan to a borrower even when the latter is not assessed as sufficiently reliable to receive an unsecured loan. Therefore, a rise in securities prices increases the affordability of borrowings for securities holders and boosts lending. This effect of interest rates on lending amounts is called the *balance sheet channel* of the transmission mechanism.

Securities are held by not only banks' clients, but also banks themselves. Revenues from a growing value of securities held by a bank is one of the sources of bank capital. An increase in bank capital, in turn, enables banks to issue more loans to their current borrowers and expand the range of potential borrowers. This channel is referred to as the *narrow credit channel* of the transmission mechanism.

The role of these two channels in the Russian economy is still limited. Loans backed by securities account for less than 4% of the corporate loan portfolio. In retail lending, securities are used as collaterals even more rarely. The importance of the narrow credit channel is limited by both the percentage of securities in bank assets (shares and equity stakes account for less than 3%, and bonds – for approximately 15%) and a considerable capital cushion. During 2023, the capital adequacy ratio N1.0 exceeded 12%, which is 1.5 times higher than the minimum value of this ratio. In addition, when there are notable fluctuations in market rates and securities prices in Russia, the authorities can introduce regulatory easing measures, owing to which the loss from securities revaluation does not affect capital immediately. Nonetheless, the domestic bond market has been expanding steadily faster than the credit market in recent decades. Therefore, the importance of the balance sheet channel and the narrow credit channel can be expected to gradually increase in the long term.

Securities prices impact inflation not only through the credit market. The economic literature also refers to the *welfare channel* related to how financial asset owners take into account their financial reserves when planning their expenses. When prices for securities and, accordingly, the welfare of their holders increase, their propensity to consume rises. Contrastingly, lower prices for securities make their holders save more to offset the losses.

Currently, securities account for a rather small percentage in households' savings. As of early 2023, the ratio of savings in deposits and cash to savings in bonds and listed shares was one ruble to less than 0.2 rubles. However, this figure has been steadily growing (it was two times lower five years ago). Therefore, the potential role of the welfare channel in the Russian economy has been increasing.

In recent years, the efficiency of all the three channels was negatively affected by soaring volatility in the securities market, especially in the segment of shares. Securities prices could be affected by changes in the quarantine regime during the pandemic period, the

enactment of new sanctions, or foreign investors' exit from the Russian market in 2022–2023 more notably than by monetary policy changes.

Monetary policy influences aggregate demand in the economy, contributing to a temporary rise or decline in economic activity, through the interest rate channel of the transmission mechanism and other channels related to asset prices. If there is a gap between the current level of economic activity and the potential one (an output gap; see Box 7 'Concept of an economic equilibrium and deviations of key macroeconomic variables from it'), this gap impacts the inflation rate.

According to the Bank of Russia's assessments, a 1% output gap entails a 0.6 pp change in annual inflation over a four-quarter horizon. Proinflationary (or disinflationary) influence is observed during the entire period when a positive (or negative) output gap persists, and not only when it expands or shrinks. The impact of the output gap on inflation became much stronger in 2022–2023 due to the decreased cross-border mobility of capital (amid the effective sanctions, concerns about new sanctions, and the capital controls) and the changed nature of the influence of domestic demand on the ruble exchange rate (see Box 10 'Impact of capital controls on the monetary policy transmission mechanism') and foreign trade transactions.

Foreign exchange channel of the transmission mechanism

Interest rates on ruble-denominated financial instruments forming under the influence of monetary policy affect not only the propensity to save, but also preferences for particular financial instruments. Specifically, the higher interest rates on ruble financial instruments are, the fewer investors prefer foreign currency instruments. In turn, changes in the demand for foreign currency-denominated financial instruments affect the ruble exchange rate. Furthermore, the above-described impact of monetary policy on consumer and investment demand translates into the dynamics of imports and, accordingly, the demand for foreign currency used to pay for imports, which also affects the ruble exchange rate.

As assessed by the Bank of Russia, a 1 pp change in the overnight IBL rate leads to an approximately 0.2% adjustment of the real effective exchange rate of the ruble.[6] The response weakened in 2022–2023 after the decrease in the cross-border mobility of capital, whereas, before that, the adjustment of the exchange rate to interest rate movements had been several times stronger.

The ruble exchange rate is a factor impacting prices in the domestic market. The influence of monetary policy on inflation through the dynamics of the ruble exchange rate is referred to as the *foreign exchange channel* of the transmission mechanism.

The foreign exchange channel comprises several chains of the cause and effect relationships. Firstly, the ruble exchange rate can affect inflation directly through prices for imported consumer goods and prices for raw materials and components imported by Russian companies, which impacts the input costs of domestic goods. Secondly, the exchange rate affects the ruble value of exports and imports that influences price competitiveness of Russian and foreign goods. Thus, a ruble weakening results in growth of the ruble value of both imports to Russia (making it possible for Russian manufacturers to raise prices for their products) and exports from Russia (encouraging domestic exporters to expand exports or increase prices in the domestic market).

[6] The weighted average change in the real exchange rate of the ruble against the currencies of Russia's main trading partners.

The foreign exchange channel is characterised by pronounced asymmetry: when the ruble depreciates, prices grow faster than they decrease when the national currency strengthens. According to the Bank of Russia's estimates, until recently, when the nominal effective exchange rate of the ruble[7] weakened by 1%, inflation accelerated by no more than 0.1 pp over a six-month horizon.

In recent years, this channel has become less significant. In the first place, the shocks related to the pandemic in 2020–2021 and rising geopolitical risks in 2022–2023 affected the dynamics of demand and supply in the foreign exchange and commodity markets (see Appendix 4 'One-off supply-side inflation factors'), considerably distorting the impact of monetary policy on them.

Secondly, rising risks triggered large-scale structural shifts influencing the efficiency of the foreign exchange channel of the transmission mechanism. The sanctions and the capital controls weakened the relationships between the Russian and foreign financial markets and, consequently, the effect of ruble interest rates on the foreign exchange rate (see Box 10 'Impact of capital controls on the monetary policy transmission mechanism'). The effect of the ruble exchange rate on domestic prices (the pass-through effect) remained an important factor of domestic inflation. However, according to preliminary estimates, this effect became weaker and slower in 2022–2023. Furthermore, a partial substitution of unfriendly states' currencies in foreign trade transactions for rubles contributed to the contraction of importers' demand for foreign currency and its supply by exporters. A decrease in the depth of the foreign exchange market creates conditions for more considerable fluctuations of the ruble exchange rate that are partially offset by the weakening of the price response to them.

The majority of the above economic changes that have happened in recent years and are impeding the functioning of the transmission mechanism are temporary. Accordingly, the monetary policy transmission mechanism may be expected to gradually restore its efficiency. However, such trends as the growing proportion of ruble settlements with non-residents and lower willingness to use foreign currency financial instruments can remain for a long time, weakening the influence of interest rates on the foreign exchange rate and the effect of the foreign exchange rate on foreign trade, thus decreasing the importance of the foreign exchange channel of the transmission mechanism.

Inflation expectations channel of the transmission mechanism

The above transmission mechanism channels are complemented by the *inflation expectations channel*. Expectations about future movements of goods prices are taken into account by households when they make their decisions on savings and consumption, by companies when they estimate returns on investment and set product prices, and by banks when they develop their interest rate policies. The Bank of Russia's monetary policy, including communication as its significant element, is among the factors influencing inflation expectations.

Thus, if the Bank of Russia raises the key rate or announces its planned increase, these are grounds for expecting a future slowdown in inflation. These expectations encourage companies to avoid a too fast increase in prices for their products, which might compromise their competitiveness, and households – to maintain moderate consumer activity

[7] The weighted average change in the nominal exchange rates of the ruble against the currencies of Russia's main trading partners.

without fearing a depreciation of their savings. As a result, both demand- and supply-side proinflationary factors weaken even before a key rate change is fully transmitted to bond yields and credit and deposit rates. Accordingly, the inflation expectations channel accelerates the functioning of the transmission mechanism in general, making it more efficient.

The above-mentioned weakening of the response of long-term interest rates to a key rate change (see the subsection 'The impact of the key rate on market rates in the economy') reflects the increasing importance of the inflation expectations channel. Estimating long-term interest rates, market participants consider faster inflation and the related key rate increase as temporary, not expecting inflation and the key rate to stay elevated for an extended period.

The shocks of recent years induced by the coronavirus pandemic and rising geopolitical risks hinder the functioning of the inflation expectations channel. The scale of the pandemic and the anti-Russian sanctions is unprecedented compared to any other events of recent decades, which makes it hard to form long-term expectations. Seeking to support the efficiency of the inflation expectations channel, the Bank of Russia especially focuses on communication and disclosure of information on the situation in the Russian economy and monetary policy decisions made.

Specifics of the functioning of the transmission mechanism during a long period of accommodative monetary policy

The above-described patterns in the functioning of the monetary policy transmission mechanism are observed when the main priority of monetary policy is to keep inflation at the target. However, central banks might be forced to pursue accommodative monetary policies in some situations (e.g., during the coronavirus pandemic).

In countries with steadily low inflation and anchored inflation expectations, money supply can be expanded (through accommodative monetary policy or expansionary fiscal policy) during quite a long period, supporting the national economy without any significant implications for the inflation rate. However, when confidence in price stability is disrupted and prices go up, the potential of such policy is exhausted, and ultra-accommodative monetary policy becomes an additional source of inflation.[8]

In countries where inflation expectations are not anchored and the economically active population have the experience of living in the conditions of high inflation, accommodative monetary policy might have a boosting effect on the economy during a short period. Further on, rising inflation negatively affects the functioning of the national financial system, limiting economic growth opportunities.

Low deposit rates forming under the influence of accommodative monetary policy and disproportionate to inflation weaken the demand for deposits. People may withdraw funds from deposits into the product market (which directly accelerates inflation), the foreign exchange market (which increases dollarisation of the national financial system, weakens the national currency, and pushes up prices for imports), and to the real estate and securities markets (which might create price 'bubbles' in the said markets). In some cases, people might use borrowings to make speculative purchases, which amplifies the proinflationary effect of low interest rates.

[8] Borio, C., Hofmann, B. and Zakrajšek, E. Does money growth help explain the recent inflation surge? / BIS Bulletin, No. 67.

Weaker demand for deposits does not only reduce banks' capacities to fund credit transactions from deposits, but also increases liquidity risk. Fearing that depositors might withdraw their funds when inflation speeds up again, banks avoid expanding long-term lending or set high long-term credit rates that could cover banks' risks. A reduction in long-term lending might in turn adversely affect investment climate in the country and overall economic activity.

A situation where domestic funding is unstable and inflation risks are rising, preventing banks from expanding long-term lending in the national currency, provokes an increase in foreign currency lending (as it was in Russia at the end of the 1990s when over a half of long-term loans were in foreign currencies). When foreign currency lending goes up, banks have to raise more funds in the foreign currency deposit market, which further increases the dollarisation of the economy.

Growing dollarisation does not only make the domestic economy more exposed to external shocks, but also impairs the efficiency of the monetary policy transmission mechanism because the central bank's policy rates cannot influence interest rates on foreign currency-denominated loans and deposits. Therefore, when the need to slow down inflation in order to normalise the economic situation becomes obvious, the central bank might need to considerably tighten its monetary policy to achieve this objective.

Evolution of the monetary policy transmission mechanism

The transmission mechanism in general and its individual channels have evolved in recent years. Some of these changes are described above. They might continue to evolve further in the medium term.

There are three groups of potential areas of the evolution of the transmission mechanism. In the first place, the long-term trends observed in the Russian economy in recent decades can continue to evolve further. One of the most evident of them has been the dedollarisation of the national financial sector (foreign currency instruments in retail deposits being part of money supply accounted for 10% as of early 2023 compared to 26% as of early 2010, and the proportion of banks' foreign currency claims on organisations dropped from 23% to 11% over the same period) strengthening the efficiency of the interest rate channel of the transmission mechanism. The events of recent years revealing risks associated with the use of foreign currency instruments have only intensified this trend.

Another important trend is the increasing role of domestic sources for financing the national economy (over 2010–2022, Russian companies' external debt in the ruble equivalent doubled, whereas their liabilities on internal loans and bonds increased fivefold). As the accessibility and affordability of external borrowings have worsened, this trend might be expected to continue. The Bank of Russia's monetary policy directly influences the domestic financial sector. Therefore, this trend will promote the efficiency of all the channels (except the foreign exchange channel) of the transmission mechanism.

There is another trend connected with the expansion of the domestic financial market – a rise in retail investment in securities, which boosts the efficiency of both the interest rate channel (competing with the bond market for households' funds, banks adjust deposit rates faster) and the welfare channel. In 2022, the uncertainty of expectations about Russian shares and their negative revaluation entailed a reduction in the percentage of securities in savings. Nonetheless, there are still factors that might inspire individuals to increase their activity in the securities market (advancement of the infrastructure and improvement of financial literacy). Hence, this trend might be expected to restore.

Secondly, the functioning of the transmission mechanism has been distorted by some consequences of the events that occurred in 2020–2023. These are households' elevated propensity to save (decreasing the efficiency of the interest rate channel), extensive use of subsidised lending programmes (impairing the efficiency of the interest rate channel and, to a lesser extent, the balance sheet channel), and higher volatility of stock market prices (limiting the efficiency of the welfare channel, as well as the balance sheet and narrow credit channels). In addition, an important area of the government support for the economy has been additional government expenditures and tax easing, which has been expanding the budget deficit. The increase in the inflow of funds into the economy through budget operations has been limiting the demand for loans, thus making the interest rate, balance sheet and credit channels of the transmission mechanism less efficient. All the above processes are temporary and might be expected to end gradually as the Russian economy adjusts to the changed situation. Accordingly, the transmission mechanism channels will then restore their efficiency.

Thirdly, materialisation of geopolitical risks in 2022–2023 required the structural transformation of the Russian economy to promote its adaptation to the changed economic environment. There are several areas of this transformation, such as development of import substitution, implementation of technological sovereignty projects, and expansion of settlements with foreign trade partners in national currencies. The evolution of the said processes will weaken the domestic market's dependence on the situation in external markets and the ruble exchange rate, decreasing the importance of the foreign exchange channel of the transmission mechanism and strengthening the role of all other channels.

The evolution of Russia's economy in general and the transmission mechanism in particular is a significant factor that the Bank of Russia takes into account. The regulator is monitoring the situation in the key segments of the Russian economy, seeking to reveal changes that are critical for the functioning of the transmission mechanism at early stages. Making its monetary policy decisions, the Bank of Russia factors in not only actual and expected inflation movements, but also the progress of the structural transformation of the economy and risks created by internal and external conditions. This will help not only stabilise inflation in the medium term, but also promote long-term growth of the efficiency of the transmission mechanism by deepening the structural transformation and mitigating supply-side inflation risks, as well as by decreasing inflation expectations closer to the target and, accordingly, reducing demand-side inflation risks.

BOX 9. SUBSIDISED LENDING PROGRAMMES

Russia has been implementing subsidised lending programmes for over twenty years. However, they used to be local until the middle of the 2010s, influencing only individual and relatively small market segments. As inflation slowed down and, accordingly, lending to the economy, especially long-term credit, expanded, the potential to implement subsidised lending programmes began to increase. Already at the end of the 2010s, subsidised lending programmes aimed at supporting major economic segments (agriculture and small and medium-sized businesses) started to gain importance in the economy. The economic shocks induced by the coronavirus pandemic in 2020 and the drastic escalation of geopolitical tensions in 2022 were the reasons for implementing large-scale programmes to provide anti-crisis support to the entire economy or large groups of industries (the Payroll Fund 2.0 and Payroll Fund 0 programmes, mechanisms to aid systemically important companies, and subsidised mortgages for new housing). These programmes accounted for a considerable proportion of the credit market's turnover and, accordingly, demand financed from borrowings.[1]

Today, loans issued at subsidised interest rates total over ₽11 trillion, which is 14% more than the value of the loan portfolio and 7% more than GDP. Considering the significant expansion of subsidised lending, the issue of its implications for the national economy in general and for fiscal and monetary policies in particular is becoming increasingly important.

In terms of fiscal policy, subsidised lending is an efficient instrument to boost demand because it promotes a local increase in demand that might surpass budget expenditures many times. Hence, it might be called a subsidy multiplier. However, such subsidising is only appropriate when a lending programme is offered for a limited period and covers only short-term loans. An example of such programmes is the above-mentioned anti-crisis lending in 2020 and 2022 that helped limit the negative consequences of the temporary reduction in demand. Where maturities of subsidised loans become longer, the overall costs for subsidising interest rates on such loans might be comparable with the loan amount. Moreover, the costs for subsidising interest rates on long-term loans issued earlier limit the flexibility of fiscal policy many years after the expansionary effect of such loans has been exhausted, as well as amplify the budget's interest rate risk.

In terms of monetary policy, subsidised lending might have mixed effects as well. On the one hand, banks select borrowers more cautiously during periods of economic instability, while households and companies prefer not to increase their debt burden. Accordingly, the efficiency of the monetary policy transmission mechanism decreases, and a key rate cut might be insufficient to encourage demand, especially in countries where central banks' policy rates are close to zero. Hence, during the pandemic period, many central banks were implementing funding for lending (FFL) programmes aimed at boosting certain credit market segments (including through government guarantees for loans incorporated into many programmes). More than a third of the 27 FFL programmes launched by 14 large central banks were meant to restore the efficiency of monetary policy.[2]

On the other hand, subsidised lending programmes hinder the efficient implementation of monetary policy in the long term. Generally, monetary policy has almost no effect on interest rates

[1] The available financial data sources do not provide consistent and unified data on the amount of issued subsidised loans and debt on them. Hereinafter in the Box, subsidised lending is assessed by combining data from several sources. They do not include statistics on some areas of subsidised lending (mortgages in agriculture, regional subsidised mortgage lending programmes, subsidised government guarantees, subsidised auto loans, etc.). Hence, the actual amount of subsidised lending exceeds the estimates given in the Box.

[2] Funding for Lending Programmes. BIS. 2023.

on subsidised loans. Therefore, an increase in subsidised lending does not only ease monetary conditions in the economy, but also distorts the functioning of the interest rate channel of the transmission mechanism. The higher is the percentage of loans at non-market interest rates in the economy, the more significant should be a key rate change to ensure an adequate effect on credit activity, demand, and inflation.

The impact of subsidised lending on the economy in general is also a matter of dispute. On the one hand, subsidised loans have the so-called substitution effect (when borrowers raise subsidised loans instead of planned market loans, which does not increase the amount of lending and demand in the economy, but only augments the burden on the budget). Moreover, there are significant risks that borrowings might be used not as intended and financial instability might rise due to a growing percentage of financially unstable borrowers.[3] The latter two problems can be addressed by improving the selection of subsidised borrowers, but this will complicate subsidised lending procedures, increase operating expenses, and reduce the accessibility and affordability of loans for reliable borrowers.

On the other hand, subsidies ensuring lower interest rates are paid from the budget (i.e., from taxes paid by the entire economy), being a mechanism of funds redistribution among various groups of economic agents. Besides, in order to weaken the proinflationary effect of such programmes, the central bank has to pursue tighter monetary policy, and a reduction in the rate for some groups of borrowers is accompanied by its increase for all others. Ultimately, subsidised loans are repaid by both tax payers (through budgetary subsidies) and borrowers who raised loans on market terms (because of the need to maintain higher market rates).

These subsidised lending programmes are not the only form of concessional lending. The practice of direct lending on non-market terms by government development institutes, the NWF, or other government organisations has also become more widespread. In some cases, such financing of socially important but low-margin projects is the only way to implement them. However, a more extensive use of this scheme might involve even greater risks than an excessive expansion of programmes for subsidising credit rates. Non-market lending from government creditors also augments the burden on the budget (through a decrease in returns on investment), but, on top of that, transfers credit risks to government creditors, whereas, under subsidised lending programmes, these risks are incurred by subsidised borrowers. Subsidised loans issued within this scheme also expand money supply, distorting the implementation of monetary policy. However, as these loans are issued on individual terms, this form of subsidised lending is less transparent, which makes it difficult to assess its effect on money circulation and inflation. In particular, there are no unified statistics on such lending and the charts in the Box do not reflect it (that is, the actual role of subsidised lending in the Russian economy is greater than it comes from the data given in the charts). Along with loans at subsidised interest rates, Russia also uses the practice of government guarantees not requiring regular expenditures on subsidising interest rates, but fully transferring credit risk to the budget.

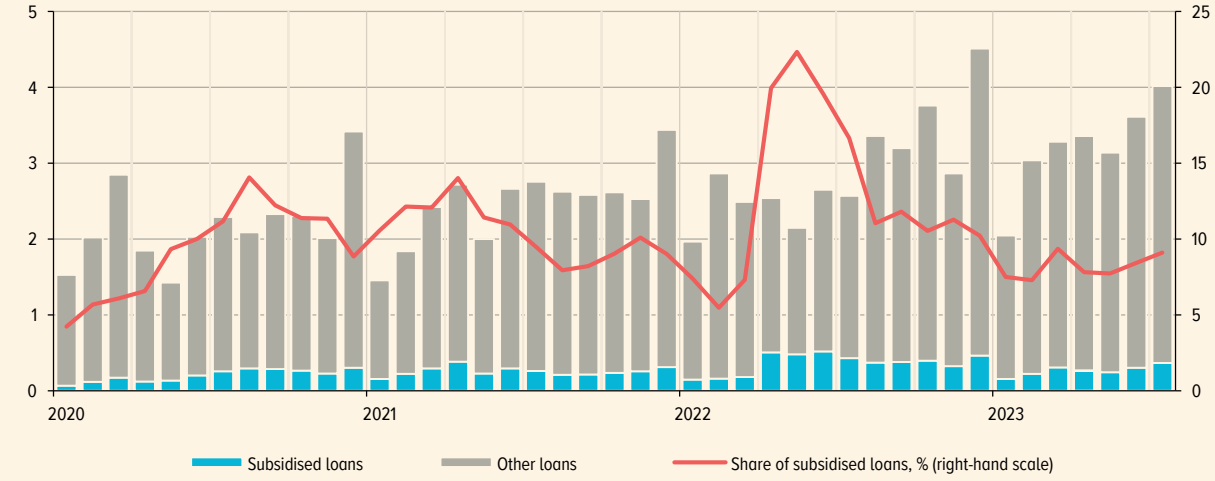
Where any form of concessional lending is used as a temporary anti-crisis measure helping support the affordability of lending amid an extreme tightening of lending conditions, the above disadvantages are less important. A decrease in the demand for and supply of loans reduces room for the effect of substitution. Anti-crisis subsidised lending has a temporary effect on the budget system and monetary policy, which is not that significant considering drastic changes in economic policy happening during any crisis.

However, when subsidised lending is used on a permanent basis and becomes more widespread, the above disadvantages materialise themselves in full. Subsidised lending programmes become

[3] A Review of Bank Lending for Agricultural Credit and Rural Finance (1948–1992). The World Bank. 1993.

AMOUNT OF ISSUED CORPORATE LOANS*
(trillions of rubles)

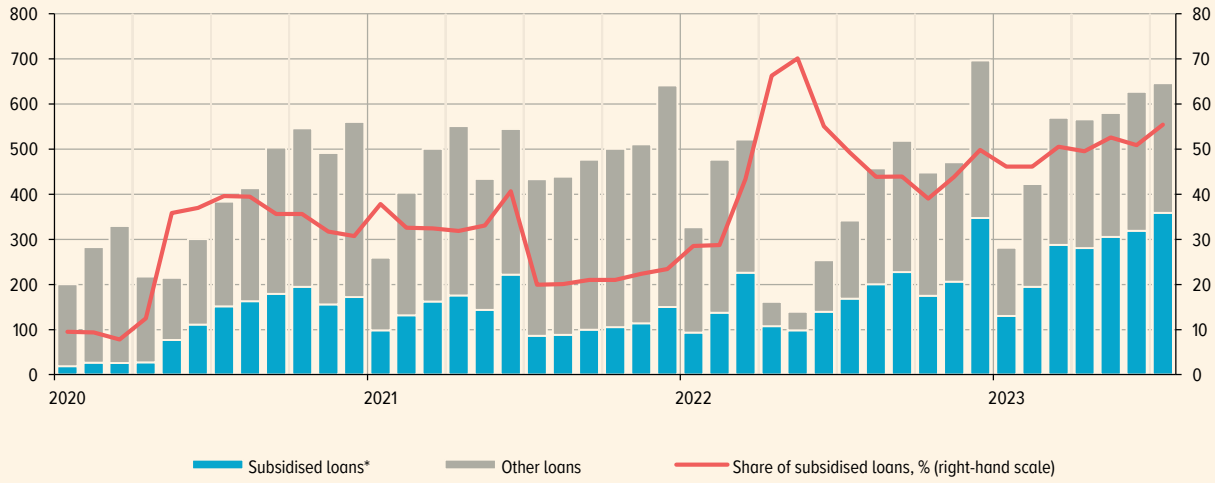
Chart B-9-1



** Ruble loans for over three months issued to Russian non-financial borrowers.*
Source: Bank of Russia calculations.

AMOUNT OF ISSUED MORTGAGE LOANS
(billions of rubles)

Chart B-9-2

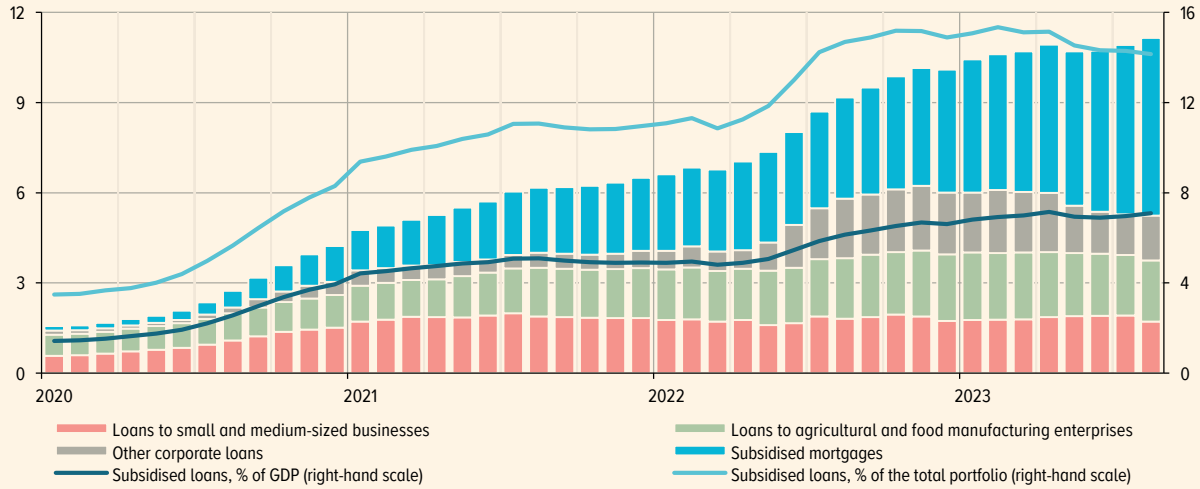


** Excluding agricultural mortgages and regional subsidised mortgage programmes.*
Sources: JSC DOM.RF, Bank of Russia calculations.

less efficient due to a growing effect of substitution, the potential for market lending to the economy compatible with price stability decreases, and the burden on the budget augments.

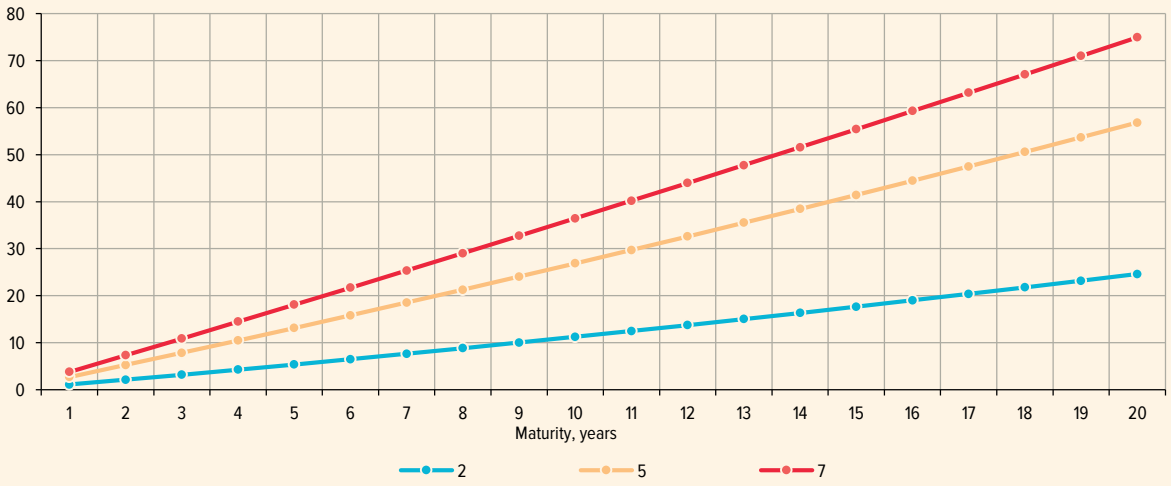
These are the reasons why the Bank of Russia does not consider such programmes as an efficient mechanism for providing long-term aid to the national economy in general. Investment resources become more affordable when inflation is predictably low and, accordingly, investors' inflation risks go down, enabling borrowers to raise loans on market terms without accumulating imbalances in the economy. Nevertheless, subsidised lending programmes can be efficient to support small groups of socially important (regional or sectoral) borrowers or to temporarily promote the recovery of demand during economic downturns.

STRUCTURE OF THE SUBSIDISED LOAN PORTFOLIO* *Chart B-9-3*
(trillions of rubles)



** Corporate loans are loans to resident non-financial organisations and individual entrepreneurs. Subsidised mortgages excluding agricultural mortgages and regional subsidised programmes.*
Sources: JSC DOM.RF, Bank of Russia calculations.

BUDGET EXPENDITURES ON SUBSIDIES DEPENDING ON SUBSIDISED INTEREST RATES AND LOAN MATURITIES *Chart B-9-4*
(% of the amount of issued loans)



Source: Bank of Russia calculations.

BOX 10. IMPACT OF CAPITAL CONTROLS ON THE MONETARY POLICY TRANSMISSION MECHANISM

In 2022, external conditions for the Russian economy altered dramatically. Due to the sanctions enacted against the Bank of Russia and major Russian banks, it was necessary to introduce capital controls in the Russian economy.

In late February–early March 2022, short-term sales in the stock market and sales of securities held by non-residents were temporarily banned. Until now, residents:

- are not allowed to make deals and conduct financial transactions with foreigners sanctioned by the Russian Federation, credit foreign currency and transfer funds abroad if these transactions are related to the transfer of Russian legal entities' profits by residents or redistribution of profits earned by Russian limited liability companies, business partnerships and producer cooperatives;
- are not allowed, without a relevant permit, to issue loans and microloans to non-residents from unfriendly states and foreign currency microloans – to non-residents from friendly states; to make deals and conduct transactions with securities and real estate with non-residents from unfriendly states, conduct transactions to pay for a stake, contribution or share in a non-resident legal entity's assets, to pay a contribution to a non-resident under a joint venture agreement, to make deals and conduct transactions with stakes in limited liability and joint-stock companies' authorised capital, with shares (stakes) of Russian credit institutions, insurers, non-governmental pension funds, microfinance companies, or management companies of joint-stock investment funds, unit investment funds or non-governmental pension funds;
- shall comply with the limits on foreign currency transfers abroad, the amount of foreign cash allowed to be taken out abroad, foreign cash withdrawals from deposits, and foreign cash sales by banks;
- are subject to the restrictions on the fulfilment of the liabilities on loans, microloans, financial instruments, rent and lease payments to non-residents from unfriendly states, payments of profits of limited liability companies, business partnerships and producer cooperatives, as well as payments due to a decrease in resident legal entities' authorised capital or resident legal entities' liquidation, within bankruptcy procedures and for the fulfilment of liabilities arising from independent guarantees (counter-guarantees) or sureties; and
- shall pay a mandatory fee for foreign currency purchases, and comply with other requirements.

Legal entities – non-residents from unfriendly states are currently not allowed to make money transfers abroad.

As uncertainty decreases and financial stability risks weaken, some of the above restrictions were eased or cancelled, first of all the restrictions on foreign currency transactions for residents. Thus, as the situation normalised, the limits set for banks on the sale of foreign currencies (other than US dollars and euros) to individuals were lifted, the brokers' fee for foreign currency purchases was cancelled, and the limits on foreign currency transfers abroad were raised to $1 million. In addition to the cancellation of the restrictions for residents, the restrictions for non-residents from friendly states were eased as well. Specifically, non-residents from friendly countries were admitted to trading in the stock and forward markets. However, at the current stage, a considerable number of the capital controls in relation to non-residents from unfriendly states are still in place.

The foreign sanctions and the response measures, together, have significantly reduced the dependence of the Russian financial system on the external environment. This in turn has

changed the view of how to respond to shocks of various nature through monetary policy measures and how these decisions affect the economy. In other words, the monetary policy transmission mechanism has altered.

The main change is associated with the functioning of the foreign exchange channel as its role has been decreasing notably. If the economy has no capital controls in place, the exchange rate of the national currency depends on trade and financial flows recognised in two accounts of the balance of payments – the current account and the financial account. Active participation of national and foreign financial institutions in trading in the foreign exchange market helps smooth out exchange rate fluctuations, including seasonal ones. Additional mechanisms, such as the fiscal rule, smooth out the exchange rate fluctuations associated with global prices for commodities (e.g., oil, copper, etc.).

When the economy has effective capital controls, the amount of the financial account depends, to a lesser extent, on autonomous factors of residents' demand for external assets and non-residents' demand for internal assets and, to a greater extent, on the flows on the current account. In particular, this implies that the exchange rate of the ruble largely depends on the ratio of importers' demand for foreign currency and exporters' supply of foreign currency.[1] Nevertheless, the effect of the financial account remains to a certain extent. Although residents' capital flows are limited, the financial account items still represent residents' transactions associated with servicing of their foreign trade transactions. These changes in turn are translated into the ruble exchange rate. Nonetheless, in the conditions of the effective capital controls, the impact of monetary policy on the exchange rate is becoming more extended over time and indirect. Previously, a decision on the key rate translated into prices for financial instruments and, further, into the exchange rate directly, whereas now it influences first the demand for imported goods through the interest rate channel and only then – the ruble exchange rate.

Using the terms of model responses of monetary policy to shocks of various nature, the changes in the monetary policy transmission mechanism can be described as follows.

Demand shock. On the one hand, the domestic demand shock increases the demand for imports and, consequently, somewhat weakens the exchange rate. On the other hand, it accelerates inflation, which requires monetary policy tightening. An increase in the key rate does not result in an instantaneous strengthening of the real exchange rate, as it was in the conditions of the open financial market, due to the disruption of the connection with financial instruments – the exchange rate stays close to the level formed by imports for a while longer. Consequently, this might require a slightly more notable increase in the key rate, as compared to a similar situation in the past, whereas accumulated inflation might still remain higher.

Oil price shock. In the new conditions, the exchange rate has become dependent on not only trade flows, but also oil prices. As a result, the oil price shock causes a more significant strengthening of the ruble and a disinflationary effect during the first 18 months of the shock, after which the effect of revenues starts to prevail. A positive response of output is shifted to future periods due to a more considerable switch to imports during the first year of the shock. As opposed to the regime of open financial markets, the key rate in the economy with capital controls in place is cut in response to lower inflation.

External demand shock. Higher external demand pushes up exports. However, commodities make a large share in Russian exports, while the markets of production factors demonstrate a weak response to higher output in the export segment. As a result, the medium-term response of inflation is much weaker, and the disinflationary effect of a stronger real exchange rate prevails

[1] For details about the implementation of these changes in the Bank of Russia's model-based approaches, see the Box 'Adaptation of the Quarterly Projection Model to the capital flow control framework'. Monetary Policy Report No. 2 (38). May 2022 (http://www.cbr.ru/Collection/Collection/File/40976/2022_02_ddcp_e.pdf).

during the first year of the shock. As opposed to past periods, the regime with capital controls in place generally needs a much weaker response of monetary policy to the external demand shock.

External monetary policy shock. As the interconnection with foreign financial markets and financial instruments has been disturbed in the new conditions and the exchange rate of the national currency predominantly depends on trade flows, the response of domestic variables to the external monetary policy shock is limited to the response of exports to lower external demand and, therefore, there might be no need in any monetary policy response. Previously, the external monetary policy shock entailed a considerable depreciation of the national currency and a subsequent pass-through of a weaker exchange rate to prices, which required a key rate increase.

IBL rate shock. Changes in the functioning of the foreign exchange channel significantly weaken the response of the exchange rate to both the initial increase in the key rate and its subsequent reduction. In contrast to the period before the enactment of the capital controls, now if the key rate is cut, the exchange rate does not weaken and, accordingly, there is no pass-through to prices. As a result, inflation stays at a lower level for a longer period owing to a stronger exchange rate of the national currency. Consequently, this might require a more substantial easing of monetary policy in the future in order to return the economy to an equilibrium. As monetary policy in this case actually offsets in part the foreign exchange channel, the rate dynamics might become more volatile.

BOX 11. TRANSFER CURVE AND FORMATION OF INTEREST RATES ON BANK OPERATIONS

The transfer curve is a set of internal transfer interest rates on transactions with various maturities that are established by a commercial bank and are the same for all its business units. The transfer curve is the core of the intrabank system of banking products pricing that enables banks to determine a coherent range of prices for operations in various market segments and, when needed, to flexibly adjust the structure of their balance sheets by choosing between various sources of funding and investment. In order to determine conditions for any transaction (whether a lending, deposit or stock transaction) with a particular maturity, a bank needs to set the transfer rate for this maturity and assess costs and risks associated with a specific transaction. Furthermore, the use of the transfer pricing system as part of the liquidity and interest rate risk management mechanism enables banks to generate additional income from maturity management – raise funds for shorter terms and invest them in assets for longer terms. At the macro-level, large banks' transfer curves are an integral part of the interest rate and credit channels of the monetary policy transmission mechanism (see Appendix 1 'Monetary policy transmission mechanism in Russia').

Each bank builds its individual transfer curve based on the yield curves of market instruments with minimum risk or, where necessary, relying on its internal assessments. The basic curve, which is usually referred to as risk-free in banks' internal documents, relies on yields on such instruments as OFZ bonds and interest rate swaps. In addition, the use of the transfer curve is reasonable mostly for large banks that conduct simultaneous transactions in multiple market segments. They need to ensure the integrity and consistency of their interest rate policies, on the one hand, and align the interests of their business units, on the other hand. Small specialised banks, e.g., those operating only in the deposit and credit markets, may simply establish two sets of interest rates – on asset- and liability-related transactions, without using transfer rates. However, large banks using the transfer curve in their pricing help strengthen the interconnection between the financial market segments since the impact of significant events is simultaneously transmitted to all these segments. One of such events is a key rate change that is translated into all other interest rates in the economy through the transfer pricing mechanism.

Transfer rates are only a starting point in bank products pricing. For each type of asset-related transactions, the rate should not be less than the transfer rate for the corresponding term plus costs and risk premiums (both general and typical of a particular transaction type), the fee for using the bank's capital, and interest margin of the relevant business unit. Contrastingly, the rate on any type of liability-related transactions should not exceed the transfer rate less costs, the fee for the liquidity buffer (including the fee for compliance with the liquidity ratio), and interest margin of the responsible unit. As a result, regardless of the asset and liability structure, the spread between interest rates on asset- and liability-related transactions in normal business conditions enables a bank to cover all necessary costs and risks and generate profit for each business unit of the bank.

Factoring in the costs and risk premiums for various transactions might have a significant effect on banking products pricing, distorting the response of deposit, loan and corporate bond rates to changes in the level and slope of the risk-free curve. The key costs and risks comprise operational costs, credit risks for individual segments and borrowers, and expenses for payments to the deposit insurance system and contributions to the required reserves (for details on costs and risks, refer to Appendix 7 to MPG 2018–2020).

Thus, banks' cautious selection of borrowers in 2016–2017, which restricted access to the market for the highest-risk clients, coupled with the recovery of the Russian economy, brought down credit risk premiums embedded in credit rates and, accordingly, helped (along with the expectations of a further key rate decrease) accelerate the reduction in medium-term interest rates in the credit market as compared to the key rate and money market rates.

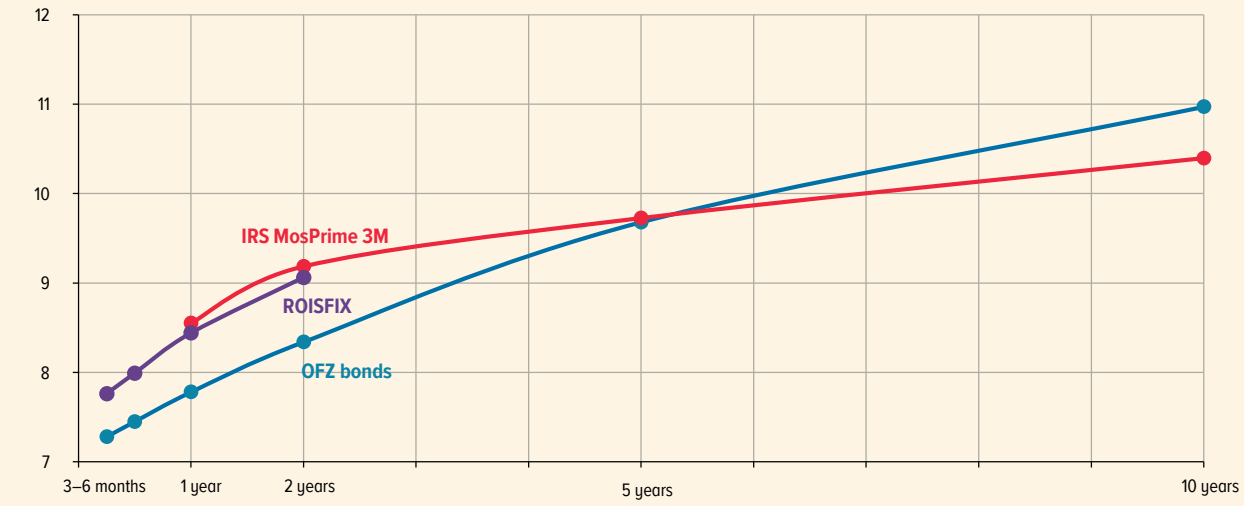
Moreover, under certain conditions, movements of transfer rates and interest rates for ultimate borrowers might diverge. For instance, in 2014, an important factor influencing interest rate dynamics in long-term retail lending was changes in the market structure, namely the substitution of long-term consumer and car loans for lower-risk mortgage loans. As a result, a decrease in the risk premium caused a reduction in long-term interest rates in retail lending despite the rise in the key rate and IBL rates over the year. The opposite situation is also possible: a slight decline in the transfer rate following the risk-free rate might cause an increase in credit rates due to a more significant rise in the cost of risk.

The ultimate interest rate for a client might be also affected by the value of options embedded in a banking product, that is, the client's right to unilaterally change the main terms of the contract (e.g., the maturity of the transaction, its interest rate or currency). Besides, the ultimate interest rate for a borrower on certain loan types might turn out to be lower as a result of the implementation of government subsidised lending programmes. In this case, the difference between the subsidised and market rates is compensated to the bank as a subsidy from the budget.

Financial market parameters may exert additional influence on interest rates for the real sector of the economy. Such parameters include the extent of market segmentation, the level of competition for depositors' funds or for higher-quality borrowers, as well as the specifics of business models employed by individual market participants and of the financial sector regulation in general.

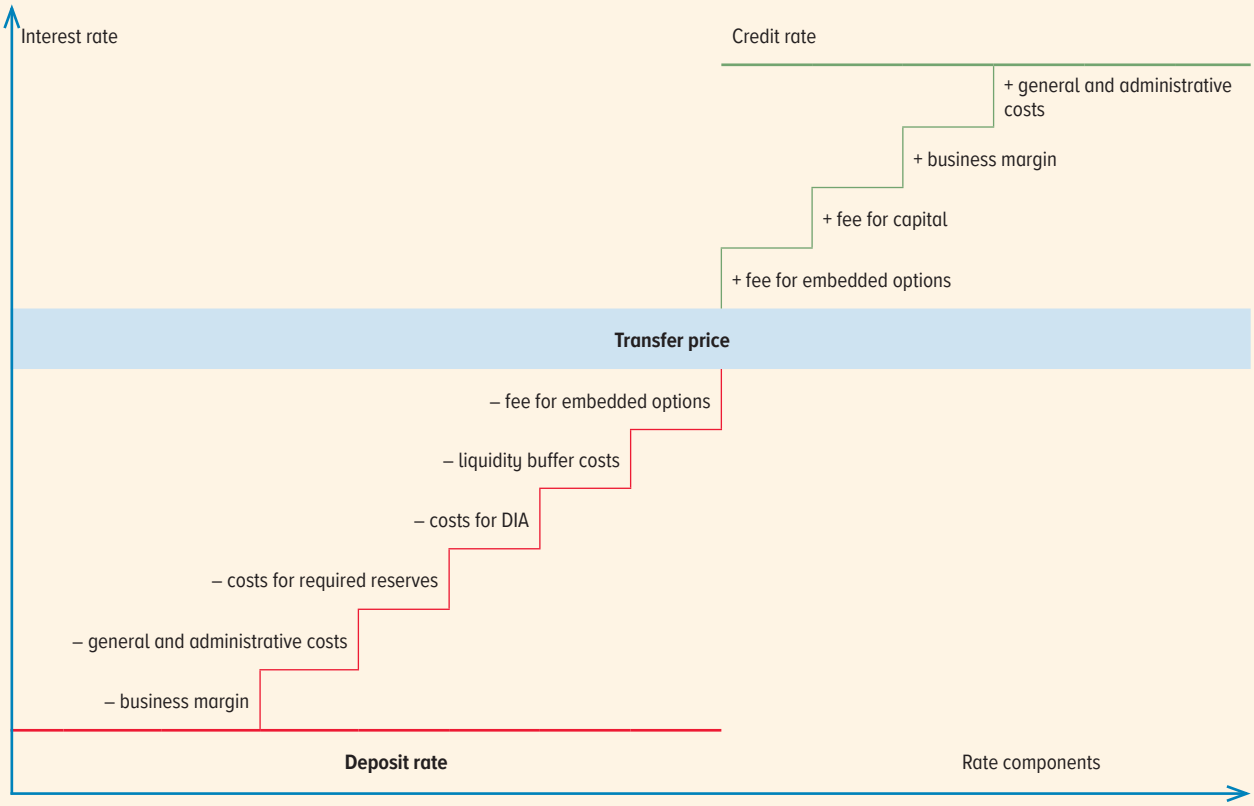
Significant transformations in the functioning of financial markets might cause modifications in the calculation of the transfer curve. Thus, changes in the structure of financial markets that occurred in 2022–2023 have considerably affected the pricing of foreign currency-denominated banking products. The restriction on access to foreign markets for Russian entities has complicated the assessment of the risk premium in foreign currency made in the Russian Federation: previously, it was assessed based on long-term FX swaps (this market has become much less liquid) or CDS (this market has almost stopped functioning). In the new conditions, banks have started to modify their approaches to transfer pricing of foreign currency products considering the specifics of management of open foreign currency positions in a situation where some banks have limited access to trading in unfriendly states' currencies. In turn, as the demand for banking products in friendly countries' currencies has increased, it has become necessary to form transfer curves separately for each of such currencies.

BASIC CURVES IN RUBLES AS OF 16 JUNE 2023 *Chart B-11-1*
(%)



Sources: Cbonds, Moscow Exchange, NFA.

FORMATION OF INTEREST RATES ON DEPOSIT AND CREDIT PRODUCTS FOR BANKS' CLIENTS USING THE TRANSFER PRICING MECHANISM *Chart B-11-2*



Source: Bank of Russia.

APPENDIX 2. INFLATION INDICATORS USED BY THE BANK OF RUSSIA

The Bank of Russia pursues its monetary policy to maintain price stability, that is, steadily low inflation.

Rosstat's Consumer Price Index (CPI) is used as the main measure of price dynamics. This measure is calculated monthly based on prices for over 550 products and services, easy to understand, and widely used by economic agents. The objective of the Bank of Russia's monetary policy is to maintain the annual growth rate of the CPI close to 4%. The annual growth rate of the CPI is a convenient measure to analyse long-term price dynamics.

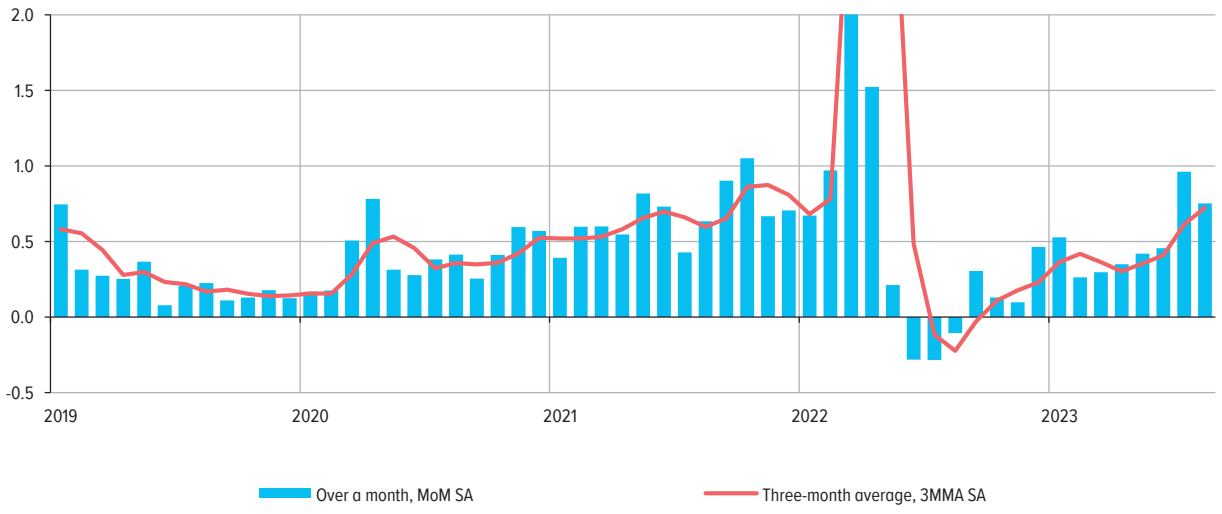
Measures of current price dynamics

The monthly growth rate of the CPI is used to analyse current price movements. It can be used to analyse changes in the CPI over the year, but is very sensitive to seasonal price fluctuations. Seasonal movements have a notable impact on prices, but are the same year-on-year and do not accelerate price growth in annualised terms. The analysis is based on seasonally adjusted prices to ensure that the monthly growth rate of the CPI reflects price growth acceleration / deceleration excluding seasonal fluctuations.

However, even the seasonally adjusted monthly growth rate of the CPI is a rather volatile measure. Prices for certain goods monitored by Rosstat may notably fluctuate due to short-term shocks that often abate within several months. The attenuation of short-term fluctuations is evident from the comparison of the seasonally adjusted CPI with the average growth rate of the CPI over the past three months that is used to smooth out sharp price fluctuations.

SEASONALLY ADJUSTED CPI
(%)

Chart A-2-1



Sources: Rosstat, Bank of Russia calculations.

Trend inflation measures

Trend inflation is the part of overall price dynamics that is typical of the majority of product groups. Accordingly, it is most relevant for understanding medium-term inflation trends.

Normally, short-term price fluctuations do not require any intervention from the Bank of Russia. This is because key rate decisions influence economic agents' propensity to save impacting the economy during a longer period (over one year). Therefore, the implementation of monetary policy should rely on the inflation forecast. To address this objective, the trend component of inflation is isolated from the so-called distortions.

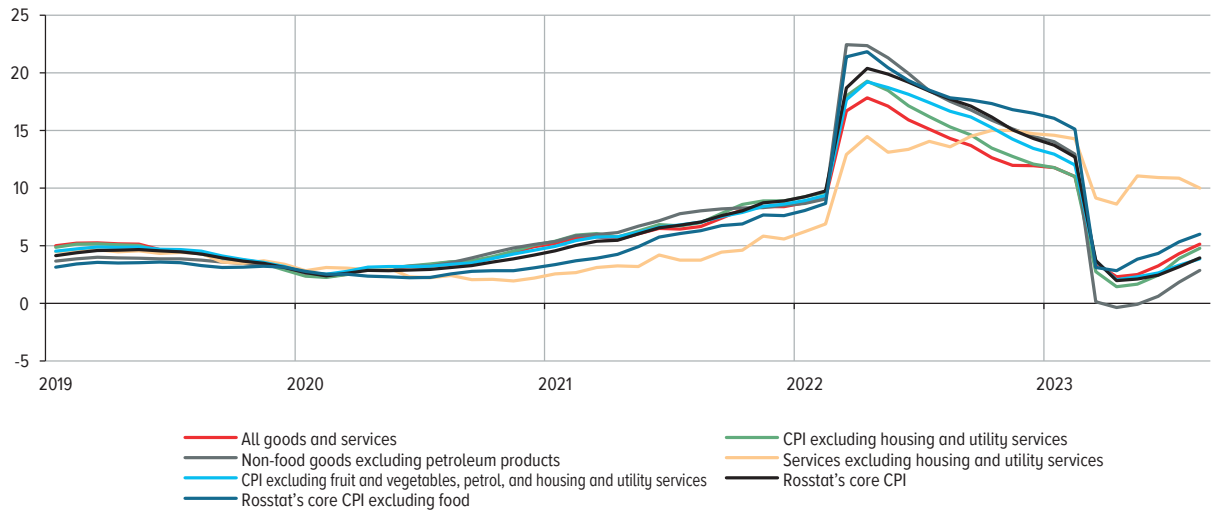
Basically, distortions imply one-off and irregular inflation fluctuations frequently resulting from changes in relative prices for specific goods and services. They cause significant deviations in the paths of prices for certain goods and outliers in the distributions of price increases. Such price fluctuations are triggered by short-term factors that quickly diminish. If they affected medium-term trends, this could worsen the quality of the forecast.

It is not always possible to differentiate between various factors in terms of their nature and persistence and, consequently, to isolate the trend component of inflation from distortions. Therefore, inflation targeting central banks rely on a complex of trend inflation measures and apply multiple approaches to assessing them. These approaches are usually divided into statistical and model-based ones. Statistical approaches rely on a certain calculation algorithm removing all distorting components from the data. Contrastingly, model-based approaches use an estimate of an equilibrium path of inflation within a certain model.

Overall, none of the trend inflation measures can be considered the best one in any situation. In practice, each of them has its pros and cons. Accordingly, it is necessary to monitor a wide range of these measures.

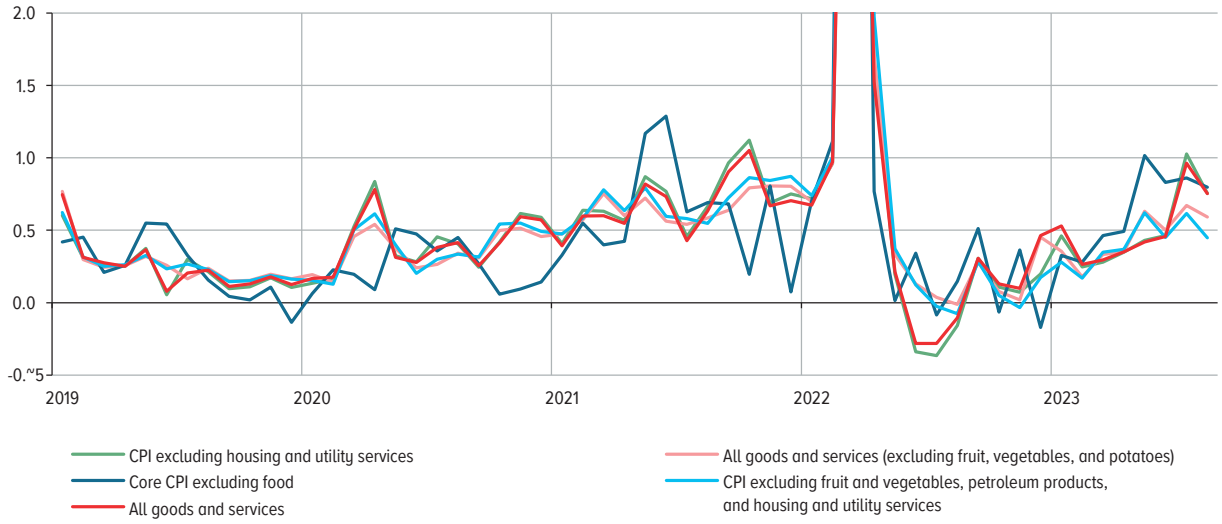
The Bank of Russia uses a large number of trend inflation measures in the analysis. This section gives examples of such measures, but the list is not exhaustive.

ANNUAL GROWTH OF INFLATION SUBINDICES EXCLUDING A FIXED SET OF COMPONENTS *Chart A-2-2*
(%)



Sources: Rosstat, Bank of Russia calculations.

SEASONALLY ADJUSTED MONTHLY GROWTH OF INFLATION SUBINDICES EXCLUDING A FIXED SET OF COMPONENTS *Chart A-2-3*
(%)



Sources: Rosstat, Bank of Russia calculations.

Statistical subindices excluding a fixed set of components. To calculate the CPI, this approach excludes specific components conforming to certain criteria from the consumer basket. Normally, the analysis leaves out the CPI subindices that demonstrated significant historical volatility (e.g., prices for fuels, fruit and vegetables) and pronounced seasonality (e.g., prices for fruit and vegetables) or are administered (e.g., prices for alcoholic drinks and housing and utility services). The weights of the remaining CPI components in the basket are adjusted so that they account for 100% of the new basket, while the calculated weighted average of the indices of the components is a modified measure of core inflation calculated using the method of exclusion.

Particular examples of this approach are as follows:

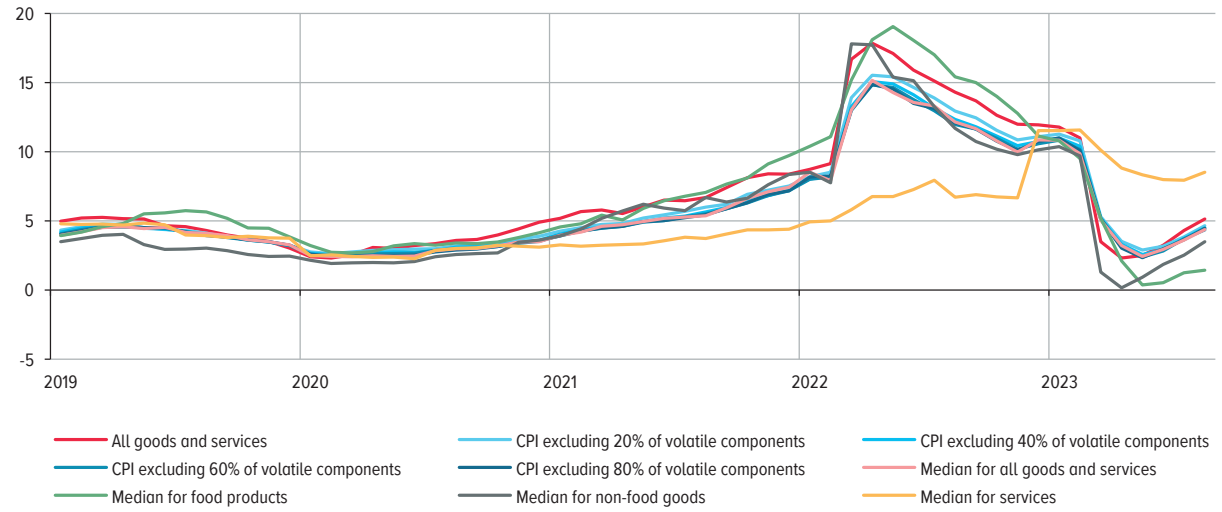
1. Rosstat's core CPI.
2. CPI excluding housing and utility services.
3. CPI excluding fruit and vegetables, petroleum products, and housing and utility services.
4. Core CPI excluding food.
5. Non-food goods excluding petroleum products.
6. Services excluding housing and utility services.

In 2022 H2–2023 H1, trend inflation was much less volatile than the CPI. Fruit and vegetable prices were the main source of price fluctuations during the said period. Nevertheless, trend inflation was gradually accelerating over this period.

Statistical subindices excluding a variable set of components

This group comprises multiple options of one-time exclusion of specific components from the overall measure of price dynamics based on a certain criterion (the recalculation is made monthly). The advantage of this approach is that these methods may eliminate large one-off changes in prices for goods and services that are normally not volatile. These measures can also give an idea of how wide the range of product and service categories causing inflation fluctuations is. The peculiarity of this approach is that the composition of

ANNUAL GROWTH OF INFLATION SUBINDICES EXCLUDING A VARIABLE SET OF COMPONENTS *Chart A-2-4*
(%)



Sources: Rosstat, Bank of Russia calculations.

the basket for calculating the measures changes every month. Particular examples of this approach are as follows:

1. The median of the overall distribution of price increases.

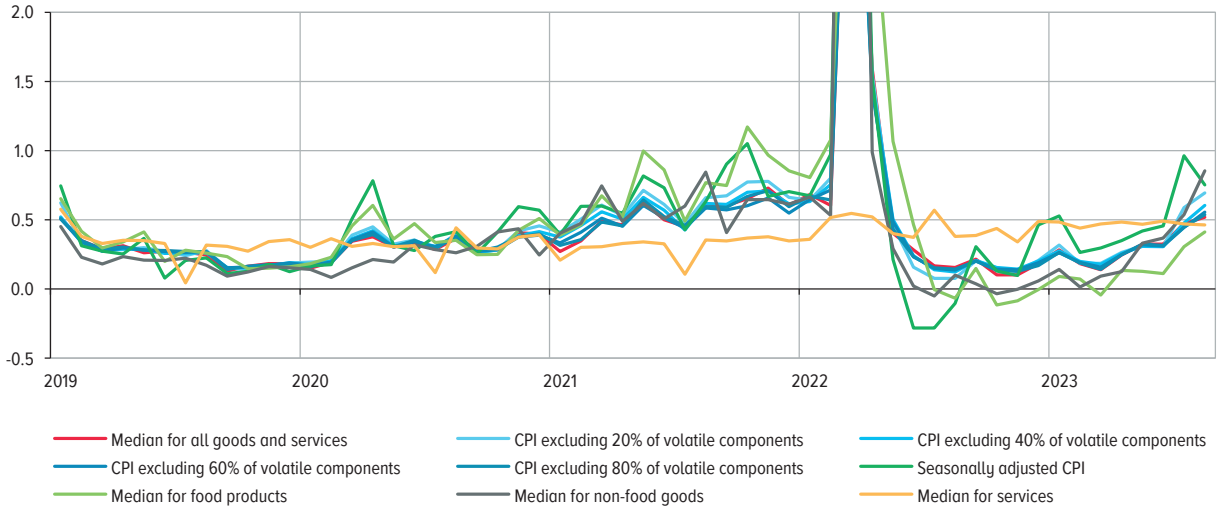
2. The medians of increases in prices for components strongly and weakly dependent on exchange rate dynamics.

3. The measure truncating the distribution tails: 20%, 40%, 60%, and 80%. The truncation based on the optimality criterion, that is, the parameters ensuring that the truncated measure is the closest to the average price growth rate based on historical data.

4. The measure excluding the most volatile (10%, 20%, 30%, and 40%) inflation subindices over the past three or 24 months.

5. The CPI with changed weights: the weight of each subindex is adjusted in inverse proportion to the variance of price increases over the past 12 months.

SEASONALLY ADJUSTED MONTHLY GROWTH OF SUBINDICES EXCLUDING A VARIABLE SET OF COMPONENTS *Chart A-2-5*
(%)



Sources: Rosstat, Bank of Russia calculations.

In 2022–2023 H1, volatile components had a notable effect on price growth rates. Thus, prices for household appliances were highly volatile in 2022. In particular, prices for them rose in March–April 2022 and then adjusted downwards during the summer months. In late 2022–2023 H1, prices for volatile components, such as tourism services, were again growing faster than the CPI. When adjusted for volatile or extreme observations, the dynamics show that the increase in prices for most goods and services was steadily moderate. However, this growth rate was gradually rising over the past 12 months.

Model-based measures of trend inflation

For the purpose of assessment of model indicators, trend inflation means the price growth rate observed in the economy when there are no supply or demand shocks, one-off changes in relative prices, and any other shocks, that is, when the economy stays in an equilibrium. To isolate the contribution of shocks, econometric models are built to assess how the factors causing the economy's deviation from an equilibrium affect inflation. An equilibrium in the economy is unobservable. Accordingly, trend inflation, defined as above, is also an unobservable variable. To assess it, the analysis relies on:

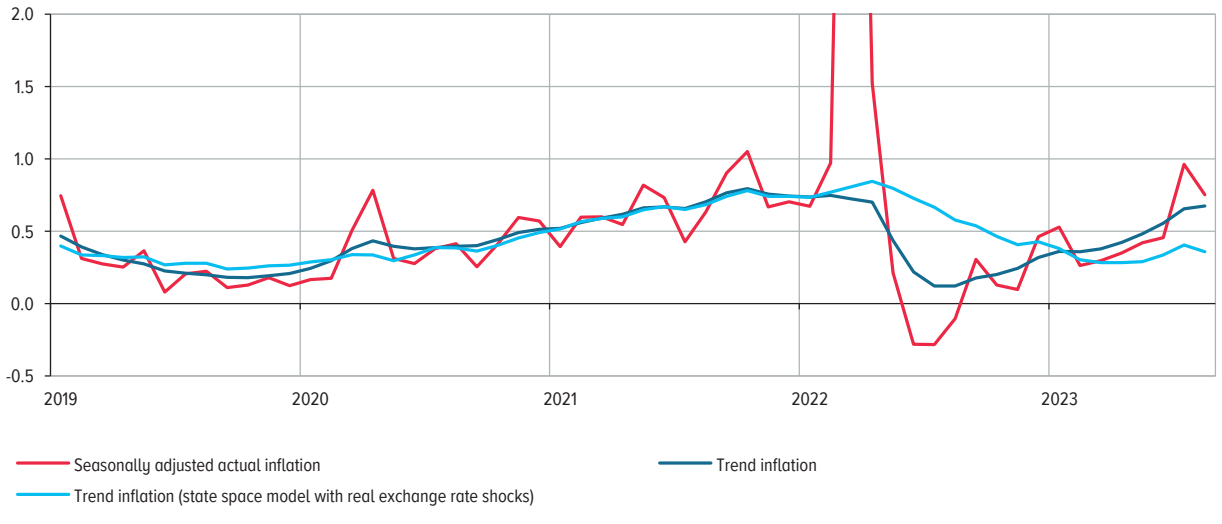
1. Models measuring underlying inflation, e.g., a dynamic factor model taking into account 46 subindices of the CPI.

2. Models of unobservable components adjusted for various shocks, including shocks of the real foreign exchange rate.

Models of trend inflation regard the spike in prices in March–April 2022 with its subsequent slowdown as temporary deviations from the trend. Besides, beginning from mid-2022, the model-based rate of trend inflation has been decreasing steadily.

Using a large number of various measures, the Bank of Russian is able to carry out a comprehensive analysis. Thus, statistical measures of trend inflation helping analyse each particular data point generally indicate a gradual acceleration of the growth of prices for most goods and services in 2023. Contrastingly, model-based measures that are largely aimed at gauging an equilibrium level of inflation show that current price pressure is still weaker than in 2021–early 2022.

MONTHLY GROWTH OF TREND INFLATION MEASURED BASED ON MODELS *Chart A-2-6*
(%)



Sources: Rosstat, Bank of Russia calculations.

APPENDIX 3. QUANTITATIVE ANALYSIS OF REASONS FOR THE INFLATION DEVIATION FROM THE TARGET

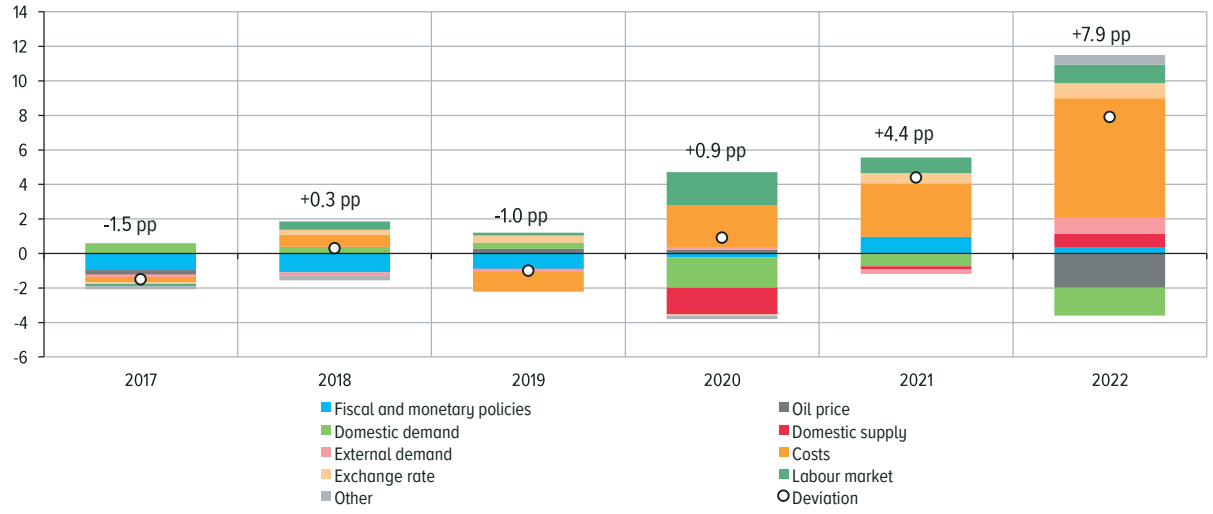
Owing to the updated model-based techniques used for medium-term forecasting,[1] the traditional quantitative analysis of the reasons behind the inflation deviation from the 4% target provides a more detailed and structured retrospective assessment of inflation sources in the Russian economy.

Chart A-3-1 shows the contributions of specific shocks measured on the basis of historical data using the Quarterly Projection Model with the block covering the labour market.

In **2022**, the deviation of inflation from the target of 4% reached its maximum over the entire period of inflation targeting in Russia. The geopolitical events and the subsequent restrictions on foreign trade, investment and technology cooperation, and the resulting structural transformation of the economy were the dominant factors causing the spikes in price dynamics.

The major proinflationary factors were **cost shocks**: +6.9 pp in annualised terms. The surge in producer costs was provoked by the restrictions on imports, difficulties with purchases of raw materials and components, and the announced termination of supplies of a number of foreign goods to the Russian market. A considerable proportion of these costs are related to core inflation that is characterised by higher inertia and, accordingly, implies elevated inflation during the next periods as well. This pushed up inflation expectations and required proportionate monetary policy measures.

DECOMPOSITION OF THE DEVIATION OF ACTUAL INFLATION FROM THE 4% TARGET AS OF THE YEAR-END (pp) *Chart A-3-1*



Note. Certain differences in the description of shocks, compared to MPG 2023–2025, are associated with the transition to the new version of the model. The decomposition of the deviation in 2017–2021 is presented in this Chart according to the new version of the model as well.
Source: Bank of Russia calculations.

[1] For details, refer to the Annex to Monetary Policy Report No. 3 (43). July 2023 (http://cbr.ru/Collection/Collection/File/45192/2023_03_ddcp_e.pdf).

Shocks from the weakening of the **exchange rate** at the beginning of the year were followed by shocks from its strengthening in the next quarters resulting from, among other factors, the enactment of the capital controls aimed at maintaining the banking system's financial stability. The contribution of the exchange rate shocks to inflation was significant in annualised terms, namely +0.9 pp.

As estimated, **shocks** related to **labour market** overheating, rising real wages, and record-low unemployment contributed +1.1 pp to the annual deviation of inflation from the target.

Shocks associated with the **supply** adjustment account for +0.8 pp in the deviation of inflation from the target, which reflects the effects of the structural transformation of the economy and its adaptation to the new conditions of trade and financial relationships with the external world.

Shocks of plummeting **domestic demand** in 2022 H1 were followed by positive shocks of its growth. By the end of the year, demand exceeded the level that would have had a neutral effect on inflation. Nonetheless, the effect over the year in general is assessed as disinflationary, specifically -1.6 pp.

External demand shocks predominantly triggered by a reduction in physical trade flows (especially, import quantities) had a proinflationary effect, accounting for +0.9 pp.

Although the spread between oil prices expanded due to the US and UK sanctions and the EU's partial refusal to import Russian crude, real **oil prices** during the year were above their equilibrium level, which formed positive **shocks** decreasing inflation by 2 pp.

Considering the current macroeconomic situation, the measures implemented by the Bank of Russia and the Government of the Russian Federation to support the adaptation of the domestic economy to the changed environment have a weak proinflationary effect, specifically +0.3 pp.

2017–2021

In order to compare the results with the findings of the previous model-based analysis,[2] the decomposition of the inflation deviation from the target is given for the same past period.

Oil price shocks remained almost the same. **External demand shocks**, combined with shocks associated with physical trade flows, had been making a vanishingly small disinflationary contribution until 2020. The trade restrictions enacted due to the coronavirus pandemic in 2020 reversed this trend, following which the contribution of these shocks became weakly proinflationary. In 2021, as the restrictions were lifted and supply chains restored, the contribution of foreign trade to the inflation deviation from the target was again estimated as slightly disinflationary.

Exchange rate shocks also reproduce the dynamics shown in the previous decomposition, but the disinflationary effect of the real excessive strengthening of the exchange rate in 2017 is no longer assessed as considerable as a result of the increased complexity of endogenous factors of the exchange rate in the model and, consequently, the revision of the gap between the real exchange rate based on historical data and its impact on inflation.

The contribution of **domestic demand shocks** to inflation over 2017–2019 decreased, which indicates a greater coherence between demand dynamics and the structure of the model. The contribution of domestic demand shocks during the coronavirus pandemic and in 2021 remained nearly the same.

---

[2] For details, refer to Appendix 4 to MPG 2023–2025.

In the current version of the model, **domestic supply shocks** imply the efficiency of the use of production factors. Supply shocks in the previous decomposition combined the shocks directly affecting potential output dynamics – this is why their contribution during that period was revised. If supply shocks are considered partially with labour market shocks, this aggregated block of shocks will be essentially close to the previous version of the domestic supply shock.

Cost shocks have also changed considerably over time. New blocks added to the model make it possible to provide an enhanced view of inflation movements taking into account a larger number of structural shocks. Specifically, it is obvious that cost shocks in 2017 and 2018 decreased notably. During crises and periods of rising uncertainty, cost shocks remain the major contributor to inflation, and there is a reason for that.

The contributions of **fiscal and monetary policy shocks** were revised downwards. This is consistent with the changes in the contributions of all other shocks and, fundamentally, does not change the understanding of the retrospective assessments given in the previous analysis.

Overall, the understanding of the nature of the processes in the economy has changed only slightly. Nevertheless, the opportunity to carry out a detailed analysis of both demand- and supply-side factors will enable more comprehensive and granular analysis and forecasting of macroeconomic processes in the course of preparation of monetary policy decisions.

APPENDIX 4. ONE-OFF SUPPLY-SIDE INFLATION FACTORS

Inflation, or a change in the overall level of prices in the economy is a complex process resulting from the combined dynamics of aggregate demand and aggregate supply. The main factor of trend inflation is changes in aggregate demand, including those caused by monetary policy decisions. Long-term changes in aggregate supply are smoother and depend on structural factors, the labour force size, the level of staff competencies, and technological developments.

Nevertheless, these long-term supply-side dynamics might be accompanied by changes triggered by one-off factors associated with specific products and services. These factors may vary in terms of their nature (e.g., fluctuations of the harvest year-on-year, disruptions in supply chains, imposition of foreign trade barriers and restrictions, and changes in tax treatment impacting the economy of particular industries) and duration.

Such factors of price movements are often referred to as non-monetary factors of inflation since the price fluctuations resulting from them are associated with supply-side changes, rather than with demand dynamics. The central bank's monetary policy cannot influence the reasons causing such price changes directly. However, this does not mean that, making its monetary policy decisions, the central bank should ignore the part of price changes provoked by such one-off factors. First of all, trend inflation also influenced the dynamics of prices for the goods strongly affected by one-off factors. Secondly, if the effect of a one-off factor persists for a considerable period and/or if one-off factors have a simultaneous and codirectional effect on a significant proportion of the consumer basket, their impact on the overall level of prices might also affect inflation expectations and, through them, entail secondary effects on trend inflation.

In practice, differentiation between the trend component of inflation and price movements caused by one-off factors is not a trivial task as both steady and one-off factors influence prices simultaneously. Nevertheless, analysing the economic situation and trend inflation, the central bank seeks to assess the role of one-off factors in overall price dynamics, as well as the nature and duration of their impact.

One-off factors, including persistent ones, became more important in 2020–2021 due to significant disruptions in production and logistics chains during the pandemic period. In 2022–2023, inflation both in Russia and worldwide was notably influenced by the shocks induced by the sanctions.

Import disruptions provoked by the imposed sanctions, the exit of a number of international brands from the Russian market, and the need to rearrange logistics and payment mechanisms became the strongest one-off proinflationary supply-side factor in spring 2022. Its impact was exacerbated even more by a short-term surge in demand as households were seeking to purchase imported goods of common brands, expecting that their accessibility would be limited. Combined with other factors affecting prices (inflation expectations and a sharp, although a short-term ruble depreciation), soaring demand entailed a spike in prices in March–April 2022.

In subsequent months as the situation with imports normalised gradually, companies accumulated sufficient stocks of imported durables, and soaring demand declined (that, among other things, partially covered in advance the future demand for non-food goods), prices for many items adjusted downwards from the levels reached by the end of April. This was an important temporary factor explaining low price growth rates in 2022 H2–early 2023. Persistent inflationary pressure during that period was stronger than the observed increase in the CPI. However, as the adjustment of import chains to the changed conditions completes (as to consumer imports, this process has mostly ended already), the disinflationary effect of this factor is dwindling. Moreover, the continuing tightening of the sanctions can have an additional one-off proinflationary effect. Its scale will be significantly smaller compared to the price spike in spring 2022, but this effect will be more extended over time.

An important supply-side factor is the **increase in administered tariffs**. When inflation is low, their regular annual rise by the percentage corresponding to the inflation target should be taken into account in the assessments of seasonally adjusted price growth. However, the increase in these tariffs is not an independent one-off supply-side factor in these conditions, as opposed to an additional indexation of utility tariffs, for instance. Thus, last year, the Russian Government decided to reschedule the indexation of utility tariffs from July 2023 to December 2022 and increase the indexation from 4% to 9%, including to factor in higher inflation of 2022 in the utility tariffs. The earlier indexation in December 2022 directly added 0.25 pp to the monthly growth rate of consumer prices (SA), but, as a result, the increase in the utility tariffs was not taken into account in price growth over July 2023 and annual inflation over 2023 in general. In other words, the rescheduling of the indexation of the utility tariffs had a one-off proinflationary effect on the rise in the CPI in 2022 and a one-off disinflationary effect in 2023. This should be considered when assessing trend inflation as of the end of 2023.

Fruit and vegetable prices are normally characterised by significant seasonal changes during a year. Last year's good harvest of both fruit and vegetables and other categories of agricultural products moderated the growth of food prices. However, in January–February 2023, there was an abnormal surge in cucumber and tomato prices because of the very cold winter that temporarily increased greenhouse heating costs. Prices were also affected by disruptions in the import of some vegetables and fruit, including citruses. In 2023 Q2, after the effect of the said one-off factors diminished, prices trended downwards.

As regards the market of **petroleum products**, price growth in 2022 and early 2023 was much slower than the increase in the CPI in general, that is, the overall price level. This difference was associated with the influence of the damper mechanism that had a disinflationary effect. However, as the overall price level in the economy has changed, it is necessary to update the parameters of the damper mechanism in order to reduce the amount of related budget-funded payments. Petrol and diesel prices started to go up faster from May 2023, which is a one-off supply-side proinflationary factor. However, as long as its effect is extended over time and petrol prices might significantly influence inflation expectations in general, it contributes to the overall price dynamics both directly and indirectly. Specifically, it might create secondary effects through higher transportation costs, thus aggravating persistent inflationary pressure. Such impact should be taken into account when making monetary policy decisions.

Besides, prices for **tourism services** have been adjusting to the contraction of supply for an extended period. As a result of the restrictions on flights and the issue of visas, as well as difficulties with using Russian payment instruments abroad, foreign tourism has become less accessible. Consequently, both foreign tourism (due to higher airfares and the ruble weakening) and domestic tourism (because of limited accommodation and transport capacities) have become more expensive. As domestic supply expands, the contribution of this one-off proinflationary factor associated with the shrinking external supply of tourism services will be diminishing, although this will take time.

To reduce the impact of one-off supply-side factors, the Russian Government applies customs regulation measures, as well as regulates pricing for some goods and services in certain cases.

In particular, it will preserve the quota on the export of the main grains (wheat, corn, and barley) and the ban on the export of rice and rice groats. From March to July 2023, the Government applied the ban on the export of rape. The restriction on the export of sugar was extended until the end of 2023. There is also direct regulation of prices for socially important items. Specifically, from 6 May 2023, the authorities of the constituent territories of the Russian Federation are entitled to set maximum allowable retail prices for certain types of socially important basic food products.

Nevertheless, it is worth emphasising that government measures for customs duties regulation, customs restrictions and government regulation of prices (tariffs) can effectively reduce only short-term effects of one-off and temporary supply-side shocks related to specific goods and services. Besides, it is essential to remember that, influencing prices, these measures discourage producers from responding to changes in the demand and supply ratio. Where price movements are caused by steady shifts in demand (consumer preferences or export demand) or a decrease in supply due to foreign companies' exit from the Russian market, excessive or long-lasting intervention in market pricing might only slow down the adjustment of production targets and capabilities to the changed conditions.

The main mechanism to ensure and maintain price stability is monetary policy pursued by the Bank of Russia taking into account all the factors, including one-off supply-side factors, that might affect trend inflation.

APPENDIX 5. HOUSEHOLDS' AND BUSINESSES' PERCEPTION OF INFLATION AND INFLATION EXPECTATIONS

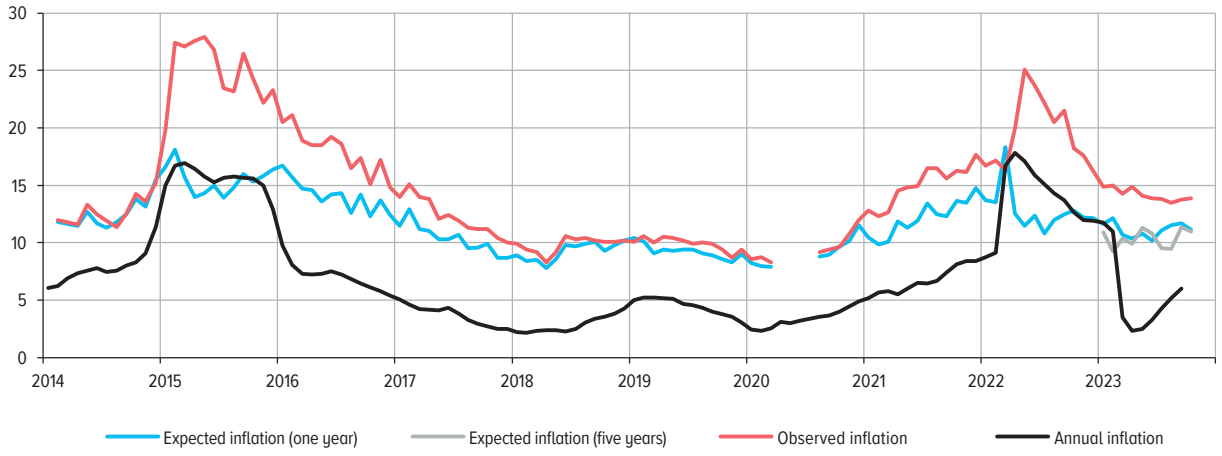
The analysis of economic agents' inflation expectations is critical in the course of implementation of the Bank of Russia's monetary policy. Inflation expectations of businesses, credit institutions and households influence how efficiently monetary policy will be able to control inflation. This is because economic agents make their decisions on consumption, savings and investment, price products, and set credit and deposit rates, being guided by their expectations about future inflation, among other factors.

The effectiveness of the Bank of Russia's monetary policy in turn impacts inflation expectations. Achieving the inflation target and maintaining inflation at a steadily low level help anchor inflation expectations and reduce their volatility and sensitivity to one-off and short-term spikes in prices for some products or services. When inflation expectations are not anchored, their volatility might cause a deviation of inflation from the target in the medium term and, consequently, require a monetary policy response.

Inflation expectations and observed inflation measured using household surveys almost always exceed actual inflation rates both in Russia and abroad. This difference is ascribed to psychological peculiarities of perception: people tend to notice and actively respond to price growth, whereas declining or stable prices usually attract less attention. Accordingly, people estimate inflation guided primarily by the product prices that have increased most significantly. Besides, people generally focus on the items they purchase daily or frequently, e.g., food, petrol, and basic non-food goods.

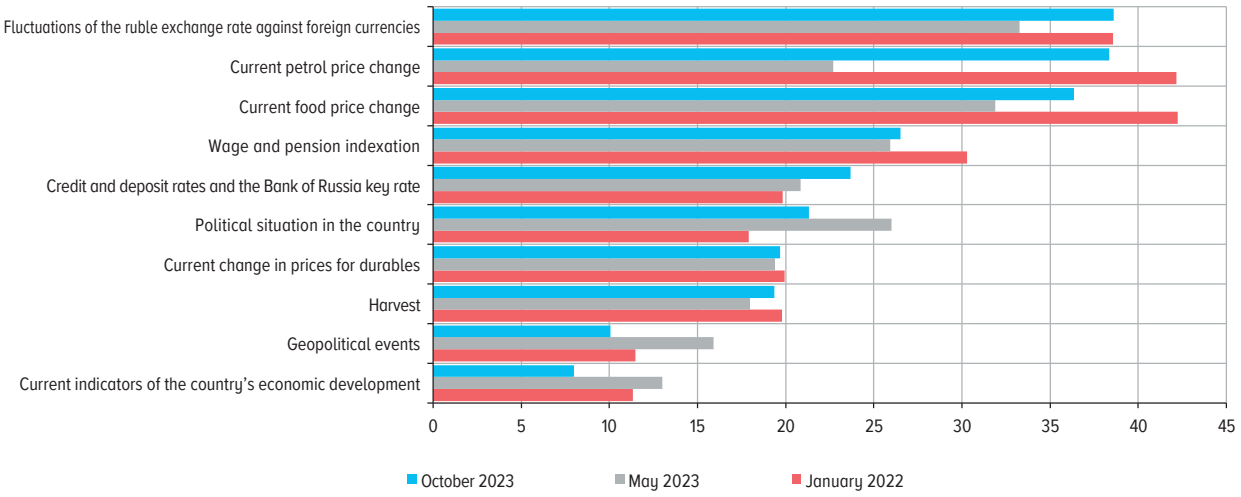
Despite this systematic bias in the absolute values of inflation expectations, their change and relative level compared to the historical range are essential indicators showing possible changes in households' economic behaviour. These changes in turn influence future trend inflation.

INFLATION OBSERVED AND EXPECTED BY HOUSEHOLDS (MEDIAN ESTIMATE) *Chart A-5-1*
(%)



Sources: InFOM, Rosstat, Bank of Russia calculations.

DISTRIBUTION OF RESPONSES TO THE QUESTION 'WHAT DO YOU PERCEIVE AS A SIGN OR A SIGNAL THAT PRICES WILL GROW AND THERE WILL BE INFLATION?'* *Chart A-5-2*
(% of all respondents)



** Multiple choice, top-10 possible responses, %. The option 'the upcoming holidays (the New Year, the Easter, etc.)' was excluded due to the seasonal factor in the responses.*
Sources: InFOM, Bank of Russia calculations.

To analyse households' and businesses' inflation expectations, the Bank of Russia relies on the findings of InFOM's household surveys commissioned by the Bank of Russia and the monitoring of businesses carried out by the Bank of Russia. Additional sources of data on economic agents' inflation expectations include analysts' inflation forecasts and estimates of implied inflation for OFZ-IN bonds.[1]

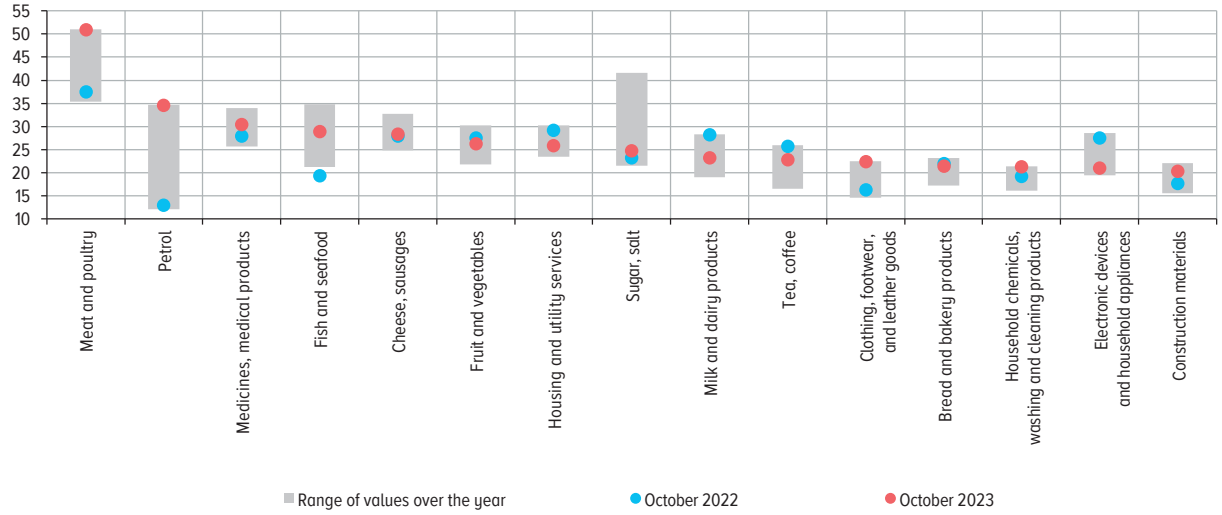
According to InFOM's survey, **households' inflation expectations** stayed elevated in 2022 H2 and January–October 2023, ranging from 10.2% to 12.8%.[2] Persistently elevated inflation expectations among households amid moderate price growth rates during 2022 H2–2023 H1 were largely associated with increased uncertainty about the overall economic situation, the existing sanction pressure, as well as people's views regarding additional budget expenditures and their impact on inflation. InFOM's survey proves that, in 2022–2023 H1, the influence of current price growth, changes in prices for visible goods, the indexations, as well as the exchange rate on households' expectations about future price increases weakened, although remaining the major factor, whereas the geopolitical situation, to the contrary, was assessed as more important. In summer–autumn 2023, the impact of the geopolitical situation on households' inflation expectations decreased, and respondents started focusing more on the ruble exchange rate and prices for visible goods.

Inflation observed by households in July–December 2022 and January–May 2023 was declining for the most part. From June 2023, the estimates of observed inflation stayed nearly the same, ranging from 13.5% to 13.9%. In October 2023, the estimate of observed inflation equalled 13.9%, which is 11.2 pp lower than the peak of May 2022. In July–December 2022 and January–May 2023, respondents' concerns about rising prices for the most frequently purchased goods and services were decreasing. From summer 2023 amid the acceleration of current price growth, more respondents started to complain

[1] Various economic agents' inflation expectations are analysed in the monthly information and analytical commentary Inflation Expectations and Consumer Sentiment (http://www.cbr.ru/eng/analytics/dkp/inflation_expectations/).

[2] For details on changes in households' inflation expectations during 2022, refer to Box 3 of Monetary Policy Report No. 1 (41). February 2023 (http://www.cbr.ru/Collection/Collection/File/43776/2023_01_ddcp_e.pdf).

DISTRIBUTION OF RESPONSES TO THE QUESTION 'WHAT MAIN PRODUCTS AND SERVICES SHOWED VERY HIGH GROWTH RATES OVER THE PAST MONTH?' *Chart A-5-3*
(% of all respondents)

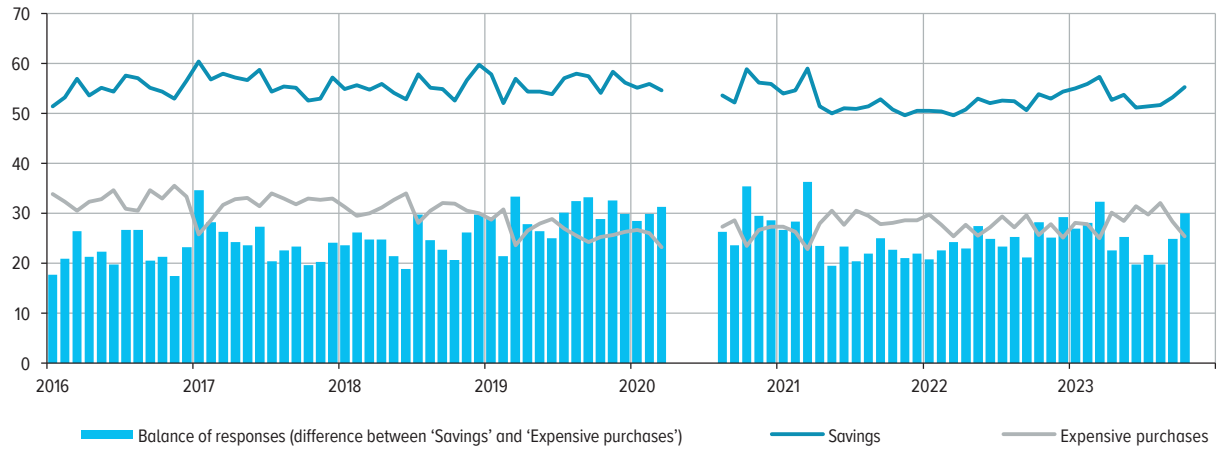


Source: InFOM.

about soaring prices for certain goods. Thus, in September–October 2023, respondents' concerns about rising prices for meat and poultry, as well as petrol reached the highest level over the year.

Another important factor for the implementation of the Bank of Russia's monetary policy is people's propensity to save because it affects consumer demand and, consequently, inflation. Thus, according to InFOM's surveys, respondents' propensity to save was increasing from April 2022 to March 2023. This upward trend was for several reasons. On the one hand, the overall uncertainty about the economic situation persisted during the said period. People's propensity to consume and save was impacted by the price surge that had occurred in February–April 2022 and changes in the range of durables after the exit of a number of international brands from the Russian market. This is why some people could postpone large purchases or decide not to make them at all, preferring to

DISTRIBUTION OF RESPONSES TO THE QUESTION 'WHAT IS YOUR OPINION ABOUT THE BEST WAY TO USE AVAILABLE MONEY: MAKE SAVINGS OR PURCHASE EXPENSIVE GOODS?' *Chart A-5-4*
(% of all respondents)

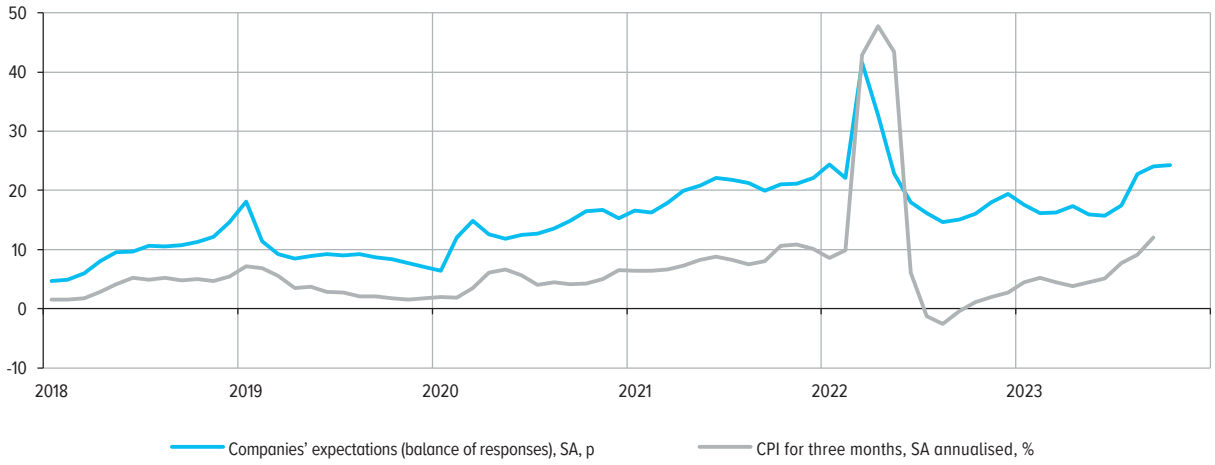


Source: InFOM.

save the available funds. This shift in households' preferences caused an overall decline in consumer activity. Subdued consumer demand in 2022 H2–early 2023 was one of the factors decelerating price growth. In April–August 2023, households' propensity to save was decreasing, and the percentage of respondents opting to purchase expensive goods was growing. Beginning from September 2023, respondents' propensity to save started to rise again owing to higher deposit and credit rates.

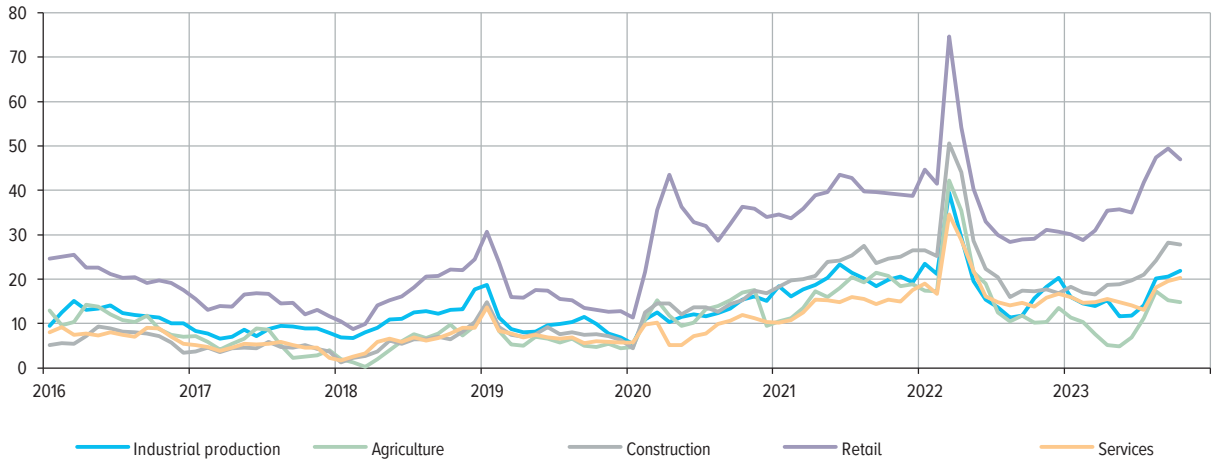
According to the Bank of Russia's monitoring of businesses,[3] in July–December 2022 and January–June 2023, companies' price expectations (the balance of responses) for the next three months remained elevated without any noticeable and steady upward or downward trend. In July–October 2023, price expectations soared. The average price growth rate

COMPANIES' PRICE EXPECTATIONS *Chart A-5-5*



Sources: Bank of Russia, Rosstat.

COMPANIES' PRICE EXPECTATIONS, BY KEY INDUSTRY *Chart A-5-6*
(balance of responses, SA, points)



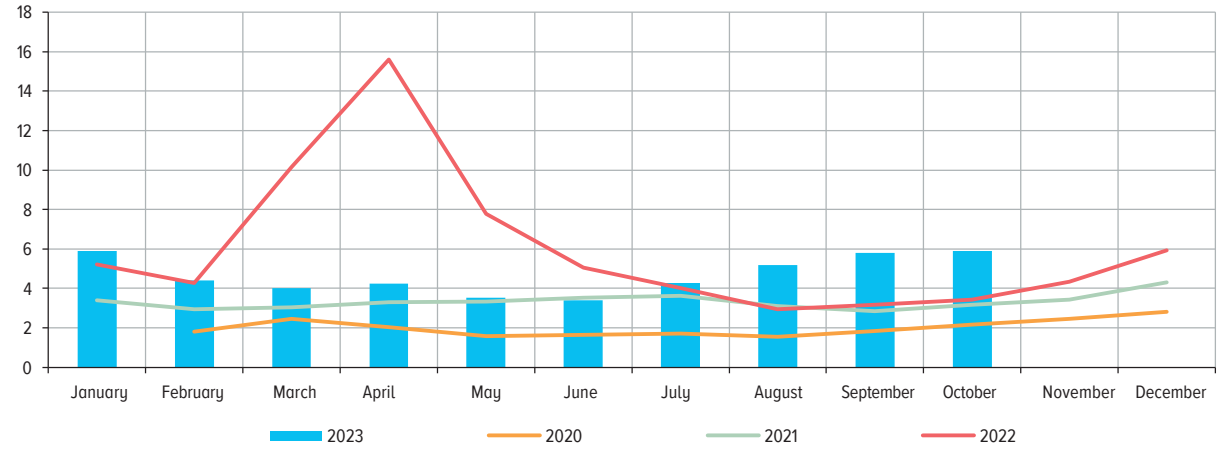
Source: Bank of Russia.

[3] The results of the monitoring of companies are presented in the monthly information and analytical commentary Monitoring of Businesses: Assessments, Expectations and Comments (http://www.cbr.ru/eng/analytics/dkp/monitoring/#a_155943).

expected in the next three months (in annualised terms) measuring companies' inflation expectations was predominantly close to 4% in 2022 H2 and January–June 2023, but increased to 5.9% by October 2023. A short-term spike in businesses' price and inflation expectations was observed in September–December 2022 and mostly associated with higher costs and the expected rise in utility and railway tariffs, as well as with a slight improvement in companies' estimates of current and future demand. In January–February 2023, when businesses took into account the actual pass-through of higher costs and tariffs, their price and inflation expectations decreased somewhat in the economy in general. In March–June 2023, expectations slightly fluctuated, with the dynamics varying across industries. Beginning from March 2023, retailers' price expectations mostly increased due to the revival of demand. Moreover, retailers' price and inflation expectations were significantly higher than across the economy as a whole: the average price growth rate expected by retailers in the next three months (in annualised terms) ranged from 6.5% to

AVERAGE GROWTH OF OUTPUT PRICES EXPECTED BY COMPANIES IN THE NEXT THREE MONTHS, IN ANNUALISED TERMS
(economy-wide, %)

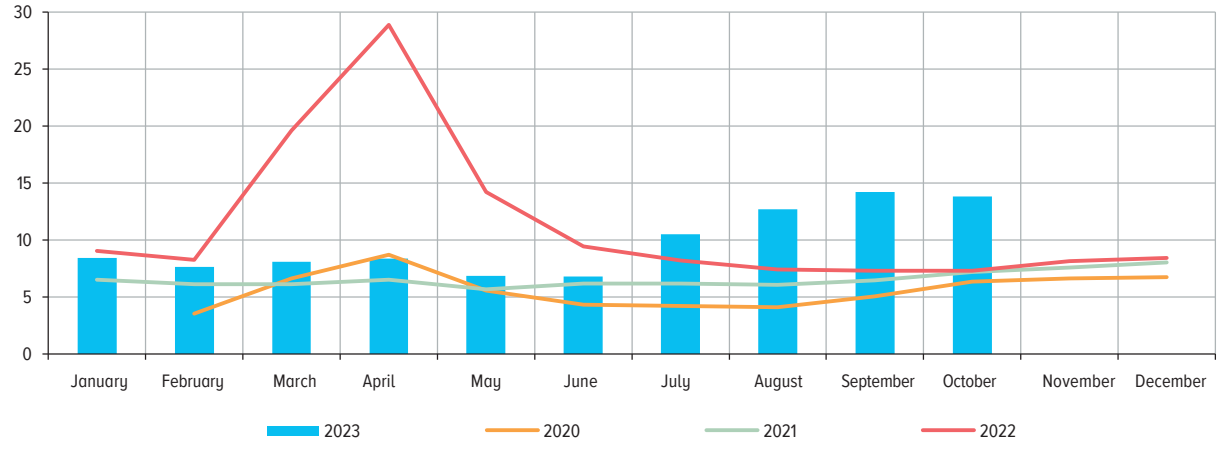
Chart A-5-7



Source: Bank of Russia.

AVERAGE PRICE GROWTH EXPECTED BY RETAILERS IN THE NEXT THREE MONTHS
(% in annualised terms)

Chart A-5-8



Source: Bank of Russia.

8.5% during the period from July 2022 through June 2023, started to rise from July 2023, and reached 13.8% in October 2023. Agricultural enterprises' price expectations primarily declined in January–May 2023 amid the expanded supply of agricultural products in the market and a slower rise in costs, including because of the good harvest of grains in 2022. Price expectations in most industries started to go up from July 2023. Most companies explained this growth by the ruble depreciation and a faster rise in costs.

Overall, households' inflation expectations and companies' price expectations were elevated in 2022 H2 and January–October 2023. This is a critical factor taken into account by the Bank of Russia when making monetary policy decisions. Higher inflation expectations, all else being equal, mean that the key rate should be kept at a higher level as well. Furthermore, when unanchored and responsive to one-off spikes in prices or fluctuations of the ruble exchange rate, inflation expectations create risks of secondary effects. To mitigate them, the central bank might need additional monetary policy measures. Stabilisation of inflation at a low level of close to the 4% target for a long period will help further decrease and anchor inflation expectations.

APPENDIX 6. INFLATION TARGETING: CROSS-COUNTRY COMPARISONS

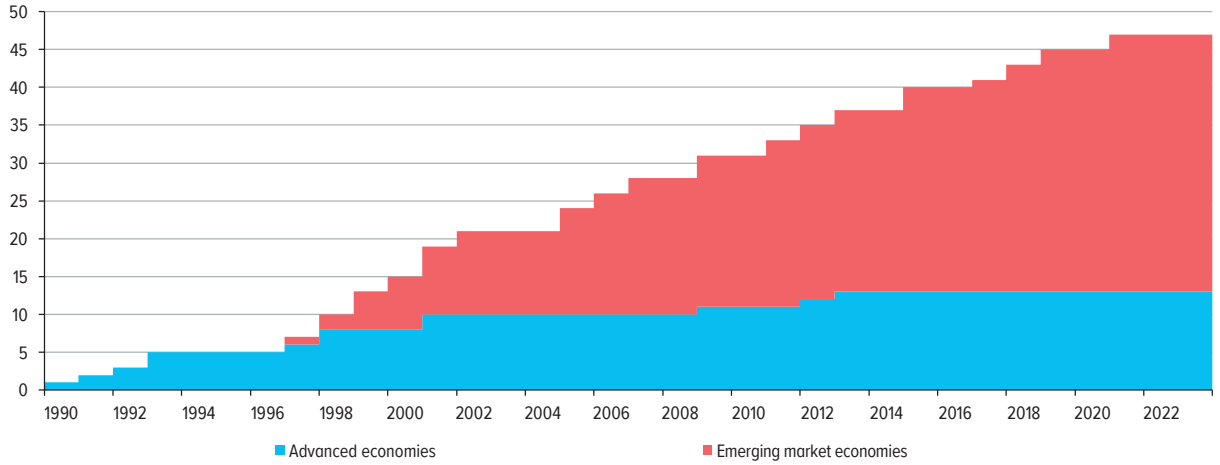
INFLATION TARGETING STRATEGY: ITS EFFECTIVENESS AND USE ACROSS THE GLOBE

Role of inflation targeting countries in the world economy

In today's world, price stability, that is, low and steady inflation, is the key task of central banks' monetary policies. In practice, central banks address this task through the inflation targeting strategy increasingly frequently. Specification of central banks' mandate and an increase in their accountability to society, coupled with clear goal setting, are the reasons why inflation targeting has been widely used globally since the 1990s. According to the IMF,[1] currently, 47[2] countries and integration associations are conducting monetary policies within the framework of the inflation targeting strategy, whether de jure or de facto. Assessments as of 2022 show that these countries account for approximately 70% of global GDP. Nearly all of them are classified by the World Bank as high- or middle-income economies. Besides, 20 largest countries and economies in the world implementing inflation targeting policies account for nearly 60% of global GDP based on purchasing power parity (according to the World Bank).

INFLATION TARGETING ECONOMIES
(number of countries)

Chart A-6-1

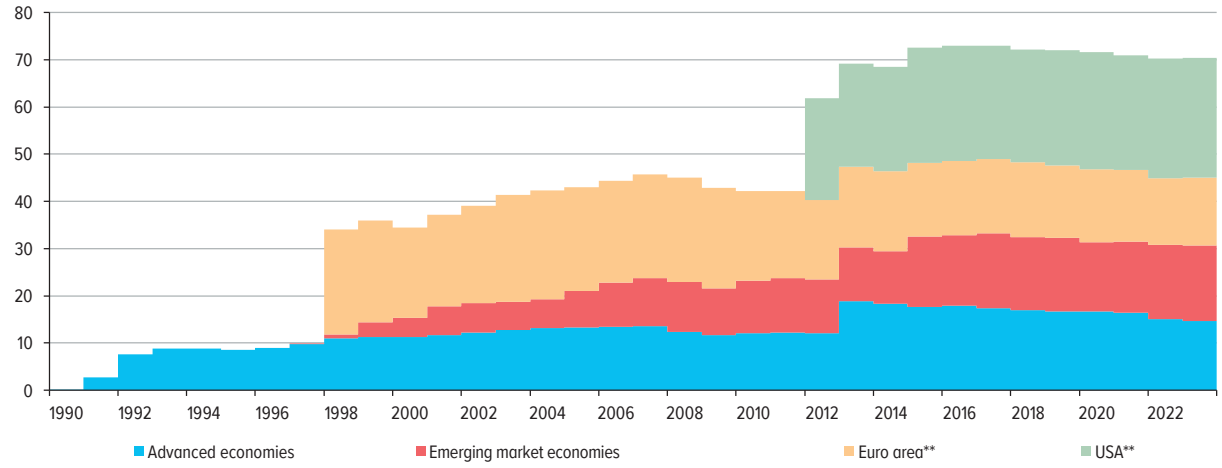


Source: IMF Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER, 2022).

[1] Refer to the Annual Report on Exchange Arrangements and Exchange Restrictions (2022).

[2] The only integration association among the inflation targeting economies is the Economic and Monetary Union of the European Union (euro area) including 20 member states.
The Republic of Seychelles is also classified as an economy whose central bank follows the inflation targeting strategy. However, from 2021, the country's central bank has not been using a quantitative inflation target.

PROPORTION OF INFLATION TARGETING COUNTRIES IN THE WORLD ECONOMY *Chart A-6-2*
(share in global GDP, %*)



** 2023 – forecast values.*
*** The USA established its inflation target in 2012, and the euro area – in 1998.*
Sources: IMF, Bank of Russia calculations.

The Reserve Bank of New Zealand became the inflation targeting pioneer in 1989. By the beginning of the 2000s, nearly all advanced[3] economies switched to inflation targeting. In 1997, the Czech National Bank was the first central bank in EMEs to transition to inflation targeting.[4] The Bank of Russia started to implement the inflation targeting strategy from 2015. As to the BRICS member states, in addition to the Bank of Russia, the inflation targeting strategy is officially implemented by the Reserve Bank of India, the Central Bank of Brazil, and the South African Reserve Bank. The People's Bank of China, although it cannot be considered an inflation targeter, has significantly adjusted its approaches to pursuing monetary policy in recent decades, predominantly at the level of instruments, aligning them somewhat with the approaches used within inflation targeting, and continues

[3] In practice, the USA and the European Economic and Monetary Union (euro area) are also classified as regions where central banks are inflation targeters. Although the USA and the euro area have not declared themselves as targeting countries, the US Federal Reserve System and the European Central Bank have all key elements of inflation targeting, including publicly announced targets, floating exchange rates, policy rates, and communication as the main instruments of their monetary policies.

[4] The IMF started to classify the Czech Republic as an advanced economy as late as 2009 (World Economic Outlook, October 2009).

its further development in this area.[5] As of 2022, central banks of 34 EMEs were inflation targeters, and this number continues to increase gradually.

Efficiency of inflation targeting compared to other strategies within monetary policy

There are multiple research papers analysing the effectiveness of inflation targeting over the more than 30-year period of its use, including studies comparing the efficiency of this strategy and the targeting of other macroeconomic indicators (e.g., monetary aggregates or national currency exchange rates). Most papers prove that inflation targeting is efficient not only for maintaining price stability, but also for improving economic growth prospects.[6]

Institutional transformations in the conditions of inflation targeting (growing independence and accountability of the central bank and enhancement of its communication on monetary policy decisions) help increase society's confidence in the central bank's activity and improve the predictability of the macroeconomic environment.[7] This reduces the weight of the adaptive (backward-looking) component of economic agents' inflation expectations, enabling central banks to achieve their inflation targets more efficiently and making their monetary policies more flexible.

Flexibility of monetary policy within inflation targeting and a floating exchange rate of the national currency strengthens the countercyclical[8] role of monetary policy in the economy. In other words, the national economy can better absorb external and internal economic shocks in the conditions of inflation targeting than when it targets any other macroeconomic indicators.[9]

---

[5] A specific feature of the monetary policy of the People's Bank of China (PBC) is its multiple objectives, intermediate benchmarks, and policy instruments. Such a complex structure is largely the legacy of the planned economy, reflects the specifics of the development of markets (rapid yet uneven), and the institutional environment. Over recent decades (particularly after 2015), amid China's progressive transition to a market economy, the PBC has made a leap forward in enhancing the efficiency of the transmission mechanism of its monetary policy. In the first place, this is related to the development of the system of liquidity management instruments to manage money market rates (a sort of the interest rate corridor) and the overall simplification of the interest rate system of monetary policy. Additionally, the state authorities have decreased their direct participation in the pricing of banking products in the economy, including through interventions in banks' transfer pricing. Finally, the PBC has gradually reduced the significance of the required reserve ratio in the course of the monetary policy implementation and has enhanced communication transparency to promote market participants' confidence. Despite the already achieved success, many experts believe that there is still sufficient room for enhancement, which is also noted by the PBC itself. In particular, making their official statements, PBC representatives emphasise their commitment to further develop interest rate policy based on market mechanisms and increase transparency. Besides, in the conditions of the multiplicity of its objectives, the PBC also has an effective inflation target that is established by the State Council of the People's Republic of China and announced by the country's premier each spring. Beginning from 2015, the target has been 'close to 3%'. However, according to the PBC's official communication, the inflation target is asymmetrical and is rather a 'ceiling' for inflation. The PBC seeks to avoid considerable deviations of inflation downwards from the target to a much lesser extent than its upward deviations.

[6] Refer to, e.g., the meta-analysis of 113 studies investigating the performance of inflation targeting: Balima, H., Kilama, E. and Tapsoba, R. Inflation targeting: Genuine effects or publication selection bias? (http://doi.org/10.1016/j. euroecorev. 2020.103520). European Economic Review. Volume 128, 2020.

[7] Refer to Blinder (2000); Gürkaynak et al. (2006); Ötker & Freedman (2009); Kartaev (2015); Shmidt-Hebbel & Carrasco (2016).

[8] This benefit is especially relevant to EMEs where central banks were often forced to tighten rather than ease monetary policies in times of crises, which exacerbated the scale of economic downturns.

[9] Refer to Fratzscher et al. (2017).

Furthermore, in the long run, successful implementation of the inflation targeting strategy does not only make economic growth steadier,[10] but also accelerates it.[11] However, in contrast to advanced economies, positive effects on EMEs' growth rates might become evident at later stages of inflation targeting. An essential condition for their materialisation is long-term confidence in the central bank's monetary policy as a result of maintaining inflation at steadily low levels.

Setting inflation targets and their achievement after transitioning to inflation targeting

The formats of medium-term inflation targets[12] used by central banks worldwide significantly vary in terms of both levels and types. Advanced economies (except Iceland and Australia) normally set their inflation targets close to 2%. Target levels in EMEs, traditionally characterised by higher volatility of the macroeconomic environment, vary more notably, namely from 2% to 8%. Nevertheless, EMEs mostly set their inflation targets in the range from 3% to 4%.

As to the types of inflation targets, a point with a range of deviations is the most widely used one globally, especially in EMEs. Advanced economies use a point more often. A target range is the rarest type. Besides, target ranges are wider on average in EMEs than in advanced economies.

In practice, choosing medium-term inflation targets (levels and types), central banks consider a broad range of factors.[13] On the one hand, these are multiple theoretical[14] optimality criteria of a target format. On the other hand, these are factors reflecting actual peculiarities of the conditions where monetary policy is implemented: overall stability of the macroeconomic environment, including the level of confidence in macroeconomic policy and institutions; the maturity level[15] of the inflation targeting regime and efficiency of monetary policy in maintaining low and steady inflation; difference between the country's inflation target and the targets set by main trading partners and economies that are similar in terms of the development level; and other structural specifics of the national economy. Furthermore, types of inflation targets are chosen depending on such institutional specifics of the conditions where monetary policy is implemented as the government's role in selecting the inflation target and the transparency of the central bank's communication on the rationale behind its monetary policy decisions, among other things.

---

[10] Refer to Mishkin (2004); Miller et al. (2012); Fratzscher et al. (2017); Balima et al. (2020); Ravenna & Ingholt (2021).

[11] Refer to Hale & Philippov (2015) or Kartaev (2015).

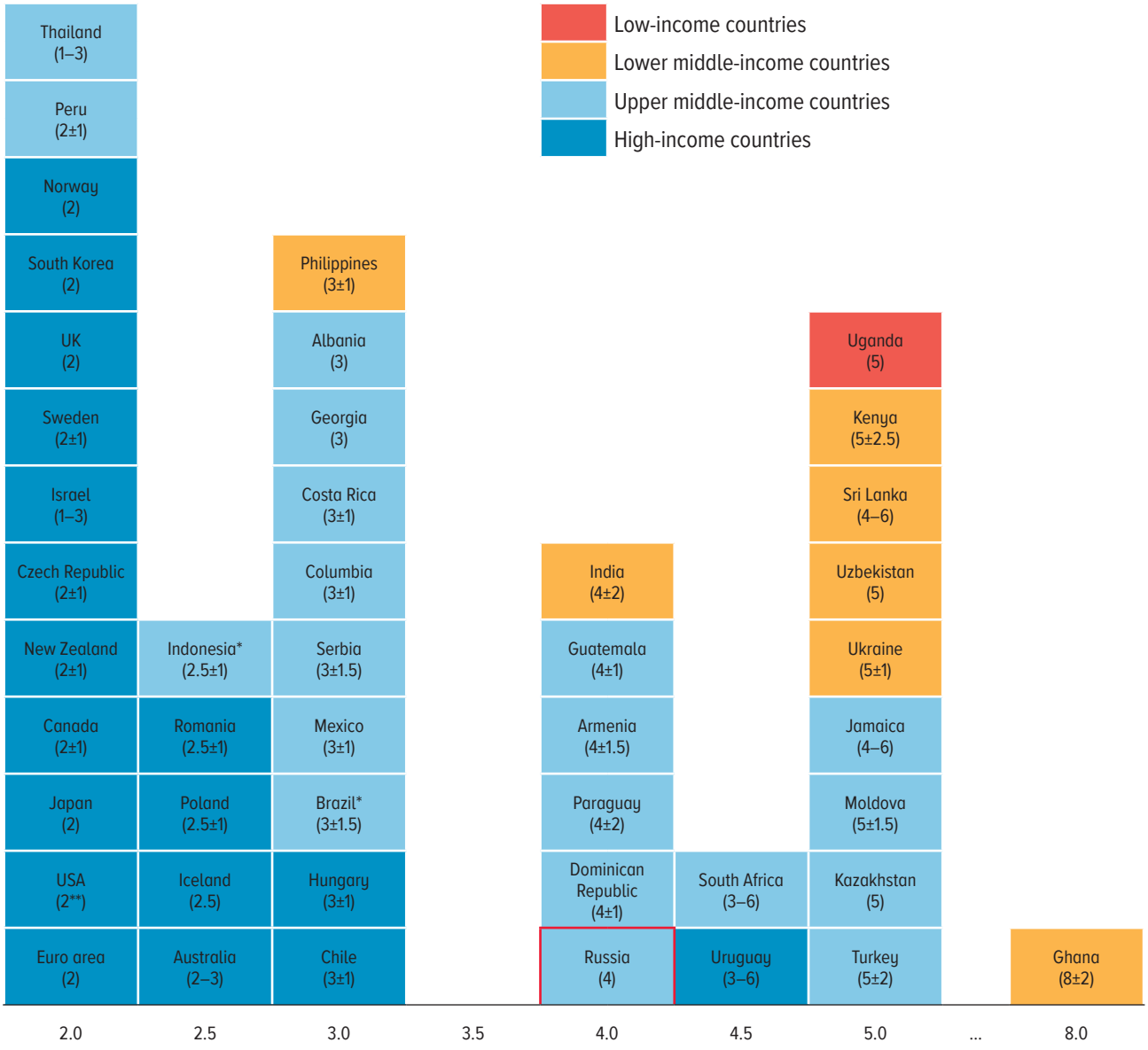
[12] Inflation targets staying effective during a long period when they remain unchanged. Normally, central banks switch to medium-term inflation targeting after the end of several-year disinflation periods (this is especially relevant for EMEs). In the conditions of disinflation, that might happen both before the official transition to inflation targeting or in the first few years after switching to this strategy, central banks might use intermediate annual inflation targets.

[13] Meshcheryakov, A., Sukhomlinov A. and Kolosov, A. Working paper Factors Determining the Choice of Inflation Target Levels: Theory and Global Practice. May 2023; Magzhanov, T. and Meshcheryakov, A. What Determines the Choice of Inflation Target 'Width'?. May 2023.

[14] Central banks can factor in the impact of price fluctuations on public welfare when choosing target levels. This impact is associated with, among other factors, problems of nominal rigidities in the economy in the medium term (especially in the labour market) and risks of reaching the effective lower bound (ELB) of policy rates in the case of disinflationary shocks in the economy. As regards inflation target types, it is essential to effectively anchor inflation expectations, while simultaneously ensuring sufficient flexibility of monetary policy if the economy has to address proinflationary or disinflationary shocks.

[15] The average inflation targeting period is 24 years in advanced countries and 13 years in EMEs.

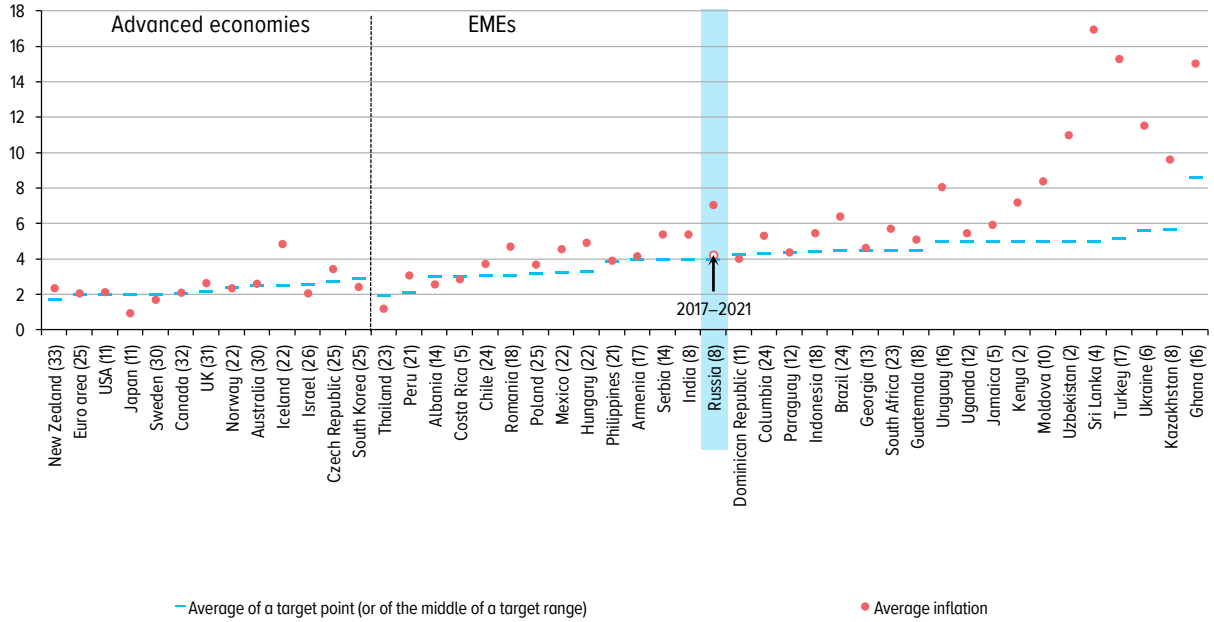
INFLATION TARGETS IN INFLATION TARGETING COUNTRIES, GROUPED ACCORDING TO THE WORLD BANK (%) *Chart A-6-3*



** The inflation target of Bank Indonesia for 2024 (the target for 2023 is 3%±1 pp); the inflation target of the Bank of Brazil for 2024 (the target for 2023 is 3.5%±1.5 pp).*
*** From August 2020, the US Fed switched to flexible average inflation targeting (FAIT).*
Note. The World Bank's classification based on the estimates of gross national income per capita for 2022.
Sources: central banks' websites, IMF Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER, 2022), World Bank.

In practice, inflation might significantly deviate from the target during certain periods, but most central banks targeting inflation ultimately manage to successfully maintain inflation close to the targets. Besides, over the entire inflation targeting period, inflation has deviated from the targets (a point or the middle of the range) by no more than 2 pp on average in the majority of advanced countries and by no more than 3 pp – in most EMEs. The experience of inflation targeting is essential as well: in the absolute majority of countries targeting inflation for more than 20 years, inflation stays within the target values on average. In countries with a shorter experience of inflation targeting, the variance is slightly higher.

AVERAGED TARGETS (%) AND AVERAGE INFLATION (% YOY) OVER THE ENTIRE PERIOD OF INFLATION TARGETING IN VARIOUS COUNTRIES *Chart A-6-4*



Note. Average inflation was calculated for the period since the transition to inflation targeting through September 2023. Respective inflation measures were applied for each of the counties: PCE – for the USA, CPIF – for Sweden, and Core CPI – for Uganda. The period of inflation targeting in years is given in the brackets of the horizontal axis. Advanced economies and EMEs were divided into two groups. Within the groups, the countries were graded by the average of their inflation targets. The average of an inflation target takes into account, among other things, changes in the target level, if any, over time. If a country has been using a point as its inflation target with a range of deviations, the calculation of the target average is based on a point within this range. If an economy has been using a target range without any fixed point, the calculation relies on the middle of the range.
Sources: central banks' websites, statistical agencies' websites, Bank of Russia calculations.

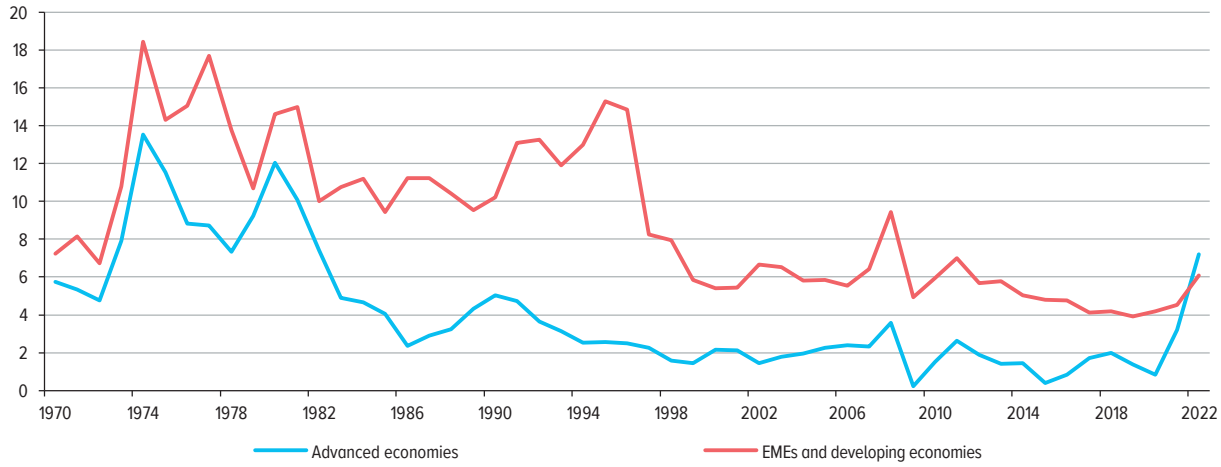
INFLATION TARGETING PRACTICE: RETROSPECTIVE VIEW

Start of inflation targeting in the 1990s and 2000s

By the middle of the 1990s after the two decades of high and volatile inflation provoked by several severe oil price shocks, among other factors, price growth rates in advanced economies edged down stabilising close to 2% as a result of the central banks' consistent disinflation policies. The transition to inflation targeting that advanced economies' central banks had started in the 1990s helped improve the predictability of macroeconomic conditions in the economies of this group of countries. This shift enabled them to keep inflation at a moderately low level for a long period, until the global financial crisis of 2007–2008 (GFC), despite a number of crisis episodes (e.g., the dotcom crash in the early 2000s).

Contrastingly, EMEs were trying to temper high and volatile inflation for a longer time. Many EMEs and developing countries were facing a transformational crisis moving from state-planned economy to the market model. In 1997–1998, they experienced a capital outflow and depreciation of their national currencies triggered by the Asian financial crisis. Overall, the largest EMEs were able to stabilise inflation at multi-decade lows as late as the end of the 1990s. Many EMEs began structural reforms primarily aimed at liberalising international trade and enhancing fiscal discipline. Later on, this transformation helped them create conditions for gradual transition to inflation targeting.

INFLATION ACROSS GROUPS OF COUNTRIES, WEIGHTED BY GDP *Chart A-6-5*
(% YoY)



Sources: Ha, J., Kose, M. A. and Ohnsorge, F. One-Stop Source: A Global Database of Inflation. Policy Research Working Paper 9737. World Bank. Washington DC. 2021.

Reasons for steadily low inflation worldwide after the 2007–2008 global financial crisis

The decade after the GFC was a period of steadily low inflation at the level of the world economy. Although inflation trends in EMEs varied across countries and regions, an important contributor consolidating the overall trend towards lower inflation in this group of countries was rising confidence in the macroeconomic policy pursued, considering, among other factors, the growing number of inflation targeting central banks in EMEs. The weakening of inflationary pressure in advanced economies was especially notable. In many of them, inflation stayed even below the targets during a long period after the GFC despite considerable monetary policy easing by these countries' central banks.

Inflation in advanced economies was affected by both cyclical and structural factors. Specifically, the recovery of the largest advanced economies after the GFC was slow. This could be largely attributed to the following: the launch of the global banking regulation reform[16] aimed at enhancing the resilience of banking systems to financial crises; a significant decrease in risk appetite among various economic agents (households, businesses, and others);[17] and a gradual phasing-out of fiscal stimulus measures[18] after the completion of the acute stage of the GFC and amid the more acute problems with sovereign debt burden, especially after the European debt crisis of 2009–2010.[19] Besides, downward pressure on prices was put by the strengthening of global competition in retail due to the rapid development of online retail (the so-called Amazon effect).[20] In addition, a slower increase

[16] Refer to Boar, C., Gambacorta, L., Lombardo, G. and Pereira da Silva, L. What are the effects of macroprudential policies on macroeconomic performance? BIS Quarterly Review. September 2017.

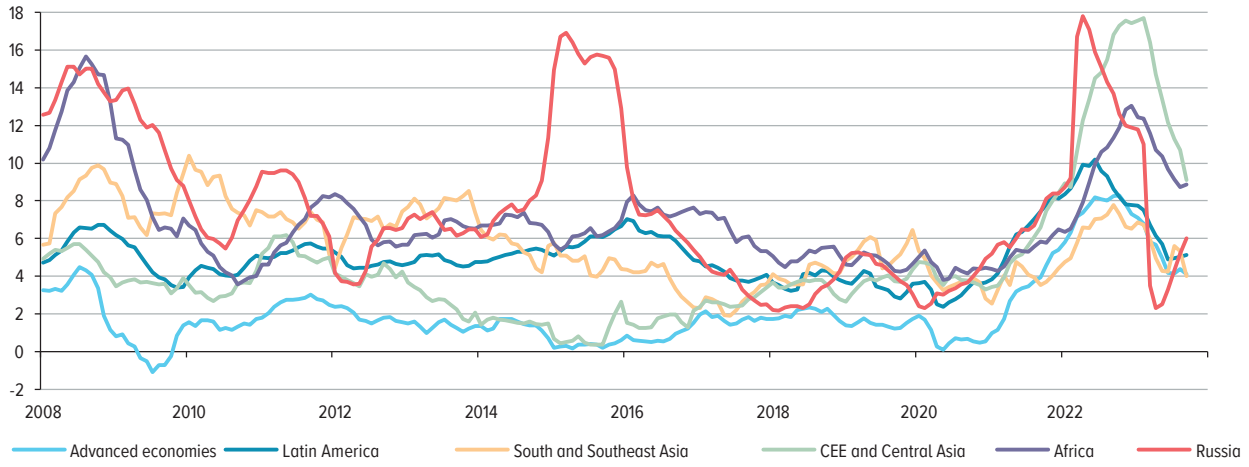
[17] Refer to, e.g., Jones, B. Uncertainty and Risk Aversion – Before and After the Pandemic. Reserve Bank of Australia.

[18] Refer to Fiscal consolidation targets, plans and measures in OECD countries. Restoring public finances. 2012.

[19] Refer to Nelson, R., Belkin, P., Mix, D. and Weiss, M. The Eurozone Crisis: Overview and Issues for Congress. Congressional Research Service. 2012.

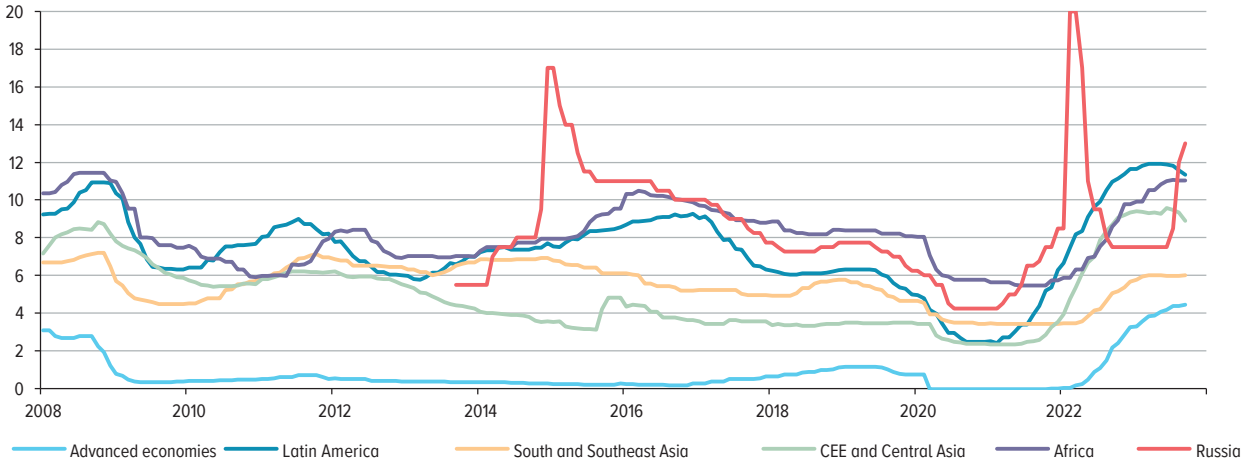
[20] Refer to the speech by Janet L. Yellen at the conference Prospects for Growth: Reassessing the Fundamentals. 2017.

INFLATION LEVEL BY GROUP OF COUNTRIES *Chart A-6-6*
(%)



Note. The calculations are based on the average of the annual change in the Consumer Price Index (CPI) weighted by GDP within each group (in current prices in US dollars over the relevant year).
Groups of countries: advanced economies – the USA, the euro area, Japan, the UK, Canada, Norway, Sweden, Australia, New Zealand, Israel, Iceland, South Korea, and the Czech Republic; Latin America – Mexico, Columbia, Peru, Brazil, Chile, the Dominican Republic, Jamaica, Costa Rica, Guatemala, Paraguay, and Uruguay; South and Southeast Asia – Thailand, Indonesia, India, the Philippines, and Sri Lanka; Central and Eastern Europe and Central Asia – Poland, Hungary, Romania, Serbia, Albania, Moldova, Kazakhstan, Armenia, Georgia, and Uzbekistan; Africa – South Africa, the Republic of Seychelles, Ghana, Uganda, and Kenya.
Sources: Cbonds, World Bank, Bank of Russia calculations.

CENTRAL BANKS' WEIGHTED AVERAGE POLICY RATES BY REGION *Chart A-6-7*
(%)



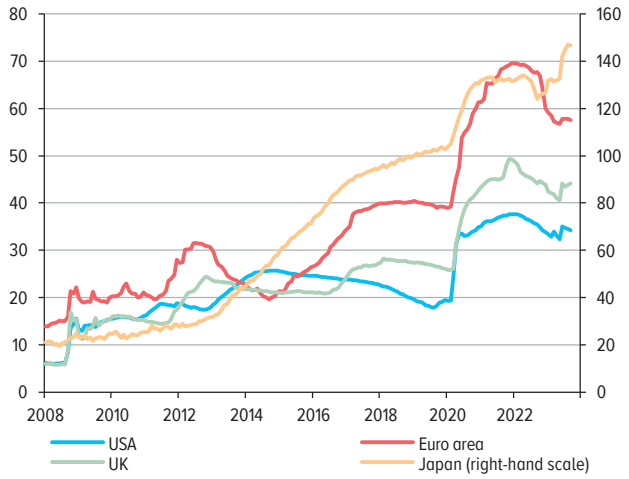
Note. The policy rate was calculated as the value of central banks' policy rates weighted by the country's GDP in the region (in current prices in US dollars over the relevant year) for the period from January 2008 through 30 September 2023.
Groups of countries: advanced economies – the USA, the euro area, Japan, the UK, Canada, Norway, Sweden, Australia, New Zealand, Israel, Iceland, South Korea, and the Czech Republic; Latin America – Mexico, Columbia, Peru, Brazil, Chile, the Dominican Republic, Jamaica, Costa Rica, Guatemala, Paraguay, and Uruguay; South and Southeast Asia – Thailand, Indonesia, India, the Philippines, and Sri Lanka; Central and Eastern Europe and Central Asia – Poland, Hungary, Romania, Serbia, Albania, Moldova, Kazakhstan, Armenia, Georgia, and Uzbekistan; Africa – South Africa, the Republic of Seychelles, Ghana, Uganda, and Kenya.
Sources: Cbonds, Bank of Russia calculations.

in total factor productivity[21] and low risk appetite among economic agents, together, caused a substantial decrease in neutral interest rates of monetary policies in this group of countries.[22] This means that monetary policies of advanced economies' central banks that

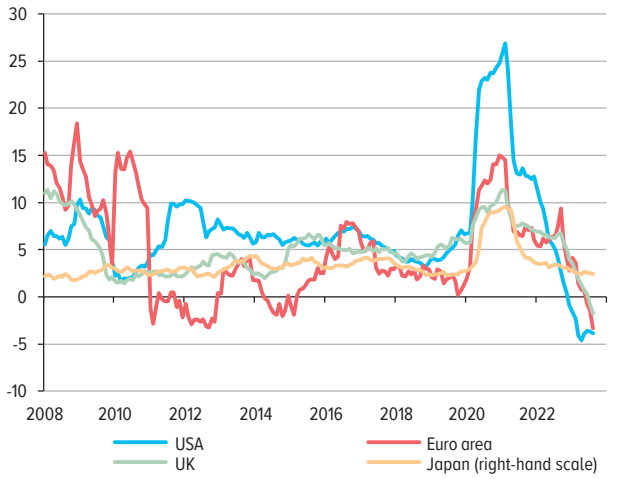
[21] Refer to Dieppe, A. 2021. Global Productivity. Trends, Drivers, and Policies. Washington, DC. World Bank.

[22] Refer to Holston K., Laubach, T., and Williams, J. C. Measuring the natural rate of interest: International trends and determinants. Journal of International Economics, 108. 2017.

RATIO OF G4 CENTRAL BANKS' BALANCE SHEETS TO GDP *Chart A-6-8*
(%)



MONEY SUPPLY (M2) IN G4 COUNTRIES *Chart A-6-9*
(% YoY)



Note. Chart A-6-8 shows the ratio of the central bank's balance sheet to the country's average GDP over the last four quarters.
Sources: Cbonds, Bank of Russia calculations.

reduced their policy rates after the start of the GFC to near-zero levels actually did not have sufficient accommodative influence to offset the effects of a broad range of disinflationary factors. Aiming to increase monetary stimuli to support the recovery of the economies and prevent steady deflation, the central banks of the largest advanced economies turned to unconventional monetary policy instruments, first of all, the expansion of balance sheets through asset purchase programmes. However, even considering the combined effect of conventional and unconventional monetary stimuli, the growth of money supply and inflationary pressure in major advanced economies remained low until the outbreak of the coronavirus pandemic.

UNCONVENTIONAL MONETARY POLICY MEASURES

Policy rates are the main instrument used by central banks to attain their inflation targets as they seek to maintain short-term money market rates close to their policy rates. Policy rates enable central banks to influence monetary conditions within a very wide range. However, the potential for easing monetary conditions through a lower policy rate is limited by the effective lower bound (ELB). The ELB is the point at which further policy rate cuts no longer provide the desired effect due to lower efficiency of the monetary policy transmission mechanism (e.g., deposit rates cease to decline despite a policy rate decrease). The ELB varies depending on economic conditions and, in some cases, can be equal to zero (zero lower bound, ZLB).

When the policy rate is close to the ZLB and pronounced disinflationary or even deflationary risks persist in the economy, or inflation steadily deviates downwards from the target, the required easing of monetary conditions is achieved through unconventional instruments, including:

Asset purchases (within quantitative easing (QE) programmes or yield curve control (YCC) – purchases by a central bank of financial assets (e.g., government bonds) in the open market within pre-set (in the case of QE) or unlimited (in the case of YCC) amounts. This mechanism helps reduce medium- and long-term interest rates thus easing monetary conditions.

Forward guidance (FG) – a central bank's signal about its future monetary policy intentions. By using this instrument, a central bank seeks to influence economic agents' expectations and decisions, including to decrease uncertainty in the market that might cause a rise in interest rates or their volatility. In the conditions of unconventional monetary policy, a central bank uses a reinforced form of FG signalling longer-term conditions or time for a possible start of policy rate increases or changes in the parameters of asset purchase programmes.

In the absolute majority of cases globally, unconventional monetary policy instruments are employed by the central banks of advanced economies (the USA, the UK, the euro area, etc.), many of which faced the problem of the ELB amid the risks of a steady deviation of inflation downwards from the targets after the GFC, as well as after the outbreak of the coronavirus pandemic in spring 2020. Asset purchases within quantitative easing are used most extensively and are a relatively effective instrument to maintain aggregate demand when there is little or no room for conventional monetary policy.[1] However, the use of such instruments might involve high risks due to a possible distortion of market-based pricing in financial markets.

If monetary conditions remain highly accommodative for a long period (e.g., policy rates stay negative), such policies increase risks to the stability of the balance sheets of the banks purchasing financial assets and issuing loans (especially, long-term ones) during the period of accommodative monetary policy. When the private sector gets used to such conditions and expects that unconventional policy will be continued for a long time, in the first place, banks' interest rate risks grow. This makes the consequences of the tapering of asset purchase programmes for financial markets and the economy in general more unpredictable if central banks have to normalise their monetary policies. Thus, the disorderly exit of the Reserve Bank of Australia (the RBA) from the YCC programme in late 2021 was associated with higher volatility in the financial market and, as reported by the RBA itself, caused some reputational damage to it.[2] Besides, the experience of a number of advanced economies in 2022–2023 (e.g., the UK or the USA) proves that materialisation of accumulated risks and a rapid worsening of banks' balance sheets might notably limit the opportunities for tightening monetary policies and, accordingly, for ensuring price stability.[3]

[1] Refer to Bailey, A., Bridges, J., Harrison, R., Jones, J. and Mankodi, A. The central bank balance sheet as a policy tool: past, present and future. Bank of England Staff Working Paper. 2020.

[2] Review of the Yield Target. Reserve Bank of Australia (https://www.rba.gov.au/monetary-policy/reviews/yield-target/).

[3] Refer to, e.g., Brunnermeier, M. Rethinking Monetary Policy in a Changing World. Finance & Development. March 2023. (http://www.imf.org/en/Publications/fandd/issues/2023/03/rethinking-monetary-policy-in-a-changing-world-brunnermeier).

Inflation dynamics worldwide in 2021–2023 and central banks' response

A long period of very low inflation after the GFC strengthened the conviction of advanced economies' central banks about the steady decreases in neutral interest rates and the flattening of the Phillips curve.[23] Amid low inflation expectations, this flattening implied, among other things, that any changes in economic activity do not translate into inflation movements to the same extent as had been estimated before the GFC. This view of the conditions of the implementation of macroeconomic policy largely predetermined the response of advanced economies' central banks and governments to the crisis provoked by the outbreak of the coronavirus pandemic in 2020. In response to the pandemic, monetary and fiscal policies were eased in the majority of both EMEs and advanced economies. However, advanced economies took unprecedentedly large-scale stimulus measures, reflecting expectations of a considerable and long-lasting deviation of the economies downwards from their potential and of inflation – downwards from the targets.

In practice, as the epidemic situation in the world changed, it became clear that the magnitude of disinflationary pressure expected at the initial stage was overestimated. The coronavirus pandemic caused demand and supply gaps globally. Disruptions in production and logistics chains entailed persistent supply-side bottlenecks. However, fiscal and monetary support measures ensured a quick rebound of demand. Coupled with changes in the structure of consumption (from services towards goods), this provoked a fast increase in inflationary pressure worldwide beginning from late 2020.[24]

Despite some common trends, inflation dynamics after the outbreak of the pandemic varied across the globe. Inflation sped up most considerably in Central and Eastern Europe and in Latin America. As to South and Southeast Asia, the pressure on prices was rising there, but still stayed moderate for a longer period amid the slump in economic activity and a slower recovery of demand due to anti-pandemic restrictions.[25] Price growth in major advanced economies peaked to 40-year highs in 2022.

The unprecedented acceleration of inflation worldwide was the reason why many countries decided to tighten their monetary policies, but the time when this tightening started differed. The largest EMEs began monetary policy normalisation already in March 2021 (Brazil and Russia). The countries started to raise their policy rates amid a steady rebound of demand and a faster increase in inflation and inflation expectations than in other economies. Asia continued accommodative monetary policy for longer.[26]

At the early stages of the inflation acceleration, advanced economies' central banks believed that excessive inflationary pressure would exhaust itself in the short term without any monetary policy response and steady inflationary pressure would remain low. However, inflation was speeding up hitting new highs amid increasing prices for energy commodities and persistent demand and supply gaps.[27] As more signs of steady inflationary pressure emerged, advanced economies' central banks started to adjust their signals regarding the time of monetary policy normalisation and, then, scale back their asset purchase

[23] Refer to the speech by Andrew G. Haldane at the National Science and Media Museum. Bradford, 2017.

[24] Refer to the BIS Annual Economic Report 2022.

[25] Refer to Asian Development Outlook (ADO) 2021: Financing a Green and Inclusive Recovery.

[26] The recovery of the region's economy was negatively affected by China's zero-COVID policy pursued until 2022, among other things.

[27] Refer to The International Monetary Fund, World Economic Outlook: Recovery During a Pandemic – Health Concerns, Supply Disruptions, Price Pressures. 2021.

programmes launched or expanded during the pandemic and switch to the cycle of policy rate increases.[28]

In these conditions, central banks of both advanced economies and EMEs began to alter substantially their forecasts for bringing inflation back to the targets. EMEs recognised the need for monetary policy tightening to stabilise inflation in the medium term as early as the beginning of 2021. Advanced economies underestimated the persistence of inflation factors. Consequently, the forecast paths sharply moved upwards and the period needed to return inflation to the targets became longer.

Due to the considerable and long-lasting price growth, fuelled by, among other factors, persistent supply shocks, it became more complicated for banks to find a trade-off between inflation stabilisation and economic activity: a too fast increase in policy rates to temper inflation could provoke a recession and higher volatility of output, whereas accommodative monetary policies pursued for too long could entail an uncontrollable rise in prices, a decrease in confidence in monetary policy,[29] and, consequently, persistent growth and unanchoring of inflation expectations. Moreover, it was difficult to make any decisions due to extremely high uncertainty of the estimates of a further spread of the pandemic and its impact on economic potential. In this situation, central banks were striving to maintain a flexible approach, thoroughly assessing all incoming data. Hence, at the first stage, many countries were normalising their monetary policies slowly, seeking to find a well-balanced path for returning inflation to the targets. However, inflationary pressure intensified in early 2022, and the dramatic escalation of geopolitical tensions exacerbated the supply shocks that had occurred during the pandemic, due to which inflation started to rise even faster. This also prolonged the time needed to bring inflation back to the targets in the future: the expected period for returning inflation to the targets in both advanced economies and EMEs in 2022 Q2 exceeded two years (from nine to ten quarters), which is considerably longer than the standard time horizon of the influence of monetary policy (from four to six quarters).

Nevertheless, the proinflationary impact of some factors that had triggered the inflation acceleration worldwide started to weaken beginning from the middle of 2022. Specifically, global prices for most commodities and food items edged lower. As the structure of consumer demand returned to that existing before the pandemic (the proportion of goods in consumption declined, whereas that of services was up), this normalisation decreased the pressure of transport and logistics costs on prices.[30] Besides, governments in a number of countries were implementing fiscal measures, including energy subsidies,[31] to contain the growth of retail prices for goods and services. Combined with the earlier monetary

---

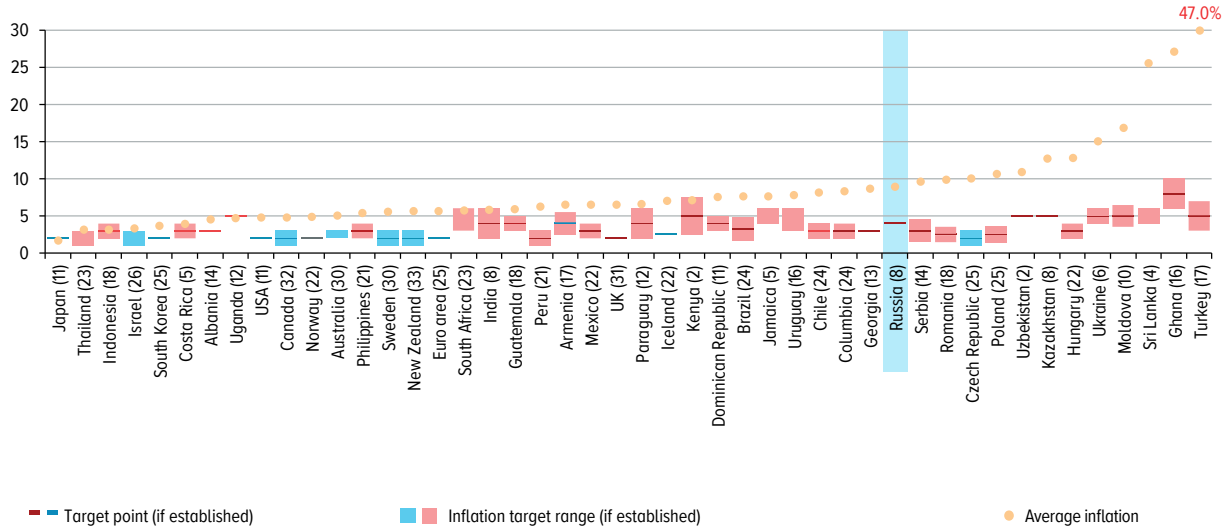
[28] When unconventional measures are used, policy normalisation usually starts from their phasing-out. The gradual tapering of QE was started in April 2021 by the Bank of Canada. New Zealand was the first country to terminate the QE programme (in July 2021). The G4 countries continued their programmes the longest. Iceland, the Czech Republic, the Republic of Korea, and Norway, that had not been implementing QE programmes, were the first to start raising their policy rates (in May, June, August and September 2021, respectively). In contrast to other advanced economies, Japan has never paused its ultra-accommodative monetary policy amid steadily low inflation during the 'lost decades'. Inflation in Japan was rising in 2021–2022, but much less notably than in other economies. Although the 2023–2024 inflation forecasts given by the Bank of Japan continued to increase, they still assume a slight downward deviation of inflation from the target over a longer time horizon.

[29] Refer to, e.g., the speech by Catherine L. Mann, an external member of the Monetary Policy Council of the Bank of England, at the Market News International Connect event. 2022.

[30] Refer to The World Bank. Global Economic Prospects. June 2023.

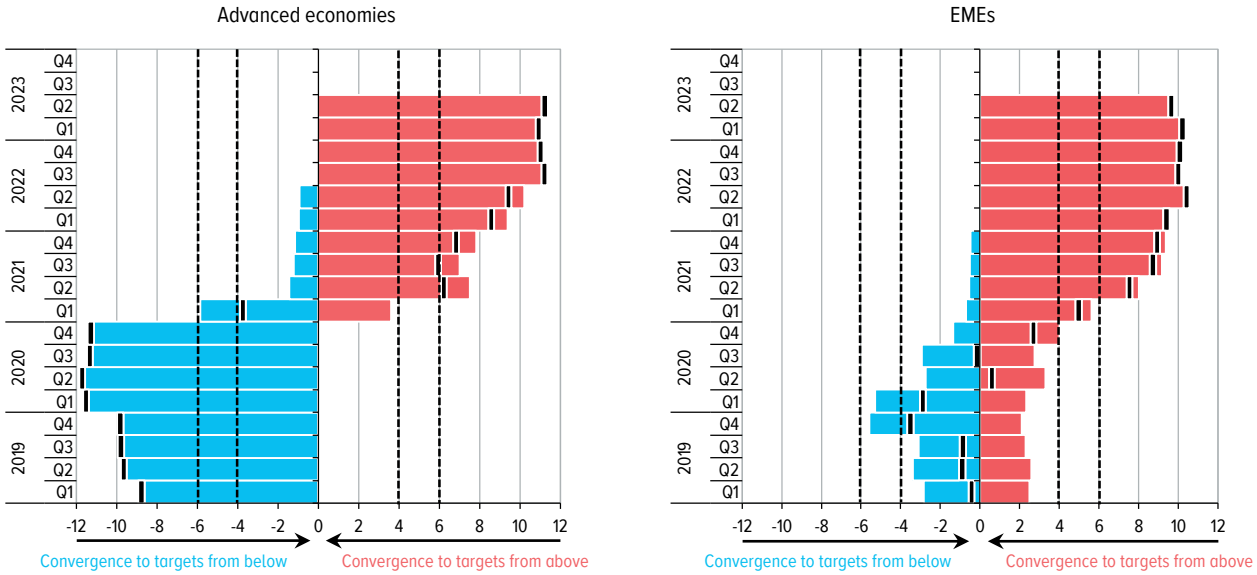
[31] E.g., the Energy Price Guarantee programme in the UK.

TARGETS (%) AND AVERAGE INFLATION (% YOY) IN 2021–2023 *Chart A-6-10*



Note. The average was calculated based on the data for the period since January 2021 through September 2023. Respective inflation measures were applied for each of the counties: PCE – for the USA, CPIF – for Sweden, and Core CPI – for Uganda. The period of inflation targeting in years is given in the brackets of the horizontal axis. The countries were graded by the average rate of inflation. Advanced economies are highlighted in blue and EMEs – in red.
Sources: central banks' websites, statistical agencies' websites, Bank of Russia calculations.

PERIOD TO BRING INFLATION BACK TO TARGETS OVER THE FORECAST HORIZON ACROSS GROUPS OF COUNTRIES *Chart A-6-11*
(number of quarters)



Note. The dotted line signifies the time horizon of the influence of monetary policy (from four to six quarters). Countries are divided into groups by the direction of the convergence of inflation to the targets – from below or from above. The time needed to bring inflation to the target was calculated considering the weight of a country's GDP (in current prices in US dollars over the relevant year) in the corresponding group and the weight of the group in the total sample. The horizontal axis signifies the time for bringing inflation back to the target point set by the central bank (or – in the case of a target range – to its middle), and the vertical axis – the quarter when the forecast was prepared. Advanced economies include the USA, the euro area, Japan, the UK, Canada, Norway, Sweden, Australia, New Zealand, Israel, Iceland, Sough Korea, and the Czech Republic. EMEs include Thailand, Peru, Poland, Chile, Romania, the Philippines, Georgia, Hungary, Serbia, Mexico, Columbia, Brazil, Paraguay, Armenia, Guatemala, India, Russia, South Africa, Jamaica, Moldova, Uganda, Uruguay, Ukraine, Turkey, Ghana, and Kazakhstan.
Sources: central banks' reports on inflation (monetary policy reports), IMF, Bank of Russia calculations.

policy tightening, this gradually decelerated annual inflation in most countries compared to the multi-year peaks reached in 2022.[32]

Nonetheless, the overall rate of inflation in many economies declined primarily because of certain components, whereas the growth rates of prices for a broad range of goods and services remained high.[33] This was associated with the demand dynamics that were more resilient to the shocks of 2022. Furthermore, prices for services in many countries were growing much faster, which, in addition to the afore-mentioned normalisation of the structure of consumer demand, was evidence that inflation trends were persistent rather than transient.[34]

Persistently elevated price pressure is a sign of an inadequate and time-lagged effect of the monetary policy response, in the first place. Although policy rates in many countries reached their multi-decade highs by early 2023, the expected period for the return of inflation to the targets in both EMEs and advanced economies has not been decreasing from 2022 and remains long. Besides, monetary policy tightening slowed down overall in 2023. On the one hand, this was associated with the need to comprehensively assess the adequacy of the earlier monetary policy tightening for ensuring a steady deceleration of inflation (considering the time lags of the transmission). On the other hand, advanced economies had to take into account financial stability risks amplified by the worsening situation in the banking sector.[35]

In their communication, central banks stress the necessity to maintain tight monetary conditions for an extended period in order to bring inflation back to the targets.[36] However, considering the current situation, the time needed to return inflation to central banks' targets remains long. Possible financial stability risks due to the rapid policy rate increases after a long period of low rates,[37] as well as persistent risks of stagflation in the world economy[38] made it even harder for central banks to find the optimal path of monetary policy for bringing inflation back to their targets. Having undermined confidence in central banks and provoked the persistent rise in long-term inflation expectations among a broad range of economic agents, delays in monetary policy tightening might be even more costly for overall macroeconomic stability in the future,[39] which thus exacerbates the risks of transition from price stability to high and volatile inflation.[40]

---

[32] Annual inflation in Latin American countries that had shifted towards monetary policy normalisation earlier than other economies started to slow down already in 2022 Q3, in South and Southeast Asia – in 2022 Q4. As to Central and Eastern Europe and Middle Asia, inflation continued to accelerate through 2023 Q1.

[33] Refer to, e.g., Measures of Trend Inflation in the USA (https://research.stlouisfed.org/publications/economic-synopses/2023/04/18/measures-of-trend-inflation).

[34] Refer to The Bank for International Settlements. Annual Economic Report. June 2023.

[35] Refer to, e.g., the speech by Claudia Buch, Bundesbank Vice President 'Financial stability and monetary policy: from low-for-long to the new normal'. Keynote Konstanzer Seminar. 24 May 2023.

[36] Refer to, e.g., the speech by Christine Lagarde, President of the European Central Bank on 28 June 2023 (http://www.bis.org/review/r230628d.htm).

[37] Refer to Jiménez, G., Kuvshinov, D., Peydró, J.-L. and Richter, R. Monetary Policy, Inflation, and Crises: New Evidence from History and Administrative Data. BSE Working Paper. December 2022.

[38] Refer to The World Bank. Global Economic Prospects. June 2022.

[39] Refer to the speech by US Fed Chair Jerome Powell in Jackson Hole on 26 August 2022, as well as the media briefing of Claudio Borio, Head of the BIS Monetary and Economic Department, on 16 September 2022.

[40] Refer to Borio, C., Lombardi, M., Yetman, J. and Zakrajšek, E. BIS Papers. No. 133. 20 March 2023. The two-regime view of inflation (http://www.bis.org/publ/bppdf/bispap133.htm).

INFORMATION ON INFLATION TARGETING COUNTRIES
(as of September 2023)

Table A-6-1

No.	Country	Date of transition to inflation targeting	Target type	Target level*	Range width, pp	Average annual inflation after transition to inflation targeting, %**	Root-mean-square deviation of inflation from the target, pp***
Advanced economies							
Europe							
1	Euro area	-	Point	2%		2.1	1.8
2	UK	1992	Point	2%		2.7	1.8
3	Iceland	2001	Point	2.5%		4.9	4.1
4	Norway	2001	Point	2%		2.4	1.6
5	Czech Republic	1997	Point with a range of deviations	2% ± 1 pp		3.5	3.7
6	Sweden	1995	Point with a range of deviations	2% ± 1 pp		1.7	2.1
Asia							
7	South Korea	1998	Point	2%		2.5	1.4
8	Japan	2013	Point	2%		1	1.7
Australia and Oceania							
9	Australia	1993	Target range	2–3%	1 pp	2.6	1.6
10	New Zealand	1990	Point with a range of deviations	2% ± 1 pp		2.4	1.9
North America							
11	USA	-	Point	2%		2.2	1.7
12	Canada	1991	Point with a range of deviations	2% ± 1 pp		2.1	1.4
Middle East							
13	Israel	1997	Target range	1–3%	2 pp	2.1	2.2
Emerging market economies							
Europe							
14	Albania	2009	Point	3%		2.6	2
15	Hungary	2001	Point with a range of deviations	3% ± 1 pp		5	4.8
16	Moldova	2013	Point with a range of deviations	5% ± 1.5 pp		8.4	8.7
17	Poland	1998	Point with a range of deviations	2.5% ± 1 pp		3.7	3.8
18	Russia	2014	Point	4%		7	5
19	Romania	2005	Point with a range of deviations	2.5% ± 1 pp		4.7	4.1
20	Serbia	2009	Point with a range of deviations	3% ± 1.5 pp		5.4	4.7
21	Turkey	2006	Point with a range of deviations	5% ± 2 pp		15.5	19.5
22	Ukraine	2017	Point with a range of deviations	5% ± 1 pp		11.5	8.6
Latin America and the Caribbean							
23	Brazil	1999	Point with a range of deviations	2023: 3.25% ± 1.5 pp 2024: 3.0% ± 1.5 pp		6.4	3.5
24	Guatemala	2005	Point with a range of deviations	4% ± 1 pp		5.1	2.6
25	Dominican Republic	2012	Point with a range of deviations	4% ± 1 pp		4.0	2.6

No.	Country	Date of transition to inflation targeting	Target type	Target level*	Range width, pp	Average annual inflation after transition to inflation targeting, %**	Root-mean-square deviation of inflation from the target, pp***
26	Colombia	1999	Point with a range of deviations	3% ± 1 pp		5.3	2.7
27	Costa Rica	2018	Point with a range of deviations	3% ± 1 pp.		2.8	3.1
28	Mexico	2001	Point with a range of deviations	3% ± 1 pp		4.6	1.9
29	Paraguay	2011	Point with a range of deviations	4% ± 2 pp		4.4	2.4
30	Peru	2002	Point with a range of deviations	2% ± 1 pp		3.1	2.3
31	Uruguay	2007	Target range	3–6%	3 pp	8.1	3.5
32	Chile	1999	Point with a range of deviations	3% ± 1 pp		3.7	2.8
33	Jamaica	2018	Target range	4–6%	2 pp	5.9	2.8
Asia							
34	India	2016	Point with a range of deviations	4% ± 2 pp		5.4	2.2
35	Indonesia	2005	Point with a range of deviations	2023: 3% ± 1 pp		5.4	2.9
				2024: 2.5% ± 1 pp			
36	Thailand	2000	Target range	1–3%	2 pp	1.2	1.8
37	Philippines	2002	Point with a range of deviations	3% ± 1 pp		3.9	2.1
38	Sri Lanka	2019	Target range	4–6%	2 pp	16.7	23.6
Middle East and Central Asia							
39	Armenia	2006	Point with a range of deviations	4,0% ± 1,5 pp		4.1	3.4
40	Georgia	2009	Point	3%		4.6	4.7
41	Kazakhstan	2015	Point	5%		9.7	6.2
42	Uzbekistan	2021	Point	5%		10.9	6.1
Africa							
43	Ghana	2007	Point with a range of deviations	8% ± 2 pp		15.2	11.2
44	Uganda	2011	Point	5%		5.5	4.5
45	South Africa	2000	Target range	3–6%	3 pp	5.7	2.8
46	Republic of Seychelles****	2019	-	-		3.2	-
47	Kenya	2021	Point with a range of deviations	5.0% ± 2.5 pp		7.2	2.6

* *The inflation target is usually set for the overall consumer price index. Countries may use its value in the current month compared to the same month of the previous year, as of the end of the year, or its average over the year.*

** *Average annual inflation is calculated by month. The calculations for the USA and the euro area were made beginning from the date of the public announcement of their inflation targets (i.e., from 2012 and 1998, respectively).*

*** *It shows the average deviation of inflation from the target in percentage points over the entire period of inflation targeting. For the countries that have changed the targets since their transition to inflation targeting, the calculation takes into account those targets that were effective during respective time periods. The target means the point or the middle of the range with a point announced by the central bank. If the inflation target was set only as a range, the calculated middle of this range is used as the target. The calculations for the USA and the euro area were made beginning from the date of the public announcement of their inflation targets (i.e., from 2012 and 1998, respectively).*

**** *Until 31 December 2020, the target range was 0–4%. From 1 January 2021, there has been no quantitative inflation target. Nevertheless, low and steady inflation is still a priority for the central bank.*

Sources: IMF, central banks' websites, statistical agencies' websites, Bank of Russia calculations.

APPENDIX 7. IMPACT OF THE DIGITAL RUBLE ON MONETARY POLICY

In 2023, the Bank of Russia continued to design the digital ruble, which is the third, new form of the Russian ruble. The digital ruble will combine the features of cash and funds in bank accounts. Just as cash, digital rubles will be the Bank of Russia's liability, but the Bank of Russia will issue the national currency in the digital form. In terms of technology, the digital ruble is more like non-cash money.

The adoption of the digital ruble will provide a number of benefits to people, businesses, and state authorities. Financial inclusion will improve, including in remote and hard-to-reach areas facing a deficit of banking services due to the lack of both bank offices and internet access. People and organisations will be able to conduct transactions with digital rubles through the mobile application or online banking system of any credit institution where they are clients. In the future, this will be possible even when access to the internet is limited. Financial intermediaries will be able to create innovative services based on the digital ruble, including by using auto payments and smart contracts. However, the key advantage is that the third form of the Russian ruble will help reduce the cost of payments in the economy. Digital ruble transactions will be fee-free for people. The fee for businesses accepting payments for goods and services in digital rubles will be 0.3% of the payment amount, which is several times lower than acquiring fees. As a result, banks will compete for clients' funds more actively, offering them more beneficial service terms and higher interest rates on deposits.

The introduction of the digital ruble will not change the structure of the banking system: banks will still issue loans, raise funds into deposits, and process the largest part of payments in the economy. The Bank of Russia will continue to regulate the financial sector, conduct operations with the banking sector for the implementation of its monetary policy and within its other functions, issue cash, and process government payments.

The Bank of Russia will be the issuer of the digital ruble and will manage the digital ruble platform (hereinafter, the Platform). This means that funds in people's and companies' digital ruble accounts will be the Bank of Russia's liability just as issued cash rubles. Clients will be able to open digital ruble accounts, make payments, and see the balance of their accounts through banks' mobile applications. Thus, banks will act as intermediaries between the Bank of Russia and holders of digital ruble accounts on the Platform. If ordered by their clients, banks will transfer funds from bank accounts to digital ruble accounts. Besides, banks will be able to offer additional services using digital rubles to their clients. This model will make it possible to use financial institutions' infrastructure for providing services to clients.

The issue of the digital ruble will influence economic agents' demand for cash and funds in bank accounts. Although the total demand for money will not change, the digital ruble will partially replace other forms of money. The ratio between different forms of money will depend on a number of factors, including the convenience of their use, transaction costs, and the level of interest rates on bank deposits influencing the attractiveness and competitive advantages of banks' non-cash funds.[1] Households' and businesses' demand

[1] Grishchenko, V., Ponomarenko, A. and Seleznev, S. A Feasible Approach to Projecting Household Demand for the Digital Ruble in Russia. Working Paper Series. No. 108. February 2023; Grishchenko, V. Estimating Households' Demand for the Digital Ruble. Cbonds Review. No. 2. 2022.

for various forms of money will primarily depend on the effect of the digital ruble on the financial system and the economy.

The Bank of Russia will be introducing the digital ruble gradually. In 2022, the regulator completed the testing of the Platform prototype. The Platform enables money transfers between consumers (C2C), consumers and businesses (C2B; static QR code payments), order templates (smart contracts) for auto payments, and money transfers when specified conditions or parameters are met or specified events occur, with regard to one-off and regular C2C money transfers. The option of digital ruble payments offline is under development. The Platform was delivered for commissioning in May 2023.

The laws related to the introduction of the digital ruble became effective on 1 August 2023.[2] The Bank of Russia started the pilot testing of the digital ruble on real transactions with the participation of a limited number of users (13 credit institutions, 30 points-of-sale, and 11 Russian cities).

The use of the digital ruble in budget processes will reduce costs for administration of budget payments. The Bank of Russia will develop and explore possible mechanisms and parameters of using the digital ruble for budget payments jointly with the Ministry of Finance and the Federal Treasury of the Russian Federation. The Bank of Russia will also cooperate with other central banks developing their own digital currencies to conduct cross-border and foreign exchange operations with central bank digital currencies. The stage-by-stage adoption of the digital ruble will allow market participants to adapt to the new conditions.

The influence of the digital ruble on the banking sector liquidity and the operational procedure of monetary policy

Economic agents' demand for the digital ruble will become an additional factor of the banking sector liquidity. Digital rubles will be issued after credit institutions buy them using funds in their correspondent accounts. In this case, funds will be debited from credit institutions' correspondent accounts and credited to their digital accounts in digital rubles.

However, banks are not interested in buying digital rubles to hold them in their digital accounts. Banks will buy digital rubles to then transfer them to the digital accounts of their clients, including both individuals and legal entities.

The introduction of the new form of money will not increase the demand for money in the economy. People and organisations will be substituting cash and funds in bank accounts for digital rubles. Their effect on the banking sector will depend on the sources that will increase the amount of digital rubles in the economy.

Thus, if a client plans to increase the balance of the digital ruble account on the Platform from cash, he/she should first replenish the non-cash account with the bank and then transfer the funds from this non-cash account to the digital ruble account. As a result, the balance of cash in the credit institution's cash office will grow, while the amount of digital rubles in its digital ruble account on the Platform will decrease. Simultaneously, the balance of funds in the client's digital ruble account will increase, while the overall amount of issued digital rubles will remain the same.

---

[2] Federal Laws 'On Amending Certain Laws of the Russian Federation' and 'On Amending Articles 128 and 140 of Part 1, Part 2, and Articles 1128 and 1174 of Part 3 of the Civil Code of the Russian Federation' establishing the basis of the legal regulation of digital ruble transactions were adopted by the State Duma, approved by the Federation Council, and signed by the Russian President.

Banks have no reasons to hold a very large amount of cash in their cash offices. Hence, banks can be expected to collect vault cash and transfer it to the Bank of Russia, receiving funds to their correspondent accounts. The amount of digital rubles in a bank's account on the Platform may only change if they are bought using the funds in the credit institution's correspondent account with the Bank of Russia. Thus, as the digital ruble replaces cash, only the structure of the Bank of Russia's liabilities will change: the proportion of digital rubles will grow, whereas credit institutions' balances will remain the same.

Credit institutions' balances will change if funds from clients' bank accounts are transferred to digital ruble accounts on the Platform. This will involve an outflow of liquidity from the banking sector. The Bank of Russia will take into account this outflow when conducting its liquidity management operations, reducing the amount of liquidity absorption or increasing the amount of its provision. This will help maintain money market rates close to the Bank of Russia key rate.[3]

The transfer of funds from bank accounts to digital rubles might cause an outflow of liquidity, due to which the banking sector might shift to a steady structural liquidity deficit. However, this only implies that, by providing the required amount of liquidity to banks, the Bank of Russia will be the net lender to the banking sector on monetary policy operations. This situation is normal and does not involve any failures or disruptions in the functioning of the banking sector. This is confirmed by the experience of both the Bank of Russia (2012–2016) and a large number of other central banks. The Bank of Russia possesses a broad range of liquidity providing instruments, which will enable it to maintain the resilience of the banking sector. As evidenced by the experience of 2022 when the Bank of Russia

EXAMPLE OF CHANGES IN BALANCE SHEET ITEMS AFTER A CREDIT INSTITUTION PURCHASES DIGITAL RUBLES FROM THE BANK OF RUSSIA *Table A-7-1*

Bank of Russia	
Asset	Liability
Cash in the cash office 0	Issued cash 0
Claims on a credit institution 0	Credit institution's correspondent account (-100)
	Credit institution's digital ruble account (+100)
	Client's digital ruble account 0
Change in the balance sheet	0

Credit institution	
Asset	Liability
Cash in the cash office 0	Client's deposit / account (non-cash funds) 0
Correspondent account with the Bank of Russia (-100)	Liabilities to the Bank of Russia 0
Digital ruble account on the Platform (+100)	
Loans issued to a client 0	
Change in the balance sheet	0

Client	
Asset	Liability
Cash 0	Raised bank loan 0
Digital ruble account 0	
Client's deposit / account with a credit institution (non-cash funds) 0	
Change in the balance sheet	0

– changes in balance sheet items as a result of digital ruble transactions

* Hereinafter, the tables of Appendix 7 show the resulting effect of transactions on economic agents' balance sheets. The identical categories of assets and liabilities are highlighted in the same colour.
Source: Bank of Russia.

[3] Conducting liquidity providing or absorbing operations, the Bank of Russia regulates the overall amount in banks' correspondent accounts and thus manages interest rates in the money market.

EXAMPLE OF CHANGES IN BALANCE SHEET ITEMS WHEN A CLIENT REPLENISHES THE DIGITAL RUBLE ACCOUNT ON THE PLATFORM USING FUNDS IN THE CLIENT'S BANK ACCOUNT *Table A-7-2*

Bank of Russia	
Asset	Liability
Cash in the cash office 0	Issued cash 0
Claims on a credit institution 0	Credit institution's correspondent account 0
	Credit institution's digital ruble account on the Platform (-100)
	Client's digital ruble account (+100)
Change in the balance sheet	0

Credit institution	
Asset	Liability
Cash in a credit institution's cash office 0	Client's deposit / account (non-cash funds) (-100)
Correspondent account with the Bank of Russia 0	Liabilities to the Bank of Russia 0
Digital ruble account (-100)	
Loans issuedl to a client	
Change in the balance sheet	-100

Клиент	
Asset	Liability
Cash 0	Raised bank loan 0
Digital ruble account on the Platform (+100)	
Client's deposit / account with a credit institution (non-cash funds) (-100)	
Change in the balance sheet	0

– changes in balance sheet items as a result of digital ruble transactions

Source: Bank of Russia.

managed to provide a record-high amount of funds to banks within a very short period, the regulator's operational procedure enables it to support banks even in the case of a rapid transition from a liquidity surplus to its deficit and fully offset the outflow of liquidity, including if funds are transferred from clients' bank accounts to digital ruble accounts. The introduction of the digital ruble will not entail a significant outflow of funds from bank accounts owing to the stage-by-stage piloting of the digital ruble and zero interest on digital ruble balances. In addition, the Bank of Russia will set a limit of ₽300,000 per month for transfers of funds from bank accounts to digital ruble accounts on the Platform. This limit will make it easier for credit institutions to adapt to the introduction of the new form of money.

If credit institutions need to raise more funds from the Bank of Russia, the regulator will change its operational procedure only in terms of the amount. To achieve its operational objective, the Bank of Russia will still seek to ensure the balance between the demand for and supply of liquidity in the banking sector. To this end, where needed, the Bank of Russia will change the direction and amounts of its operations with credit institutions. Besides, it might further expand the list of assets that may be accepted as collaterals for the Bank of Russia's liquidity providing operations.

The influence of the digital ruble on the monetary policy transmission mechanism

The introduction of the third form of the Russian ruble will influence the transmission mechanism of monetary policy. This influence will most likely be insignificant and extended over time. In the course of the adoption of the digital ruble, rising uncertainty about the flows of clients' funds and possible changes in the structure of banks' balance sheets might have a distorting effect on the transmission of the monetary policy signal to the economy.

Nevertheless, having a mature system of monetary policy instruments, the Bank of Russia does not plan to use the digital ruble for increasing the efficiency of the transmission

of the monetary policy signal to the economy. Some central banks of advanced economies are considering the option of accruing interest on funds in digital currency accounts. These central banks were keeping zero or negative interest rates for a long time and have thus exhausted the potential of conventional monetary policy instruments. By accruing interest on digital currencies, these central banks will get an additional instrument for regulating interest rates in the economy and promoting market activity. The Bank of Russia will not use this mechanism and will not accrue interest on the balances of digital ruble accounts.

In the long term, the adoption of the digital ruble will create conditions enhancing the efficiency of the monetary policy transmission mechanism. A reduction in transaction costs for payments will encourage competition among banks. As a result, interest rates on bank deposits and current accounts will respond to changes in monetary conditions more quickly. Payments and financial transactions with the digital ruble will be faster, which will accelerate the transmission of the monetary policy signal. Non-cash payments will become more accessible in remote and hard-to-reach areas, thus improving financial inclusion in the economy.

The influence of the digital ruble on financial stability

The issue of the digital ruble and the transfer of clients' funds from their bank accounts to their digital ruble accounts on the Platform do not involve any risks to financial stability.

A gradual introduction of the digital ruble which will be extended over time will help mitigate the risk of a considerable outflow of liquidity from the banking sector. This will enable credit institutions to adjust to changes in the structure of their balance sheets. The Bank of Russia in turn will fully offset the outflow of liquidity from banks using the existing monetary policy instruments.

Financial stability risks that might stem from a large-scale transfer of funds from bank accounts to digital rubles as a result of the so-called flight to quality appear to be minor at the moment. People and businesses are confident in the Russian banking system, which has been promoted by the Bank of Russia's banking regulation and supervision measures, among other things. The external shocks observed in recent years have not entailed a steady flight to quality, while the short-term increases in the amount of cash in circulation (2020 and 2022) were triggered not by lower confidence in banks among households and organisations. The existing deposit insurance system protects bank deposits to the extent required by law. Besides, the limit to be established on transfers of non-cash funds to digital ruble accounts will make it impossible for banks' clients to instantaneously substitute the balances of their bank accounts for digital rubles. Furthermore, the Bank of Russia will not accrue any interest on funds in digital ruble accounts and thus compete with the banking sector for depositors' funds. If deposit rates remain positive, depositors will be interested in holding their funds with banks and receiving interest income.

As estimated by the Bank of Russia, the adoption of the digital ruble will not cause an outflow of funds from time deposits. The introduction of another inexpensive and convenient payment instrument will become another incentive for banks to increase the attractiveness of current accounts and offer more beneficial service terms to their clients. Overall, the adoption of the digital ruble will create conditions for increasing competition in the banking sector, more efficiently redistribute financial resources in the economy, and distribute revenues in the banking sector in favour of the credit institutions offering more beneficial terms on their products.

The additional payment infrastructure to be established for the digital ruble will enhance the resilience, reliability, and robustness of the payment system and money settlements in general. The use of the digital ruble will accelerate the transfer of funds from one bank to another, which will encourage competition in the banking system and improve financial stability. As the digital ruble is adopted, the Bank of Russia will monitor its effect on both the banking sector and the financial sector in general and take all necessary measures if there are any risks to financial stability.

Hence, the introduction of the digital ruble will not affect the fundamentals of the functioning of the banking system and the principles of the implementation of monetary policy. A two-tier retail model for the implementation of the digital ruble project will make it possible to preserve credit institutions' functions, first of all, lending to the economy and the creation of stable savings instruments, and to use credit institutions' infrastructure to provide services to clients. Furthermore, the adoption of the digital ruble will promote conditions for increasing competition in the banking sector and redistributing revenues in favour of more efficient financial intermediaries, as well as advancing the payment infrastructure. In the case of an outflow of funds from bank accounts to digital rubles, the Bank of Russia is prepared to promptly respond to the situation and take all necessary measures to maintain short-term interest rates close to the key rate and support the resilience of the banking system and financial stability.

APPENDIX 8. FINANCIAL MARKET DEVELOPMENT

In 2022, the Russian economy and financial market faced a whole range of various challenges amid the unprecedented sanction pressure. Owing to the implemented anti-crisis measures and the earlier consistent efforts aimed at enhancing the resilience of the financial sector, the situation was quickly stabilised. As a result, the financial market did not only prove its robustness supplying necessary resources to the economy, but also continued to develop.

Key measures planned for 2022 that remained relevant were still implemented as scheduled. Specifically, the Government established the system guaranteeing the rights of members of non-governmental pension funds (NPFs) in the non-governmental pension system. The Bank of Russia launched the Know Your Customer platform and completed the testing of the digital ruble platform. Furthermore, the authorities eased the requirements for classifying securities as hi-tech sector securities, and NPFs were allowed to invest pension reserves in bonds with variable payments within a separate limit and provide additional services to their clients.

In addition to the implementation of the anti-crisis measures, the Bank of Russia, jointly with the Russian Government, elaborated plans for further development of the financial market in the new environment. They were included in the Russian Financial Market Development Programme for 2023–2025 and are currently being actively implemented.

Specifically, based on the taxonomy developed by the Government of the Russian Federation, the regulator implemented special measures to support lending for projects promoting Russia's technological sovereignty and the structural adaptation of the country's economy.[1] In particular, banks with a universal licence are able to reduce the load on capital for targeted loans issued to finance such projects. These incentives will ensure the priority of financing of investment projects that are vital for the country's economy and encourage the expansion of the potential of bank lending in general. This will additionally boost the development of the top-priority areas of the Russian industrial sector and help refocus external economic activity on new markets. To increase the attractiveness of non-bank financial institutions' investment in securities issued by companies focused on promoting technological sovereignty and the structural adaptation of the economy, the Bank of Russia implemented incentive-based regulation measures for insurers and unit investment funds[2] and is planning to introduce relevant incentive-based regulation for NPFs and professional securities market participants.

[1] Resolution of the Government of the Russian Federation No. 603, dated 15 April 2023, 'On Approving the Priority Areas of Projects Promoting Russia's Technological Sovereignty and the Structural Adaptation of the Economy and the Regulation on the Terms for Classifying Projects as Projects Promoting Russia's Technological Sovereignty and the Structural Adaptation of the Economy, on Submitting the Information on Projects Promoting Russia's Technological Sovereignty and the Structural Adaptation of the Economy, on Keeping the Register of the Said Projects, and on the Requirements for Organisations Authorised to Issue Opinions on Compliance of Projects with the Requirements for Projects Promoting Russia's Technological Sovereignty and the Structural Adaptation of the Economy of the Russian Federation'.

[2] Bank of Russia Ordinance No. 6495-U, dated 2 August 2023, 'On Amending Bank of Russia Ordinance No. 4129-U, Dated 5 September 2016, 'On the Composition and Structure of Assets of Joint-stock Investment Funds and Unit Investment Funds' and Bank of Russia Ordinance No. 6513-U, dated 21 August 2023, 'On Amending Bank of Russia Regulation No. 781-P, Dated 16 November 2021, 'On the Requirements for Insurers' Financial Stability and Solvency'.

Jointly with the Government of the Russian Federation, the Bank of Russia promotes the development of the financial market, carrying out work in the following focus areas.

1. Creation of conditions for strengthening the role of the financial market in the financing of the economy's transformation while maintaining the resilience of the financial sector

The structural transformation requires a significant amount of long-term resources. For the economy to have a balanced set of financing sources, it is essential to promote the role of the capital market and non-bank financial intermediaries, active participation of various groups of investors and issuers in the market, development of long-term savings and investment instruments, and confidence in the financial market.

To encourage the involvement of private investors, the Bank of Russia is carrying out work to expand the range of long-term savings and investment instruments (transformation of individual investment accounts, launch of the long-term savings programme, development of the system of unit-linked life insurance), as well as to focus state support mechanisms on such instruments (expansion of the system of guarantees, provision of tax incentives).

Another aim is to increase the attractiveness of the Russian market for investors from friendly states. To this end, the Bank of Russia implemented the option of remote identification for foreign investors and their admission to exchange trading. Besides, it is planned to establish the procedure for opening branches of foreign banks from friendly countries. The partnership (Islamic) financing experiment will help expand opportunities for raising investment from countries having mature partnership (Islamic) financing instruments.

The consulting infrastructure of certain market participants and their groups might also become an important driver of the advancement of the capital market. Most issuers, especially among those offering their first issues, do not have such structural units that could make all preparations for a deal, while outsourcing to third-party consultants (exchanges, underwriters, auditors) involves considerable costs. Furthermore, jointly with the Russian Government, the Bank of Russia discusses support measures for issuers – technological companies. In addition, it is planned to develop other forms of financing that companies could use at earlier stages of their operation.

As regards the expansion of opportunities for banks to take part in the financing of the economy's transformation, the Bank of Russia especially focuses on extending bank deposit maturities. In view of this, the Bank of Russia will consider the issue of developing the mechanism of long-term deposits and create regulatory incentives by updating the national liquidity ratios and differentiating the rates of insurance premia paid to the compulsory deposit insurance fund depending on the maturity and type of deposits raised. To address the issue of credit risk diversification, the Bank of Russia will promote the development of the market of non-mortgage securitisation. Besides, the Bank of Russia is also considering possible expansion of the incentive-based regulation programme to encompass banks with a basic licence for them to participate in the financing of technological sovereignty and economic adaptation projects.

The Bank of Russia continues the work for the transition to credit ratings as banks' main selection criterion for placing public funds and other socially important entities' funds with these banks. The Russian Government will be able to set various rating levels for different situations depending on acceptable risk exposure. The implementation of this approach will help expand the range of banks eligible to raise the said funds and increase the potential for the inflow of temporarily available funds into the economy.

To ensure efficient operation of the financial market, it is crucial to restore and strengthen confidence among all its participants, including by gradually resuming the disclosure of information needed for making investment decisions and by developing the system of audit, which will improve the quality (reliability) of available information. Another focus area is establishing the national system of financial and commodity indices that will be a source of high-quality and reliable pricing information for market participants. As before, enhancement of corporate governance practices, including protection of minority investors and predictability of dividend payments, is critical for promoting confidence.

2. Protection of financial consumers and investors and enhancement of financial inclusion for people and businesses

Ensuring protection of financial consumers and investors and improving their financial and investment literacy are important areas of the Bank of Russia's work. In the near term, it is essential to enhance investors' protection further, including by actively advancing technologies and remote service channels. Besides, in the conditions of overload with information in everyday life, including in the form of investment advice, it is critical to teach newbie investors how to navigate the information environment and use reliable data sources.

The Bank of Russia carries out work to develop a complex of measures aimed at protecting retail investors and improving the approaches to their admission to the capital market with regard to testing procedures, classification of individuals as qualified investors, development of the list of instruments accessible only to qualified investors, and a number of others.

Another priority for the Bank of Russia is to increase the accessibility, quality and range of financial services for people and businesses, especially for vulnerable groups of consumers, namely residents of remote, sparsely populated and hard-to-reach areas, people with disabilities, elderly and physically challenged persons, low-income people, and SMEs.

As part of comprehensive protection of financial consumers' rights, it is critical to develop the key elements of financial culture among Russian people (values, behaviour patterns and practices) that would improve financial well-being of people, families and society, including by forming financial literacy competencies, developing the financial market and social institutions, and influencing people's values through creative industries' products.

The legislative authorities adopted the federal law,[3] developed with the active engagement of the Bank of Russia, that provides for fee-free online money transfers by individuals across their accounts opened with various banks within the monthly limit of ₽30 million. Furthermore, banks will be obliged to send fee-free messages to clients to notify them that their deposits are maturing, at least five days prior to the maturity date. The law is aimed at enhancing the protection of depositors–individuals, as well as at encouraging competition and improving the quality of banking products.

3. Promotion of digitalisation

Further digitalisation in the financial market remains a strategic priority for the Bank of Russia. Implementation of digital infrastructure projects and promotion of legal conditions encouraging innovations in the financial market are in progress.

---

[3] Federal Law No. 482-FZ, dated 4 August 2023, 'On Amending Articles 29 and 36 of Federal Law 'On Banks and Banking Activities'.

The Bank of Russia will continue to develop technologies for data exchange in the market, which will expand the potential for providing financial services remotely in the digital form. An essential stage will be the introduction of the regulation of Open APIs in the financial market for deploying the Open Finance model. Besides, the Bank of Russia plans to develop recommended Open Data model specifications for the non-financial market. The regulator continues to develop the Digital Profile and the Unified Biometric System, which will help reduce financial market participants' costs.

The Bank of Russia is enhancing the regulation of digital rights to develop innovative instruments in the financial market. In particular, it will harmonise the approaches to taxation of digital rights and traditional financial instruments. Furthermore, the Bank of Russia is going to create conditions for circulation of these instruments in the conventional financial infrastructure, which might notably expand the potential of their use.

To increase the opportunities for testing innovations, the authorities will develop a legal framework for using experimental legal regimes in the financial market.

4. Advancement of the payment infrastructure of the financial market

Ensuring the independence of the Russian economy in terms of the functioning of the financial market is primarily about the development of the required independent payment and settlement infrastructure. The development of products and services based on innovative digital solutions will be continued within the National Payment Card System and the Mir payment system. There are plans to enhance the functions and increase the number of participants in the Financial Messaging System, as well as to expand the set of the functions of the Faster Payments System.

The key innovation in the area of cash circulation, payments and settlements will be the planned introduction of the digital ruble (see Appendix 7 'The impact of the digital ruble on monetary policy').

5. Transformation of the system of foreign trade payments and settlements

In the conditions of the geopolitical pressure from unfriendly countries, the channels for interbank settlements in unfriendly states' currencies traditionally used by foreign trade participants have become unreliable or inaccessible.

To arrange new channels for cross-border settlements, the Bank of Russia is developing correspondent relationships among credit institutions with a focus on settlements in national currencies and is expanding financial messaging channels, other than the SWIFT. A legal framework is being created for admitting foreign banks' branches to the Russian financial market.

6. Ensuring financial stability

The Bank of Russia's priority is to maintain financial stability and depositors' and investors' confidence in the Russian financial system.

The key objectives are to mitigate foreign exchange risks by uniformly reducing the use of 'toxic' currencies, strategically refocus the Russian infrastructure on friendly states' markets, timely phase out the regulatory easing measures, and switch to the accumulation of capital buffers.

The Bank of Russia details the plans for the development of the financial market in the draft Russian Financial Market Development Programme for 2024–2026.

APPENDIX 9. MONETARY PROGRAMME

The main goal of the Bank of Russia's monetary policy is to maintain inflation close to 4%, and its operational objective is to keep interest rates in the unsecured overnight segment of the interbank money market close to the key rate. This strategy does not provide for setting and delivering on quantitative targets for any other economic indicators, including monetary ones. In addition to the banking sector liquidity forecast, the Bank of Russia calculates the monetary programme indicators. They supplement the forecast indicators which the Bank of Russia takes into account when elaborating and implementing its monetary policy.

Entry 1 'Monetary base (narrow definition)'

Changes in the monetary base in 2023–2026 will depend on the dynamics of the amount of cash in circulation. According to the Bank of Russia's baseline forecast, the proportion of cash in the total amount of money supply (national definition) will be gradually contracting, including owing to a further expansion of the practice of cashless payments.

The rise in the amount of required reserves for ruble liabilities held in special accounts with the Bank of Russia is associated with the increases in the required reserve ratios by the Bank of Russia in 2023 and with the annual recalculation of required reserves in 2024.

FORECAST OF KEY INDICATORS FOR MONETARY AUTHORITIES' ACCOUNTS (MONETARY PROGRAMME INDICATORS)*
(as of the end of the period, trillions of rubles, unless indicated otherwise)

Table A-9-1

	2022 (actual)	Baseline scenario			
		2023	2024	2025	2026
1. Monetary base (narrow definition)	**16.5**	**19.2**	**20.9**	**22.2**	**23.4**
1.1. Cash in circulation (outside the Bank of Russia)	16.3	19.0	20.5	21.7	22.9
1.2. Required reserves**	0.1	0.2	0.4	0.4	0.5
2. Net international reserves	**39.6**	**39.0**	**40.0**	**41.1**	**42.3**
– billions of US dollars***	563	554	568	585	601
3. Net domestic assets	**-23.1**	**-19.7**	**-19.0**	**-19.0**	**-18.9**
3.1. Net credit to general government	**-4.6**	**-2.0**	**-2.0**	**-3.2**	**-4.3**
3.2. Net credit to banks	**-5.4**	**-4.8**	**-5.2**	**-4.6**	**-4.1**
3.2.1. Gross credit to banks	2.5	1.5	0.5	0.8	1.8
3.2.1.1. Claims on refinancing operations****	2.1	1.2	0.2	0.5	1.5
3.2.2. Credit institutions' correspondent accounts with the Bank of Russia	-3.0	-4.6	-4.9	-5.3	-5.7
3.2.3. Credit institutions' deposits with the Bank of Russia and coupon OBRs	-5.0	-1.7	-0.8	-0.2	-0.2
3.3. Other net non-classified assets***	**-13.0**	**-12.9**	**-11.9**	**-11.1**	**-10.5**

** Monetary programme indicators calculated at a fixed exchange rate are based on the official exchange rate of the ruble as of the end of 2022, which was 70.3 rubles per US dollar, and at fixed cross exchange rates of the US dollar against foreign currencies as of the end of 2022.*

*** Credit institutions' required reserves deposited with the Bank of Russia in ruble-denominated accounts (do not include funds in credit institutions' correspondent accounts with the Bank of Russia taken into account within the required reserves averaging procedure).*

**** The forecast change in net international reserves takes into account operations of Russia's Ministry of Finance to buy (sell) foreign currency in the domestic foreign exchange market, as well as a reduction in banks' liabilities on the Bank of Russia's refinancing operations in foreign currency, operations of the Bank of Russia to buy monetary gold, and settlements within FX swaps to sell foreign currency for rubles.*

***** Include claims on refinancing operations in rubles, including secured loans, repos and the Bank of Russia's FX swaps to buy foreign currency for rubles.*

****** Include operations with the use of funds of the State Corporation Deposit Insurance Agency and the Fund of Banking Sector Consolidation, the Bank of Russia's net interest expenses, operations of Russia's Ministry of Finance to invest the NWF's resources, the growth of required reserves for foreign currency liabilities held in special accounts, and foreign currency revaluation of assets.*

Source: Bank of Russia.

The total amount of required reserves will be redistributed based on the following factors: 0.9 to be averaged by banks in correspondent accounts with the Bank of Russia, and 0.1 to be credited to special required reserve accounts. Besides, to a certain extent, the rise in this indicator over the period under review is explained by the overall expansion of broad money. The change in required reserves for foreign currency liabilities, also held in special accounts, is given in Entry 3.3 'Other net non-classified assets'.

Entry 2 'Net international reserves'

Changes in Entry 2 'Net international reserves' take into account regular fiscal rule-based operations to buy (sell) foreign currency and operations associated with the use of the NWF's resources to invest them in permitted financial assets within the Russian economy.

Entry 3 'Net domestic assets'

Entry 3.1 'Net credit to general government'

Entry 3.1 'Net credit to general government' takes into account the assumption about the financing of a part of budget expenditures from the NWF.

Entry 3.2 'Net credit to banks'

The value in Entry 3.2 'Net credit to banks' will remain negative throughout the period under review.

Entry 3.2.1.1 'Claims on refinancing operations' includes banks' operations to raise funds for longer terms, including through the use of specialised refinancing instruments.

As before, the forecast for the value in Entry 3.2.2 'Credit institutions' correspondent accounts with the Bank of Russia' implies a uniform trajectory of required reserves averaging by credit institutions. The forecast takes into account the increases in the required reserve ratios by the Bank of Russia in 2023 and the rise in this indicator over the period under review through the overall expansion of broad money.

Entry 3.2.3 'Credit institutions' deposits with the Bank of Russia and coupon OBRs' is a balancing component of the monetary programme in the case of a liquidity surplus. If there is a liquidity deficit, Entry 3.2.1.1 'Claims on refinancing operations' becomes a balancing component. As a result of changes in other items of the monetary programme, the amount of deposits, including standing deposit facilities, and claims on refinancing operations will decline to ₽0.2 trillion and ₽1.5 trillion, respectively, by the end of 2026.

Entry 3.3 'Other net non-classified assets'

The changes in Entry 3.3 'Other net non-classified assets' over the forecast horizon take into account the Bank of Russia's payment of interest on standard liquidity absorbing and refinancing operations and the operations of Russia's Ministry of Finance to invest the NWF's resources, foreign currency revaluation of assets, and the growth of required reserves for foreign currency liabilities held in special accounts.

CALENDARS AND TABLES

CALENDAR OF KEY RATE DECISIONS FOR 2024

■	**16 February 2024**	**Bank of Russia Board of Directors' key rate meeting**
		Press release on the key rate
		Medium-term forecast
		Press conference by the Governor of the Bank of Russia
	27 February 2024	**Monetary Policy Report**
	22 March 2024	**Bank of Russia Board of Directors' key rate meeting**
		Press release on the key rate
		Press conference by the Governor of the Bank of Russia
■	**26 April 2024**	**Bank of Russia Board of Directors' key rate meeting**
		Press release on the key rate
		Medium-term forecast
		Press conference by the Governor of the Bank of Russia
	8 May 2024	**Monetary Policy Report**
	7 June 2024	**Bank of Russia Board of Directors' key rate meeting**
		Press release on the key rate
		Press conference by the Governor of the Bank of Russia
■	**26 July 2024**	**Bank of Russia Board of Directors' key rate meeting**
		Press release on the key rate
		Medium-term forecast
		Press conference by the Governor of the Bank of Russia
	5 August 2024	**Monetary Policy Report**
	13 September 2024	**Bank of Russia Board of Directors' key rate meeting**
		Press release on the key rate
		Press conference by the Governor of the Bank of Russia
■	**25 October 2024**	**Bank of Russia Board of Directors' key rate meeting**
		Press release on the key rate
		Medium-term forecast
		Press conference by the Governor of the Bank of Russia
	2 November 2024	**Monetary Policy Report**
	20 December 2024	**Bank of Russia Board of Directors' key rate meeting**
		Press release on the key rate
		Press conference by the Governor of the Bank of Russia

SCHEDULE OF BANK OF RUSSIA AUCTIONS IN 2024

One-week repo and deposit auctions

In the situation of a structural liquidity surplus, the Bank of Russia is planning to hold one-week auctions in the form of deposit auctions. Should a one-week repo auction be held instead of a deposit auction, the Bank of Russia will publish relevant information on its website on the business day preceding the auction.

ONE-WEEK DEPOSIT AUCTIONS

Auction date	Date of funds placement by credit institutions	Date of repayment and interest payment by the Bank of Russia
09.01.2024	10.01.2024	17.01.2024
16.01.2024	17.01.2024	24.01.2024
23.01.2024	24.01.2024	31.01.2024
30.01.2024	31.01.2024	07.02.2024
06.02.2024	07.02.2024	14.02.2024
13.02.2024	14.02.2024	21.02.2024
20.02.2024	21.02.2024	28.02.2024
27.02.2024	28.02.2024	06.03.2024
05.03.2024	06.03.2024	13.03.2024
12.03.2024	13.03.2024	20.03.2024
19.03.2024	20.03.2024	27.03.2024
26.03.2024	27.03.2024	03.04.2024
02.04.2024	03.04.2024	10.04.2024
09.04.2024	10.04.2024	17.04.2024
16.04.2024	17.04.2024	24.04.2024
23.04.2024	24.04.2024	02.05.2024
02.05.2024	02.05.2024	08.05.2024
07.05.2024	08.05.2024	15.05.2024
14.05.2024	15.05.2024	22.05.2024
21.05.2024	22.05.2024	29.05.2024
28.05.2024	29.05.2024	05.06.2024
04.06.2024	05.06.2024	13.06.2024
11.06.2024	13.06.2024	19.06.2024
18.06.2024	19.06.2024	26.06.2024
25.06.2024	26.06.2024	03.07.2024
02.07.2024	03.07.2024	10.07.2024

Auction date	Date of funds placement by credit institutions	Date of repayment and interest payment by the Bank of Russia
09.07.2024	10.07.2024	17.07.2024
16.07.2024	17.07.2024	24.07.2024
23.07.2024	24.07.2024	31.07.2024
30.07.2024	31.07.2024	07.08.2024
06.08.2024	07.08.2024	14.08.2024
13.08.2024	14.08.2024	21.08.2024
20.08.2024	21.08.2024	28.08.2024
27.08.2024	28.08.2024	04.09.2024
03.09.2024	04.09.2024	11.09.2024
10.09.2024	11.09.2024	18.09.2024
17.09.2024	18.09.2024	25.09.2024
24.09.2024	25.09.2024	02.10.2024
01.10.2024	02.10.2024	09.10.2024
08.10.2024	09.10.2024	16.10.2024
15.10.2024	16.10.2024	23.10.2024
22.10.2024	23.10.2024	30.10.2024
29.10.2024	30.10.2024	06.11.2024
05.11.2024	06.11.2024	13.11.2024
12.11.2024	13.11.2024	20.11.2024
19.11.2024	20.11.2024	27.11.2024
26.11.2024	27.11.2024	04.12.2024
03.12.2024	04.12.2024	11.12.2024
10.12.2024	11.12.2024	18.12.2024
17.12.2024	18.12.2024	25.12.2024

REQUIRED RESERVES AVERAGING PERIODS IN 2024

Averaging period to calculate required reserves for a corresponding reporting period	Averaging period duration (days)	Memo item:	
		Reporting period	Required reserves regulation period
17.01.2024 – 13.02.2024	28	December 2023	24.01.2024 – 26.01.2024
14.02.2024 – 12.03.2024	28	January 2024	16.02.2024 – 20.02.2024
13.03.2024 – 09.04.2024	28	February 2024	19.03.2024 – 21.03.2024 (as recalculated)
10.04.2024 – 07.05.2024	28	March 2024	16.04.2024 – 18.04.2024
08.05.2024 – 04.06.2024	28	April 2024	21.05.2024 – 23.05.2024
05.06.2024 – 09.07.2024	35	May 2024	19.06.2024 – 21.06.2024
10.07.2024 – 13.08.2024	35	June 2024	16.07.2024 – 18.07.2024
14.08.2024 – 10.09.2024	28	July 2024	16.08.2024 – 20.08.2024
11.09.2024 – 08.10.2024	28	August 2024	17.09.2024 – 19.09.2024
09.10.2024 – 12.11.2024	35	September 2024	16.10.2024 – 18.10.2024
13.11.2024 – 10.12.2024	28	October 2024	18.11.2024 – 20.11.2024
11.12.2024 – 14.01.2025	35	November 2024	17.12.2024 – 19.12.2024

The required reserves averaging period as recalculated in 2024

The required reserves averaging period in 2024 for the annual recalculation of required reserves deposited in the required reserve account: 19–21 March 2024.

STATISTICAL TABLES

MACROECONOMIC INDICATORS IN 2004–2022 *Table 1*
(% growth YoY, unless indicated otherwise)

Indicators	Average 2004–2008	Average 2009–2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Inflation, as of the year-end											
Inflation, as of the year-end											
CPI, all goods and services	11.4	7.3	11.4	12.9	5.4	2.5	4.3	3.0	4.9	8.4	11.9
of which: excluding fruit and vegetables, petroleum products, and housing and utility services	10.4	6.8	11.2	13.3	6.1	2.1	4.0	3.2	4.6	8.6	13.5
– food products	12.5	7.5	15.4	14.0	4.6	1.1	4.7	2.6	6.7	10.6	10.3
of which: fruit and vegetables	11.4	5.5	22.0	17.4	-6.8	1.2	4.9	-2.1	17.4	14.0	-2.0
food products excluding fruit and vegetables	12.6	7.6	14.7	13.6	6.0	1.0	4.6	3.1	5.4	10.2	12.0
– non-food goods	6.9	6.2	8.1	13.7	6.5	2.8	4.1	3.0	4.8	8.6	12.7
of which: non-food goods excluding petroleum products	6.5	6.0	8.0	14.5	6.8	2.3	3.3	3.1	5.1	8.5	14.5
– services	16.4	8.7	10.5	10.2	4.9	4.4	3.9	3.8	2.7	5.0	13.2
of which: services excluding housing and utility services	13.7	6.8	10.9	10.2	4.7	4.2	4.1	3.4	2.2	5.6	14.7
Core inflation	10.2	6.6	11.2	13.7	6.0	2.1	3.7	3.1	4.2	8.9	14.3
GDP											
GDP	7.1	1.3	0.7	-2.0	0.2	1.8	2.8	2.2	-2.7	5.6	-2.1
Final consumption expenditure	9.5	2.6	0.9	-8.0	-1.5	3.4	3.5	3.4	-3.9	8.0	-0.3
– households	12.4	3.7	2.1	-9.5	-2.6	3.7	4.3	3.8	-5.9	10.0	-1.4
– general government	2.4	-0.1	-2.5	-3.6	1.4	2.5	1.3	2.4	1.9	2.9	2.8
Gross capital formation	15.1	-0.1	-6.4	-11.7	-0.6	6.4	-1.6	2.3	-4.3	14.1	-4.9
– gross fixed capital formation	14.5	1.2	-2.1	-10.6	1.3	4.7	0.6	1.0	-4.0	9.1	3.3
Exports	6.5	1.5	0.5	3.7	3.2	5.0	5.6	0.7	-4.2	3.3	-13.9
Imports	20.6	3.4	-7.3	-25.0	-3.7	17.3	2.7	3.1	-11.9	19.1	-15.0
Consumer activity											
Retail turnover	14.0	3.7	2.7	-10.0	-4.8	1.3	2.8	1.9	-3.2	7.8	-6.5
– food products	11.4	2.6	0.0	-9.0	-5.2	1.1	2.1	1.8	-1.6	2.7	-1.7
– non-food goods	16.3	4.8	5.1	-10.9	-4.5	1.5	3.5	2.0	-4.6	12.7	-10.6
Turnover in public catering	13.2	1.5	1.7	-5.0	-2.9	3.2	14.9	4.9	-22.4	26.8	7.6
Turnover in commercial services	7.1	1.2	1.3	-2.0	-0.3	0.2	3.2	1.7	-14.6	17.2	5.0
Labour market											
Unemployment, %, yearly average	6.8	6.6	5.2	5.6	5.5	5.2	4.8	4.6	5.8	4.8	3.9
Real wages, % YoY, yearly average	13.0	3.5	1.2	-9.0	0.8	2.9	8.5	4.8	3.8	4.5	0.3
Nominal wages, % YoY, yearly average	25.8	11.5	9.1	5.1	7.9	6.7	11.6	9.5	7.3	11.5	14.1
Monetary indicators, as of the year-end											
Money supply in the national definition (M2)	33.5	19.5	0.7	11.3	9.2	10.5	11.0	9.7	13.5	13.0	24.4
Broad money (M2X)[1]	33.1	17.7	3.4	11.8	4.0	8.6	7.9	7.6	12.6	11.1	14.0
Claims on the economy[1]	43.3	15.6	19.9	3.0	3.5	9.1	8.7	10.1	10.9	13.9	12.0
– including on households[1]	72.8	21.0	12.9	-6.4	1.4	12.1	21.8	19.0	12.9	22.0	9.4
– on businesses[1]	38.4	14.0	22.8	6.3	4.0	8.3	4.8	7.1	10.2	10.7	13.2

[1] Where increases in the indicators comprising foreign currency and ruble components are calculated herein, the growth of the foreign currency component is converted into rubles using the period average exchange rate.
Sources: Rosstat, Bank of Russia calculations.

MACROECONOMIC INDICATORS IN 2021–2023, BY QUARTER *Table 2*
(% growth YoY)

Indicators	2021				2022				2023					
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	July	August	September
Internal conditions														
Inflation														
CPI, all goods and services	5.8	6.5	7.4	8.4	16.7	15.9	13.7	11.9	3.5	3.3	6.0	4.3	5.2	6.0
of which: excluding fruit and vegetables, petroleum products, and housing and utility services	5.8	6.6	7.5	8.6	17.7	18.2	16.2	13.5	3.7	2.6	4.5	3.3	3.8	4.5
– food products	7.6	7.9	9.2	10.6	18.0	18.0	14.2	10.3	2.6	0.2	4.9	2.2	3.6	4.9
of which: fruit and vegetables	11.9	11.2	15.2	14.0	34.8	11.6	-3.9	-2.0	-9.4	-1.9	25.9	12.9	20.4	25.9
food products excluding fruit and vegetables	7.0	7.4	8.6	10.2	15.7	19.0	16.5	12.0	4.4	0.4	2.7	0.9	1.7	2.7
– non-food goods	5.9	7.0	8.1	8.6	20.3	17.9	14.9	12.7	0.1	1.0	4.6	2.4	3.6	4.6
of which: non-food goods excluding petroleum products	6.0	7.2	8.2	8.5	22.4	19.9	16.8	14.5	0.1	0.6	3.6	1.9	2.9	3.6
– services	3.2	4.0	4.2	5.0	9.9	10.2	11.0	13.2	9.7	11.0	9.7	10.0	9.5	9.7
of which: services excluding housing and utility services	3.1	4.2	4.5	5.6	12.9	13.4	14.5	14.7	9.2	10.9	10.0	10.9	10.0	10.0
Core inflation	5.4	6.6	7.6	8.9	18.7	19.2	17.1	14.3	3.7	2.4	4.6	3.2	4.0	4.6
GDP														
GDP	0.5	11.2	5.0	5.8	3.0	-4.5	-3.5	-2.7	-1.8	4.9	-	-	-	-
Final consumption expenditure	-1.1	20.7	7.8	6.4	4.6	-2.6	-2.3	-0.7	3.5	6.9	-	-	-	-
– households	-2.6	28.7	9.8	7.8	5.8	-4.4	-3.9	-2.4	-0.1	8.9	-	-	-	-
– general government	2.6	4.1	2.6	2.4	1.9	2.3	2.4	4.7	13.5	1.9	-	-	-	-
Gross capital formation	16.0	19.3	8.4	14.5	-7.6	-18.7	5.6	-2.4	11.4	21.9	-	-	-	-
– gross fixed capital formation	6.3	14.7	11.3	5.9	7.4	2.7	1.8	3.0	0.6	12.8	-	-	-	-
Exports	-0.9	-1.4	8.5	6.8	3.6	-15.8	-26.6	-14.6	-	-	-	-	-	-
Imports	2.0	34.9	21.6	19.8	1.4	-27.6	-20.5	-11.2	-	-	-	-	-	-
Consumer activity														
Retail turnover	-0.8	24.3	5.9	4.7	4.8	-9.6	-9.8	-9.6	-6.9	9.4	-	10.8	11.0	-
– food products	-2.8	8.0	3.0	2.8	3.3	-2.2	-3.1	-3.9	-3.2	4.8	-	4.1	5.1	-
– non-food goods	1.3	43.3	8.5	6.4	6.1	-15.9	-15.3	-14.5	-10.0	14.1	-	17.6	16.8	-
Turnover in public catering	-1.6	108.2	23.9	16.0	12.7	2.1	5.3	10.6	12.2	18.4	-	12.1	8.4	-
Turnover in commercial services	-2.9	53.9	17.1	13.0	11.5	3.3	3.9	3.0	2.8	5.0	-	5.2	5.2	-
Labour market														
Unemployment , SA	5.5	5.0	4.5	4.3	4.2	4.0	3.9	3.7	3.5	3.3	-	3.1	3.0	-
Real wages	1.6	5.5	2.0	2.8	3.1	-5.4	-1.9	0.5	1.9	11.4	-	9.2	-	-
Nominal wages	7.2	11.8	9.0	11.3	15.0	10.6	12.2	12.7	10.7	14.4	-	13.9	-	-
Monetary indicators														
Money supply in the national definition (M2)	11.3	9.5	8.2	13.0	17.1	16.8	23.9	24.4	24.4	25.4	20.8[1]	24.7	22.9	20.8[1]
Broad money (M2X)[2]	11.0	9.9	10.2	11.1	11.0	12.5	14.3	14.0	15.9	16.6	14.9[1]	15.9	15.5	14.9[1]
Claims on the economy[2]	10.2	13.1	14.3	13.9	15.7	11.5	10.7	12.0	10.9	16.2	-	18.2	19.0	-
– including on households[2]	13.5	20.4	20.7	22.0	20.2	12.2	10.2	9.4	10.0	17.2	-	18.2	18.3	-
– on businesses[2]	8.9	10.3	11.9	10.7	14.0	11.1	10.9	13.2	11.3	15.8	-	18.3	20.6	-

[1] Preliminary estimate.
[2] Where increases in the indicators comprising foreign currency and ruble components are calculated herein, the growth of the foreign currency component is converted into rubles using the period average exchange rate.
Sources: Rosstat, Bank of Russia.

BALANCE OF PAYMENTS INDICATORS IN 2004–2022
(billions of US dollars, unless indicated otherwise)

Table 3

Indicators	Average 2004–2008	Average 2009–2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Current account	**82.3**	**64.0**	**57.5**	**67.8**	**24.5**	**32.2**	**115.7**	**65.7**	**35.4**	**122.1**	**237.9**
Balance of trade	127.0	165.9	188.9	148.4	90.2	114.6	195.1	165.8	93.4	190.3	315.6
Exports	305.6	450.9	496.8	341.4	281.7	352.9	443.9	419.7	333.5	494.3	592.1
Imports	178.6	285.0	307.9	193.0	191.5	238.4	248.9	253.9	240.1	304.0	276.5
Balance of services	-14.1	-36.4	-55.3	-37.2	-24.0	-31.3	-30.1	-36.5	-16.8	-20.4	-22.2
Exports	37.7	57.1	65.7	51.6	50.6	57.5	64.6	62.0	48.0	55.6	48.6
Imports	51.8	93.5	121.0	88.8	74.6	88.9	94.7	98.5	64.7	75.9	70.9
Balance of primary and secondary income	-30.6	-65.5	-76.1	-43.5	-41.8	-51.1	-49.3	-63.7	-41.3	-47.8	-55.4
Capital account	**-4.8**	**-3.6**	**-42.0**	**-0.3**	**-0.8**	**-0.2**	**-1.1**	**-0.3**	**-0.1**	**0.1**	**-4.6**
Current account balance and capital account balance	**77.5**	**60.4**	**15.5**	**67.5**	**23.7**	**32.0**	**114.6**	**65.4**	**35.3**	**122.2**	**233.3**
Financial account balance, net of reserves	**10.3**	**39.5**	**131.0**	**68.6**	**10.1**	**11.9**	**78.5**	**-3.1**	**52.8**	**59.0**	**236.9**
Net incurrence of liabilities	96.0	67.2	-49.7	-72.2	-5.4	2.9	-36.5	28.7	-39.5	37.7	-126.4
Net acquisition of financial assets, net of reserves	106.3	106.7	81.3	-3.5	4.7	14.9	42.0	25.7	13.3	96.7	110.5
Net errors and omissions	**-2.4**	**-8.7**	**7.9**	**2.9**	**-5.4**	**2.6**	**2.1**	**-2.0**	**3.8**	**0.3**	**-3.7**
Change in reserves	**64.8**	**12.1**	**-107.5**	**1.7**	**8.2**	**22.6**	**38.2**	**66.5**	**-13.8**	**63.5**	**-7.3**
Goods and services exports, % YoY	29.0	5.5	-5.0	-30.1	-15.4	23.5	23.9	-5.3	-20.8	44.1	16.5
Goods and services imports, % YoY	29.5	7.8	-8.7	-34.3	-5.6	23.0	5.0	2.6	-13.5	24.6	-8.6
Memo item:											
Brent crude price, $ per barrel, yearly average	65.7	94.7	98.9	52.4	44.0	54.4	71.1	64.2	43.2	70.9	99.0
Nominal exchange rate, RUB/USD, yearly average	26.9	30.9	38.0	60.7	66.9	58.3	62.5	64.7	71.9	73.6	67.5

Source: Bank of Russia.

EXTERNAL CONDITIONS IN 2004–2022

Table 4

Indicators	Average 2004–2008	Average 2009–2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
GDP, % YoY, average for the period											
USA	2.5	1.2	2.3	2.7	1.7	2.2	2.9	2.3	-2.8	5.9	2.1
Euro area	2.1	-0.4	1.4	2.0	1.9	2.6	1.8	1.6	-6.1	5.4	3.5
China	11.6	9.1	7.4	7.0	6.9	6.9	6.8	6.0	2.2	8.5	3.0
Inflation, % YoY, as of the year-end											
USA (Headline CPI)	2.8	2.0	0.5	0.7	2.2	2.2	1.9	2.1	1.6	7.4	6.6
Euro area (Headline HICP)	2.2	1.8	-0.2	0.3	1.1	1.3	1.5	1.3	-0.3	5.0	9.2
China (Headline CPI)	3.0	3.1	1.6	1.7	2.1	1.7	1.8	4.5	0.2	1.4	1.8
Budget deficit, % of GDP, average for the period											
USA	3.8	9.3	4.0	3.5	4.4	4.8	5.3	5.7	14.0	13.6	5.7
Euro area	2.0	4.7	2.5	1.9	1.5	0.9	0.4	0.6	7.1	6.8	3.7
China	0.8	0.7	0.7	2.5	3.4	3.4	4.3	6.1	9.7	4.3	5.1
Policy rate, % p.a., yearly average											
USA (upper bound)	3.30	0.25	0.25	0.27	0.52	1.13	1.90	2.29	0.39	0.25	2.00
Euro area (deposit facility rate)	1.90	0.26	-0.10	-0.21	-0.38	-0.40	-0.40	-0.43	-0.50	-0.50	0.12
China			5.71	4.85	4.30	4.30	4.31	4.26	3.87	3.85	3.68

Sources: national statistical agencies, US Fed, ECB, IMF, Investing, Bank of Russia calculations.

BALANCE OF PAYMENTS INDICATORS IN 2021–2023, BY QUARTER *Table 5*
(billions of US dollars, unless indicated otherwise)

Indicators	2021				2022				2023		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3*
Current account	**22.4**	**17.3**	**35.5**	**46.9**	**71.0**	**77.0**	**47.9**	**41.9**	**14.7**	**9.6**	**16.6**
Balance of trade	28.7	38.8	54.2	68.5	84.8	95.1	72.8	62.8	30.2	27.4	30.2
Exports	93.3	114.9	132.1	154.0	154.6	151.8	141.7	144.0	104.9	103.7	106.1
Imports	64.6	76.1	77.9	85.5	69.8	56.7	68.8	81.2	74.7	76.2	75.9
Balance of services	-3.0	-4.1	-6.9	-6.4	-3.5	-3.6	-7.0	-8.1	-7.3	-8.5	-9.0
Exports	11.5	13.0	14.1	17.0	13.9	11.1	11.4	12.3	9.8	10.4	10.1
Imports	14.5	17.1	21.0	23.3	17.4	14.7	18.3	20.4	17.1	18.9	19.1
Balance of primary and secondary income	-3.3	-17.5	-11.9	-15.2	-10.2	-14.4	-18.0	-12.8	-8.2	-9.3	-4.5
Capital account	**0.2**	**0.0**	**0.0**	**0.0**	**0.0**	**-1.1**	**-1.9**	**-1.5**	**-0.1**	**0.0**	**0.0**
Current account balance and capital account balance	**22.6**	**17.2**	**35.5**	**46.9**	**71.0**	**75.9**	**46.0**	**40.4**	**14.7**	**9.5**	**16.6**
Financial account balance, net of reserves	**19.0**	**9.8**	**4.1**	**26.1**	**77.9**	**75.1**	**42.6**	**41.2**	**17.1**	**7.9**	**12.5****
Net incurrence of liabilities	-0.3	2.9	32.2	2.9	-35.1	-50.1	-13.9	-27.4	-9.2	6.2	4.3
Net acquisition of financial assets, net of reserves	18.7	12.7	36.3	29.1	42.9	25.0	28.7	13.8	7.9	14.1	16.8**
Net errors and omissions	**0.1**	**1.1**	**-1.8**	**0.9**	**-3.7**	**0.4**	**-1.6**	**1.1**	**-2.7**	**-3.1**	**-4.1**
Change in reserves	**3.7**	**8.5**	**29.6**	**21.7**	**-10.6**	**1.2**	**1.8**	**0.4**	**-5.1**	**-1.4**	**-**
Goods and services exports, % YoY	1.6	58.5	63.0	58.5	60.7	27.4	4.7	-8.6	-31.9	-30.0	-24.1
Goods and services imports, % YoY	4.6	40.9	32.5	23.0	10.2	-23.3	-11.8	-6.6	5.3	33.2	9.0
Memo item:											
Brent crude price, $ per barrel, quarterly average	61.3	69.1	73.2	79.7	97.9	112.0	97.7	88.6	82.1	77.7	85.9
Nominal exchange rate, RUB/USD, quarterly average	74.3	74.2	73.5	72.6	84.7	66.0	59.4	62.3	72.7	81.0	94.1

** Estimate for 2023 Q3.*
*** Estimates for 2023 Q3 include the change in reserves.*
Source: Bank of Russia.

EXTERNAL CONDITIONS IN 2021–2023, BY QUARTER *Table 6*

Indicators	2021				2022				2023		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
GDP, % YoY, average for the period											
USA	1.2	12.5	5.0	5.7	3.7	1.8	1.9	0.9	1.6	2.2	-
Euro area	-0.8	14.1	4.0	4.7	5.5	4.3	2.5	1.8	1.0	0.4	-
China	19.2	8.3	5.3	4.4	4.7	1.4	3.9	2.8	4.0	6.8	-
Inflation, % YoY, as of the year-end											
USA (Headline CPI)	2.6	5.3	5.4	7.3	8.5	8.9	8.2	6.5	5.0	3.1	3.7
Euro area (Headline HICP)	1.3	1.9	3.4	5.0	7.3	8.5	9.8	9.1	6.8	6.1	4.3
China (Headline CPI)	0.3	1.2	0.5	1.4	1.5	2.5	2.8	1.8	0.7	0.0	0.0
Budget deficit, % of GDP, average for the period											
USA	19.3	11.9	12.2	11.1	7.3	4.3	5.5	5.6	7.0	8.6	-
Euro area	8.3	7.0	6.4	5.4	4.3	3.2	3.2	3.7	3.7	3.7	-
China	5.2	4.3	3.9	3.8	3.8	5.3	5.5	4.7	5.0	4.8	-
Policy rate, % p.a., yearly average											
USA (upper bound)	0.25	0.25	0.25	0.25	0.30	0.95	2.37	3.84	4.70	5.16	5.43
Euro area (deposit facility rate)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	0.1	1.4	2.4	3.2	3.7
China	3.9	3.9	3.9	3.8	3.7	3.7	3.7	3.7	3.7	3.6	3.5

Sources: national statistical agencies, US Fed, ECB, IMF, Investing, Bank of Russia calculations.

REQUIRED RESERVE RATIOS IN 2022–2023[1]

Table 7

(%)

	Ruble liabilities[2] of banks with a universal licence and non-bank credit institutions	Ruble liabilities to non-resident legal entities of banks with a basic licence	Ruble liabilities to individuals and other liabilities of banks with a basic licence	Banks' and non-bank credit institutions' foreign currency liabilities[2] (except in unfriendly countries' currencies)	Banks' and non-bank credit institutions' foreign currency liabilities[2] (in unfriendly countries' currencies)	Banks' foreign currency liabilities[2]	Non-bank credit institutions' foreign currency liabilities[2]
From 01.06.2023	4.50	1.00		6.00	8.50	-	-
01.04.2023–31.05.2023	4.00	1.00		5.50	7.50	-	-
01.03.2023–31.03.2023	4.00	1.00		-	-	7.00	
01.08.2022–28.02.2023	3.00	1.00		-	-	5.00	
01.05.2022–31.07.2022	2.00	1.00		-	-	4.00	2.00
01.04.2022–30.04.2022	2.00	1.00		-	-	2.00	
03.03.2022–31.03.2022	2.00		1.00	-	-	2.00	
01.01.2022–02.03.2022	4.75		1.00	-	-	8.00	

[1] *For details, refer to the required reserve ratios.*
[2] *Liabilities to non-resident legal entities, liabilities to individuals, and other liabilities.*
Source: Bank of Russia.

REQUIRED RESERVES AVERAGING RATIOS IN 2022–2023

Table 8

	Banks	Non-bank credit institutions
From 03.03.2022	0.9	1.0
From 01.01.2022	0.8	1.0

Note. From 1 January 2022 through 31 March 2022, credit institutions meeting certain criteria were entitled to calculate the averaged amount of required reserves using the averaging ratio not above the averaging ratios established by the Bank of Russia. From 1 April 2022, unified averaging ratios are mandatory.
Source: Bank of Russia.

BANK OF RUSSIA KEY RATE[1] AND RUONIA IN 2022–2023 *Table 9*
(% p.a.)

Period	Key rate	Key rate change, pp	RUONIA (average for the period)	Spread between RUONIA and the key rate, pp (average for the period)	Standing overnight deposit facilities – lower bound of the interest rate corridor	Open market operations: main and fine-tuning auctions[2]	Standing liquidity providing operations[3]		Open market operations: long-term auctions[4]		
							Operations within the MM[5] – upper bound of the interest rate corridor	Operations within the AM[6]	Repo auctions		Loan auctions
					1 day	1 week and from 1 to 6 days	From 1 to 30 days[7]	From 1 to 180 days[8]	1 month	1 year	3 months
Rule: spread to the key rate, pp					-1.00	0.00	+1.00	+1.75	+0.10	+0.25	
From 30.10.2023	15.00	↑ 2.00			14.00	15.00	16.00	16.75	15.10	15.25	15.25
18.09.2023–29.10.2023	13.00	↑ 1.00	12.74	-0.26	12.00	13.00	14.00	14.75	13.10	13.25	13.25
15.08.2023–17.09.2023	12.00	↑ 3.50	11.93	-0.07	11.00	12.00	13.00	13.75	12.10	12.25	12.25
24.07.2023–14.08.2023	8.50	↑ 1.00	8.34	-0.16	7.50	8.50	9.50	10.25	8.60	8.75	8.75
19.09.2022–23.07.2023	7.50	↓ -0.50	7.33	-0.17	6.50	7.50	8.50	9.25	7.60	7.75	7.75
25.07.2022–18.09.2022	8.00	↓ -1.50	7.92	-0.08	7.00	8.00	9.00	9.75	8.10	8.25	8.25
14.06.2022–24.07.2022	9.50	↓ -1.50	9.11	-0.39	8.50	9.50	10.50	11.25	9.60	9.75	9.75
27.05.2022–13.06.2022	11.00	↓ -3.00	10.60	-0.40	10.00	11.00	12.00	12.75	11.10	11.25	11.25
04.05.2022–26.05.2022	14.00	↓ -3.00	13.82	-0.18	13.00	14.00	15.00	15.75	14.10	14.25	14.25
11.04.2022–03.05.2022	17.00	↓ -3.00	16.30	-0.70	16.00	17.00	18.00	18.75	17.10	17.25	17.25
28.02.2022–10.04.2022	20.00	↑ 10.50	19.86	-0.14	19.00	20.00	21.00	21.75	20.10	20.25	20.25
14.02.2022–27.02.2022	9.50	↑ 1.00	9.57	0.07	8.50	9.50	10.50	11.25	9.60	9.75	9.75
01.01.2022–13.02.2022	8.50	-	8.22	-0.28	7.50	8.50	9.50	10.25	8.60	8.75	8.75

[1] As well as interest rates on the additional liquidity providing mechanism. Set by the Bank of Russia Board of Directors.
[2] This is the maximum possible interest rate in an application for deposit auctions and the minimum possible interest rate in an application for repo auctions. The decision on the type (deposit or repo) of an auction is made depending on the liquidity situation.
[3] Loans and repos for more than one day are provided at a floating interest rate linked to the Bank of Russia key rate.
[4] This is the minimum possible interest rate in an application. Based on the results of auctions, repos are conducted and loans are issued at a floating interest rate linked to the Bank of Russia key rate. For one-month repos, a floating interest rate is applied beginning from 9 January 2023 (earlier, a fixed rate was set). Loan auctions are not held from April 2016.
[5] Before the introduction of the MM / AM – the interest rate on loans, repos and FX swaps for one day; from 1 March 2022 – on loans secured by non-marketable assets for two to 90 days, as well; and from 25 March 2022 – on Lombard loans for two to 90 days, as well.
[6] Before the introduction of the MM / AM – the interest rate on loans secured by non-marketable assets for 91 to 549 days; and from 28 February 2022 – on the above loans for two to 90 days, as well.
[7] Repos and FX swaps for one day, loans for one to 30 days, and FX swaps were suspended from April 2022 due to the changes in external economic conditions.
[8] Repos for one to 180 days and loans secured by non-marketable assets for one to 180 days.
For reference: from 1 January 2016, the value of the Bank of Russia refinancing rate equals its key rate as of the relevant date.
Source: Bank of Russia.

USE OF MONETARY POLICY INSTRUMENTS IN 2022–2023[1] *Table 10*
(billions of rubles)

	Standing overnight deposit facilities	Open market operations				Standing liquidity providing operations			
		Deposit auctions (main and fine-tuning auctions)	Repo auctions (main and fine-tuning auctions)	Repo auctions (for long terms)		Overnight loans	Repos	Lombard loans	Loans secured by non-marketable assets
	1 day	1 week and from 1 to 6 days	1 week and from 1 to 6 days	1 month	1 year	1 day	1 day	From 1 to 90 days	From 1 to 549 days
01.10.2023	914.1	1,975.6	0.0	101.0	1,101.7	0.0	0.3	24.1	880.4
01.07.2023	1,007.8	1,746.6	0.0	301.7	1,076.5	0.0	1.5	25.4	521.3
01.04.2023	1,094.3	2,450.0	0.0	1,005.8	759.8	0.0	7.6	32.2	266.4
01.01.2023	1,328.2	3,621.2	0.0	1,007.3	484.3	0.0	7.9	95.9	213.1
01.10.2022	1,291.0	1,663.9	0.0	0.0	166.0	0.0	9.5	91.4	1,211.5
01.07.2022	1,341.1	1,838.4	0.0	100.7	70.0	0.0	9.9	47.3	52.1
01.04.2022	3,107.8	0.0	2,212.2	11.1	75.1	0.0	91.6	38.7	55.5
01.01.2022	1,177.9	1,625.9	0.0	100.8	15.6	0.0	2.6	0.0	790.1

[1] The Bank of Russia's claims under liquidity providing instruments and liabilities under liquidity absorbing instruments.
Source: Bank of Russia.

INTERESTRATES ON THE BANK OF RUSSIA'S SPECIALISED REFINANCING FACILITIES[1]
(% p.a.)

Table 11

	Support for large investment projects	Support for economic activities (loans secured by insurance contracts of JSC Russian Agency for Export Credit and Investment Insurance (EXIAR)[2]	Support for SMEs secured by sureties from JSC RSMB Corporation or backed by OFZ bonds[3]	Support for SMEs in the industries hardest hit by the spread of the novel coronavirus infection[4]	Support for SMEs in 2022[5]
	Up to 3 years	Up to 3 years	Up to 3 years	Up to 1.5 years	Up to 1 year
Rule:	The lower of the two rates: 9.00% p.a. or the key rate reduced by 1.00 pp	The lower of the two rates: 6.50% p.a. or the key rate	Key rate reduced by 1.50 pp[6]	None	None
From 30.10.2023	9.00	-	13.50	-	-
From 18.09.2023	9.00	-	11.50	-	-
From 17.08.2023	9.00	-	10.50	-	-
From 15.08.2023	9.00	6.50	10.50	-	-
From 24.07.2023	7.50	6.50	7.00	-	-
From 01.01.2023	6.50	6.50	6.00	-	-
From 19.09.2022	6.50	6.50	6.00	-	9.50
From 25.07.2022	7.00	6.50	6.50	-	9.50
From 15.07.2022	8.50	6.50	8.00	-	9.50
From 14.06.2022	8.50	6.50	9.50	-	9.50
From 02.05.2022	9.00	6.50	9.50	-	9.50
From 15.03.2022	9.00	6.50	9.50	4.00	9.50
From 11.03.2022	9.00	6.50	18.50	4.00	9.50
From 28.02.2022	9.00	6.50	18.50	4.00	-
From 14.02.2022	8.50	6.50	8.00	4.00	-
From 01.01.2022	7.50	6.50	7.00	4.00	-

[1] Refinancing mechanisms aimed at encouraging bank lending to certain industries the development of which is limited by structural factors. Within these mechanisms, the Bank of Russia provides funds to credit institutions at lower interest rates and for longer periods, compared to the main and additional mechanisms.
Interest rates for new loans issued from the specified date that were approved by the Bank of Russia Board of Directors.
[2] The issue of new loans was suspended from 17 August 2023.
[3] Loans issued from 20 June 2023 and secured by OFZ bonds.
[4] Loans issued from 1 November 2021 to 30 December 2021 and from 24 January 2022 to 1 May 2022.
[5] Loans issued from 11 March 2023 to 30 December 2022.
[6] From 15 March 2022 to 14 July 2022, the rule was suspended, and a fixed rate was set.
Source: Bank of Russia.

USE OF THE BANK OF RUSSIA'S SPECIALISED REFINANCING FACILITIES[1]
(billions of rubles)

Table 12

Bank of Russia's claims on credit institutions (start of business)	Support for large investment projects	Support for economic activities (loans secured by insurance contracts of JSC Russian Agency for Export Credit and Investment Insurance (EXIAR)	Support for SMEs through JSC SME Bank[2]	Support for SMEs secured by sureties from JSC RSMB Corporation or backed by OFZ bonds[3]	Support for SMEs in the industries hardest hit by the spread of the novel coronavirus infection[4]	Support for SMEs in 2022[5]
	Up to 3 years	Up to 3 years	Up to 3 years	Up to 3 years	Up to 1.5 years	Up to 1 year
Limit as of 1 October 2023	150.0	75.0	288.3			-
01.10.2023	26.2	66.7	0.2	236.7	2.4	0.0
01.07.2023	29.6	52.4	0.4	230.0	14.9	2.4
01.04.2023	32.7	47.1	0.7	202.4	32.0	39.6
01.01.2023	37.3	45.4	0.9	139.0	39.8	67.1
01.10.2022	41.6	43.5	1.1	94.1	49.7	112.1
01.07.2022	45.4	54.7	1.4	98.7	56.5	257.3
01.04.2022	49.0	39.3	1.7	71.1	50.2	129.9
01.01.2022	52.6	45.0	2.2	75.0	26.8	-

[1] Refinancing mechanisms aimed at encouraging bank lending to certain industries the development of which is limited by structural factors. Within these mechanisms, the Bank of Russia provides funds to credit institutions at lower interest rates and for longer periods, compared to the main and additional mechanisms.
[2] The issue of loans ended from 23 August 2021; claims on loans issued by JSC SME Bank to its partner banks and microfinance organisations under the SME Financial Support Programme for lending to SMEs and its partner leasing companies for property leasing to SMEs.
[3] Loans issued from 20 June 2023 and secured by OFZ bonds.
[4] Loans issued from 1 November 2021 to 30 December 2021 and from 24 January 2022 to 1 May 2022.
[5] Loans issued from 11 March 2023 to 30 December 2022.
Source: Bank of Russia.

GLOSSARY

Balance of payments of the Russian Federation

A statistical system reflecting all economic operations between residents and non-residents of the Russian Federation over the course of the reporting period.

Banking sector liquidity

Credit institutions' ruble-denominated funds held in correspondent accounts with the Bank of Russia primarily for making payments via the Bank of Russia Payment System and for fulfilling the reserve requirements.

Banking system's claims on the economy

The banking system's claims on non-financial and financial organisations and households in rubles, foreign currencies, and precious metals, which include issued loans (including overdue loans), overdue interest on loans, credit institutions' investment in debt and equity securities and promissory notes, as well as other forms of participation in non-financial and financial organisations' equity, and other receivables under settlement operations with non-financial and financial organisations and households.

Bank of Russia key rate

The principal instrument of the Bank of Russia's monetary policy. The key rate is set by the Bank of Russia Board of Directors eight times a year. Changes in the key rate influence credit and economic activity and, ultimately, help achieve the key goal of monetary policy. The key rate corresponds to the minimum interest rate at the Bank of Russia's one-week repo auctions and to the maximum interest rate at the Bank of Russia's one-week deposit auctions.

Basic balance (basic deficit)

The indicator of the federal budget execution under the fiscal rule calculated as the difference between the total of basic oil and gas revenues and non-oil and gas revenues and federal budget expenditures.

Basic oil and gas revenues

The amount of oil and gas revenues earned with the Urals crude price at an equilibrium level and used to calculate the maximum amount of federal budget expenditures within the fiscal rule.

Business Climate Index (BCI) of the Bank of Russia

An analytical measure calculated monthly based on the estimates of companies participating in the Bank of Russia's monitoring. This index is built similarly to the method of Germany's Ifo economic institute and shows both actual and expected changes in output and demand.

Consumer Price Index (CPI)

The ratio of the value of a fixed set of goods and services in current-period prices to its value in previous (reference) period prices. This index is calculated by the Federal State Statistics Service (Rosstat). The CPI reflects changes over time in the overall level of prices

for goods and services purchased by households for consumption. The CPI is calculated based on data on the actual structure of consumer spending and is, therefore, the principal indicator of the cost of living. In addition, the CPI has a range of characteristics making it convenient for common use, namely a simple and clear method of construction, monthly calculation, and timely publication.

Core inflation

The inflation rate measuring underlying inflation trends. Core inflation is measured based on the core Consumer Price Index (CCPI). The difference between the CCPI and the Consumer Price Index (CPI) is that the CCPI is calculated excluding changes in prices for certain products and services that are subject to the influence of administrative and seasonal factors (certain categories of fruit and vegetables, passenger transportation services, communication services, housing and utility services, motor fuels, etc.).

Credit default swap (CDS)

A financial instrument enabling a buyer to insure against a certain credit event (e.g., a default) related to a third party's financial liabilities in exchange for regular payments of premiums (a CDS spread) to the CDS seller. The higher is the premium paid, the riskier are the liabilities that are the subject of a CDS.

Deflation

A steady decline in the overall level of prices for goods and services in the economy for at least 12 months, negative annual growth rates of consumer prices.

Dollarisation of bank deposits (loans)

The proportion of foreign currency-denominated deposits (loans) in the banking sector's overall portfolio of deposits (loans).

Federal government bonds (OFZ)

Domestic government securities issued by the Ministry of Finance of the Russian Federation within its borrowing programme to cover the deficit of the federal budget.

Financial stability

A state of the financial system involving no systemic risks which, in the case of their materialisation, might adversely affect the transformation of savings into investment and the real economy. Financial stability improves the resilience of the economy to both internal and external shocks.

Floating exchange rate regime

An exchange rate regime where the central bank establishes no targets, including operational ones, whether for the level or movements of the exchange rate, with the exchange rate forming under the influence of market factors. However, the central bank reserves the right to purchase foreign currency in order to replenish the country's international reserves or to sell foreign currency in the case of any threats to financial stability.

Inflation

A steady rise in the overall level of prices for goods and services in the economy. Inflation is generally associated with changes over time in the price of the consumer basket, that is, a set of food products, non-food goods, and services consumed by an average household (see also 'Consumer Price Index (CPI)').

Inflation expectations

Economic agents' expectations about price growth in the future. Inflation expectations are formed by businesses, households, financial markets, and analysts. Economic agents make economic decisions and their plans for the future (including those related to consumption, saving, borrowing, investment, and loan and deposit rates) relying on their expectations. Inflation expectations impact inflation and are, therefore, a critical indicator for making monetary policy decisions.

Inflation targeting

A strategy of monetary policy based on the following principles: price stability is the key goal of monetary policy; the inflation target is clearly specified and announced; under a floating exchange rate regime, monetary policy influences the economy primarily through interest rates; monetary policy decisions are made based on the analysis and forecast of a wide range of macroeconomic indicators; the central bank seeks to provide clear reference points for households and businesses, including through enhancing communication transparency.

Liquidity absorbing operations

Operations conducted by the Bank of Russia to absorb liquidity from credit institutions on a repayable basis. These are operations either to raise deposits or place Bank of Russia bonds.

Monetary base

The amount of cash outside the Bank of Russia and credit institutions' funds in accounts and in Bank of Russia bonds denominated in Russian rubles. In the narrow sense of the term, the monetary base comprises cash in circulation (outside the Bank of Russia) and credit institutions' funds in required reserve accounts for ruble-denominated funds raised by credit institutions. The broad monetary base includes cash in circulation (outside the Bank of Russia) and credit institutions' total funds in accounts and in Bank of Russia bonds.

Money supply

The total amount of Russian residents' funds (excluding general government's and credit institutions' funds). For the purposes of economic analysis, various monetary aggregates are calculated (M0, M1, M2, and M2X).

Money supply in the national definition (M2 monetary aggregate)

The total amount of cash in circulation outside the banking system and of the balances of Russian residents (non-financial and financial (other than credit) institutions and individuals) in settlement, current and other demand accounts (including in bank card accounts), time deposits, and other raised fixed-term funds in the banking system denominated in Russian rubles, as well as interest accrued on them.

Neutral rate of interest

The level of the interest rate (in particular, of the central bank's key rate and overnight interbank interest rates forming close to the key rate) that sustainably supports the economy at full employment (when output is at its potential, and unemployment is at its 'natural' level) and maintains inflation steadily at the target level. When the key rate is neutral, monetary policy neither speeds up, nor slows down inflation.

Parallel imports

The import of original foreign-made goods into the country not authorised by trademark owners.

Refinancing operations

Operations conducted by the Bank of Russia to provide liquidity to credit institutions on a repayable basis. They may be in the form of loans, repos, or FX swaps.

Required reserve ratios

Ratios that are applied to credit institutions' reservable liabilities to calculate the regulatory value of required reserves. In accordance with Federal Law No. 86-FZ, dated 10 July 2002, 'On the Central Bank of the Russian Federation (Bank of Russia)', their values may range from 0% to 20%. These ratios are established by the Bank of Russia Board of Directors.

RUONIA benchmark interest rate (Ruble OverNight Index Average)

Ruble OverNight Index Average (RUONIA) is the weighted average interest rate on overnight interbank ruble loans (deposits) reflecting the cost of unsecured overnight borrowing. The Bank of Russia is in charge of the RUONIA methodology, compilation of the list of the panel banks, data collection, the calculation and publication of this benchmark.

Structural liquidity deficit / surplus of the banking sector

A structural deficit in the banking sector is a situation when credit institutions demonstrate stable demand for liquidity from the Bank of Russia. A structural surplus is when credit institutions have a steady excess of liquidity and the Bank of Russia needs to carry out liquidity absorbing operations. The estimated level of a structural liquidity deficit / surplus is the difference between the outstanding amount on refinancing operations and the amount of liquidity absorbing operations of the Bank of Russia.

Structural primary balance

The metric of the stance of fiscal policy in fiscal rule terms. The metric is calculated as the difference between the total of basic and non-oil and gas revenues and actual (planned) budget expenditures.

Transmission mechanism

The mechanism through which monetary policy decisions impact the economy in general and price movements in particular; the process of gradual transmission of the central bank's signal about holding or changing the key rate and its future path from financial market segments to the real sector of the economy and, ultimately, to the inflation rate. A change in the key rate is translated into the economy through multiple channels (interest rates, credit, foreign exchange, balance sheet, inflation expectations, etc.).

ABBREVIATIONS

€STR – euro short-term rate

3MMA – three-month moving average

AM – additional mechanism for providing liquidity

API – application programming interface ensuring communication between information systems

BCI – Business Climate Index of the Bank of Russia

bp – basis point (0.01 percentage points)

BPM6 – the 6th edition of the IMF's Balance of Payments and International Investment Position Manual

C2B – consumer-to-business payments

C2C – consumer-to-consumer money transfers

CEE – Central and Eastern Europe

Core CPI – core Consumer Price Index

Coupon OBR – Bank of Russia coupon bond

CPI – Consumer Price Index

CPIF – Consumer Price Index with a Fixed Interest Rate

DFA – digital financial asset

EAEU – Eurasian Economic Union

ECB – European Central Bank

EGSA – electricity, gas, steam and air conditioning supply

ELB – effective lower bound

EME – emerging market economy

ESG – environmental, social and corporate governance

FCS – Federal Customs Service

FG – forward guidance (a central bank's signal regarding its monetary policy)

GDP – gross domestic product

GFC – global financial crisis of 2007–2008

GFCF – gross fixed capital formation

IBL – interbank lending

IMF – International Monetary Fund

InFOM – Institute of the Public Opinion Foundation

IRS – interest rate swap

KII – Key Industry Index

mbd – million barrels per day

MET – mineral extraction tax

Ministry of Economic Development – Ministry of Economic Development of the Russian Federation

Ministry of Finance – Ministry of Finance of the Russian Federation

MM – main mechanism for providing liquidity

MPG 2018–2020 – Monetary Policy Guidelines for 2018–2020

MPG 2023–2025 – Monetary Policy Guidelines for 2023–2025

MPG 2024–2026 – Monetary Policy Guidelines for 2024–2026

NFA – National Finance Association

NFI – non-bank financial institution

NOGR – non-oil and gas revenues

NPF – non-governmental pension fund

NWF – National Wealth Fund

OFZ – federal government bond

OFZ-IN – inflation-indexed federal government bond

OGR – oil and gas revenues

PCE – personal consumption expenditures (the index measuring consumer spending)

pp – percentage point

PPP – purchasing power parity

QE – quantitative easing

RRF – required reserve fund

RUONIA – Ruble OverNight Index Average (the weighted average interest rate on overnight interbank ruble loans (deposits))

SA – seasonally adjusted

SAAR – seasonally adjusted annualised rate

SME – small and medium-sized enterprise

SOFR – Secured Overnight Financing Rate in US dollars

UBS – Unified Biometric System

US Fed – US Federal Reserve System

VAT – value added tax

YCC – yield curve control

ZLB – zero lower bound

Monetary Policy Guidelines

Monetary Policy Review

Monetary Policy section on the Bank of Russia website

Monetary Policy Report