Bank of Russia

MONETARY POLICY GUIDELINES FOR 2025–2027

Moscow

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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 Bank of Russia implements its monetary policy taking into account its core function stipulated by the Constitution of the Russian Federation, which is protecting the ruble and ensuring 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, steadily low inflation. Securing price stability, the Bank of Russia creates an essential condition to foster sustainable development of the domestic economy.

In late 2023–2024 H1, the Russian economy continued to expand quickly. Its growth rates were considerably higher than predicted by the Bank of Russia in the baseline scenario in MPG 2024–2026. The expansion was still primarily driven by domestic demand. The continuing increase in households' incomes and companies' profits alongside rising budget expenditures supported high consumer and investor activity. Consumer sentiment remained very optimistic, while companies were seeking to fill the market niches that had become vacant due to the sanctions and the exit of a number of foreign businesses from the Russian market. After the Bank of Russia raised the key rate to 16.0% p.a. in 2023 H2, monetary conditions considerably tightened. However, despite higher interest rates, households and businesses continued to further expand borrowings as their incomes and profits were rising. Moreover, many companies were raising loans at variable interest rates expecting a key rate reduction. The increase in lending was another driver of domestic demand.

That said, the potential to ramp up supply so as to cover growing demand was limited. The capacity utilisation rate remained high. Surveyed companies complained about more severe staff shortages. They were optimising their production processes and purchasing new equipment, seeking technological solutions to compensate for staff shortages. However, the labour market remained tight. Companies were raising wages to retain personnel, which was pushing up their costs. Tightening sanctions were also limiting the potential to expand supply. It became more difficult for enterprises to buy equipment and components needed to expand their production capacities and maintain the operability of available machines. Their expenses on logistics and cross-border settlements were growing.

Given surging domestic demand that was surpassing the expansion of supply, it was simpler for companies to pass through higher costs to prices. As a result, inflationary pressures stayed elevated. After a decrease in 2024 Q1, inflationary pressures intensified again in April–July 2024. To a certain extent, this rise was attributed to transitory factors. However, most measures of underlying inflation (stripping out the impact of temporary factors) remained heightened. The acceleration of inflation was accompanied by growth in most indicators of inflation expectations, which was increasing the inertia of underlying inflation. Higher inflationary pressures suggested that overheating in the economy remained significant and that it had deviated upwards from a balanced growth path. In these conditions, in July–October 2024, the Bank of Russia was gradually increasing the key rate. Overall, the key rate was raised by 5 pp from 16.00% p.a. to 21.0% p.a. In addition, the Bank of Russia revised upwards the projected path of the key rate in its baseline scenario two times (in July and October) and gave a tough signal that the key rate might be raised further at the upcoming meeting (in September and October).

The Bank of Russia's baseline forecast scenario assumes that the world economy will continue to develop within the already existing trends. Seeking to lower inflation, the central banks of advanced economies will maintain tight monetary conditions for a long time. Concurrently, the world economy is not expected to slow down notably given that it stays resilient to high interest rates. This will prop up the demand for Russian exports. However, the sanctions that will remain in place over the forecast horizon will constrain growth in exports and imports. Given the expected increase in oil production worldwide, crude prices will be gradually declining to $70 per barrel in 2027, according to the Bank of Russia's forecast.

The transformation of the Russian economy will continue in the next few years. The structure of the economy will be dominated by domestic demand. The proportion of exports and imports will be smaller than before the enactment of the sanctions. The Bank of Russia forecasts that the domestic economy will expand by 3.5–4.0% in 2024. At the end of 2024, overheating in the economy will be decreasing gradually, including owing to the monetary policy pursued. In 2027, it will return to a balanced growth rate of 1.5–2.5%. Consumer and investor demand will be increasing more moderately in the next few years. As the economy adapts to the toughening sanctions, the expansion of exports and imports will resume after the contraction in 2024. Annual inflation will decelerate to 4.5–5.0% in 2025 and 4.0% in 2026 H1 and stay at the target further on. To achieve this, monetary conditions shall remain tight for a long time. A high level of the key rate will ensure the monetary tightness needed for economic agents to reduce credit activity and increase saving activity in the conditions when their inflation expectations are elevated and unanchored. According to the Bank of Russia's estimates, the key rate will average 17.5% p.a. in 2024, 17.0–20.0% p.a. in 2025, and 12.0–13.0% p.a. in 2026. In 2027, the key rate will average 7.5–8.5% p.a., which is in line with the estimated range of the long-term neutral rate in the Russian economy. The Bank of Russia has raised this estimate by 1.5 pp compared to the previous one, taking into account the comprehensive review of the changes in the economy over the past five years associated with the structural expansion of the demand for investment, a higher risk premium, the easing of the fiscal rule parameters, and the increase in neutral interest rates globally.

The main risks to the development of the Russian economy are related to both internal and external conditions. In view of this, the Bank of Russia considers two unfavourable alternative scenarios. The proinflationary scenario 'Higher Demand' suggests a higher share of budget expenditures on subsidised lending programmes and an expansion of measures of a protectionist nature aimed at encouraging import substitution. The risk scenario 'Global Crisis' assumes a possible worsening of the situation in global financial markets, which might provoke a global financial crisis. According to the Bank of Russia's estimates, materialisation of risks under these two scenarios will speed up inflation in 2025–2026 and require tighter monetary policy compared to the baseline scenario. Inflation will return to the target later than under the baseline scenario.

Nevertheless, in certain conditions, developments in the Russian economy may be more favourable than in the baseline scenario. The disinflationary scenario 'Higher Potential' assumes a surge of supply in the domestic economy, driven by increasing fixed capital investment and a faster rise in labour productivity. As a result, the expansion of supply will cover increasing domestic demand. As in the baseline scenario, inflation will return to the target already in 2025, while monetary policy easing might be faster.

An important factor that will influence the economy under any of the scenarios in the coming years is fiscal policy. Preparing its macroeconomic forecast and making its key rate decisions, the Bank of Russia takes into account the fiscal policy parameters and measures planned. If these parameters change, the Bank of Russia might need to adjust its monetary policy. Responsible and well-balanced fiscal policy relying on the fiscal rule is critical to maintain macroeconomic stability.

Under any scenario of future developments both in the domestic economy and worldwide, the Bank of Russia's monetary policy will be aimed at achieving its main goal, that is, price stability. Ensuring low inflation, the Bank of Russia promotes necessary conditions for the development of the domestic economy, including to create prerequisites for balanced and sustainable economic growth. All else being equal, price stability helps:

- businesses and households better plan their activity;
- increase affordability of borrowings inside the country;
- protect households' incomes and savings against a significant unpredictable devaluation;
- enhance confidence in the national currency and make it more attractive as a store of value; and
- promote the ruble as a currency for settlements and contracts, including in foreign trade.

Beginning from 2015, the Bank of Russia has been implementing its monetary policy under the inflation targeting regime, relying on the world best practices.

The Bank of Russia sets a quantitative inflation target, which is an annual inflation rate of close to 4%. The target is effective on a permanent basis. Furthermore, the Monetary Policy Review carried out by the Bank of Russia in 2021–2023 shows that the Russian economy has formed prerequisites for reducing the inflation target in the future. The Bank of Russia will assess the reasonableness of such a decrease after inflation slows down and stabilises close to 4%. However, a reduction in the inflation target will only be possible no earlier than 2028. If the Bank of Russia makes such a decision, it will be announced in advance.

Implementing its monetary policy, the Bank of Russia influences price movements through the key rate and communication regarding its possible changes in the future. This influence is ensured through a long chain of interconnections known as the transmission mechanism. Changes in the key rate and communication about its possible dynamics in the future impact interest rates in various segments of the financial market, 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 affects price dynamics. It takes time for monetary policy decisions to be fully transmitted to price dynamics through the above chain of interconnections. As estimated by the Bank of Russia, this process takes from three to six quarters. Therefore, making its monetary policy decisions, the Bank of Russia relies on the macroeconomic forecast that helps estimate what conditions should form in the economy to ensure an inflation rate of close to 4% over the time horizon of the impact of monetary policy. To build the forecast, the Bank of Russia uses advanced macroeconomic models.

Targeting inflation, the Bank of Russia pursues a floating exchange rate regime. It enables the Bank of Russia to implement a monetary policy that is independent of other countries. A floating exchange rate smooths out the impact of external factors on the economy and helps it adjust to the changing external environment. 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. The effect of capital flows on the dynamics of the exchange rate stays less significant than before. The capital controls are aimed at maintaining the stability of the financial sector and were mostly introduced as response measures.

The Bank of Russia seeks to promptly communicate the information on its monetary policy to the fullest extent possible. The Bank of Russia continues the work to improve the outreach of its monetary policy and make its communication more targeted. The Bank of Russia's communication transparency with regard to its monetary policy helps form a more predictable environment for decision-making and enhances the effect of monetary policy on the economy and inflation.

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. The section has three boxes about the level of the inflation target in Russia, the benefits of a floating exchange rate, and enhancement of model-based approaches.

Section 2 offers a retrospective overview of the Bank of Russia's monetary policy from late 2023 until now. The section includes three boxes about inflation trends in the Russian regions, the use of business monitoring results for the purposes of monetary policy, and the Bank of Russia's operations in the domestic FX market.

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 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 has a box describing the impact of the LCR on banks' transactions and the situation in the money market.

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.

SECTION 1. MONETARY POLICY GOALS, PRINCIPLES AND INSTRUMENTS

The goal of monetary policy is to maintain steadily low inflation that is critical to ensure stable economic development and protect households' and companies' incomes and savings

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.**

A crucial prerequisite for the economic development is macroeconomic stability achieved through both responsible fiscal policy and price stability. **Price stability is the Bank of Russia's contribution to the development of the country's economy** and an essential element of an environment that is favourable for living and doing business.

Steadily low inflation ensures a stable purchasing power of the national currency – the ruble. When inflation is low, wages, pensions and other earnings, as well as ruble-denominated savings of households and companies are protected against a significant unpredictable devaluation. Stability makes it possible to plan spending, including long-term expenses, with greater confidence, maintain living standards, and prevent an aggravation of social inequality.[3]

Low and steady inflation is favourable for businesses. Setting a clear inflation target and adhering to it are essential elements of a predictable economic environment. In such conditions, it is easier for companies to develop their business and make long-term financial and investment plans. Low and stable inflation improves the accessibility of borrowings inside the country: investors are more willing to provide financing to enterprises. High and volatile inflation is a source of risks to all economic agents, including banks and their clients. To receive returns on investment in a situation of high and volatile inflation, banks price in an elevated inflation premium when setting loan rates, whereas low and stable inflation reduces banks' risks. As a result, interest rates form at a lower level and volatility of interest rates (especially long-term ones) decreases.

Steadily low inflation promotes confidence in the national currency and helps reduce the proportion of foreign currency-denominated assets and liabilities in the economy. This improves the economy's resilience to changes in the external environment. The ruble is more attractive as a currency for international settlements and contracts when inflation in the country is steadily low. 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.

Monetary policy promotes conditions necessary for the development of the domestic economy and its structural transformation. However, monetary policy alone cannot drive a sustainable increase in the economy's potential. The latter 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 deploying innovative technologies. 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.

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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)'.

3 For details about the influence of inflation on social inequality, refer to Appendix 3 to MPG 2018–2020.

To enable a sustainable expansion of production capacities in the economy and boost potential economic growth rates, it is necessary to implement other measures. In the first place, these are measures of structural, fiscal policy (changes in the structure of budget expenditures to promote the modernisation of the economy and increase human capital) and 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 as part of reskilling and upskilling programmes), and create predictable conditions for economic activity. Alongside macroeconomic stability, efficient implementation of the above measures can ensure successful transformation of the economy promoting its transition to a new equilibrium with a subsequent increase in its potential growth rates.

Key monetary policy principles

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

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

Pursuing the inflation targeting strategy, the Bank of Russia relies on the world best practices of monetary policy implementation (see Appendix 11 'Inflation targeting: cross-country comparisons'). The advantage of inflation targeting is its flexibility. This strategy does not imply that the inflation target should be achieved 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 benefits of inflation targeting amid various challenges are evidenced by the studies carried out by the Bank of Russia as part of its Monetary Policy Review in 2021–2023.[4]

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 announced inflation target. To set a quantitative inflation target, the Bank of Russia determines the targeted measure, its type and level.

The goal 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 in Russia, that is, for the change in prices for goods and services purchased by households over the past 12 months. **The Bank of Russia uses the CPI to measure the growth rate of consumer prices (inflation).** The CPI is calculated and published by Rosstat.

The Bank of Russia sets the inflation target as a point. Compared to target ranges of inflation, a point gives the clearest signal to society about the goal of monetary policy. This target type provides a clearer understanding to economic agents. In practice, a point helps anchor inflation expectations to the target more efficiently.

[4] For details, refer to the Bank of Russia's Monetary Policy Review subsection in the Monetary Policy section on the Bank of Russia website.

The Bank of Russia chose the **inflation target of 4%** when switching to the inflation targeting strategy in 2015, considering the actual specifics of pricing and the structure of the Russian economy, as well as the experience of inflation targeting worldwide. In 2021–2023, the Bank of Russia carried out its Monetary Policy Review. The findings of the studies showed that, by the end of 2021, the Russian economy had formed the prerequisites for reducing the inflation target in the future (see Box 1 'The level of the inflation target in Russia'). However, in 2022, following the enactment of extensive sanctions by a number of foreign countries, the Russian economy started a structural transformation that was accompanied by significant adjustments in relative prices[5] across a wide range of goods and services. Furthermore, by the end of 2023, the Russian economy considerably deviated upwards from a balanced growth path and inflation upwards from the target. After inflation slows down and stabilises at around 4%, the Bank of Russia will assess the reasonableness of decreasing the inflation target. However, a reduction will only be possible no earlier than 2028. If the Bank of Russia makes such a decision, it will be announced a few years before the change. This will help mitigate the costs of switching to a new level of the target. The Bank of Russia will continue discussing this issue with businesses, the analyst and expert community, public organisations, the Government and the Federal Assembly of the Russian Federation.

The wording 'close to 4%' implies that inflation might slightly hover around 4%. These fluctuations are natural and associated with a continuous adjustment of relative prices. 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 (see Box 4 'Inflation in Russian 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 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 the main monetary policy instruments').

Floating exchange rate of the ruble

The Bank of Russia pursues a floating exchange rate regime. This means that the exchange rates of foreign currencies against the ruble are determined by market forces, that is, the ratio of demand for and supply of foreign currency in the FX 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 FX operations to influence the dynamics of the exchange rate. That said, the Bank of Russia can conduct operations in the FX market aimed at maintaining financial stability.

A floating exchange rate is an essential condition for efficient implementation of monetary policy within the framework of inflation targeting. 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. As a result, monetary policy ensures low and stable inflation more efficiently (see Box 2 'Benefits of a floating exchange rate').

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

In the conditions of the sanctions and blocking of the Bank of Russia's foreign currency accounts, the Bank of Russia tightened capital controls from 2022 to prevent materialisation of financial stability risks. As the situation stabilised, the controls were partially eased. The restrictions that are still in place are predominantly of a 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. Despite the effective capital controls, the exchange rate of the ruble remains floating. In the new environment, its movements to a greater extent than before depend on the ratio of importers' demand for foreign currency and its supply by exporters. The effect of capital flows on the dynamics of the exchange rate stays less significant than before.

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 financial stability risks is compatible with inflation targeting and a floating exchange rate. 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.[6]

The key rate and communication as the main 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. To this end, the Bank of Russia conducts regular liquidity management operations to provide liquidity to banks or absorb it from them. The Bank of Russia sets interest rates on the main liquidity management operations at the level of the key rate.[7] Interest rates on other operations are linked to the key rate.

Conducting liquidity management operations, the Bank of Russia seeks 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 2024 and 2025–2027'). Changes in short-term money market rates influence interest rates on longer-term transactions. These changes in turn translate into the dynamics of loan and deposit rates and securities prices. Amid the sanctions and the capital controls introduced in response, the key rate impacts the ruble exchange rate indirectly, primarily through the demand for imports. 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, while the ratio between it and supply affects price dynamics. The complex of the interdependencies between economic processes making it possible to impact inflation through changes in the key rate is called the monetary policy transmission mechanism (see Appendix 1 'Monetary policy transmission mechanism in Russia').

Key rate changes influence demand and prices to the fullest extent not instantaneously but with a time lag. According to the Bank of Russia's estimates, it takes from three to six quarters for the effects of key rate changes to manifest themselves in full. Accordingly, the Bank of Russia can bring inflation back to the target over a horizon from 12 to 18 months, barring new serious shocks.

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 approved and publicly available calendar. Decision-making according to the calendar is essential to increase the predictability of the key rate path. Key rate decisions made according to the calendar become effective on the next business day. Drastic changes

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6 For details, refer to Box 3 'Capital controls and inflation targeting' in MPG 2023–2025.

7 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 conducted by the Bank of Russia to manage 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.

in the economic situation might require prompt decisions on the key rate. In this case, the Bank of Russia Board of Directors may hold unscheduled meetings. 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 that monetary policy measures have a time-lagged effect on the economy, **the Bank of Russia relies on sustainable economic trends and long-lasting factors when making its decisions on the key rate**. The Bank of Russia revises the key rate if current trends suggest a persistent deviation of inflation from the target over the forecast horizon or there are long-acting factors that will most probably cause such a persistent deviation. To estimate the impact of various factors on inflation, the Bank of Russia prepares a macroeconomic forecast (see the subsection 'Decision-making based on a macroeconomic forecast').

The Bank of Russia takes no response measures if the existing deviation of inflation from the target results from temporary factors and inflation is expected to return to the target in the short run without any additional measures. Such an approach to decision-making helps avoid undesirable volatility of economic indicators. A change in the key rate in response to transitory 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%.

Nevertheless, the Bank of Russia analyses the influence of temporary factors on inflation expectations (see Appendix 4 'One-off supply-side inflation factors'). If factors originally considered to be transitory cause a notable rise in inflation expectations and changes in economic agents' behaviour and involve significant risks to the achievement of the inflation target in the medium term, the Bank of Russia takes these factors into account when making its key rate decisions.

By changing the key rate to bring inflation close to the target, the central bank thus smooths the economic cycle and returns the economy to a balanced and stable economic growth path. This is 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. Such monetary policy is called neutral.

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. Monetary tightening in these conditions helps lower demand and drive the economy back to a balanced growth path and inflation to its target. To the contrary, when aggregate demand decreases below the economy's production capacity, the economy deviates downwards from its potential and inflation downwards from its target. This situation requires a temporary reduction in the key rate below its neutral level. Monetary policy easing will support aggregate demand and bring inflation back to the target.

A neutral level of the interest rate can only be estimated roughly based on observed economic indicators. During the period of dramatic changes in the economy, the estimates of the neutral interest rate become more uncertain (see Appendix 7 'Neutral interest rate and its estimate').

Communication on monetary policy decisions influences economic agents' expectations and behaviour and is an important monetary policy instrument. Economic agents' expectations have a considerable impact on the economy in general and on inflation in particular. For the central bank's measures to be more efficient, it is critical to anchor households' and businesses' inflation expectations to the target. This is only possible if economic agents are confident in the Bank of Russia and its monetary policy. Confidence is developing when the central bank successfully achieves the inflation target and society

comprehends the central bank's policy. The Bank of Russia seeks to be as transparent as possible. This is a key principle of its monetary policy within the inflation targeting strategy (see the subsection 'Communication transparency').

The Bank of Russia does not only disclose the rationale behind its monetary policy decisions, but also gives a verbal signal regarding possible future decisions. The signal is no less important than the key rate decision itself since it impacts economic agents' expectations of the central bank's further moves and, accordingly, their behaviour.

The Bank of Russia also publishes the projected path of the key rate as part of the Bank of Russia's macroeconomic forecast. This means that if the economic situation unfolds in line with the Bank of Russia's forecast, it will change the key rate following the projected path. If the economic situation develops not as assumed by the macroeconomic forecast, the Bank of Russia will need to revise both the forecast and the projected path of the key rate. The projected path is presented as ranges of the average key rate for every calendar year. The projected path of the key rate intensifies the Bank of Russia's verbal signal having an additional effect on market participants' expectations and monetary conditions.

Decision-making based on a macroeconomic forecast

The Bank of Russia makes its monetary policy decisions based on a macroeconomic forecast as their effect on price dynamics is time-lagged. The Bank of Russia's forecast is a coordinated view of the Bank of Russia Board of Directors with respect to future economic trends and indicators. The forecast relies on the results of model-based calculations made using a wide range of modern quantitative models describing economic dynamics.[8] The Bank of Russia is continuously improving its model-based approaches (see Box 3 'Enhancement of model-based approaches'). That said, the Bank of Russia's forecast is not generated from model-based assessments automatically, but takes into account the Board of Directors' expert opinions regarding the hypotheses and factors that cannot always be incorporated into the models. Certain hypotheses are verified at the regional level. The Heads of the Bank of Russia Main Branches then report on the findings to the Board of Directors.

The Bank of Russia does a complete revision of its macroeconomic forecast before the Board of Directors' core meetings on the key rate, four times a year. Following such meetings, the Bank of Russia publishes the revised forecast along with the press release on the key rate. The main parameters of the forecast are inflation, economic growth, monetary indicators, the balance of payments, and the scenario path of the key rate.

Preparing its macroeconomic forecast, the Bank of Russia conducts an in-depth analysis of a wide range of data. The Bank of Russia analyses, among other things, the actual situation in the Russian economy and in global commodity and financial markets, 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. The uncertainty may also be associated with the specifics of model-based techniques. Therefore, the Bank

[8] For details about developing a macroeconomic forecast and 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.

of Russia places a high emphasis on the rationale for monetary policy decisions it makes. Specifically, this involves the use of a broad range of models and forecasting of several different scenarios of developments in the Russian and global economies with a number of variations of these scenarios. This approach enables the Bank of Russia to estimate the robustness of its macroeconomic forecast and monetary policy decisions made based on this forecast.

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 those of households and businesses remain sensitive to the impact of short-term proinflationary factors. 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 a persistent and long-lasting deviation 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.

Communication transparency

For monetary policy pursued within the inflation targeting strategy to be efficient, it is necessary to ensure society's understanding of and confidence in it. When households and businesses are confident that the central bank is able and determined to maintain price stability, their inflation expectations do not change notably in response to short-term price fluctuations or events that might temporarily speed up or slow down inflation.

If economic agents comprehend the central bank's decisions and 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 strengthens, and the scale and duration of an inflation deviation from the target decrease.

To promote understanding and confidence, it is necessary to ensure not only that inflation stays steadily close to the target but also that the central bank's communication regarding its monetary policy is transparent. Hence, **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 Bank of Russia performs its functions of protecting the ruble and ensuring its strength independently of other government authorities. However, this does not mean that its decisions are isolated. The Bank of Russia continuously interacts with the executive authorities and reports to the State Duma of the Federal Assembly of the Russian Federation and the National Financial Board. The Bank of Russia's communication policy is aimed at supporting an ongoing dialogue with society.

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 an explanation of its logic and carries out the Bank of Russia Governor's live press conference.[9] Furthermore, four times a year after the Board of Directors' core meetings (in February, April, July, and October), the Bank of Russia also publishes its medium-term macroeconomic forecast along with the press release on the key rate.

[9] 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.

Approximately ten days after each meeting, the Bank of Russia releases the Summary of the Key Rate Discussion that discloses the details of the deliberations about the key rate during the week preceding the Board of Directors' meeting and directly in the course of the meeting. As part of the core rounds, alongside the Summary, the Bank of Russia also publishes its Commentary on the Medium-term Forecast detailing the assumptions and parameters of the macroeconomic forecast and the reasons for their revision.[10] Furthermore, the Bank of Russia issues various commentaries on the dynamics of macroeconomic indicators.[11]

The Bank of Russia is seeking to enhance the outreach of its monetary policy and make the communication more targeted, including at the regional level.[12] The Bank of Russia's communication policy takes into account target audiences' regional, age and professional specifics and needs, including the level of education.

To this end, the Bank of Russia uses various channels of communication, including its website, mass media, social networks, as well as bloggers. The main principles of the Bank of Russia's interaction with media are timely releases of the commentaries and easy-to-understand content. Furthermore, to explain its monetary policy decisions, the Bank of Russia communicates with households and businesses directly, using both in-person formats (meetings, panel discussions, speeches at conferences, and lectures at schools, secondary vocational education institutions and universities) and remote formats (interviews on federal and regional TV and radio as well as online conferences, lectures and seminars). Specifically, after each decision on the key rate, the Bank of Russia carries out 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.

The Bank of Russia also makes efforts to enhance financial literacy among individuals. In order to promote the understanding of how monetary policy operates and what instruments it employs, the Bank of Russia publishes tailored topic-related materials on its educational resource Financial Culture (fincult.info). The Bank of Russia actively participates in the development of the Strategy for Improving Financial Literacy and Financial Culture.

When making its monetary policy decisions, the Bank of Russia factors in the mutual influence of various areas of the country's economic policy

The Bank of Russia is directly responsible for several areas of economic policy. **The goals of the Bank of Russia's work are to:**

- **protect the ruble and ensure its strength through maintaining price stability;**
- **develop and enhance the Russian banking system;**
- **ensure the stability and advancement of the National Payment System;**
- **develop the Russian financial market; and**
- **maintain the stability of the Russian financial market.**

In the long run, the Bank of Russia's goals complement each other. A critical condition for successful implementation of monetary policy is efficiency and smooth functioning of the payment and banking

[10] Before the end of 2023, this information was disclosed in the Monetary Policy Report.

[11] The commentaries are available in the Analytics subsection of the Monetary Policy section and in the Macroeconomic Bulletins subsection of the Research section on the Bank of Russia website.

[12] For details about the Bank of Russia's communication in 2024, see Appendix 6 'The Bank of Russia's communication on monetary policy issues'.

systems and the financial market. By achieving these goals, the Bank of Russia helps form conditions promoting balanced and sustainable economic growth, improving Russian citizens' welfare and maintaining it at a high level, which is the principal goal of the country's economic policy.

The correlation and consistency of measures 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 in the work of dedicated committees and working groups within the Bank of Russia.

When preparing its macroeconomic forecast, the Bank of Russia also factors in how the economic situation is influenced by measures taken in other areas of economic policy that are not the Bank of Russia's mandate. To achieve the correlation and consistency of measures, representatives of the Bank of Russia take part in the work of dedicated committees and working groups dealing with various state policy areas.

Monetary policy and financial sector stability

The Bank of Russia adheres to the principle of independent targets and instruments for monetary policy and financial sector stability policy. **To deliver on the inflation target, the Bank of Russia employs monetary policy instruments – the key rate and communication. The resilience of the financial sector (the banking system and the financial market) is ensured through other mechanisms.** In the first place, these are **microprudential regulation** (the regulation of credit and other financial institutions), supervision, and financial resolution measures. Secondly, these are **macroprudential policy measures** that support the stability of the financial system in general by helping prevent excessive risks in its individual segments and mitigate the probability of crises and their implications. Besides, the Bank of Russia takes into account the mutual influence of these two policies and their effects on monetary policy implementation.

The stability of the financial sector is crucial for efficient transmission of monetary policy decisions to the economy. Only a stable financial sector is able to ensure smooth processing of payments and 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 easing enables the financial sector to perform its core functions stably and helps mitigate negative effects on the real economy. All that drives the expansion and development of the financial sector by promoting confidence in it and its attractiveness to all groups of participants and, thus, reducing risk premiums and increasing the depth and liquidity of financial markets.

In most cases, changes in the 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 the microprudential regulation (in contrast to the 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 the microprudential regulation might be significantly altered, which would prompt the financial sector to adjust to the changes. In such cases, the Bank of Russia takes into account the effect of microprudential measures on the monetary policy environment 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, taking macroprudential measures, the Bank of Russia factors in its key rate decisions. In turn, macroprudential policy measures can impact the monetary policy environment, including lending trends and interest rates in individual segments. Hence, 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.

Other measures aimed at ensuring the financial sector's stability can also influence the monetary policy environment. Thus, liquidity provision to credit institutions as part of 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 to ensure price stability. However, if the probability of materialisation of systemic risk rises considerably, the Bank of Russia can use the key rate to maintain the stability of financial markets and the financial sector as a whole. By using the key rate for these purposes, the Bank of Russia, among other things, stabilises economic agents' exchange rate and inflation expectations, which is a critical factor for ensuring price stability.

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 to 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 impulse from the key rate 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 economy. The maturity level of the financial market also impacts the level of the neutral rate. In particular, when the capital market is more mature, this contributes to an increase in the saving ratio in the economy and, accordingly, to a reduction in the level of the neutral rate.

Despite the extensive changes in 2022, the Russian financial market today continues to render the entire range of services to people and businesses. However, as foreign participants exited the Russian financial market, its liquidity remains limited. This means that the transmission of key rate decisions through the channels associated with price dynamics in the financial market has been less efficient. In the future, the efficiency might increase. Specifically, considering the enacted restrictions, investment in foreign securities might be expected to become even less attractive, while the proportion of Russian assets in household savings and the role of domestic debt financing might grow. Furthermore, the share of securities in households' savings has been expanding in recent years. Another important factor accelerating payments and settlements and improving the accessibility of financing, thus making the transmission mechanism more efficient, will be the continuing digitalisation of the financial market.

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 (refer to the Russian Financial Market Development Programme, as well as Appendix 9 'Financial market development').

Monetary policy and fiscal policy

Fiscal policy has a significant effect on the monetary policy environment, including the banking sector liquidity, the ruble exchange rate, aggregate demand, the structure of the economy, and trends in prices for goods and services. This effect depends on budgeting approaches, the structure of budget expenditures, their effectiveness, and how they are distributed over time. **Monetary policy should timely and proportionately respond to changes in the above parameters** in order to mitigate the risks of a deviation of inflation from the target and of the economy from a balanced growth path.

A significant temporary easing of fiscal policy can accelerate inflation, whereas budget consolidation, to the contrary, might slow down inflation. Furthermore, inflation dynamics are influenced not only by direct changes in the structural budget deficit/surplus but also by secondary effects from changes in the structure of budget revenues and expenditures. In particular, a surge in aggregate demand might be caused by an expansion of credit to the economy at subsidised interest rates (see Box 10 'Subsidised lending and its impact on the transmission mechanism'). If fiscal policy easing or changes in the structure of budget revenues and expenditures augment inflationary pressures, the central bank has to tighten its monetary policy to decrease the credit stimulus proportionately. This helps bring aggregate demand in line with the economy's potential and avoid an acceleration of inflation and its deviation from the target. If fiscal policy remains expansionary for a long period, this might be a factor contributing to an increase in the neutral rate. In other words, all else being equal, when fiscal policy remains expansionary for an extended period, the level of interest rates in the economy should be higher.

Government expenditures, specifically investment in the development of a number of important industries, may expand the economy's production capacity and transform its structure. However, this influence is gradual and long-term. In the short run, these expenditures boost demand and, therefore, might intensify inflationary pressures and require monetary policy measures.

Prices might be influenced by tax policy measures as well. In particular, an increase in indirect taxes generally causes a one-off adjustment of prices and does not require any monetary policy response. Conversely, if inflation expectations respond to changes in taxes, the central bank can be forced to take monetary policy measures so as to limit the risk of an inflation deviation from the target. An increase in direct taxes might have both proinflationary and disinflationary effects, which will depend on whether this rise will cause secondary effects associated with the impact of the tax changes on households' and businesses' behaviour as well as the areas of budget spending.

Overall, responsible fiscal policy is a critical condition to maintain price stability. An important component of such policy is a fiscal rule, which is especially relevant to resource-rich countries. The fiscal rule helps these countries limit the impact of the commodity cycle on the economy by stabilising aggregate demand and reducing its dependence on the foreign trade environment. This decreases the uncertainty in the economy and increases macroeconomic stability, including price stability.

The first part of the fiscal rule implies limiting budget expenditures to the amount of revenues earned with a certain equilibrium level of commodity prices. The second part is about forming the 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 declining revenues. This makes it possible to alleviate a crisis period for the economy.

The use of the 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 favours the development of manufacturing in non-commodity sectors.

The fiscal rule is a key element of public finance stability and is aimed at preventing an excessive increase in government debt. Predictable fiscal policy and public finance stability 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. Furthermore, this helps reduce and anchor inflation expectations, which enables the central bank to implement its countercyclical monetary policy more efficiently.

As part of the fiscal rule, the Bank of Russia conducts 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 when implementing its monetary policy (see Box 7 'Fiscal policy in 2024–2027 under the baseline scenario and its impact on the economy'), the Ministries of Finance and Economic Development, in turn, take into account the inflation target and the effect of monetary policy on the economy and inflation trends 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 through continuous communication between the Bank of Russia and the Ministries of Finance and Economic Development. Namely, the Bank of Russia and the Ministries hold regular joint meetings to cross-check their estimates of key macroeconomic indicators and discuss macroeconomic forecast assumptions and scenarios. Furthermore, consistent communication on related topics is essential to enhance confidence in monetary and fiscal policies.

Overall, the use of the fiscal rule in conjunction with inflation targeting creates a synergistic effect. When combined, their contribution to demand and price stability increases.

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 to reduce the impact of supply-side factors on inflation. These factors are events not associated with monetary policy that might induce irregular changes in supply: in particular, these might be a poor harvest, disruptions in product supplies, or phytosanitary restrictions on food imports. Influenced by these factors, inflation might fluctuate considerably, and their impact might be both short- and long-term. They might entail secondary effects, such as a rise in inflation expectations, and cause a long period of high inflation.

There are various 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 fostering economic efficiency and promoting competition, and control over prices for socially important goods in certain circumstances. The indexation of regulated prices and tariffs depending on the inflation target is essential to support price stability.

Price or mark-up caps set in certain market segments in exceptional circumstances might decelerate price growth for a while. However, in the long run, direct administrative regulation of pricing might result in a contraction of the supply of goods subject to pricing regulation, a reduction in investment in these industries, and a worsening of consumer sentiment.

If economic conditions deteriorate, the second group of instruments – ad hoc measures – can be employed, e.g. temporary measures to support the transformation of the economy. Among others, these are measures implemented to facilitate business operations, including by decreasing the 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 priority industries.

The Bank of Russia carefully monitors the measures that are implemented and planned by the government authorities and discusses their effects with businesses, the financial community, and the

government authorities. Furthermore, 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 authorities and the business community. 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. THE LEVEL OF THE INFLATION TARGET IN RUSSIA

The Bank of Russia maintains the inflation target at 4% and will assess the reasonableness of decreasing it in the future

Setting the format of the inflation target, including its level, type,[1] time horizon and price index,[2] is a fundamental issue within the framework of inflation targeting. That said, choosing an inflation target that would be optimal[3] for the national economy is quite 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.

In addition, the effectiveness of inflation targeting 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, in practice, central banks generally select inflation targets and their format very carefully.

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% was consistent with 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. These 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 having multi-decade experience of high and volatile inflation, insufficient maturity of the 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 as part of 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 evidenced 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 to the target beginning from 2017. Besides, even where 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 successful and long-term experience of maintaining price stability, tend to be very adaptive, being influenced by actual inflation trends.

2. **Model-based estimates for the Russian economy relying on 2015–2021 data also prove that there is room for reducing the inflation target.** These estimates 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]

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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.

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.

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 has also been 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 ELB and 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 to respond to disinflationary shocks.

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

7. **A lower inflation target in Russia would be consistent with the levels of the inflation targets in Russia's trading partners to a greater extent, even considering a growing share of developing economies among these countries.** The practice of recent years also shows that the largest developing economies continue to progressively decrease their inflation targets as they accumulate inflation targeting experience.

A lower inflation target, provided that it is achieved sustainably, will help decrease economic agents' inflation expectations. This means that interest rates in the economy, in the first place long-term ones, will also be lower than with an inflation rate of close to 4%. In other words, the environment for expanding investment activity will also be more beneficial. Furthermore, when inflation is lower, fluctuations of relative prices in the economy are smaller as well. Inflation will become more homogeneous across consumer basket components. This will be another factor helping anchor inflation expectations at a lower level. In addition, output will become less volatile, while the distribution of factors of production in the economy will become more efficient. Finally, a reduction in Russia's inflation target will bring it closer to the levels of the inflation targets in Russia's trading partners. All else being equal, a smaller difference in inflation rates in Russia and Russia's trading partners will make the ruble exchange rate stabler.

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 potential economic growth rates. In the longer run, economic growth rates depend on the dynamics of labour and capital in the economy and their productivity. However, the economy might face costs at the stage of the transition to a lower target, that is, in the short term. These 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 and approaches to the indexation of regulated prices and tariffs.

At the current stage, the Bank of Russia has made the decision to maintain the inflation target at the level of close to 4%. After inflation slows down and stabilises at around 4%, the Bank of Russia will assess the reasonableness of decreasing the inflation target. That said, a reduction in the target will only be possible no earlier than 2028. If the Bank of Russia makes such a decision, it will be announced a few years before the change. This will help mitigate the costs of switching to a new level of the target. The Bank of Russia will also continue discussing this issue with businesses, the analyst and expert community, public organisations, and the Government and Federal Assembly of the Russian Federation.

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[7] InFOM's household surveys (March and October 2022 and February 2023); the Bank of Russia's monitoring of businesses (February and October 2022).

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

BOX 2. BENEFITS OF A FLOATING EXCHANGE RATE

The floating exchange rate of the ruble protects the economy against external shocks and enables the regulator to implement an independent monetary policy. A floating exchange rate is an essential component of the inflation targeting regime

The Bank of Russia switched to a floating exchange rate of the ruble in November 2014. That was an integral element of the transition to inflation targeting from 2015. What are the main benefits of this regime?

In the first place, a floating exchange rate acts as a 'built-in stabiliser' of the economy. In contrast to a managed exchange rate, a floating one helps the economy better absorb external shocks. In other words, if external conditions alter, a floating exchange rate will help reduce the extent of overheating or downturn in economic activity.

Russia's experience has proven this. The decline in GDP in 2015 (amid the slump in global crude prices and the enactment of the sanctions), in 2020 (during the crisis instigated by the coronavirus pandemic), and in 2022 (due to the imposition of new extensive sanctions) was not as significant as during the global financial crisis of 2008–2009, while the scale of external effects was comparable or even greater, but the exchange rate regime was different.

How does the 'built-in stabiliser' work? When the national currency depreciates, export prices for foreign buyers[1] go down. This makes domestic goods and services more competitive in the international market, offsetting the negative change in the external environment. Concurrently, in terms of domestic demand (including both consumer and investor demand), a weaker national currency makes imports more expensive, which supports the competitiveness of domestic products in the internal market and promotes import substitution. In turn, a stronger national currency has a countercyclical effect on the economy, limiting the risks of its overheating. This is possible through better availability of imports to 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.

Secondly, a floating exchange rate enables the Bank of Russia to implement autonomous monetary policy aimed at addressing internal issues, first and foremost at maintaining inflation close to the target, independently of other countries' policies and the external economic environment.

In particular, when the exchange rate is regulated, interest rates in the economy have to follow global interest rates due to arbitrage. Contrastingly, if the central bank does not target the exchange rate, it may adjust monetary conditions in the economy setting interest rates independently at a level needed to ensure low and stable inflation. In turn, inflationary pressures stemming from exchange rate movements through the effect of their pass-through to consumer prices are taken into account by the central bank in the course of implementation of its monetary policy.

Finally, a floating exchange rate makes it possible to balance the interests of different economic agents thus helping diversify the economy and enhancing its resilience. This is crucial during periods of structural economic transformations or heightened uncertainty.

Just like administered domestic prices, a regulated exchange rate distorts the market pricing principles. The exchange rate shall reflect the state of the country's balance of payments adjusting to objective changes in foreign trade and financial flows. A short- and long-term equilibrium in the FX market can be effectively achieved only through continuous interaction among a diversity of market participants. If the central bank strives to maintain a certain level of the exchange rate of the national currency, it will have to search for this equilibrium artificially.

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[1] 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 exports. Nonetheless, for exporters – sellers in general, movements of the exchange rate influence the amount of foreign currency earnings denominated in the national currency, which impacts the level of consumer and investor demand in the economy from their perspective.

Moreover, any 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.[2] If the nominal exchange rate is kept at the same level, this might create favourable conditions for individual industries, but only temporarily and at the expense of other sectors of the economy.

The experience of the crises in Russia in 1998 and 2008 and in other countries proves that the pegging of the national currency to a foreign one is inefficient in the conditions of the modern world economy. This pegging will provoke and increase imbalances in the economy in the short term and is impossible in the longer run: when there are powerful negative external factors, any attempts to prevent the national currency from weakening would exhaust the country's foreign currency reserves, which would be inevitably followed by rapid depreciation.

Nevertheless, certain measures reducing exchange rate volatility associated with price fluctuations in global commodity markets may have positive effects on commodity exporting economies. To improve their macroeconomic stability, these countries, including Russia, seek to limit the impact of the external commodity cycle on the internal business cycle and, to this end, employ various instruments, e.g. a fiscal rule. In some cases, the mechanism of a fiscal rule also helps reduce exchange rate volatility stemming from crude price fluctuations. Russia first introduced the fiscal rule in 2004 and has then been gradually modifying it.

[2] In particular, the real exchange rate in a developing economy might grow 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.

BOX 3. ENHANCEMENT OF MODEL-BASED APPROACHES

The history of development of the Bank of Russia's projection models and latest upgrades: the block of the labour market and region-level models

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 changes in macroeconomic variables in the next one to two quarters and models for medium-term forecasting to estimate changes in macroeconomic indicators 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]

One of the main models used by the Bank of Russia to analyse the domestic economy is the QPM. This model was designed in 2007 as part of 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.

The Bank of Russia has been continuously enhancing its model-based approaches taking into account latest research and developments by Russian and foreign experts in macroeconomics and quantitative methods. In 2012–2013, the basic model was expanded to encompass the breakdown of inflation dynamics 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. This 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 managed floating of the 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 covering the public sector that 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 the tightening 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 interconnections between Russian 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 equation 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 period of the 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 pertinent to differentiate between the underlying component of inflation demonstrating sustained price growth in the economy and short-term fluctuations triggered by one-off factors in individual markets. One of the metrics of the underlying 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. Non-core inflation components include fruit and vegetables, petroleum products, regulated services, and other volatile components. They 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.

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

[2] This version of the model was presented in the paper Orlov, A. Quarterly Projection Model. March 2021.

[3] For details about 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.

Second, the model was expanded to include the block capturing the labour market that comprises wage and unemployment variables. The labour market is a key factor influencing price dynamics in any economy. Adding this block in the QPM helps improve the understanding of the main interconnections in the Russian economy, including the ratio between aggregate demand and supply.

Furthermore, the model was complemented with a multi-level production function as a deeper analysis of the interconnections among labour market indicators requires structural modelling of factors of production 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 taking into account their relative costs and spending to additionally increase a particular factor of production. Besides, spending is assumed to grow in the following order: imports, capital, and then, labour. 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 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 factors of production.[4]

For details about the update of the QPM, the specifics of adding the block covering the labour market, and the main changes in the equations, refer to the paper Quarterly Projection Model with the Labour Market Component.

The Monetary Policy Department presents its QPM-based forecast estimates at the meetings with the Bank of Russia executives during the week preceding a key rate decision and at the meetings of the Bank of Russia Board of Directors. To enhance the robustness of forecast estimates, the Research and Forecasting Department presents alternative (independent) forecast calculations relying on its own models. Its main projection model is also one of the versions of the standard QPM. It comprises two complementary – fiscal and credit – blocks in addition to the standard equations. The fiscal block is to estimate and take into account the effects of changes in the main public finance indicators, including by modelling the fiscal rule. The credit block describes the credit impulse considering the impact of subsidised lending programmes on the dynamics of lending. To provide a more comprehensive view of the economic situation, the meetings with the Bank of Russia executives preceding key rate decisions are also attended by the Heads of the Bank of Russia Main Branches to present their region-level forecast estimates. All the Bank of Russia Main Branches completed the development of their region-level structural and/or semi-structural models in 2024. Their models rely on the same principles as the models for the Russian economy as a whole, while focusing more on the regional specifics and interpretations of countrywide trends. Normally, region-level models decompose the country's economy into a particular region and the rest of Russia. Papers studying a number of region-level models are already available on the Bank of Russia website.[5]

[4] For details about the model, refer to the Annex to Monetary Policy Report No. 3 (43). July 2023.

[5] The model for the Volga-Vyatka macro-region is described in Monetary Policy in a Regionally Heterogeneous Economy: Approaches Based on Aggregate and Regional Data, the model for the Urals – in DEMUR: A Regional Semi-structural Model of the Ural Macroregion, the model for the Central Federal District – in Forecasting Regional Indicators Based on the Quarterly Projection Model, and the model for the Far East – in Semi-structural Economic Model of the Far Eastern Macroregion.

SECTION 2. MONETARY POLICY ENVIRONMENT AND CORE MEASURES IN LATE 2023 AND 2024

Amid considerable overheating in the economy, inflationary pressures stayed high. Monetary policy was aimed at decreasing annual inflation to bring it back to the target

Beginning from 2023 H2, the economy notably deviated upwards from a balanced growth path, which was fuelled mainly by domestic demand. High consumer activity was driven by households' growing incomes and confidence coupled with surging credit. Investment activity hit record highs. However, the capacities for expanding supply to meet soaring demand were limited. Companies were using almost all resources available, including production capacities and personnel. The Bank of Russia continued to tighten its monetary policy. Specifically, over August–December 2023, the key rate was raised by 4 pp to 16.0% p.a. Consequently, in early 2024, current price growth significantly slowed down compared to the peaks recorded in autumn 2023. Most measures of underlying inflation went down to 6–7% (SAAR). However, despite the monetary tightening and rising saving activity, lending continued to expand rapidly. This was associated with a growing proportion of loans that are weakly responsive to key rate changes and borrowers' expectations of a key rate reduction in the near future amid elevated inflation expectations. Moreover, due to rising incomes and profits, borrowers were able to raise loans even despite high interest rates.

In 2024 H1, the Bank of Russia continued to pursue tight monetary policy maintaining the key rate at 16.0% p.a. However, in 2024 Q2, disinflation halted. The extent of the economy's deviation upwards from a balanced growth path was not decreasing. Domestic demand remained high, while the capacities to adequately increase supply were still limited. In 2024 Q3, inflationary pressures intensified, including with regard to the underlying component.

In October 2024, the Bank of Russia estimated that annual inflation would equal 8.0–8.5% as of the end of the year. Such a significant deviation from the target was associated with, in the first place, the increased inertia of inflation expectations due to the fact that the inflation rate had been exceeding the target for four years already. The second reason was an additional increase in budget expenditures, including their impact on the growth of both retail and corporate lending. Third, the expansion of credit was also driven by the easing measures in the banking regulation introduced in 2022 to support banks. Finally, borrowers believed that the key rate reduction, that was reflected in the forecast presented by the Bank of Russia on 16 February 2024, would happen regardless of inflation dynamics. Combined with borrowers' doubts about a slowdown in inflation, the resulting monetary tightening was more modest than the Bank of Russia's projections.

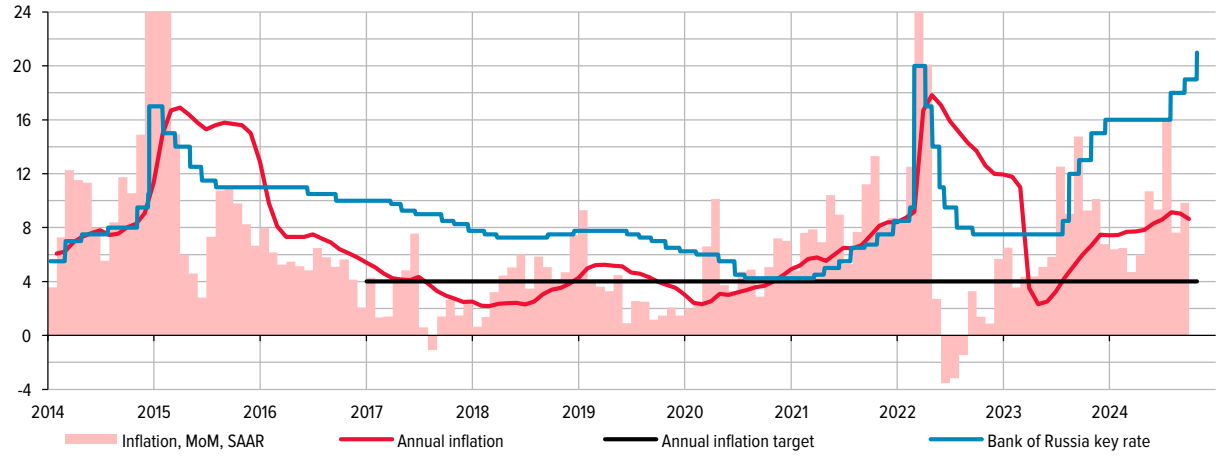
The dynamics of the inflation rate, inflation expectations, lending and domestic demand, as well as an additional increase in budget expenditures in 2024, a more considerable tariff indexation, and a rise in the recycling fee were the reasons why it was necessary to further tighten monetary policy. Overall, in July–October 2024, the Bank of Russia raised the key rate by 5 pp to 21.0% p.a. and significantly adjusted its projected path for 2025–2026 upwards.

In December 2023, the Bank of Russia increased the key rate to 16.0% p.a.

Annual inflation was high, reaching 7.4% as of the end of 2023. That was close to the upper bound of the forecast range presented in the baseline scenario of MPG 2024–2026 but above the target.[1] At the beginning of 2024, annual inflation continued to accelerate given the low rates of early 2023 and the elevated level of current inflationary pressures. In January–April 2024, annual inflation was in the range of 7.4–7.8%.

Current inflationary pressures remained high, which was mainly attributed to soaring domestic demand that was surpassing the capacities to ramp up supply. Nevertheless, as a result of the earlier monetary policy decisions, current inflation notably slowed down to 6.8% (SAAR) already in December 2023 compared to the autumn peaks of 11.5% on average (SAAR). The deceleration then continued, whereas current price growth rates still significantly exceeded 4%, averaging 5.9% (SAAR) in January–April 2024.

BANK OF RUSSIA KEY RATE AND INFLATION *Chart 1*
(%)



Sources: Rosstat, Bank of Russia.

INDIVIDUAL MEASURES OF THE CURRENT ECONOMIC SITUATION *Table 1*

	2023 Q1	2023 Q2	2023 Q3	2023 Q4	2024 Q1	2024 Q2	2024 Q3
CPI, % QoQ, SAAR	4.8	5.1	12.0	8.8	5.9	8.7	11.1
Core CPI, % QoQ, SAAR	2.9	5.6	9.5	9.5	6.8	9.2	7.6
GDP, % YoY	-1.6	5.1	5.7	4.9	5.4	4.1	–
Key rate, % p.a., as of quarter-end	7.5	7.5	13.0	16.0	16.0	16.0	19.0
Banking system claims on the economy in rubles and foreign currency,[1] % YoY	10.9	17.1	21.5	22.7	23.2	22.8	–
on businesses	11.3	17.1	21.2	22.6	23.3	22.6	–
on households	10.0	17.2	22.3	23.0	23.0	23.3	–

[1] *The banking system's claims on the economy mean all claims of the banking system on non-financial and financial organisations and households in rubles, foreign currency 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 participation in non-financial and financial organisations' equity, and other receivables on settlements with non-financial and financial organisations 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 currency and precious metals is recalculated into rubles at the period average RUB/USD exchange rate.
Sources: Rosstat, Bank of Russia calculations.

[1] For details, see Appendix 3 'Quantitative analysis of reasons for the inflation deviation from the target and decomposition of GDP dynamics into shocks'.

A key indicator of the rapid increase in domestic demand was quickly rising service prices. The acceleration peaked at 15.5% (SAAR) in February 2024. The growth of the demand for tourism was pushing up prices for health resort services and travel. However, it takes time to expand tourism clusters and the supply of these services. Therefore, higher demand caused an increase in prices. Contrastingly, the current growth rate of prices for goods notably declined. In 2024 H1, food and non-food prices were rising at a pace of close to 4% (SAAR).

Most measures of underlying inflation considerably decreased from the autumn peaks of 10–12% (SAAR) to 6–7% in 2024 Q1.[2] However, the Bank of Russia's baseline scenario assumed a faster slowdown. The inertia of underlying inflation increased due to elevated inflation expectations.[3]

Households' expectations peaked at 14.2% in December 2023, after which edged down while staying above 11%. Businesses' price expectations declined slightly in early 2024 but remained high, namely close to the 2023 average. In April 2024, companies again raised their price expectations. During that period, businesses also reported higher costs after their reduction for five consecutive months. Analysts' inflation forecasts for 2024 had been exceeding the Bank of Russia's target since autumn 2023 and reached 5.5% by May 2024.

Monetary conditions tightened substantially. After the Bank of Russia raised the key rate in 2023 H2 and signalled that monetary conditions should remain tight for a long period, market participants significantly revised the key rate path upwards. OFZ yields increased across all maturities. Since December 2023, long-term interest rates had been lower than short-term ones, that is, the yield curve had become inverted. This was evidence of monetary tightness, but the curve became slightly less inverted in 2024 Q2. In response to the monetary tightening, interest rates on loans and deposits notably increased, especially on short-term deposits. Over January–April 2024, they averaged 14.5% p.a. compared to 7.6% p.a. in 2023.

High deposit rates ensured a stable inflow of households' funds into time deposits. In these conditions, the saving ratio rose considerably. In 2024 Q1, it reached the maximum level for that period (4.6% without seasonal adjustment), according to Rosstat. Concurrently, people's credit activity generally remained high as well.[4] The expansion of market-based mortgage lending slowed down somewhat, but the overall growth rate of the mortgage portfolio was high. That was driven by large amounts of subsidised loans. Nevertheless, their growth rate was below the autumn peaks owing to the modifications in the parameters of the government subsidised programmes from the beginning of 2024. The increase in unsecured consumer lending did not slow down notably compared to autumn 2023. A significant rise in incomes and positive consumer sentiment contributed to the expansion of lending even despite high interest rates.

Corporate lending continued to increase, although more slowly than in 2023. This segment was less responsive to higher interest rates for several reasons. Banks were issuing a considerable proportion of corporate loans at variable interest rates, while companies could be more willing to borrow because, being guided by the projected path of the Bank of Russia key rate, they were expecting interest rates to go down in the near future. Furthermore, their inflation expectations were notably above the inflation rate assumed in the forecast. Businesses used part of loans to finance earlier launched projects as their suspension could be costly. Another driver was high profits and safety cushions

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

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

[4] To limit the increase in households' debt burden, from 1 March 2024, the Bank of Russia raised the macroprudential risk-weight add-ons for mortgages (refer to the Bank of Russia's press release, dated 27 December 2023). Furthermore, from 1 July 2024, the Bank of Russia increased the macroprudential requirements for unsecured consumer loans and introduced add-ons for car loans (refer to the Bank of Russia's press release, dated 26 April 2024).

enabling companies to service their debts. Finally, as businesses expected the demand for their products to stay high, including from the government, that also supported the expansion of lending.

The economy continued to surge, with the growth of GDP exceeding the Bank of Russia's forecast as of the end of 2023. Economic activity was still rapidly increasing in 2024 Q1. The Bank of Russia's baseline scenario assumed that, given higher saving activity and more moderate domestic demand, the economy will start to shift to a more balanced growth rate from 2024 Q2, which would promote disinflation.

The expansion of the economy was still primarily driven by domestic demand, including both consumer and investor demand. High consumer activity was supported by a considerable increase in households' incomes, lending, and positive consumer sentiment, with the consumer sentiment index rising close to record highs. However, a number of regions recorded signs of a slowdown in consumer activity.

The indicator of investor activity reached historic highs.[5] Enterprises were actively manufacturing investment goods. The import of investment goods was growing as well. The surge in investment was also partly associated with the recovery of the economy's potential, but the main driver was the structural rise in investment activity. The economy was increasingly focusing on the domestic market. The utilisation rate of production capacities was close to the maximum, while companies needed to ramp up output in order to cover soaring demand. Given staff shortages and higher labour costs, businesses were seeking to automate production and enhance its efficiency. With quickly rising profits, companies were able to finance investment projects even though loans became more expensive. Projects associated with government demand, including those financed from the NWF (₽1.0 trillion on a net basis in 2023), were another important contributor to investment activity. Generally, fiscal policy remained a significant driver of the expansion of aggregate demand. Budget expenditures exceeded the threshold provided for by the fiscal rule.

All this supported high business activity. The Bank of Russia's BCI stayed close to its 12-year highs. In the conditions of so high growth rates, the economy was using almost all available production capacities. Their utilisation rate was close to 80%. The potential to further expand the output of goods and services in order to meet elevated demand was limited, including because of challenges related to the import of required equipment.

That said, the main constraint was the situation in the labour market. Its tightness continued to increase, with the unemployment rate dropping to new record lows. Surveyed companies reported that staff shortages were becoming more severe. The situation was most complicated in manufacturing, particularly in metallurgy, machine building and pharmaceuticals. To address these issues, enterprises were raising wages and searching for workers in other regions as well. Moreover, businesses had to utilise manpower more intensely: increasingly more manufacturers were extending the working day and adding work shifts. In these conditions, the growth rate of wages hit record highs. In 2024 Q1, the rise in nominal wages averaged 19.2%.

The world economy was quickly expanding, but the external conditions remained challenging for the Russian economy. Foreign trade was still constrained by geopolitical tensions, intensifying sanction pressure, and the threat of secondary sanctions. Imports started to contract faster, which was not correlating with strong domestic demand. These dynamics could be explained by problems with payments caused by the sanctions. Tight monetary policy was another factor moderating imports. High interest rates were supporting the demand for ruble savings. Combined with a better balance

[5] For details, see Box 5 'Monitoring of businesses for the purposes of monetary policy'.

of trade, this somewhat strengthened the ruble exchange rate.[6] At the beginning of 2024, export dynamics slightly improved. As the OPEC+ countries extended their additional oil production cuts and geopolitical tensions in the Middle East persisted, crude prices went up. Coupled with higher demand amid growing business activity in the world, a good grain harvest and redirection of supplies to Asia, this propped up Russian exports.

The dynamics of global interest rates and stock markets had a weak effect on the situation in the domestic financial market. This was associated with the sanctions limiting Russian participants' access to the international capital market as well as the remaining capital controls.[7]

Proinflationary risks continued to grow. The Bank of Russia noted that an even stronger deviation of the Russian economy upwards from a balanced growth path, persistent labour market tightness, a slower rise in labour productivity compared to wages, continuously elevated inflation expectations, and worsening of the foreign trade environment, including with regard to the import of equipment needed to expand production, could involve risks of an inflation deviation upwards from the baseline scenario over the forecast horizon. Disinflationary risks were weaker. They mostly included a faster slowdown of the increase in domestic demand than assumed by the baseline scenario.

Fiscal policy decisions remained an important factor for the dynamics of aggregate demand, inflation, and monetary policy. The Bank of Russia's baseline scenario relied on the approved decisions of the Russian Government regarding the medium-term path of budget expenditures and the time of fiscal policy normalisation from 2025. The Bank of Russia estimated that the effect of the tax reform[8] on inflation would be generally neutral. However, secondary effects related to the structure of these expenditures and revenues might be both proinflationary and disinflationary. The Bank of Russia noted that its key rate decisions would also take into account the overall amount and duration of the subsidised lending programmes. If these programmes remained extensive, a decline in credit activity might be slower, which would hinder disinflation.

The Bank of Russia continued to implement tight monetary policy. In the conditions of strong domestic demand that was surpassing the capacities to ramp up supply and high inflationary pressures, in December 2023, the Bank of Russia decided to raise the key rate by 1 pp to 16.0% p.a. and was keeping it at that level until the Board of Directors' meeting in July 2024. That said, until April–May 2024, market participants had been expecting a key rate reduction in the near future. These expectations were associated with a faster deceleration of inflation. However, by June 2024, proinflationary risks had become more likely. The actual inflation dynamics and elevated inflation expectations that were no longer declining suggested that the earlier tightening of monetary conditions was insufficient to ensure the required pace of disinflation. In these conditions, the Bank of Russia notably strengthened its signal, admitting the possibility of a key rate increase at the July meeting.

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[6] 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' have a limited effect on the ruble exchange rate. In the longer run, it will be determined by the fundamentals, including monetary policy tightening and the dynamics of the balance of trade (the ratio between the foreign demand for exports and the domestic demand for imports). Moreover, the requirement to sell foreign currency earnings involves extra costs for companies and additional difficulties with payments for imports, in the Bank of Russia's view.

[7] Due to the effective sanctions, the Bank of Russia maintains the limits on foreign currency purchases in the Russian market for non-residents from unfriendly countries and the limits on foreign cash withdrawals and transfers abroad. Furthermore, the requirements for selling foreign currency earnings remain in effect. For details, refer to the section Financial Market Protection Measures on the Bank of Russia website and the Report on the Bank of Russia's Anti-crisis Measures.

[8] The tax reform was approved by Federal Law No. 176-FZ, dated 12 July 2024.

In July–October 2024, the Bank of Russia was tightening its monetary policy. Overall, the key rate was raised by 5 pp to 21.0% p.a.

Inflationary pressures were high. Current price growth (SA) sped up to 8.6% in 2024 Q2 from 5.9% in the previous quarter and continued to accelerate in 2024 Q3, reaching 11.1%. The elevated inflation dynamics were attributed to both persistent and one-off factors. In the spring and summer months, most measures of underlying inflation ranged from 6.0% to 8.0%. In September 2024, they went up, with core inflation exceeding 9% (SAAR). The important one-off factors in 2024 Q2–Q3 included the indexation of communication service tariffs and housing and utility rates, higher prices for motor vehicles, including due to the rise in the recycling fee, a shift in the seasonality of fruit and vegetables, and a decrease in harvest.

Inflation expectations continued to trend upwards. Households' expectations started to grow from May 2024. In October 2024, they reached the maximum from the beginning of the year, responding largely to high current inflation. Businesses' price expectations were rising from April 2024, remaining above the 2023 averages and considerably higher than in 2017–2019 when inflation was close to the target. In July 2024, analysts revised their median forecast of inflation for 2025 upwards to 4.5%. By October 2024, it increased to 5.3%. Persistently high and unanchored inflation expectations were an additional factor preventing a slowdown of inflation.

Monetary conditions were tightening. After the Bank of Russia's communication in June–September 2024 and the key rate increase, market participants' expectations shifted upwards even more. OFZ yields soared, especially for short- and medium-term maturities. The yield curve became more inverted. Loan and deposit rates were trending upwards as well. Higher interest rates were encouraging household savings. Despite the rise in market rates on loans, this turned out to be insufficient to decelerate the expansion of credit activity. It remained high, although some segments recorded a slowdown as a result of the monetary policy tightening. In addition, retail lending was influenced by the termination of the non-targeted subsidised mortgage lending programme, the modification of the parameters of other subsidised programmes, and the macroprudential measures. Corporate lending continued to expand fast because of a considerable contribution of transactions that are less responsive to market rates. To decelerate the increase in lending to more balanced rates and boost the saving ratio further, it was necessary to tighten monetary conditions to a greater extent.

The economy's deviation upwards from a balanced growth path remained significant. Furthermore, the economic growth slowed down slightly compared to 2024 H1, which was primarily attributed to more severe supply-side constraints, namely high capacity utilisation rates and the situation in the labour market. According to the Bank of Russia's surveys, businesses were experiencing record-high staff shortages. Unemployment continued to drop, reaching 2.5% (SA) in August 2024. The growth of nominal wages edged down in 2024 Q2 compared to the previous quarter. However, it remained fast, averaging 17.0% in April–July 2024, and was still exceeding the rise in labour productivity.

Consumer activity decreased slightly as well, but stayed high, driven by households' soaring incomes and confidence. Investment demand was still supported by the fiscal stimuli and companies' high profits and optimism about future demand.

In October 2024, the Bank of Russia forecast that the Russian economy would expand by 3.5–4.0% in 2024 and return to a balanced growth path by the end of the forecast horizon.

Global economic growth was decelerating. Sanction pressure continued to increase. According to business surveys, problems with cross-border payments and logistics persisted. Alongside tight monetary policy in 2024 Q2, this was limiting the growth of imports. In 2024 Q3, imports expanded, which was partly attributed to accelerated imports of cars before the rise in the recycling fee. The

value of exports in 2024 Q2–Q3 remained stable. Such import and export dynamics affected the exchange rate of the ruble.

Proinflationary risks prevailed. As before, the main risks were the continuing deviation of the Russian economy upwards from a balanced growth path, persistently high inflation expectations, and worsening foreign trade conditions. Disinflationary risks were associated with a faster deceleration of the expansion of domestic demand or a more considerable increase in the economy's potential and labour productivity than predicted in the baseline scenario.

To bring inflation down to the target and lower inflation expectations, it was needed to tighten monetary conditions considerably more than assumed in 2024 H1. Over July–October 2024, the Bank of Russia raised the key rate by a total of 5 pp to 21.0% p.a. This was necessary due to growing inflation and inflation expectations, the surge in lending, existing supply-side constraints amid elevated demand, as well as an additional increase in budget expenditures in 2024, a more considerable tariff indexation and a rise in the recycling fee. Furthermore, the Bank of Russia revised the projected path of the key rate significantly upwards. According to the October forecast, the average key rate will equal 17.0–20.0% p.a. in 2025 and 12.0–13.0% p.a. in 2026 and return to its neutral range[9] of 7.5–8.5% p.a. in 2027. The Bank of Russia forecasts that annual inflation will be 8.0–8.5% in 2024. Tight monetary policy will ensure its slowdown to 4.5–5.0% in 2025 and return it to 4% in 2026.

[9] For details, see Appendix 7 'Neutral interest rate and its estimate'.

BOX 4. INFLATION IN RUSSIAN REGIONS

Inflation may vary across Russian regions. Nonetheless, if inflation slows down in the country in general, the variance of regional inflation decreases as well. The Bank of Russia's monetary policy is nationwide and the inflation target is common to all Russian regions

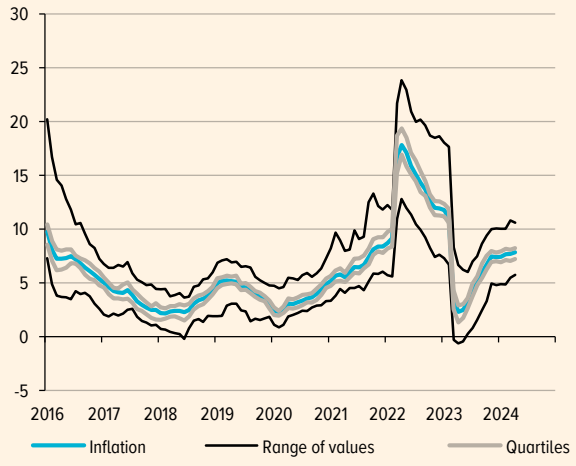
The Bank of Russia's monetary policy implemented within the inflation targeting regime is common countrywide. The target of annual inflation in Russia as a whole is close to 4%. Furthermore, although inflation in certain regions might be both slightly above or below the target, steadily low inflation in Russia in general is translated into steadily low inflation in each particular region.

Historically, the variance of the growth rates of consumer basket prices across the Russian regions is smaller than the variance of the growth rates of prices for individual products and services on average in Russia. In addition, during periods when inflation is steadily low, the variance of price growth rates is also lower across both regions and product groups (Charts 3.1 and 3.2). This is evidence that inflation targeting helps not only reduce price growth rates but also decrease their heterogeneity across both regions and product groups. In particular, in 2016–2019 when average inflation was close to 4%, the standard deviation of regional inflation ranged from 0.5% to 0.8%. In 2021 when overheating in the economy was accompanied by supply disruptions and a deficit of semiconductors, the standard deviation of regional inflation increased to 1.1%. In 2022, certain regions faced rapid changes in their economies caused by the sanctions, the exit of a number of companies from Russia, and the resulting adaptation of businesses to the new environment. Consequently, the standard deviation of regional inflation was high reaching 1.4% in April 2023. Gradually, because of convergence of the economic processes and the dominance of the proinflationary factors that were common to all the regions, the standard deviation of regional inflation returned to 0.8%.

The deviation of regional inflation from the country's average comprises two elements. The first one is different compositions of the consumer basket across the regions. Thus, regions with higher incomes have a larger share of services in spending, whereas regions with lower incomes – a larger share of food products. Furthermore, the consumer basket may be influenced by people's preferences associated with geographical or cultural patterns of particular regions. Specifically, the Far East records higher demand for used foreign-made cars than for new ones, while people in the North Caucasus prefer mutton to any other meat. The second element is that dynamics of prices for the same goods vary across the regions. These variations are usually related to the limited mobility of goods and services countrywide and differences in regional supply. For example, the supply of vegetables in agricultural regions depends mainly on their producers, whereas that in remote regions – on transportation costs.

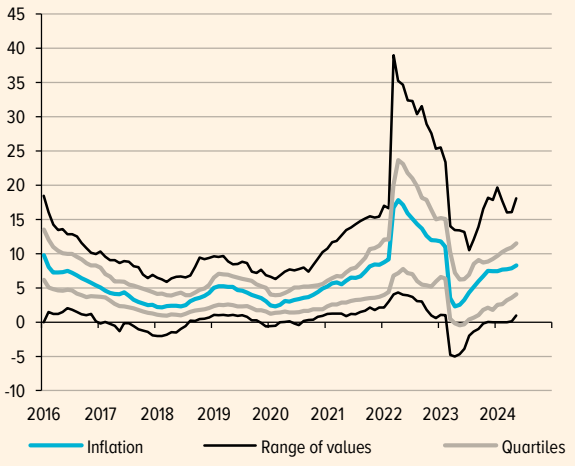
Prices in the regions are characterised by convergence. In most cases, a relatively higher price growth rate and a relatively lower one alternate over time. In terms of accumulated price increases, this means that

VARIANCE OF ANNUAL INFLATION ACROSS RUSSIAN REGIONS *Chart 3.1*
(%)



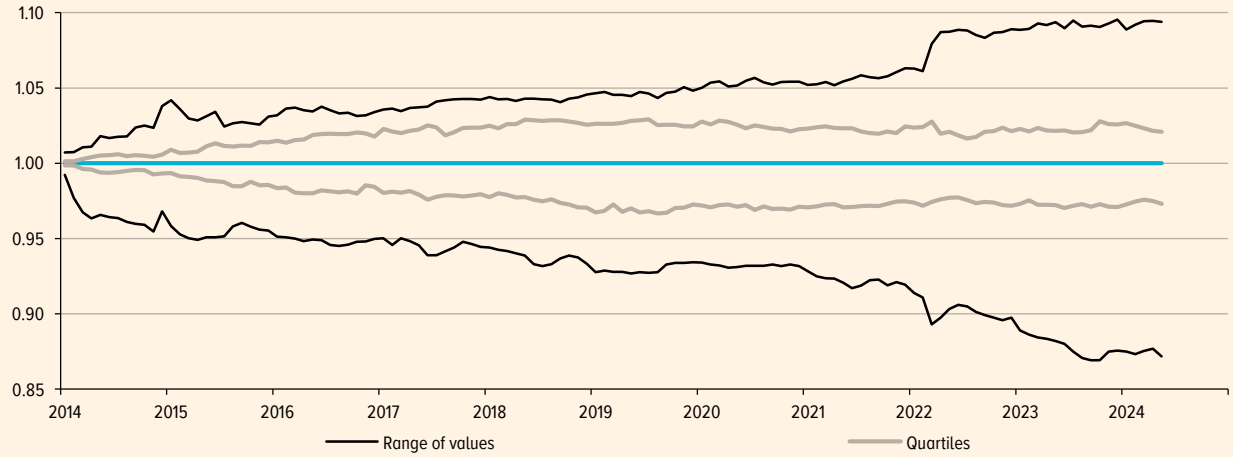
Source: Bank of Russia.

VARIANCE OF ANNUAL INCREASES IN PRICES FOR PARTICULAR PRODUCTS AND SERVICES *Chart 3.2*
(%)



Source: Bank of Russia.

VARIANCE OF RELATIVE PRICE INCREASES, DECEMBER 2013 = 1 *Chart 3.3*



Source: Bank of Russia.

there is neither a systemic rise nor a systemic decline in prices in a region relative to the countrywide level. Accordingly, relative prices in the majority of the regions stay within a certain constant range. Thus, the quartiles of the distribution for the relative price indices (Chart 3.3) remain within the range from 0.96 to 1.03, that is, the accumulated price increase for a half of the Russian regions deviates from the countrywide level by no more than 4%. Over the past three years, annual inflation across Russia was changing within a very wide range from 2.3% to 17.8%. It was impacted by multiple factors whose influence was uneven across the regions. For instance, economic activity varied a lot in the Russian regions in 2022. By early 2024, the estimates of economic activity were declining due to overheating in the economy in all the regions.[1] Specifically, the variance of average inflation over the past three years (from May 2021 through April 2024) was smaller than over each of the years separately. This is associated with the mobility of goods and labour, which causes the degrees of overheating in the regional economies to converge in the medium term.

The Bank of Russia issues monthly information and analytical materials on inflation in the Russian regions on its website. These publications scrutinise how regional inflation is impacted by various factors, including those specific to a particular region and common countrywide.

[1] For details about economic activity in the Russian regions, refer to the report Regional Economy: Commentaries by Bank of Russia Main Branches.

BOX 5. MONITORING OF BUSINESSES FOR THE PURPOSES OF MONETARY POLICY

The Bank of Russia uses business monitoring results as leading indicators of the economic situation when it prepares its monetary policy decisions, including in forecast models

In 2024, when preparing its monetary policy decisions, the Bank of Russia has continued to extensively use the results of business monitoring (regular surveys of over 15,000 industrial, construction, transportation and storage, agricultural, trade and service companies) and high-frequency surveys involving nearly 1,300 businesses. An important measure that the Bank of Russia takes into account when estimating a future path of the economic development is the Bank of Russia's composite BCI. This is a leading indicator of business activity comprising companies' estimates of actual and expected changes in output and demand. The dynamics of the composite BCI normally correlate with GDP dynamics.

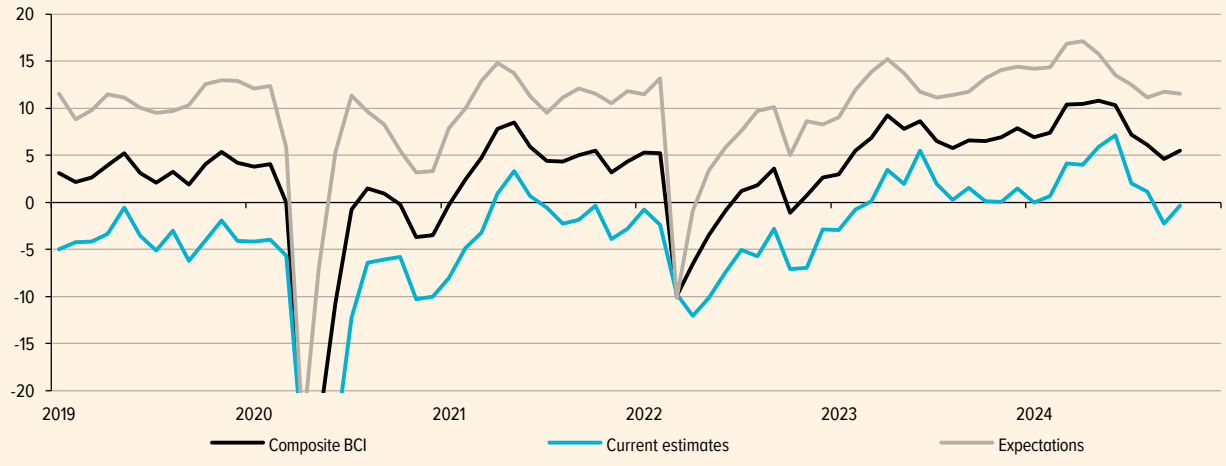
In 2024, the change in the composite BCI was evidence of the continuing rise in business activity. Moreover, in March–June 2024, it stayed close to its 12-year highs (Chart 4.1). In October 2024, business activity started to grow faster again, after its slowdown in July–September 2024. As before, respondents complained about staff shortages and problems related to settlements with foreign counterparties as the main factors hampering the expansion of business activity. Just as in 2023, the growth of the Russian economy in 2024 has been driven by manufacturing alongside trade. Due to the refocusing on the domestic market and the intensification of import substitution, the demand for manufacturing products has continued to go up. In particular, the assessments of current demand by enterprises manufacturing investment goods in 2024 are close to the 2017 peaks.

Nevertheless, after the confident increase from September 2023, companies' short-term expectations in the economy as a whole were generally more moderate in May–August 2024 compared to April 2024. In September–October 2024, short-term expectations regarding demand and output improved.

Staff shortages have been becoming more severe in 2024, especially among manufacturers of investment and consumer goods (Chart 4.2). In 2024 Q3, the staffing level dropped to -33.6 p, which is the lowest on record. The measures implemented by companies to address the problem of staff shortages (wage increases) have continued to exert additional proinflationary pressure. Concurrently, companies have been upgrading available machines or purchasing new ones to enhance performance, as well as making efforts to improve the efficiency of production processes.

When making its monetary policy decisions, the Bank of Russia also pays particular attention to quarterly estimates of investment activity, including actual data and expectations for the next three months, as well as capacity utilisation rates. These data complement the assumptions about the future path of the economic development that rely on the monthly values of the BCI.

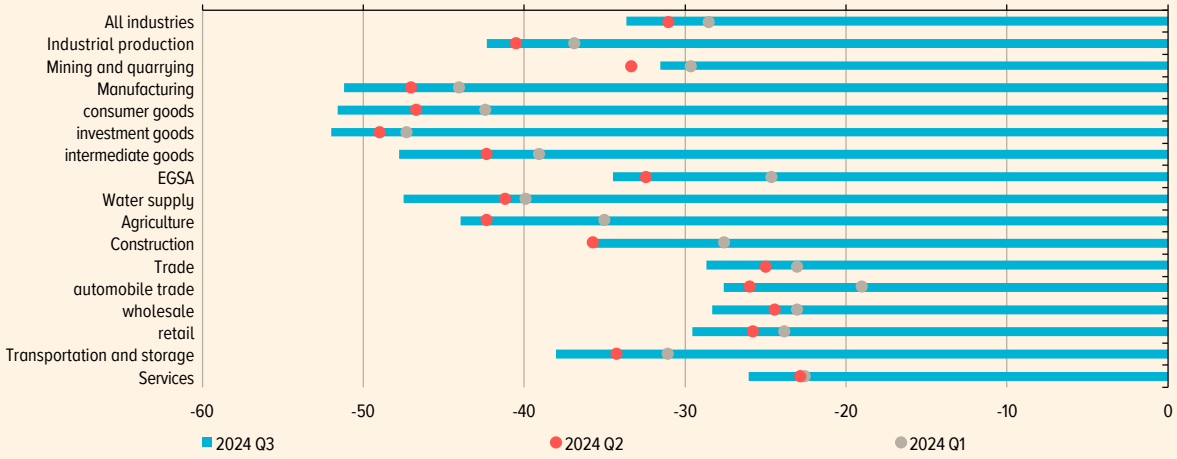
BANK OF RUSSIA'S BCI *Chart 4.1*
(P, SA)



Source: Bank of Russia.

ASSESSMENTS OF COMPANIES' STAFFING LEVELS ACROSS INDUSTRIES
(BALANCE OF RESPONSES, P)

Chart 4.2



Source: Bank of Russia.

Companies' investment activity continued to expand in 2024 Q1–Q3, while the growth became slightly more moderate. The estimates of investment activity were below the 2023 averages (Chart 4.3).

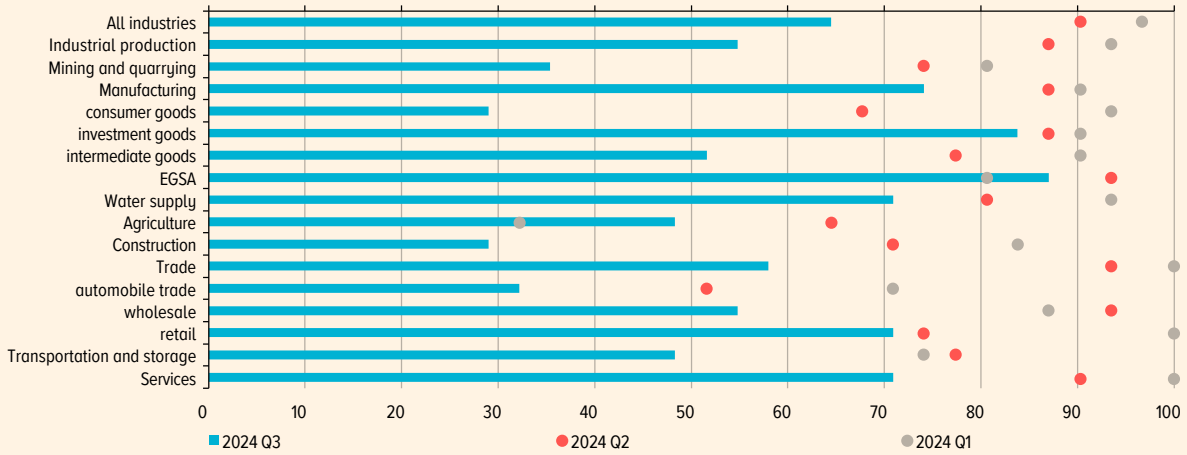
Production capacity utilisation rates reached 80.4% in 2024 Q3, staying close to the 2023 averages (Chart 4.4).

When making monetary policy decisions, the Bank of Russia also tracks 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 and may be used as an indicator of a future inflation path, especially in trade.[1]

The vast array of survey data accumulated over quite a significant period enables the Bank of Russia to carry out comprehensive studies and expand the areas of using the monitoring results. According to the findings

ASSESSMENTS OF CHANGES IN INVESTMENT ACTIVITY ACROSS INDUSTRIES
(IN PERCENTILES RELATIVE TO THE DISTRIBUTION OF VALUES SINCE 2017)

Chart 4.3

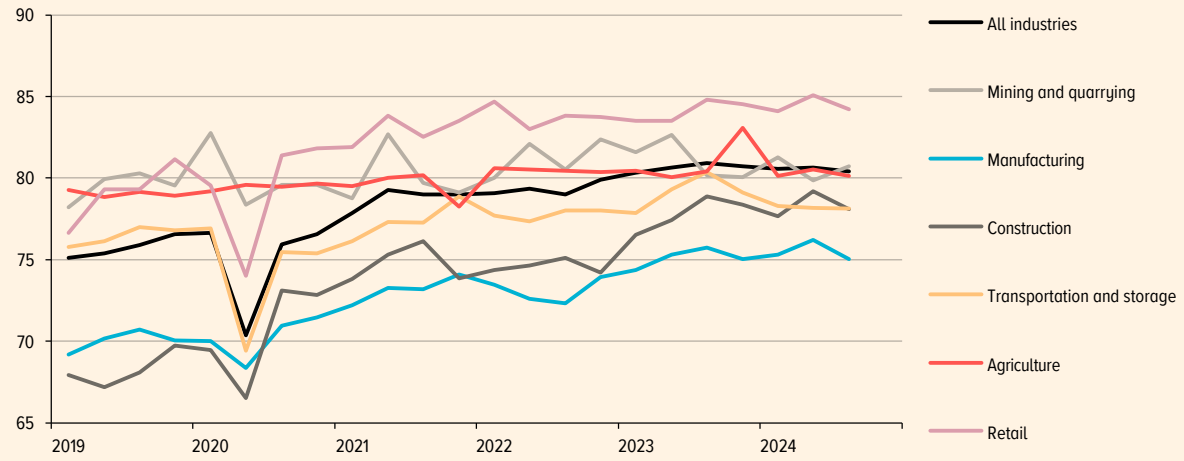


Note. Chart 4.3 shows the percentiles for the current and two previous quarters in the distribution observed from 2017 Q1 through 2024 Q2. A shift in the indicator to the left relative to the previous date means lower levels of the indicator, and a shift to the right – its higher levels.
Source: Bank of Russia.

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

CAPACITY UTILISATION RATE
(%, SA)

Chart 4.4



Source: Bank of Russia.

of the studies conducted by the Bank of Russia's regional branches in 2023 H2–early 2024, the monitoring results contain, among other things, leading indicators of output and inflation and help make short-term forecasts more accurate. Forecasts using the business monitoring results often turn out to be more accurate than forecasts relying on other models. The Bank of Russia uses the business monitoring results as an alternative when estimating the output gap and potential.

BOX 6. BANK OF RUSSIA OPERATIONS IN THE FX MARKET

Mirroring all the operations with the NWF's resources, including within the framework of the fiscal rule, has been smoothing the impact of global price volatility on the Russian economy and reducing the volatility of the ruble exchange rate

After the enactment of the unprecedentedly large-scale sanctions and the blocking of part of Russia's international reserves in February–March 2022, the Government of the Russian Federation suspended the fiscal rule. The Bank of Russia paused fiscal rule-based operations in the FX market even earlier – at the end of January 2022. From 2023, the Ministry of Finance resumed fiscal rule-based operations to accumulate additional OGR in the NWF in favourable foreign trade conditions and use the NWF's resources in the amount of the decline in OGR when the trade environment is unfavourable.[1]

The Bank of Russia started to mirror these operations in the domestic FX market using the CNY/RUB currency pair (the CNYRUB_TOM instrument on Moscow Exchange).[2] Mirroring means the Bank of Russia's operations to buy (sell) foreign currency in the domestic FX market conducted in connection with the operations of the Ministry of Finance[3] to replenish (use) the NWF's foreign currency assets, including within the framework of the fiscal rule. The Bank of Russia's operations to mirror the fiscal rule-based operations help smooth the impact of volatility in global commodity markets on the ruble exchange rate and the Russian economy. The amounts of foreign currency purchases/sales announced by the Ministry of Finance on a monthly basis on the third business day are uniformly mirrored by the Bank of Russia throughout each month. In August 2023, amid growing volatility in the FX market, the Bank of Russia suspended foreign currency purchases until the end of the year, while undertaking to make the suspended purchases similarly to the suspension in 2018 H2.

In 2023 H2, the Bank of Russia started to conduct **regular operations mirroring transactions to invest the NWF's resources in permitted financial assets inside the country in rubles**. Before that, the Bank of Russia had not been mirroring those transactions on a regular basis. The exceptions were two one-time transactions in 2020 to invest the NWF's resources in Sberbank's and Aeroflot's listed shares. In September 2023, in order to mitigate risks to financial stability and the risk of volatility in financial markets, the Bank of Russia changed the timing of foreign currency sales as part of its operations to mirror investments from the NWF, accelerating the sales during the period of redemption of Russian Eurobonds.[4]

From 2024, the Bank of Russia began **to mirror one-time operations that use the NWF's resources to cover the budget deficit beyond the framework of the fiscal rule**.[5] Before that, the Bank of Russia had not been mirroring these one-time operations conducted to spend sovereign funds for anti-crisis purposes (e.g. as of the end of 2015–2018 and 2022).

Thus, in 2024, the Bank of Russia started **to mirror all the operations accumulating and spending the NWF's money in full amount**.[6] This helps efficiently smooth excessive volatility of exchange rate movements and avoid financial stability risks in the case of a significant depreciation/appreciation of the ruble. If, historically, the entire amount of the NWF's liquid (foreign currency) part has been accumulated through direct foreign currency purchases in the market, all the outflows from this part of the NWF (including as investments inside the Russian economy and spending to cover the budget deficit beyond the framework of the fiscal rule) shall be accompanied by equivalent sales in the market so as to contribute to the establishment of a fair market exchange rate of the ruble.

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1 Press release of the Ministry of Finance, dated 11 January 2023, 'On operations in the domestic FX market related to an increase/decrease in oil and gas revenues of the federal budget'.

2 Commentary by the Bank of Russia, dated 11 January 2023, on fiscal rule-based operations in the domestic FX market.

3 When replenishing or using the NWF's foreign currency assets, the Ministry of Finance conducts direct conversion operations with the Bank of Russia to buy or sell foreign currency, which changes the balances of the general government's ruble and foreign currency accounts with the Bank of Russia (the liabilities side of the Bank of Russia's balance sheet). After the Bank of Russia directly purchases foreign currency from the Ministry of Finance or sells it to the Ministry of Finance, the Bank of Russia conducts mirroring operations in the domestic FX market by either selling or buying the same amount, respectively.

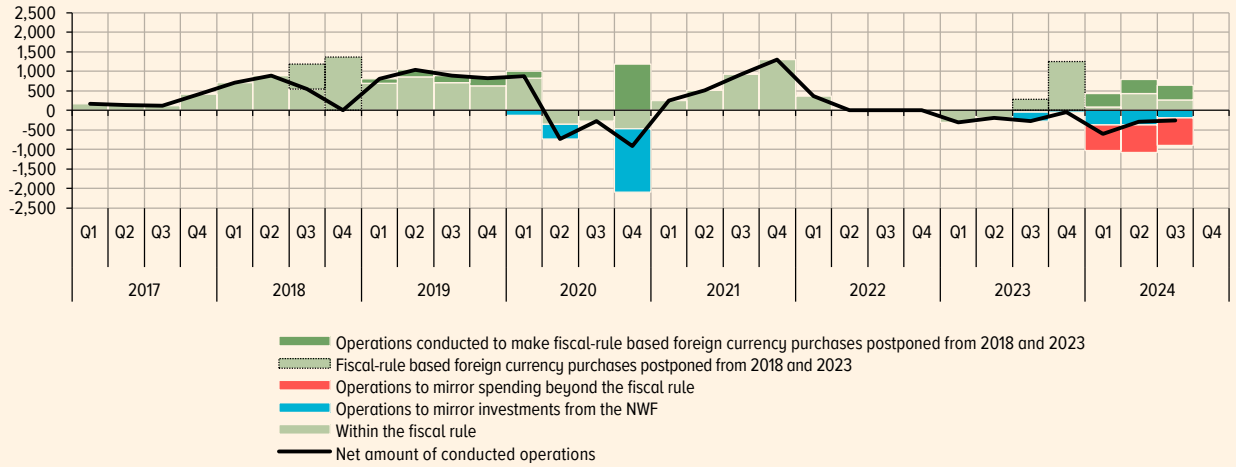
4 Commentary by the Bank of Russia, dated 6 September 2023, on operations in the domestic FX market.

5 Commentary by the Bank of Russia, dated 27 November 2023, on operations with the NWF's resources in the FX market in 2024.

6 Commentary by the Bank of Russia, dated 28 December 2023, on operations with the NWF's resources in the FX market in 2024.

BANK OF RUSSIA OPERATIONS IN THE DOMESTIC FX MARKET RELATED TO ACCUMULATING AND SPENDING THE NWF'S MONEY IN 2017–2024 *Chart 5.1*

(₽ BN)



Sources: Ministry of Finance, Bank of Russia, Bank of Russia calculations.

By conducting operations that mirror the transactions with the NWF's resources performed by the Ministry of Finance, the Bank of Russia neutralises their effect on the banking sector liquidity. In 2022–2024, spending of the NWF's money beyond the framework of the fiscal rule and investments from the NWF inside the Russian economy have become sufficiently large (totalling approximately ₽10 trillion over the three years). These operations have greatly contributed to the growth of ruble money supply and the banking sector liquidity balance. Having started since 2024 to mirror all the operations of the Ministry of Finance with the NWF's resources, the Bank of Russia will thus be able to reduce their long-term effect on the banking sector liquidity. Nevertheless, as there remains a time lag in mirroring part of transactions (six months for investments from the NWF and one year for operations beyond the framework of the fiscal rule), there might be temporary money inflows into and outflows from banks over a short-term horizon.[7]

Furthermore, during periods of high volatility in financial markets, seeking to mitigate financial stability risks, the Bank of Russia has been adjusting the timing of its operations (by suspending and rescheduling for the next period and/or accelerating/decelerating a relatively uniform distribution across days). Nevertheless, the announced total amount mirroring these operations remains the same in this case.

[7] See Section 4 'Monetary policy operational procedure in 2024 and 2025–2027'.

SECTION 3. MACROECONOMIC SCENARIOS AND MONETARY POLICY IN 2024 AND 2025–2027

In addition to the baseline scenario, the Bank of Russia considered three alternative forecast scenarios. Whatever the scenario, monetary policy will be aimed at ensuring an inflation rate of close to 4%

In 2023–2024, the Russian economy has been actively rebounding and adapting to foreign restrictions, which has been facilitated by, among other things, the measures implemented by the Russian Government and the Bank of Russia. Foreign trade relations with friendly countries have been developing in the conditions of the sanctions and persistent problems in settlements and payments. Domestic demand, including both consumer and investor demand, has been soaring, exceeding the Russian economy's production capacities, which has resulted in serious challenges to price stability. The forecasts did not assume that the economy would be growing so fast in 2023–2024.

MPG 2024–2026 presented a baseline scenario and two alternative scenarios of the medium-term economic development. Those scenarios predicted the economy's growth by 2.2–2.7% and an inflation rate of 7.0–7.5%. The economy has increased more significantly, namely by 3.6%, with actual inflation reaching 7.4%. The actual average Brent price has been close to the expected level, equalling $82 per barrel vs the forecast of $83 per barrel. The quicker expansion of the Russian economy over 2023–2024 has been driven by, among other factors, a considerable fiscal stimulus. During that period, the fiscal rule was eased due to the rise in the cut-off oil price to $60 per barrel that is used to calculate basic OGR allocated to finance budget expenditures. As a result, the higher growth rate of GDP compared to the baseline forecast of MPG 2024–2026 has been attributed to more notable aggregate domestic demand than expected. Moreover, throughout 2023–2024, the expansion of domestic demand has been increasingly exceeding the capacities to build up supply. Ultimately, this has amplified inflationary pressures in the economy that have been exacerbated by growing inflation expectations among households and businesses. During this period, the deviation of inflation upwards from the target has been associated with both the significant expansion of budget expenditures encouraging demand and insufficiently restrictive monetary policy given the actual level of elevated demand. Another proinflationary factor has been higher producer costs than assumed by the baseline scenario.[1]

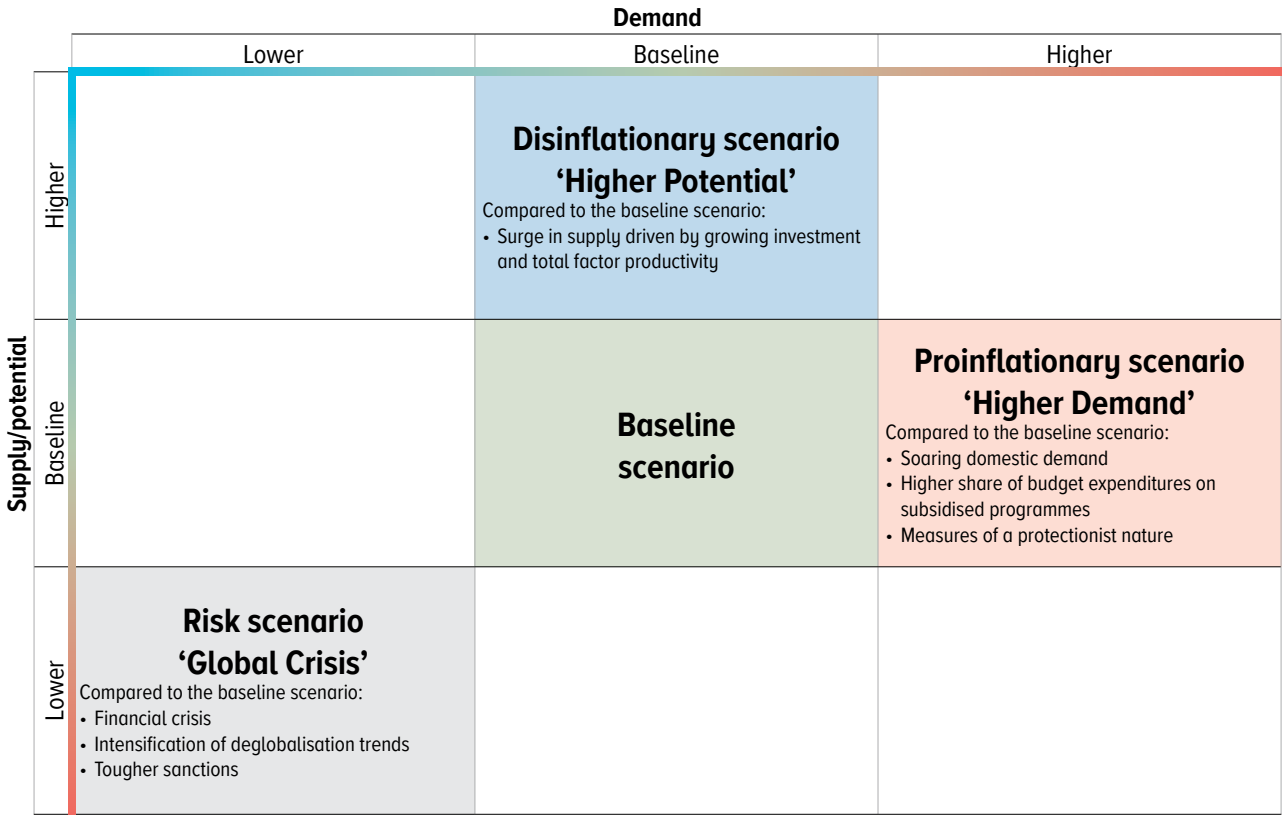
The Bank of Russia prepared a baseline scenario and three alternatives with different assumptions regarding internal and external conditions

The Bank of Russia Board of Directors approved the baseline scenario on 25 October 2024. It assumes that the world economy will continue to develop within the already existing trends. Considering that the world economy remains resilient to higher interest rates, it is not expected to slow down notably, which will support the demand for Russian exports. However, the sanctions that will remain in place will somewhat constrain growth in exports and imports and increase transaction costs.

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

[1] For details, see Appendix 3 'Quantitative analysis of reasons for the inflation deviation from the target and decomposition of GDP dynamics into shocks'.

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



Source: Bank of Russia.

On the one hand, the gradual transformation of the status quo in the world economy and relations formed between countries 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 increasingly focusing 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 above the targets in the majority of economies. 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 all the effects to fully transmit to the economy and the financial system. Therefore, the probability of a large-scale financial crisis cannot be excluded.

The Russian economy is also undergoing transformation, continuing to adapt to changes in the external environment. This is intensifying the uncertainty about the effects of the implemented government support measures, that is, how significantly and quickly they will boost the Russian economy's potential, expanding the capacities to ramp up the supply of goods and services, and to what extent they will influence current consumer activity and consumer sentiment.

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

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

	2022	2023	2024 (forecast)	2025 (forecast)	2026 (forecast)	2027 (forecast)
World GDP, % YoY						
Baseline / Disinflationary / Proinflationary	3.5	3.2	3.1	3.1	3.1	3.0
Risk scenario ('Global Crisis')				0.2	1.2	2.8
US GDP, % YoY						
Baseline / Disinflationary / Proinflationary	2.5	2.9	2.8	2.4	2.0	1.9
Risk scenario ('Global Crisis')				-2.0	0.5	2.9
Euro area GDP, % YoY						
Baseline / Disinflationary / Proinflationary	3.4	0.5	0.5	1.2	1.5	1.5
Risk scenario ('Global Crisis')				-1.9	-0.8	1.0
Chinese GDP, % YoY						
Baseline / Disinflationary / Proinflationary	3.0	5.2	4.9	4.9	5.1	4.9
Risk scenario ('Global Crisis')				2.8	2.9	4.1
US inflation,[1] % in December YoY						
Baseline / Disinflationary / Proinflationary	5.0	3.0	2.7	2.3	2.2	2.2
Risk scenario ('Global Crisis')				1.9	1.5	1.5
Euro area inflation,[2] % in December YoY						
Baseline / Disinflationary / Proinflationary	5.2	3.4	2.9	2.0	1.9	1.9
Risk scenario ('Global Crisis')				2.2	0.4	0.6
US Fed funds rate,[3] %, Q4 average YoY						
Baseline / Disinflationary / Proinflationary	3.7	5.3	4.6	3.4	3.4	3.6
Risk scenario ('Global Crisis')				1.2	0.2	0.4
ECB rate,[4] %, Q4 average YoY						
Baseline / Disinflationary / Proinflationary	1.3	4.0	3.3	2.4	2.2	2.2
Risk scenario ('Global Crisis')				-0.2	-0.6	-0.4

[1] *Core PCE, USA.*
[2] *Core HICP, euro area.*
[3] *US Fed Funds Effective Rate, the upper bound of the range.*
[4] *ECB deposit facility rate.*
Sources: data from national statistical agencies, Bank of Russia calculations.

- The **disinflationary scenario 'Higher Potential'** assumes a surge of supply in the domestic economy, driven by increasing fixed capital investment and a faster rise in total factor productivity. Expanding supply begins to fully cover heightened domestic demand. As a result, inflationary pressures are easing, which allows the Bank of Russia to shift towards monetary policy easing sooner. The Bank of Russia does see possibilities for realisation of this scenario. Nevertheless, compared to the disinflationary scenario, the proinflationary one is assumed to be more probable.

- The **proinflationary scenario 'Higher Demand'** assumes that high demand observed since 2023 H2 will become steadier and continue into 2025. In particular, a high share of budget expenditures on subsidised lending programmes will be an important contributor to the increase in aggregate demand. Furthermore, expanding the measures of a protectionist nature and encouraging import substitution, the Government will impose and raise duties on imports. Coupled with the sanctions in place, this will be pushing up prices for imports. Consequently, consumers will be switching to domestic goods and services more actively. Persistently high domestic demand will be the reason why the demand for factors of production will remain elevated and companies will continue to raise wages at a pace

significantly exceeding the growth rate of labour productivity. The combined effect of these factors will considerably augment inflationary pressures and result in an appropriate monetary policy response.

- The **risk scenario 'Global Crisis'** combines the entire range of adverse external conditions. High interest rates and imbalances accumulated in advanced economies' financial markets will ultimately provoke a global financial crisis. This is happening in the conditions where countries are forming regional blocks, which will only be exacerbating the crisis. Deglobalisation processes are becoming more prevalent, and the risk of deterioration of relations between China and the USA materialises. As to the Russian economy, this scenario suggests intensifying sanction pressure limiting exports, with the geopolitical environment considerably worsening and the discount for Russian exports increasing. A global financial crisis and tougher sanctions will entail a shift in the Russian economy's potential and slow down its growth rate.

Overall, the scenarios differ in terms of the ratios between demand- and supply-side factors they assume. The proinflationary scenario suggests higher demand, the disinflationary scenario – higher supply, while the risk scenario – a combination of negative demand- and supply-side factors. The baseline scenario and the alternative proinflationary and disinflationary scenarios assume that the sanction pressure from the external economy will remain at the current level, while the alternative risk scenario takes into account possible tightening of the sanctions. The baseline scenario is considered to be the most probable one, while the likelihood of the risk scenario has decreased compared to the previous year. As to the disinflationary and proinflationary scenarios, the latter is more probable.

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 and without new shocks. Inflation worldwide continues to slow down.

The growth rate of the world economy stays slightly below the historical average, while the world economy remains resilient to the earlier rise in interest rates. The statistics released in the USA suggest that the economy remains steady. The euro area's growth rate is close to zero, recording no signs of a sustained economic recovery. The situation in China's economy is sufficiently stable and it is expected to expand by about 5% in the medium term, taking into account the moderate scale of the stimuli.

The baseline scenario does not assume any significant changes in geopolitical conditions throughout the forecast horizon. The enacted external restrictions on Russian exports, imports, and 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 the Brent crude price will reach $80 per barrel as of the end of 2024. A gradual increase in supply associated with, among other things, the expected expansion of oil production by OPEC+ will cause a decline in the Brent price to $70 per barrel in 2027. 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 will remain above the 2015–2021 average in 2024 but are expected to edge down in the future

due to an increase in liquefied natural gas production capacities worldwide. Prices for other Russian exports will be rising in the medium term following global inflation trends.

Exports. The value of exports will be increasing moderately in the medium term, according to the Bank of Russia's estimates. A rise in exports of other goods and services is expected to offset a decline in the value of oil and gas exports. The dynamics of the value of crude exports will correlate with changes in the crude price that is forecast to decline by 2027. The value of natural gas and liquefied natural gas exports is expected to contract over the entire forecast horizon due to the adjustment from the elevated level of 2023. Contrastingly, the value of non-oil and gas exports is predicted to grow because of higher external demand amid the expansion of the world economy and rising commodity prices. Nevertheless, exports will still be constrained by unfriendly states' sanctions.

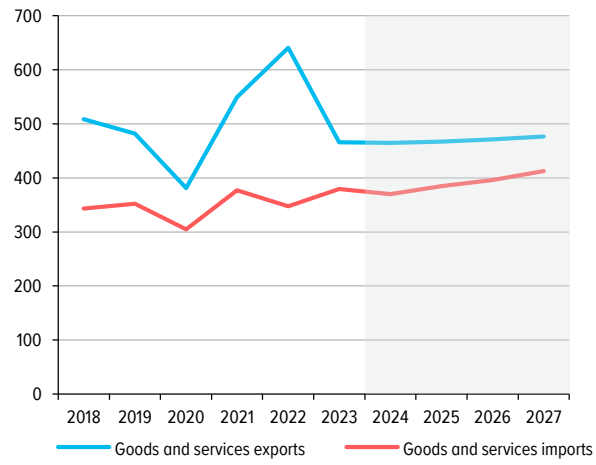
Imports. According to the Bank of Russia's estimates, the value of goods and services imports will shrink in 2024 due to the toughening sanctions adversely affecting payments and logistics. This will be a temporary contraction, and imports are expected to bounce back in the next few years as a result of diversification of supplies and development of new logistics chains. In addition, imports will be supported by expanding domestic demand. Nevertheless, the imports-to-GDP ratio is expected to remain at a lower level in the medium term compared to 2021, which will be associated with import substitution, among other things.

Current account. Due to contracting imports and a slight reduction in the primary and secondary income deficit, the current account surplus is forecast to grow to $61 billion in 2024. Nevertheless, in the next few years, as imports recover, the current account surplus is expected to decrease, specifically to $51 billion in 2025, $43 billion in 2026, and $31 billion in 2027.

Financial account. After the expansion to $78 billion in 2024, the financial account balance, net of reserves, will contract to $52 billion in 2025, $28 billion in 2026, and $27 billion in 2027. Over the forecast horizon, the financial account balance will be supported by the accumulation of foreign assets. That said, the growth of foreign assets is to slow down due to a reduction in foreign trade earnings. Because of transactions with the NWF's resources, the reserves will shrink in 2024 and start to grow again from 2026. Fiscal rule-based foreign currency purchases are expected to be larger in 2026–2027 than the amount of other transactions with the NWF's resources.

EXPORT AND IMPORT FORECAST
IN THE BASELINE SCENARIO
($ BN)

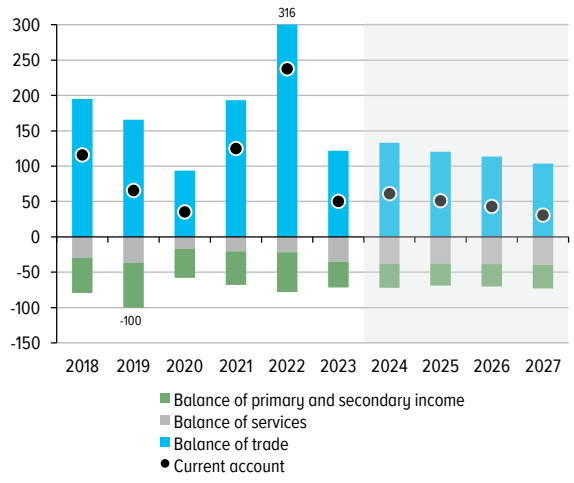
Chart 3.2



Source: Bank of Russia calculations.

CURRENT ACCOUNT FORECAST
IN THE BASELINE SCENARIO
($ BN)

Chart 3.3



Source: Bank of Russia calculations.

Forecast of key macroeconomic indicators

GDP. In 2024 H1, output focused on domestic demand was increasing faster than the economy's production capacities. The economy is overheated. Considering the actual data for 2024 H1 and high-frequency indicators at the beginning of 2024 Q3, the Bank of Russia forecasts that GDP growth will reach 3.5–4.0% in 2024. In 2025–2026, the economy will expand by 0.5–1.5% and 1.0–2.0%, respectively. The slowdown in 2025 will be largely associated with a smaller gap between aggregate demand and production capacities compared to 2024, while the growth rate of potential output will remain unchanged. The slight deceleration of the expansion will be attributed to the effect of tighter monetary conditions over the entire forecast horizon, among other factors. Nevertheless, investment demand will be rising steadily as before, which is related to the shift in the structure of aggregate demand towards a greater share of investment. In 2027, the economy will expand by 1.5–2.5%, which means that it will return to a balanced growth path.

The increase in economic activity in 2024 has been largely driven by domestic demand, whereas external demand in the conditions of the sanctions has been a negative contributor. In the next few years, the contribution of exports will be positive but, generally, remain relatively less significant than ever before.

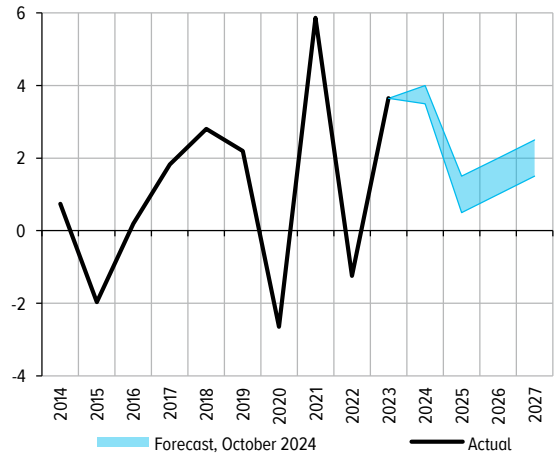
Final consumption expenditure. Household consumption was increasing faster in 2024 H1 than production capacities. According to the Bank of Russia's estimates, the expansion of consumer activity will slow down in 2024 H2 since monetary conditions will remain tight. People's incomes will continue to grow, which will partially support consumer demand but will be translating already into an increase in the saving ratio to a greater extent. Over 2024, final consumption will expand by 3.5–4.5%, driven by both households and the public sector. Further on, the growth of final consumption is expected to decelerate to 0.0–1.0% in 2025, edge up to 1.0–2.0% in 2026, and then return to a balanced path in 2027.

Gross capital formation. Gross capital formation has been increasing in the conditions of the refocusing of the Russian economy on domestic demand, encouragement of import-substituting technologies, and adaptation to the external trade and financial restrictions. Companies' financial performance has continued to improve, driving a rise in private investment. Businesses have been actively increasing capital, including through borrowings. The growth in investment activity has also been promoted by investment from the NWF in infrastructure and large investment projects of state-owned companies. The transformation of the Russian economy will continue in 2024, with the rise in gross capital formation reaching 3.5–5.5% as a result of a considerable contribution of government investment. After the substantial expansion of inventories over 2023, they are expected to adjust downwards in 2024 and moderately contribute to GDP in 2025–2027, according to the Bank of Russia's estimates. In 2025–2026, as monetary conditions will remain tight, private investment will stay close to the level of 2024. Nevertheless, the public sector's demand, in particular within government investment and infrastructure projects, will ensure positive growth rates of gross capital formation. In 2027, investment will return to a balanced growth path of 1.0–3.0%.

Exports. As of the end of 2024, export quantities might shrink by 0.0–2.0% due to new sanctions and the need to further adapt and redirect supplies. In 2025, exports are expected to bounce back and might grow by 0.5–2.5%. In the next few years, the expansion of exports will gradually reach the rates consistent with a balanced growth path of the economy, considering that its structure will become more domestically focused (1.0–3.0%).

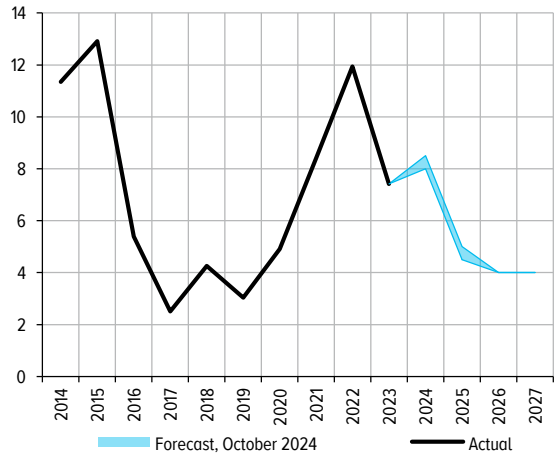
Imports. Despite steadily expanding domestic demand, import quantities will decline by 1.0–3.0% in 2024, which is attributed to the toughening sanctions adversely affecting payments and logistics as they will remain in place in the short term. Further on, their impact will be gradually diminishing as

GDP GROWTH IN THE BASELINE SCENARIO *Chart 3.4*
(% YOY)



Source: Bank of Russia calculations.

INFLATION IN THE BASELINE SCENARIO *Chart 3.5*
(% IN DECEMBER YOY)



Source: Bank of Russia calculations.

businesses adapt to the situation. However, the growth rate of imports will be lower than that of domestic demand, which is associated with the ongoing import substitution in the Russian economy, among other things. In 2026–2027, the growth rates of 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. Inflationary pressures peaked in autumn 2023, after which were gradually easing through 2024 Q1. However, the trends reversed already by the end of spring 2024, and inflationary pressures intensified again. In 2024 Q2, price growth accelerated across a wide range of goods and services. Most measures of underlying inflation considerably exceed 4% in annualised terms. Moreover, inflation over 2024 Q3–Q4 will be significantly above the rate predicted in the July baseline forecast. Inflationary pressures have increased close to the highest levels recorded from early 2024, with inflation expectations soaring as well. Furthermore, the October baseline scenario takes into account the updated budget projections providing for additional expenditures in 2024 and the decisions on indexation of the regulated prices and tariffs. Considering all the inputs, inflation is forecast to reach 8.0–8.5% as of the end of 2024.

The major factor of elevated pressure on prices is still soaring demand surpassing the capacities to ramp up supply. Growing demand amid limited supply enables companies to pass on their rising costs to consumers more quickly and to a greater extent. A significant factor pushing up producer costs in recent months has been rising wages and transportation costs, including because of search for new suppliers and redirection of supplies. Higher labour costs are associated with persistent staff shortages.

The Bank of Russia's monetary policy aims to slow down the increase in demand to a pace that would be more commensurate with the potential to steadily ramp up domestic output and would thus not provoke excess inflationary pressures in the economy. The Bank of Russia forecasts that, given the current monetary policy stance, annual inflation will lower to 4.5–5.0% in 2025 and stay close to 4% further on.

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

	2022 (actual)	2023 (actual)	2024	2025	2026	2027
Key macroeconomic indicators (% growth YoY, unless indicated otherwise)						
Inflation, % in December YoY	11.9	7.4	8.0–8.5	4.5–5.0	4.0	4.0
Inflation, yearly average, % YoY	13.8	5.9	8.2–8.4	6.1–6.8	4.0–4.2	4.0
Key rate, yearly average, % p.a.	10.6	9.9	17.5[1]	17.0–20.0	12.0–13.0	7.5–8.5
Gross domestic product	-1.2	3.6	3.5–4.0	0.5–1.5	1.0–2.0	1.5–2.5
– % change, Q4 YoY	*-1.8*	*4.9*	*2.0–3.0*	*0.5–1.5*	*1.0–2.0*	*1.5–2.5*
Final consumption expenditure	-0.1	6.6	3.5–4.5	0.0–1.0	1.0–2.0	1.5–2.5
– households	*-1.1*	*6.5*	*4.5–5.5*	*0.0–1.0*	*1.0–2.0*	*1.5–2.5*
Gross capital formation	1.7	15.8	3.5–5.5	0.5–2.5	0.0–2.0	1.0–3.0
– gross fixed capital formation	*6.7*	*8.8*	*6.0–8.0*	*0.5–2.5*	*0.5–2.5*	*1.0–3.0*
Exports	–[2]	–[2]	(-2.0)–0.0	0.5–2.5	1.0–3.0	1.0–3.0
Imports	–[2]	–[2]	(-3.0)–(-1.0)	0.5–2.5	0.0–2.0	1.0–3.0
Money supply (national definition)	24.4	19.4	17–20	6–11	6–11	6–11
Banking system claims on the economy in rubles and foreign currency[3]	12.0	22.7	15–18	8–13	7–12	8–13
– on organisations	*13.2*	*22.6*	*17–20*	*8–13*	*7–12*	*8–13*
– on households, including	*9.4*	*23.0*	*12–15*	*6–11*	*7–12*	*8–13*
housing mortgages	*17.0*	*29.4*	*8–11*	*8–13*	*10–15*	*10–15*
Balance of payments indicators[4] ($ bn, unless indicated otherwise)						
Current account	238	50	61	51	43	31
Balance of trade	316	122	133	120	113	103
Exports	*592*	*424*	*422*	*423*	*427*	*431*
Imports	*277*	*303*	*289*	*303*	*313*	*327*
Balance of services	-22	-35	-38	-38	-39	-40
Exports	*49*	*41*	*42*	*44*	*45*	*46*
Imports	*71*	*76*	*80*	*82*	*83*	*85*
Balance of primary and secondary income	-56	-36	-34	-31	-32	-33
Current account and capital account balance	**233**	**49**	**61**	**51**	**43**	**31**
Financial account balance, net of reserve assets	**234**	**52**	**78**	**52**	**28**	**27**
Net incurrence of liabilities	-124	-8	-20	-1	4	6
Net acquisition of financial assets, net of reserve assets	110	44	58	51	32	33
Net errors and omissions	-6	-7	4	0	0	0
Change in reserve assets	**-7**	**-10**	**-14**	**-1**	**15**	**3**
Brent crude price, yearly average, $ per barrel	**99**	**82**	**80**	**80**	**75**	**70**

[1] *Given that from 1 January through 27 October 2024 the average key rate was 16.7%, from 28 October through 31 December 2024 the average key rate is forecast in the range of 21.0–21.3%. Additional information on the format of the key rate forecast is available in the methodological note.*

[2] *Data on the use of GDP in terms of exports and imports have not yet been published by Rosstat.*

[3] *The banking system's claims on the economy mean all claims of the banking system on non-financial and financial organisations and households in rubles, foreign currency 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 participation in non-financial and financial organisations' equity, and other receivables on settlements with non-financial and financial organisations 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 currency and precious metals is recalculated into rubles at the period average RUB/USD exchange rate.

[4] *On the basis of the methodology set out in the 6th edition of the IMF's 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.

Forecast of monetary indicators

Key rate. Medium-term proinflationary risks remain considerable. To steadily lower 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 17.5% p.a. in 2024 and 17.0–20.0% p.a. in 2025 and return to the neutral range by the end of the forecast horizon. Based on the comprehensive analysis of the economy and the changes in it over the past five years, the estimated long-term level of the real neutral rate in the Russian economy has been raised by 1.5 pp compared to the earlier estimates and now equals 3.5–4.5% p.a. With the inflation target being close to 4%, this range corresponds to the nominal neutral rate of 7.5–8.5% p.a. The estimate of the neutral rate has been revised upwards due to the following. The first factor is the rising necessity to ramp up domestic production and increase capital amid the ongoing transformation of the economy. This requires a higher rate to expand domestic savings that are now the key source of funds for investment. The second factor is a higher risk premium because of the dramatic changes in external conditions for Russia in 2022 and the subsequent toughening of the sanctions. The third reason is the easing of the current parameters of the fiscal rule compared to 2021. Finally, this is a higher estimate of the external neutral rate than before the coronavirus pandemic, taking into account how persistent inflation is despite rising interest rates in advanced economies.[2]

Claims of the banking system on the economy. Taking into account a further increase in investment, implementation of large state-supported investment projects, and a rise in households' incomes and spending, the forecast growth rate of claims on the economy in 2024 reflects a moderate decline in credit activity in the corporate and retail market segments as a result of tight monetary conditions. Other factors helping gradually decelerate the expansion of the retail loan portfolio are macroprudential measures in relation to high-risk consumer loans and the termination of the non-targeted subsidised mortgage programme. A long period of tight monetary conditions and steadily high saving activity among households will result in a slowdown of the growth of claims on the economy to 8–13% in 2025 and 7–12% in 2026. Further on, as price lending conditions ease and inflation and inflation expectations lower, the growth rate of claims on the economy will stabilise at 8–13%.

Money supply. Over the entire forecast horizon, growth in money supply in the national definition (M2) will be driven by lending to the economy coupled with a sustained inflow of budgetary funds. The growth rate of M2 will equal 17–20% in 2024 and, as the expansion of claims on the economy slows due to tight monetary conditions, will decline to 6–11% in 2025. As a result of a better balance of the budget and the return of credit to a steady growth path, the increase in money supply will stabilise in the range of 6–11% in 2026–2027.

Alternative scenarios

Disinflationary scenario 'Higher Potential'

Fixed capital investment has been surging over the past three years. It increased by 9.8% in 2023, which is the highest rate since 2011. Investment has continued to expand in 2024 as well, driven by the refocusing of the Russian economy on domestic demand, encouragement of import-substituting technologies, and adaptation to the external trade and financial restrictions. More severe staff shortages are forcing companies to make larger investment to intensify production. Furthermore, investment has been expanding in both the private and public sectors. Investment in the private sector is boosted by companies' growing financial performance. Businesses have been actively raising capital,

[2] For details, see Appendix 7 'Neutral interest rate and its estimate'.

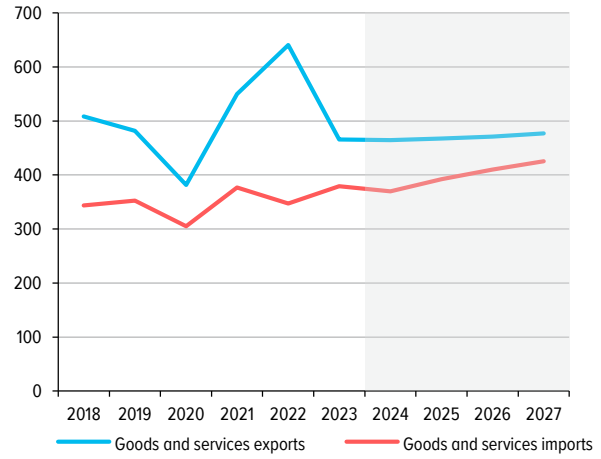
including through borrowings. As to the public sector, the increase in investment has been associated with, among other things, investment from the NWF in infrastructure and large investment projects of state-owned companies (for details about the effect of fiscal policy on the economy, see Box 7 'Fiscal policy in 2024–2027 under the baseline scenario and its impact on the economy').

The disinflationary scenario assumes that, as companies implement investment projects and increase total factor productivity, the expansion of supply (growth in potential output in 2025–2026) will become more considerable compared to the baseline scenario. However, the rise in investment is temporary and only causes a shift in the level of the potential rather than its long-term growth rates. In 2027, both GDP and gross capital formation will return to their balanced growth paths similar to those assumed in the baseline scenario. In this case, expanding aggregate supply will cover elevated domestic demand in 2025–2026. A faster rise in real wages will not have a notable proinflationary effect owing to higher labour productivity, while the employment rate will return to its equilibrium more quickly. The assumptions related to fiscal policy are the same as in the baseline scenario: the Government will be progressively normalising fiscal policy and return to expenditure budgeting in accordance with the long-term parameters of the fiscal rule from 2025.

As a result, inflationary pressures will ease, making it possible to start cutting the key rate earlier. The key rate in this scenario will average 15.0–18.0% p.a. in 2025 and 10.0–11.0% in 2026, as compared with 17.0–20.0% p.a. in 2025 and 12.0–13.0% in 2026 in the baseline scenario. GDP will increase by 2.0–3.0% in 2025 and 2026 and return to a balanced growth path of 1.5–2.5% in 2027. More positive output trends, compared to the baseline scenario, will be driven by a faster increase in final consumption and gross capital formation. The current account surplus will be smaller than in the baseline scenario due to larger imports, driven by higher domestic demand, amid comparable exports. The financial account balance will also be below the level assumed in the baseline scenario because of smaller investment in foreign assets.

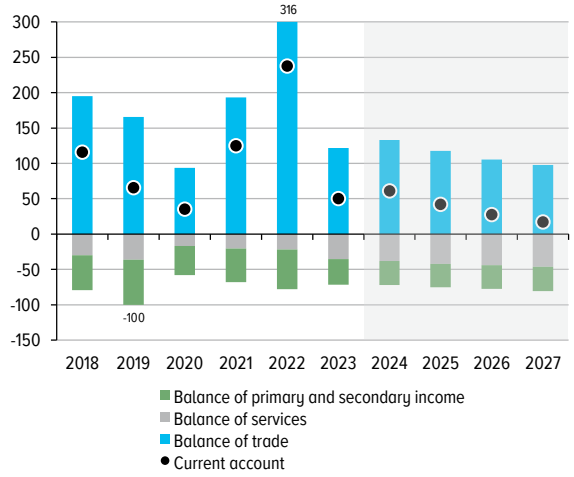
A rise in households' incomes amid high economic activity will expand the range of solvent borrowers, contributing to a faster increase in retail lending as compared to the baseline scenario. Concurrently, companies' potential to implement investment projects will improve and, as a result, they will increase the demand for borrowings. A faster expansion of lending will influence the dynamics of money supply. By the end of the forecast horizon, the growth rates of lending and money supply will return to the path assumed in the baseline scenario.

EXPORT AND IMPORT FORECAST IN THE DISINFLATIONARY SCENARIO 'HIGHER POTENTIAL' *Chart 3.6*
($ BN)



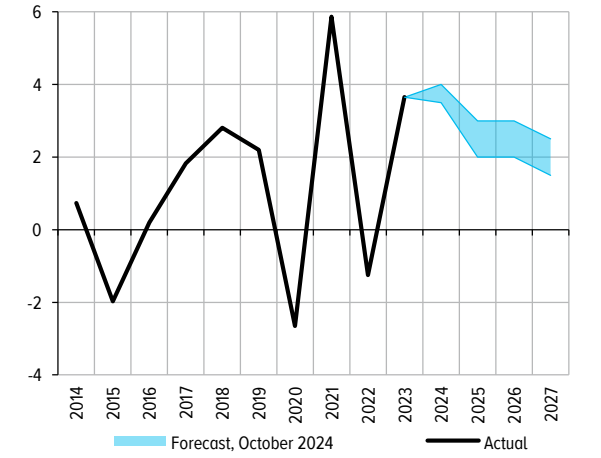
Source: Bank of Russia calculations.

CURRENT ACCOUNT FORECAST IN THE DISINFLATIONARY SCENARIO 'HIGHER POTENTIAL' *Chart 3.7*
($ BN)



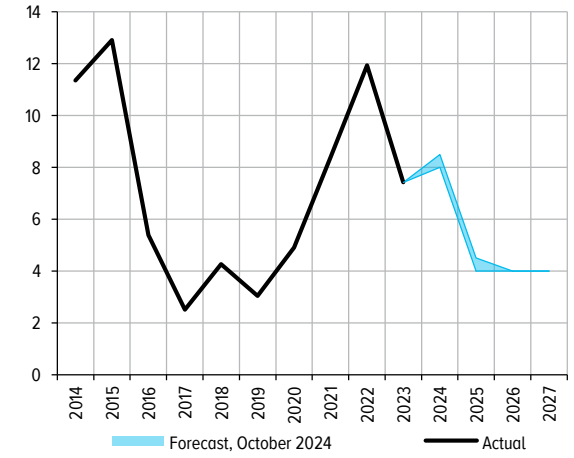
Source: Bank of Russia calculations.

GDP GROWTH IN THE DISINFLATIONARY SCENARIO 'HIGHER POTENTIAL' *Chart 3.8*
(% YOY)



Source: Bank of Russia calculations.

INFLATION IN THE DISINFLATIONARY SCENARIO 'HIGHER POTENTIAL' *Chart 3.9*
(% IN DECEMBER YOY)



Source: Bank of Russia calculations.

THE BANK OF RUSSIA'S FORECAST UNDER THE DISINFLATIONARY SCENARIO ('HIGHER POTENTIAL') *Table 3.3*

	2022 (actual)	2023 (actual)	2024	2025	2026	2027
Key macroeconomic indicators (% growth YoY, unless indicated otherwise)						
Inflation, % in December YoY	11.9	7.4	8.0–8.5	4.0–4.5	4.0	4.0
Inflation, yearly average, % YoY	13.8	5.9	8.2–8.4	5.6–6.3	4.0	4.0
Key rate, yearly average, % p.a.	10.6	9.9	17.5[1]	15.0–18.0	10.0–11.0	7.5–8.5
Gross domestic product	-1.2	3.6	3.5–4.0	2.0–3.0	2.0–3.0	1.5–2.5
– % change, Q4 YoY	*-1.8*	*4.9*	*2.0–3.0*	*2.5–3.5*	*2.0–3.0*	*1.5–2.5*
Final consumption expenditure	-0.1	6.6	3.5–4.5	2.0–3.0	1.5–2.5	1.5–2.5
– households	*-1.1*	*6.5*	*4.5–5.5*	*2.0–3.0*	*1.5–2.5*	*1.5–2.5*
Gross capital formation	1.7	15.8	3.5–5.5	3.0–5.0	3.5–5.5	1.0–3.0
– gross fixed capital formation	*6.7*	*8.8*	*6.0–8.0*	*3.5–5.5*	*2.5–4.5*	*1.0–3.0*
Exports	–[2]	–[2]	(-2.0)–0.0	0.5–2.5	1.0–3.0	1.0–3.0
Imports	–[2]	–[2]	(-3.0)–(-1.0)	1.5–3.5	1.0–3.0	1.0–3.0
Money supply (national definition)	24.4	19.4	17–20	8–13	7–12	6–11
Banking system claims on the economy in rubles and foreign currency[3]	12.0	22.7	15–18	10–15	8–13	8–13
– on organisations	*13.2*	*22.6*	*17–20*	*10–15*	*8–13*	*8–13*
– on households, including	*9.4*	*23.0*	*12–15*	*9–14*	*8–13*	*8–13*
housing mortgages	*17.0*	*29.4*	*8–11*	*10–15*	*10–15*	*10–15*
Balance of payments indicators[4] ($ bn, unless indicated otherwise)						
Current account	238	50	61	42	28	17
Balance of trade	316	122	133	117	105	98
Exports	*592*	*424*	*422*	*423*	*427*	*431*
Imports	*277*	*303*	*289*	*306*	*321*	*333*
Balance of services	-22	-35	-38	-42	-44	-46
Exports	*49*	*41*	*42*	*44*	*45*	*46*
Imports	*71*	*76*	*80*	*86*	*89*	*92*
Balance of primary and secondary income	-56	-36	-34	-33	-34	-34
Current account and capital account balance	**233**	**49**	**61**	**42**	**28**	**17**
Financial account balance, net of reserve assets	**234**	**52**	**78**	**43**	**13**	**14**
Net incurrence of liabilities	-124	-8	-20	1	6	8
Net acquisition of financial assets, net of reserve assets	110	44	58	44	19	21
Net errors and omissions	-6	-7	4	0	0	0
Change in reserve assets	**-7**	**-10**	**-14**	**-1**	**15**	**3**
Brent crude price, yearly average, $ per barrel	**99**	**82**	**80**	**80**	**75**	**70**

[1] *Given that from 1 January through 27 October 2024 the average key rate was 16.7%, from 28 October through 31 December 2024 the average key rate is forecast in the range of 21.0–21.3%. Additional information on the format of the key rate forecast is available in the methodological note.*

[2] *Data on the use of GDP in terms of exports and imports have not yet been published by Rosstat.*

[3] *The banking system's claims on the economy mean all claims of the banking system on non-financial and financial organisations and households in rubles, foreign currency 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 participation in non-financial and financial organisations' equity, and other receivables on settlements with non-financial and financial organisations 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 currency and precious metals is recalculated into rubles at the period average RUB/USD exchange rate.

[4] *On the basis of the methodology set out in the 6th edition of the IMF's 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.

Proinflationary scenario 'Higher Demand'

The scenario is based on a number of assumptions. First of all, the positive demand-side factors observed since 2023 H2 will become steadier and continue into 2025. Consequently, the demand for factors of production will remain elevated and companies will continue to raise wages seeking to hire and retain employees. Investment demand will be heightened as well, which will be associated with the need to expand production capacities given the constraints in the labour market. High domestic demand, coupled with companies' rising labour costs, will cause higher inflationary pressures than in the baseline scenario.

Second, the scenario implies a steadily higher share of budget expenditures on subsidised lending programmes. Hence, with the structural primary deficit being the same, the structure of expenditures suggests a greater effect of fiscal policy on aggregate demand and inflation (a higher fiscal multiplier). This will be translated into an even faster expansion of domestic demand, thus amplifying inflationary pressures. In the conditions of a steadily higher share of budget expenditures on subsidised programmes, the level of the longer-run neutral rate in the economy will be higher due a more significant increase in lending that is not responsive to key rate changes.

Third, the scenario assumes an expansion of measures of a protectionist nature and imposition and growth of duties on imports to encourage import substitution amid the persistent sanctions. Any new duties have a proinflationary effect. In this case, they will push up prices for imports and cause higher demand for domestic goods, which will increase prices for the latter. In the conditions of persistent overheating in the economy and unanchored inflation expectations, the secondary effects of such measures on price dynamics might be more pronounced and longer-lasting.

As a result, inflationary pressures in this scenario will be stronger over the entire forecast horizon, as compared to the baseline scenario. Inflation will speed up to 5.5–6.0% in 2025, forcing the Bank of Russia to take even more decisive measures so as to bring inflation down to the target. Consequently, the average key rate will equal 20.0–23.0% p.a. in 2025 and decrease to 15.0–16.0% p.a. in 2026. In addition, because of a larger proportion of budget expenditures on subsidised lending programmes, the neutral rate in this scenario is higher, averaging 8.5–9.5% in 2027. Due to tight monetary conditions, GDP growth will slow down to 0.0–1.0% in 2026 and return to a balanced path of 1.5–2.5% in 2027. At the end of the forecast period, the level of GDP will be the same as in the baseline scenario. This means that a higher share of budget expenditures on subsidised lending programmes will only accelerate inflation but not increase output in the economy. If fiscal policy normalisation does not progress in line with the announced parameters, this will entail much higher price growth rates.

The current account surplus will be smaller than in the baseline scenario due to a greater value of imports in the conditions of higher domestic demand and higher import prices pushed up by measures of a protectionist nature. Concurrently, exports will be comparable with the level assumed in the baseline scenario. The financial account balance in the proinflationary scenario will also be below the level predicted in the baseline scenario because of smaller investment in foreign assets.

Lending growth rates in 2025 will be higher compared to the baseline scenario. The inflow of budgetary funds into the economy implies a higher fiscal multiplier as the funds will be allocated directly through government support programmes. As a result, companies and households will demonstrate higher demand for loans in order to increase production and consumption, including real estate purchases. Tighter monetary policy will help limit credit activity, but in 2025, monetary tightening will not fully offset the effect of subsidised lending programmes. Consequently, money supply will expand more considerably than in the baseline scenario. In 2026–2027, the growth rate of money supply will return to that forecast in the baseline scenario.

THE BANK OF RUSSIA'S FORECAST UNDER THE PROINFLATIONARY SCENARIO ('HIGHER DEMAND') *Table 3.4*

	2022 (actual)	2023 (actual)	2024	2025	2026	2027
Key macroeconomic indicators (% growth YoY, unless indicated otherwise)						
Inflation, % in December YoY	11.9	7.4	8.0–8.5	5.5–6.0	4.0–4.5	4.0
Inflation, yearly average, % YoY	13.8	5.9	8.2–8.4	6.8–7.4	4.2–4.7	4.0
Key rate, yearly average, % p.a.	10.6	9.9	17.5[1]	20.0–23.0	15.0–16.0	8.5–9.5
Gross domestic product	-1.2	3.6	3.5–4.0	1.5–2.5	0.0–1.0	1.5–2.5
– % change, Q4 YoY	*-1.8*	*4.9*	*2.0–3.0*	*1.5–2.5*	*0.0–1.0*	*1.5–2.5*
Final consumption expenditure	-0.1	6.6	3.5–4.5	2.0–3.0	0.0–1.0	1.5–2.5
– households	*-1.1*	*6.5*	*4.5–5.5*	*2.0–3.0*	*0.0–1.0*	*1.5–2.5*
Gross capital formation	1.7	15.8	3.5–5.5	0.5–2.5	0.0–2.0	1.0–3.0
– gross fixed capital formation	*6.7*	*8.8*	*6.0–8.0*	*1.5–3.5*	*0.0–2.0*	*1.0–3.0*
Exports	–[2]	–[2]	(-2.0)–0.0	0.5–2.5	1.0–3.0	1.0–3.0
Imports	–[2]	–[2]	(-3.0)–(-1.0)	1.0–3.0	1.0–3.0	1.0–3.0
Money supply (national definition)	24.4	19.4	17–20	9–14	6–11	6–11
Banking system claims on the economy in rubles and foreign currency[3]	12.0	22.7	15–18	11–16	7–12	8–13
– on organisations	*13.2*	*22.6*	*17–20*	*11–16*	*7–12*	*8–13*
– on households, including	*9.4*	*23.0*	*12–15*	*9–14*	*7–12*	*8–13*
housing mortgages	*17.0*	*29.4*	*8–11*	*11–16*	*10–15*	*10–15*
Balance of payments indicators[4] ($ bn, unless indicated otherwise)						
Current account	238	50	61	45	35	25
Balance of trade	316	122	133	118	110	102
Exports	*592*	*424*	*422*	*423*	*427*	*431*
Imports	*277*	*303*	*289*	*305*	*316*	*328*
Balance of services	-22	-35	-38	-41	-43	-44
Exports	*49*	*41*	*42*	*44*	*45*	*46*
Imports	*71*	*76*	*80*	*85*	*87*	*90*
Balance of primary and secondary income	-56	-36	-34	-32	-33	-33
Current account and capital account balance	**233**	**49**	**61**	**45**	**35**	**25**
Financial account balance, net of reserve assets	**234**	**52**	**78**	**46**	**21**	**22**
Net incurrence of liabilities	-124	-8	-20	0	5	7
Net acquisition of financial assets, net of reserve assets	110	44	58	46	26	29
Net errors and omissions	-6	-7	4	0	0	0
Change in reserve assets	**-7**	**-10**	**-14**	**-1**	**15**	**3**
Brent crude price, yearly average, $ per barrel	**99**	**82**	**80**	**80**	**75**	**70**

[1] *Given that from 1 January through 27 October 2024 the average key rate was 16.7%, from 28 October through 31 December 2024 the average key rate is forecast in the range of 21.0–21.3%. Additional information on the format of the key rate forecast is available in the methodological note.*

[2] *Data on the use of GDP in terms of exports and imports have not yet been published by Rosstat.*

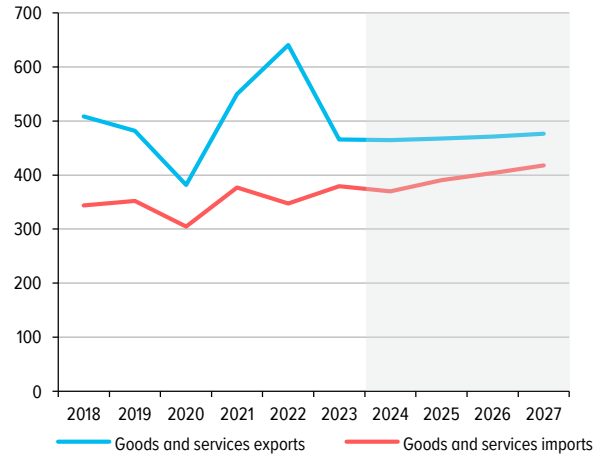
[3] *The banking system's claims on the economy mean all claims of the banking system on non-financial and financial organisations and households in rubles, foreign currency and precious metals, which include loans issued (including overdue loans), overdue interest on loans, credit institutions' investment in debt and equity securities and promissory notes, as well as other forms of participation in non-financial and financial organisations' equity, and other receivables on settlements with non-financial and financial organisations 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 currency and precious metals is recalculated into rubles at the period average RUB/USD exchange rate.

[4] *On the basis of the methodology set out in the 6th edition of the IMF's 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.

EXPORT AND IMPORT FORECAST IN THE PROINFLATIONARY SCENARIO 'HIGHER DEMAND' *Chart 3.10*

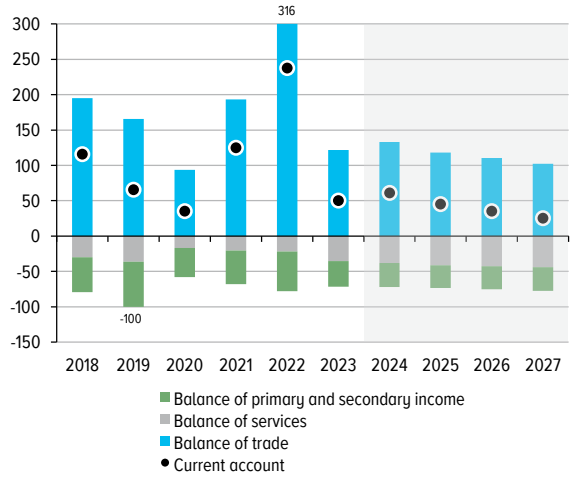
($ BN)



Source: Bank of Russia calculations.

CURRENT ACCOUNT FORECAST IN THE PROINFLATIONARY SCENARIO 'HIGHER DEMAND' *Chart 3.11*

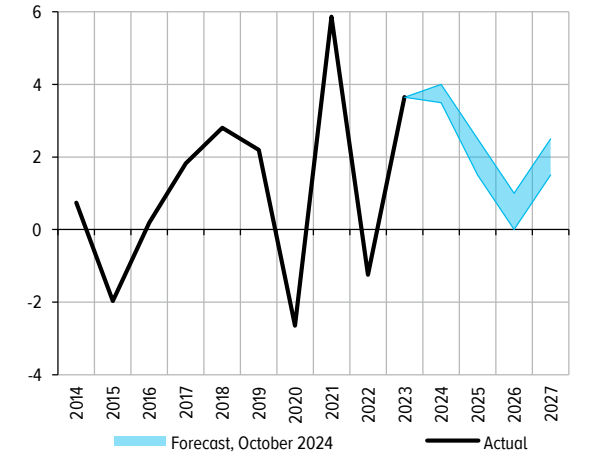
($ BN)



Source: Bank of Russia calculations.

GDP GROWTH IN THE PROINFLATIONARY SCENARIO 'HIGHER DEMAND' *Chart 3.12*

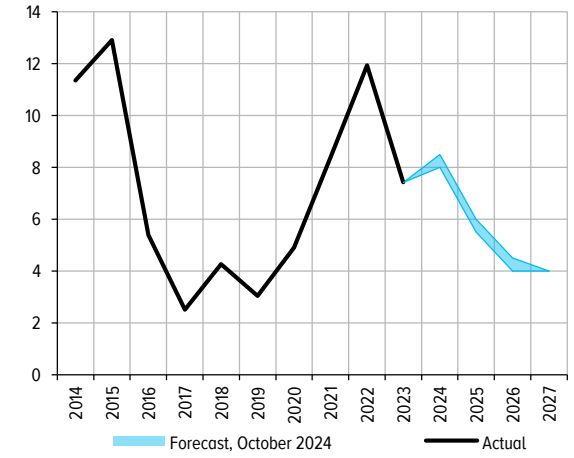
(% YOY)



Source: Bank of Russia calculations.

INFLATION IN THE PROINFLATIONARY SCENARIO 'HIGHER DEMAND' *Chart 3.13*

(% IN DECEMBER YOY)



Source: Bank of Russia calculations.

Risk scenario 'Global Crisis'

The scenario assumes a significant deterioration of the external environment. Advanced economies raised their monetary policy rates in 2022–2023 very quickly, at a pace close to the highest on record. Moreover, that increase happened after a nearly 15-year period of close-to-zero policy rates maintained by these countries' central banks. This scenario assumes that high interest rates and imbalances accumulated in advanced economies' financial markets will entail a global financial crisis, the scale of which might be comparable with that of the 2007–2008 crisis. Signs of a crisis in this scenario will emerge in 2025 Q1, peaking in 2025 Q2–Q3. Central banks will respond to the crisis by cutting their policy rates.

In addition to the financial crisis, this scenario also assumes materialisation of the risk of deterioration of relationships between China and the USA, which will entail rapid deglobalisation of the world economy (fragmentation and division into trade blocks/zones). The deglobalisation trend started to emerge back in 2018–2019 simultaneously with trade disputes and frictions. In 2022, the trend was notably exacerbated by intensifying geopolitical tensions. Countries will be increasingly seeking to localise their production capacities in their territories and develop partnerships not based on economic rationale (e.g. cost cuts) but rather with neighbouring countries and geopolitical allies (reshoring and friendshoring). Moreover, fragmentation of global trade will entail a decrease in total factor productivity and accelerate inflation. Thus, deglobalisation processes in the world economy will only amplify negative effects in the financial market.

As a result, global demand will plummet amid a recession in the two largest economies (the USA and the euro area) aggravated by stronger fragmentation. Crude prices will be considerably lower than in the baseline scenario over the entire forecast horizon. For the Russian economy, this might not only deteriorate trade conditions but also intensify the sanction pressure, due to which the discount for Russian exports will increase. A slump in commodity prices amid the current parameters of the fiscal rule will be the reason to extensively use the liquid part of the NWF in order to neutralise the shock, which might exhaust the NWF's resources over the course of 2025. Given that the equilibrium of global commodity prices is lower, the Government will need to transform the fiscal rule gradually shifting towards the base crude price of $40 per barrel by 2027. A reduction in basic OGR following a decline in the fiscal rule-based cut-off price will contribute to budget consolidation, that is, a decrease in budget expenditures in relative terms.

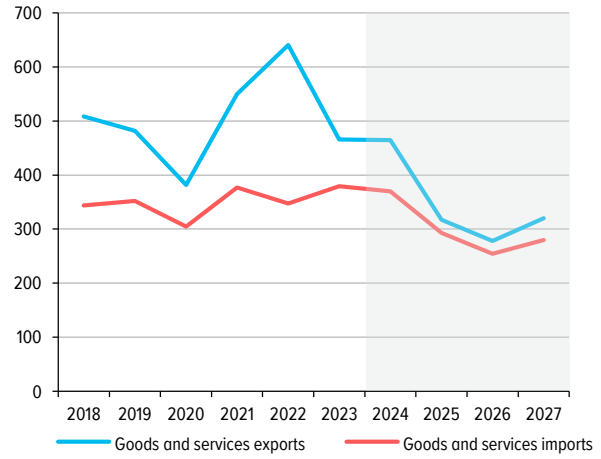
GDP will contract by 3.0–4.0% in 2025 and by 1.0–2.0% in 2026. During the crisis period, budget spending to support the economy will increase compared to the baseline scenario but will still be lower than in 2020 and 2022–2023 due to reduced opportunities amid worse conditions in foreign trade. In 2027, the economy will be expanding at a recovery pace of 2.0–3.0%.

However, a global financial crisis and tougher sanctions will entail a decrease in the Russian economy's potential and its growth rate. A plunge in supply will cause elevated inflationary pressures. During the first crisis year, inflation will speed up to 13.0–15.0%. This will force the Bank of Russia to take decisive response measures in order to prevent a long-lasting deviation of inflation from the target and a persistent rise in inflation expectations – the key rate will average 22.0–25.0% p.a. over 2025. Its average level will equal 16.0–17.0% p.a. in 2026 but reach a neutral range by the end of the forecast horizon. This monetary policy stance will help bring inflation back to the target in 2027.

Amid low oil and gas prices and contracting external demand, exports will plummet. A decline in imports will be caused by lower domestic demand. As a result of the slump in exports and a relatively moderate reduction in imports, the current account will decrease to $4–5 billion in 2025–2026 and will only grow by the end of the forecast period as commodity exports rebound.

EXPORT AND IMPORT FORECAST IN THE RISK SCENARIO 'GLOBAL CRISIS' *Chart 3.14*

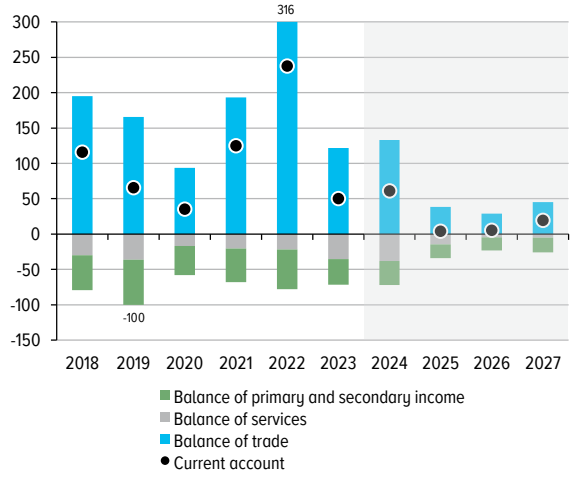
($ BN)



Source: Bank of Russia calculations.

CURRENT ACCOUNT FORECAST IN THE RISK SCENARIO 'GLOBAL CRISIS' *Chart 3.15*

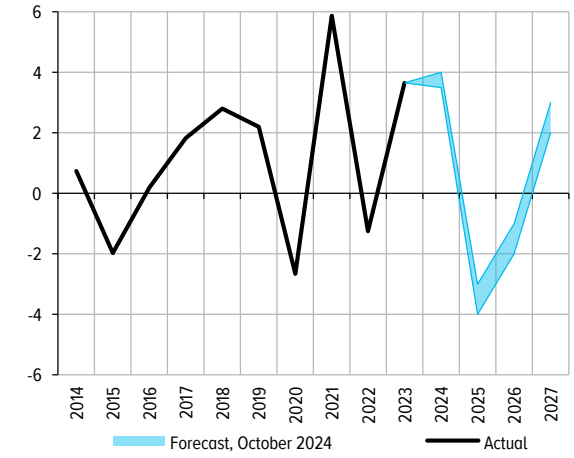
($ BN)



Source: Bank of Russia calculations.

GDP GROWTH IN THE RISK SCENARIO 'GLOBAL CRISIS' *Chart 3.16*

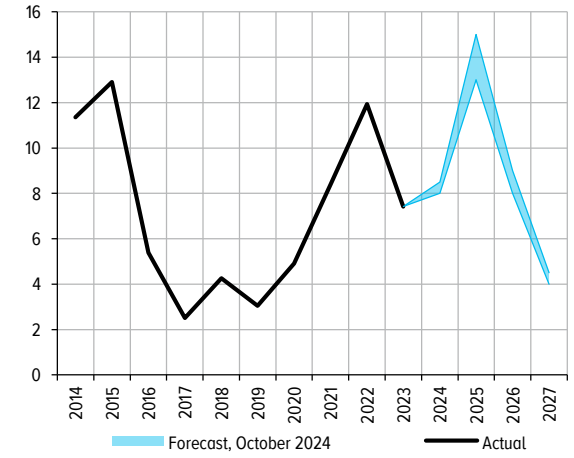
(% YOY)



Source: Bank of Russia calculations.

INFLATION IN THE RISK SCENARIO 'GLOBAL CRISIS' *Chart 3.17*

(% IN DECEMBER YOY)



Source: Bank of Russia calculations.

High uncertainty about future incomes and, accordingly, the ability to repay loans will limit both the demand for corporate and retail loans and banks' willingness to expand lending. Combined with higher interest rates, this will considerably decelerate the growth of lending. Nevertheless, owing to increasing budget support for the economy in crisis conditions, the growth rate of money supply will not drop notably. In 2026–2027, as the economy adapts to the situation and monetary policy eases, credit activity will be bouncing back amid a gradual reduction in the amount of government aid to the economy. By the end of the forecast period, the growth rate of money supply dependent on these two factors will be close to the level assumed in the baseline scenario.

THE BANK OF RUSSIA'S FORECAST UNDER THE RISK SCENARIO ('GLOBAL CRISIS') *Table 3.5*

	2022 (actual)	2023 (actual)	2024	2025	2026	2027
Key macroeconomic indicators (% growth YoY, unless indicated otherwise)						
Inflation, % in December YoY	11.9	7.4	8.0–8.5	13.0–15.0	8.0–9.0	4.0–4.5
Inflation, yearly average, % YoY	13.8	5.9	8.2–8.4	9.9–11.5	11.7–13.1	5.4–6.0
Key rate, yearly average, % p.a.	10.6	9.9	17.5[1]	22.0–25.0	16.0–17.0	7.5–8.5
Gross domestic product	-1.2	3.6	3.5–4.0	(-4.0)–(-3.0)	(-2.0)–(-1.0)	2.0–3.0
– % change, Q4 YoY	*-1.8*	*4.9*	*2.0–3.0*	*(-5.5)–(-4.5)*	*0.5–1.5*	*2.0–3.0*
Final consumption expenditure	-0.1	6.6	3.5–4.5	(-2.0)–(-1.0)	(-3.0)–(-2.0)	2.0–3.0
– households	*-1.1*	*6.5*	*4.5–5.5*	*(-3.5)–(-2.5)*	*(-2.5)–(-1.5)*	*2.0–3.0*
Gross capital formation	1.7	15.8	3.5–5.5	(-16.0)–(-14.0)	(-3.0)–(-1.0)	5.5–7.5
– gross fixed capital formation	*6.7*	*8.8*	*6.0–8.0*	*(-4.0)–(-2.0)*	*(-2.0)–0.0*	*3.0–5.0*
Exports	–[2]	–[2]	(-2.0)–0.0	(-10.0)–(-8.0)	(-5.0)–(-3.0)	1.5–3.5
Imports	–[2]	–[2]	(-3.0)–(-1.0)	(-18.5)–(-16.5)	(-11.0)–(-9.0)	5.5–7.5
Money supply (national definition)	24.4	19.4	17–20	6–11	6–11	7–12
Banking system claims on the economy in rubles and foreign currency[3]	12.0	22.7	15–18	0–5	4–9	8–13
– on organisations	*13.2*	*22.6*	*17–20*	*2–7*	*4–9*	*8–13*
– on households, including	*9.4*	*23.0*	*12–15*	*(-2)–3*	*4–9*	*10–15*
housing mortgages	*17.0*	*29.4*	*8–11*	*2–7*	*7–12*	*10–15*
Balance of payments indicators[4] ($ bn, unless indicated otherwise)						
Current account	238	50	61	4	5	19
Balance of trade	316	122	133	38	29	45
Exports	*592*	*424*	*422*	*278*	*240*	*279*
Imports	*277*	*303*	*289*	*240*	*211*	*234*
Balance of services	-22	-35	-38	-15	-5	-5
Exports	*49*	*41*	*42*	*39*	*38*	*41*
Imports	*71*	*76*	*80*	*53*	*43*	*46*
Balance of primary and secondary income	-56	-36	-34	-20	-18	-21
Current account and capital account balance	**233**	**49**	**61**	**4**	**5**	**19**
Financial account balance, net of reserve assets	**234**	**52**	**78**	**50**	**17**	**16**
Net incurrence of liabilities	-124	-8	-20	-5	0	2
Net acquisition of financial assets, net of reserve assets	110	44	58	45	17	18
Net errors and omissions	-6	-7	4	0	0	0
Change in reserve assets	**-7**	**-10**	**-14**	**-46**	**-11**	**3**
Brent crude price, yearly average, $ per barrel	**99**	**82**	**80**	**55**	**45**	**50**

[1] *Given that from 1 January through 27 October 2024 the average key rate was 16.7%, from 28 October through 31 December 2024 the average key rate is forecast in the range of 21.0–21.3%. Additional information on the format of the key rate forecast is available in the methodological note.*

[2] *Data on the use of GDP in terms of exports and imports have not yet been published by Rosstat.*

[3] *The banking system's claims on the economy mean all claims of the banking system on non-financial and financial organisations and households in rubles, foreign currency 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 participation in non-financial and financial organisations' equity, and other receivables on settlements with non-financial and financial organisations 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 currency and precious metals is recalculated into rubles at the period average RUB/USD exchange rate.

[4] *On the basis of the methodology set out in the 6th edition of the IMF's 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 7. FISCAL POLICY IN 2024–2027 UNDER THE BASELINE SCENARIO AND ITS IMPACT ON THE ECONOMY

Fiscal policy is an essential part of the assumptions of the forecast with respect to its effects on domestic demand. The Bank of Russia assumes that there will be no changes in the announced path of fiscal policy normalisation in 2025–2027. Changes in fiscal policy are taken into account when the Bank of Russia updates its forecast

Fiscal policy remains a major factor influencing aggregate demand and inflation in Russia. The Bank of Russia's baseline scenario relies on the budget projections announced by the Ministry of Finance and its own macroeconomic assumptions. The forecast implies that the Government will progressively normalise fiscal policy and return to expenditure budgeting in accordance with the fiscal rule principles in 2025, with the structural primary deficit kept at a zero level in the future.

Expenditures

The Bank of Russia's baseline scenario assumes that the current version of the fiscal rule will remain effective over the entire forecast horizon. The fiscal rule implies that the maximum amount of federal budget expenditures is determined taking into account:

- basic OGR (from 2027, basic oil and gas prices are indexed by 2% each year);
- NOGR (from 2025, they are expected to increase following the modification of the tax system);
- expenditures on public debt servicing; and
- the balance of government (budget and export) loans.

An important factor of changes in the budget projections relative to the plans of the Ministry of Finance announced at the end of 2023 is the Presidential Address to the Federal Assembly of the Russian Federation (hereinafter, the Presidential Address) made in February 2024. The overall amount needed to implement the goals of the Presidential Address over the course of 2024–2030 is estimated at more than ₽18 trillion (over ₽3 trillion annually, including new expenditures, writing-off of budget loans, tax privileges, investment from the NWF, etc.). The Presidential Address provides for multiple social measures, a large set of investment and infrastructure projects, support for human capital development sectors (education, healthcare, culture, etc.), and extension of certain subsidised lending programmes and social and demographic measures (the maternity capital programme, Family Mortgage, partial repayment of mortgages issued to multi-child families). The measures pursuant to the Presidential Address are included in the 19 updated national projects.

Important changes in social spending include a considerable rise in the minimum monthly wage until 2030 (it will be raised by 16.6% in 2025 to ₽22,440 per month), higher annual indexations of social pensions (by 14.8% in 2025), resumption of indexation of working pensioners' pensions from 2025 (by ₽0.1–0.3 trillion in 2025–2027 annually), and higher social tax deductions for children. In addition, in pursuance of the Presidential Address, a large complex of investment and infrastructure measures will be implemented beginning from 2025, especially in the housing and utility sector and in road and transport infrastructure construction.

Higher inflation rates in 2024–2025 than those included by the Ministry of Finance in its budget projections in autumn 2023 will cause an increase in expenditures of regional budgets and extra-budgetary funds. Instead of the planned reduction in federal budget expenditures in 2025 relative to 2024,[1] they are expected to grow according to the current budget projections both in nominal terms and as per cent of GDP.

As to the budget execution over the course of 2024, the amount of advance funding has been normalising and the economy has been receiving earlier made advance payments from the budget. In other words, the amount of advance funding credited to budgetary funds recipients' accounts with the FT is being gradually aligned with the historical seasonal dynamics adjusted for inflation. The return to the traditional practice of advance funding reduces the uncertainty about the amount of budget expenditures and their distribution throughout a year.

[1] Federal Law No. 540-FZ, dated 27 November 2023, 'On the Federal Budget for 2024 and the 2025–2026 Planning Period'.

Revenues

If commodity prices remain above the basic cut-off prices provided for by the fiscal rule, this will contribute to an increase in OGR and make it possible to replenish the NWF over the entire forecast horizon.

To finance the measures listed in the Presidential Address and other additional expenditures, the taxation system will be modified from 2025. In particular, the Government will:

- expand the progressive PIT scale (a larger number of tax brackets and new tax rates of 18%, 20%, and 22%);
- raise the profit tax rate from 20% to 25%;
- increase the threshold for applying the simplified taxation system to ₽450 million in terms of earnings and/or to ₽200 million in terms of the value of fixed assets; and raise certain property and rental taxes (mineral extraction tax) for companies in a number of commodity industries.

As a result of the tax modifications, in 2025–2027, the budget will annually receive additional revenues in the amount of over ₽3 trillion (1.5% of GDP). According to the logic of the fiscal rule, an increase in NOGR is translated into a rise in planned expenditures. Hence, the effects of the tax modifications should rather be considered in combination with the social and investment expenditures they cover. With higher households' nominal incomes and the fixed tax brackets of the progressive PIT scale, the effective PIT rate may increase and tax payments may surge relative to the base (the wage fund of the economy, the money income fund, and GDP) even despite the new social tax deductions and privileges. The ultimate effect on demand and inflation will depend on consumption patterns of various income groups of households and their propensity to save.

The increase in profit tax and rental charges primarily paid by exporting industries might cause a slight decline in investment activity in the private sector. Nevertheless, since these payments will cover budget expenditures, these measures will help localise part of earnings in the Russian economy, thus replacing the outflow of private capital as part of the reallocation of the budget. The ultimate effect of the tax modifications will depend not only on the areas of expenditures financed from the additional payments but also on the competitive environment, price elasticity of demand in particular commodity markets, companies' behaviour related to the pass-through of the tax changes to prices, and other factors. However, the increase in the taxes on profits and earnings may reduce state-owned companies' base for dividend payments to the budget.

Furthermore, payments to the budget will grow owing to the decisions made in 2024 to impose excise duties and do their unscheduled indexation and to raise the import duties, recycling and licensing fees and government duties, as well as interest income on funds deposited by the FT as a result of a higher interest rate path and partial redistribution of the balances in the TSA to deposits. As a result of the increase in the recycling fee, budget revenues may increase by over ₽1 trillion annually. If labour market tightness persists, this situation will continue to facilitate the conditions for a considerable rise in payments of PIT and social insurance premiums.

Funding and the NWF

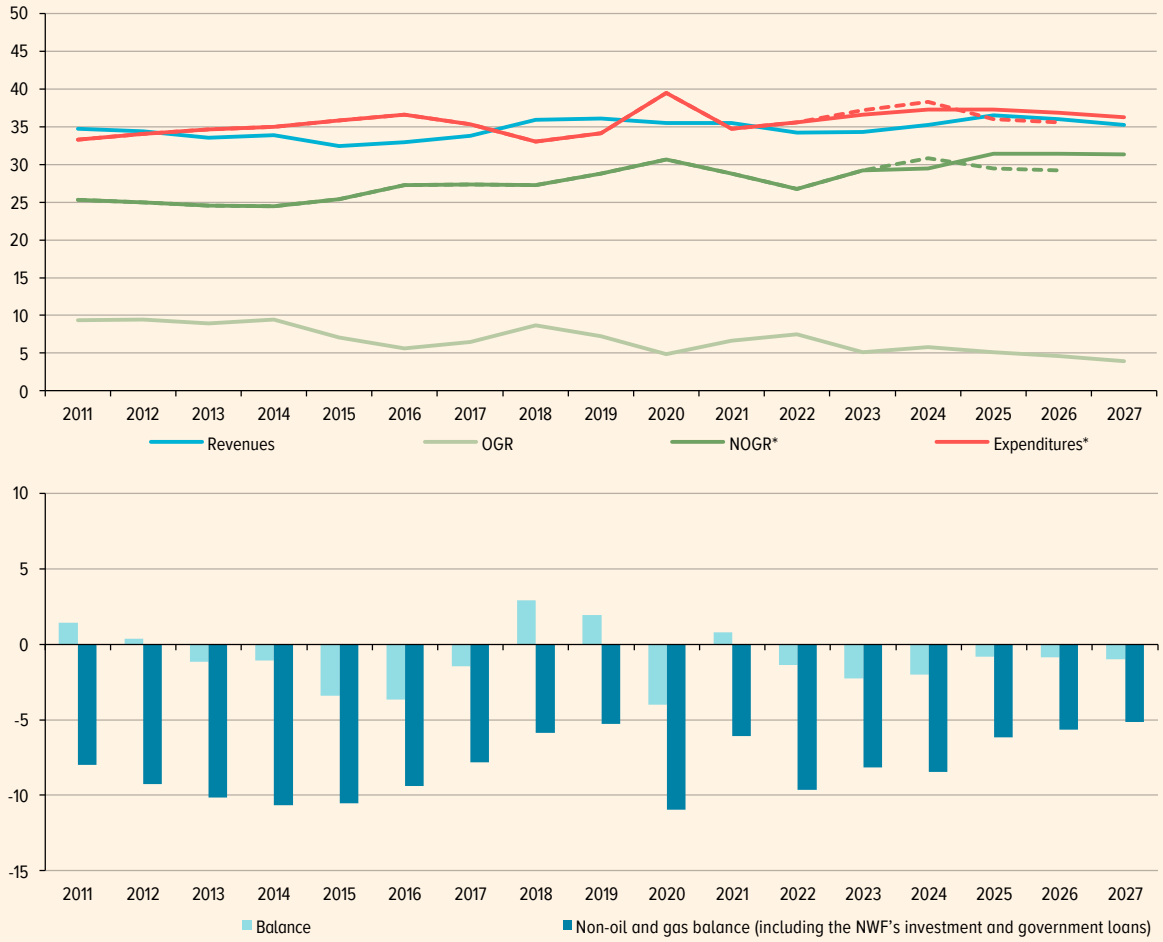
In the next few years, domestic borrowings through OFZs will remain the major source of funding to cover the structural budget deficit. If the Government adheres to the earlier announced strategy for fiscal policy normalisation and a zero-level structural primary deficit, this will help decrease inflation expectations and long-term yields in the public debt market and make OFZ offerings more successful. In 2024, the NWF's money is not expected to be used beyond the framework of the fiscal rule. The expansionary effect of fiscal policy will also be ensured by investment from the NWF to the Russian economy totalling over ₽1.5 trillion in 2024–2027. Nonetheless, the amounts of investment from the NWF in 2025–2027 are expected to be lower than in 2022–2024 (nearly ₽0.9–1.0 trillion annually).

Thus, pursuing its monetary policy, the Bank of Russia assumes that the announced path of fiscal policy normalisation will remain unchanged in 2024 and the next few years (Chart 7.1).

The termination of the non-targeted subsidised mortgage lending programme from 1 July 2024 and tougher terms of the Family Mortgage programme will enhance the transmission of monetary policy and reduce the interest rate risk to the Ministry of Finance.

The expansion of the structural primary deficit by ₽1.5 trillion in 2024 might be an additional driver of aggregate demand in 2024–2025.

FORECAST INDICATORS OF FISCAL POLICY IN 2011–2027 *Chart 7.1*
(% OF GDP)



** The solid lines reflect actual (before 2023) and forecast (from 2024) NOGR and expenditures according to the Fiscal Policy Guidelines for 2025–2027, while the dashed lines – forecast (from 2023) NOGR and expenditures pursuant to the Fiscal Policy Guidelines for 2024–2026.*
Sources: Ministry of Finance, Ministry of Economic Development, Bank of Russia calculations.

If the scenario with plummeting commodity prices realises, the NWF's liquid part will be sufficient to neutralise the initial shock. However, if the slump in commodity prices persists with a shift towards a lower equilibrium, this will involve the risk of depleting the NWF and the need to transform the fiscal rule (see the Risk scenario 'Global Crisis' in Section 3).

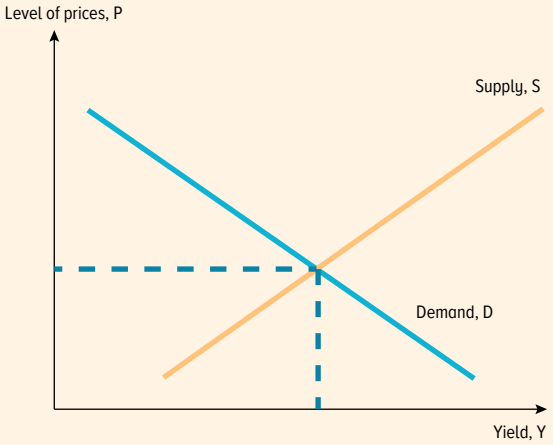
BOX 8. THE CONCEPT OF A LONG-TERM ECONOMIC EQUILIBRIUM AND DEVIATIONS OF KEY MACROECONOMIC VARIABLES FROM IT

The Bank of Russia assesses the extent of the economy's deviation from a balanced and stable growth path. Monetary policy aims to achieve low inflation and helps return the economy to this path

The concepts of a short- and long-term equilibrium in the economy are widely applied in the context of macroeconomic policy. In a **long-term equilibrium**, all key economic indicators grow at a constant pace determined by fundamental factors. In other words, a long-term equilibrium implies no specific point but rather a steady path of economic development. A **short-term equilibrium** is price and yield levels in a particular market or group of markets that balance current demand and supply. When the central bank implements its monetary policy under the inflation targeting regime in a long-term equilibrium, consumer prices rise at a pace consistent with the inflation target and economic growth rates are equal to potential ones.

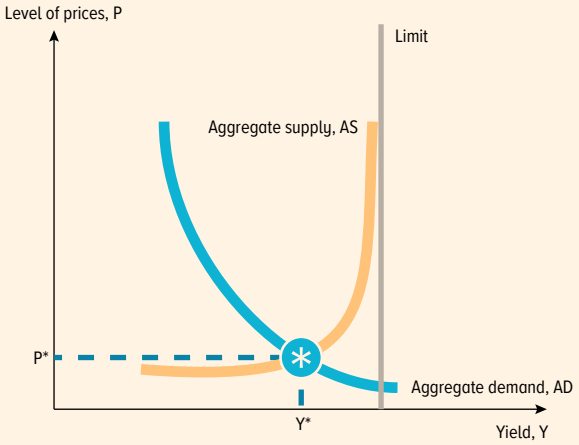
Let us consider demand and supply curves for a particular product or service (Chart 8.1). The demand curve (D) shows a negative correlation between consumption of a particular product or service and its price. The supply curve (S) in turn illustrates a positive correlation between yield/supplies of a particular product or service and its price in the market. The point where these two curves intersect is the short-term equilibrium in a particular market.

DEMAND AND SUPPLY CURVES IN A PARTICULAR MARKET *Chart 8.1*



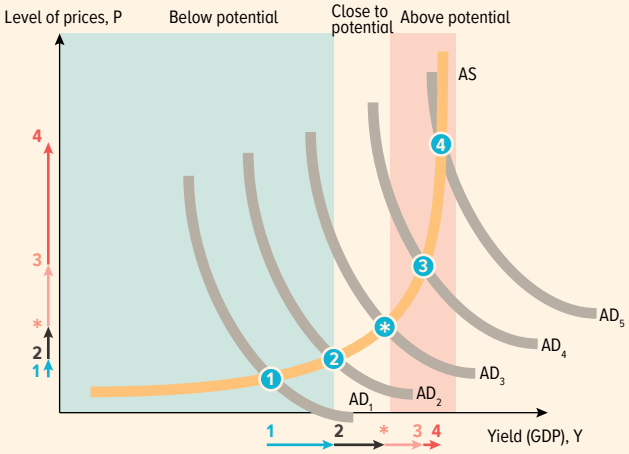
Source: Bank of Russia.

AGGREGATE DEMAND AND SUPPLY CURVES IN THE ECONOMY AS A WHOLE *Chart 8.2*



Source: Bank of Russia.

AGGREGATE DEMAND CURVE SHIFT AFTER A DEMAND SHOCK *Chart 8.3*



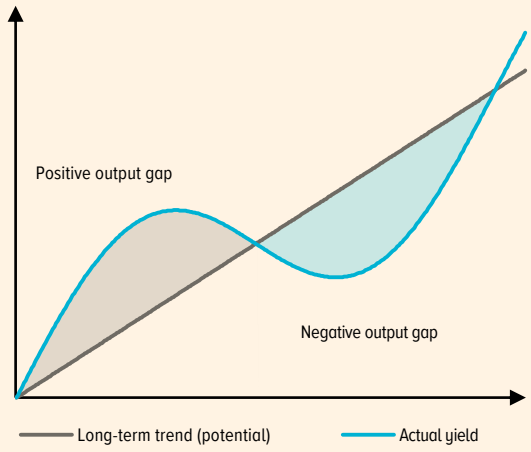
Source: Bank of Russia.

To generate such a chart for the economy in general, we need to aggregate all individual demand and supply curves for all products and services. It is possible to assume that this general chart will be similar to an individual one, but this is not true. There are constraints in the economy preventing it from expanding supply above a certain limit. They include, among others, labour market tightness (it is impossible to quickly increase employment in the entire economy, especially when there are demographic, qualification, migration and other limitations), trade and investment barriers, etc. Therefore, the general chart for aggregate supply will look differently (Chart 8.2).

In this chart, AS is the aggregate supply curve in the country (output plus imports), and AD is the aggregate demand curve (consumption expenditure, investment, government spending, and exports). There is **only a current equilibrium**, that is, a point where the two curves intersect, at each particular moment of time (statistically recorded). What happens when there is a demand shock in the economy (e.g. due to a rise in government expenditures)? In this case, the aggregate demand curve in the chart will shift rightwards. Inflationary consequences of such a scenario will critically depend on how close the economy is to its **long-term equilibrium** (whether it is above or below its potential growth path) (Chart 8.3).

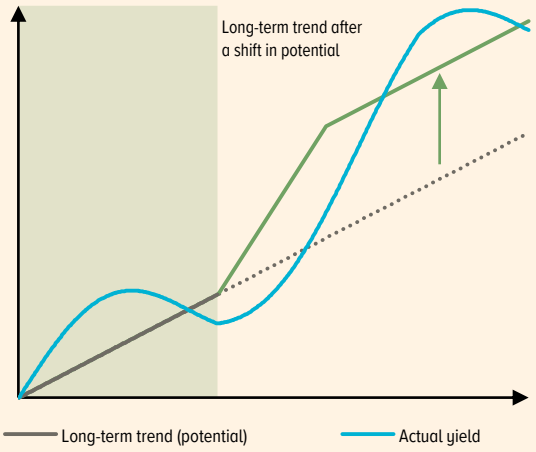
If the economy is in a negative phase of the cycle (below its potential) or close to its equilibrium, aggregate supply might relatively easily adjust to increased demand since the limit associated with labour and capital

LONG-TERM TREND AND OUTPUT GAP *Chart 8.4*



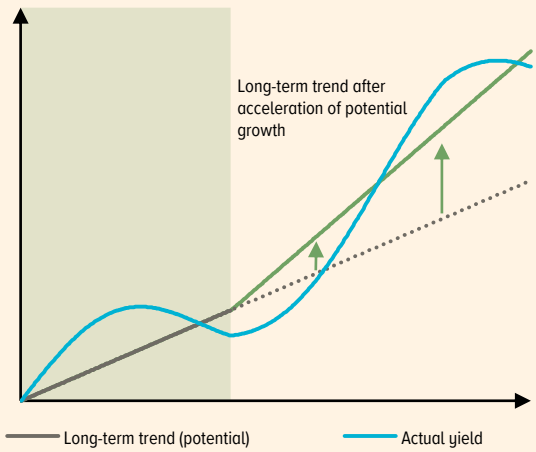
Source: Bank of Russia.

TREND LEVEL SHIFT *Chart 8.5*



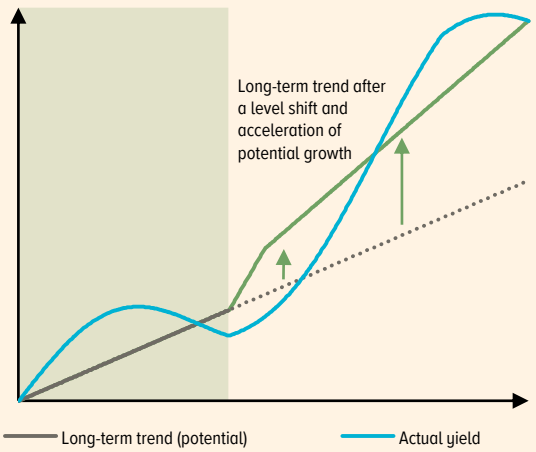
Source: Bank of Russia.

CHANGES IN TREND GROWTH RATES *Chart 8.6*



Source: Bank of Russia.

LEVEL SHIFT AND CHANGES IN TREND GROWTH *Chart 8.7*



Source: Bank of Russia.

constraints is still far. However, the further the demand curve shifts to the right, the more vertical the supply curve segment will become. Accordingly, the less the economy will expand output and the more prices will rise, that is, supply will no longer cover demand. Moreover, if the economy stays above its long-term equilibrium path for a long time, economic agents (companies and consumers) realise that the economy is accumulating imbalances. Consequently, their inflation expectations are rising, unanchoring from the inflation target. This makes it even more difficult to decelerate inflation. Hence, it is crucial for the central bank to avoid persistent overheating in the economy when it stays above its potential for too long. The central bank shall respond to such a situation by tightening its monetary policy.

If there is no external influence, the economy can remain in a long-term equilibrium for an indefinite period of time. Various internal and external cyclical shocks (e.g. rising commodity prices, higher budget expenditures, changes in consumer preferences, declining demand for exports, etc.) might cause a deviation of the economy from its potential path that is called a gap. Such a gap may occur when output, unemployment, the exchange rate, and other macroeconomic measures deviate from their long-term equilibrium values.

Economic publications most often refer to an output gap (Chart 8.4). 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 factors of production 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, barring new shocks. Potential output is not constant, but is changing depending on the dynamics of factors of production (e.g. labour force growth, deployment of innovative technologies, or commissioning of new equipment) and the pace of technological advancement. Therefore, another characteristic of the economy is the growth rate of potential output, or the pace of changes in potential output over time. When 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 pressures. 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. The effect of structural factors alters a long-term equilibrium, and the estimate of the output gap in the new conditions might turn out to be both above and below the previous one (Charts 8.5–8.7). 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.

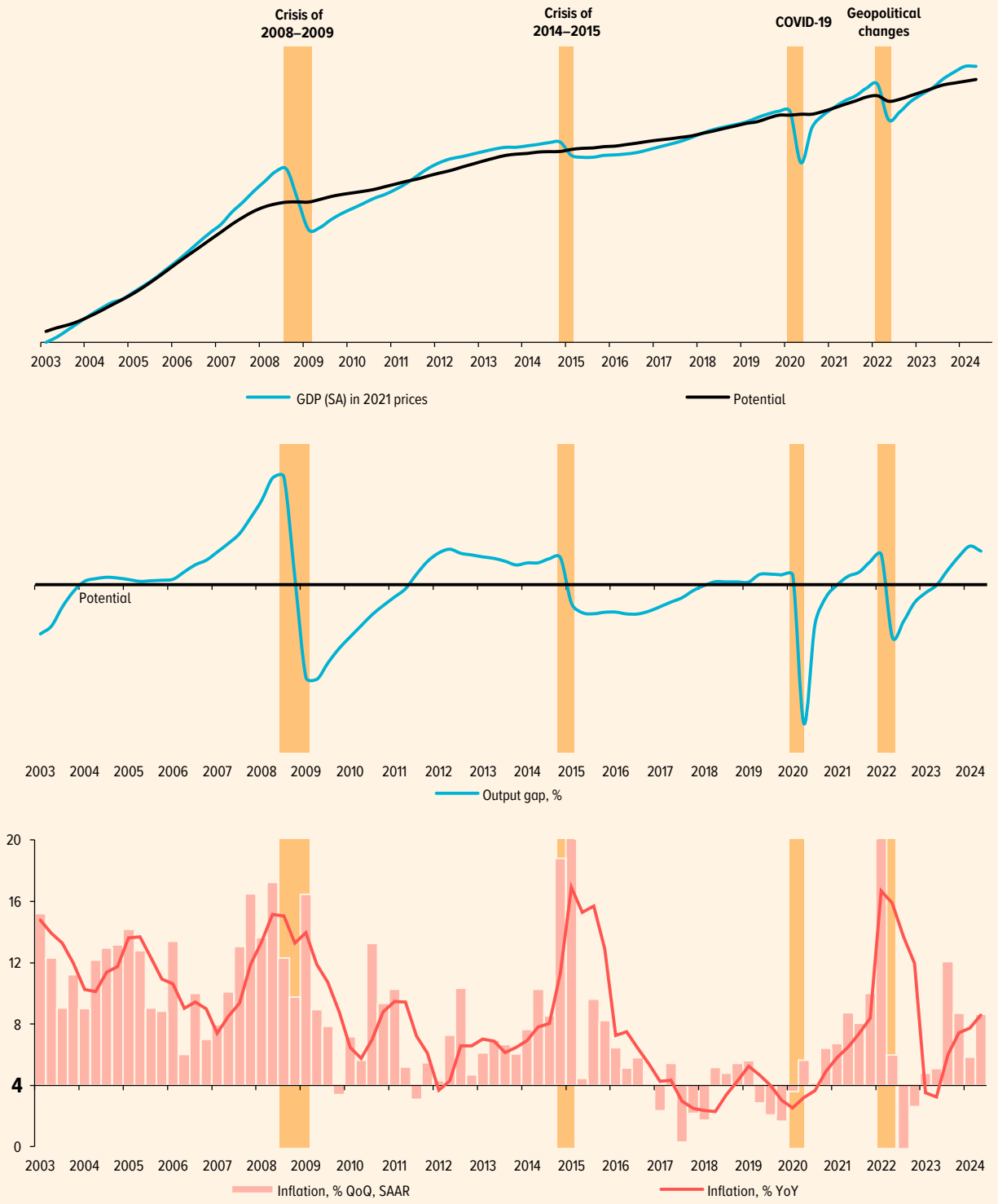
The level of the potential usually shifts due to one-off factors having a longer-run effect, such as a discovery of a rich mineral deposit, among others. In this case, the path of long-term growth will shift upwards. However, the opposite is possible as well: for instance, a natural disaster might disrupt the economy's production capacities and shift the potential path downwards. Normally, the level of the potential changes not instantaneously but gradually, with the path moving slowly to a new level. This is why, at a particular moment, such a situation may be interpreted as a change in potential growth rates, yet these are different scenarios.

A long-term acceleration (or deceleration) of growth is always related to technological progress. In other words, there are no such one-off factors that could increase the angle of the potential growth path. This can only be done by improving total factor productivity, that is, by creating a favourable environment for doing business, enhancing the legal system and the quality of management, ensuring a better regulatory environment, advancing technologies, etc.

When combined, the above factors may result in a scenario where the long-term output path and its growth rate both change. In particular, such a situation was observed in Russia in 2022–2023 (Chart 8.8).

The coronavirus-induced crisis entailed a plunge in output worldwide, including in Russia. Suspension of operations, deferred investment projects, and a reduction in labour force caused a decline in the level of potential output. Nevertheless, as long as technological progress was not compromised, long-term growth rates were not affected.

OUTPUT, OUTPUT GAP, AND INFLATION IN RUSSIA IN 2003–2024 *Chart 8.8*



Note. The decomposition of actual GDP into potential GDP and a gap depends on the specification and parametrisation of the model applied. The chart is given only for illustrative purposes to demonstrate the logic of the Bank of Russia's baseline scenario with regard to output and interpret historical data as part of the QPM, but does not replicate the respective quantifications. The shaded quarters correspond to the periods of GDP slumps (recessions).
Source: Bank of Russia.

Contrastingly, the period of the structural transformation was characterised not only by a reduction in actual output but also by changes in both the trend level and its growth rates. On the one hand, the capital controls as well as new trade barriers and other sanctions entailed a decline in the level of the potential. On the other

hand, the restrictions on technology imports and the outflow of qualified personnel reduced GDP growth rates in the long run. Concurrently, higher government expenditures boosted a quick rebound in actual output to the levels of early 2022, which formed a considerable positive output gap, causing overheating in the economy.

The estimates of the output gap are among the factors considered by the Bank of Russia when implementing its monetary policy. The 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 its long-term 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 measures. 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 that is imperfectly synchronised with the business cycle.

The main assumption is that consumer price dynamics (that is, factors creating inflationary pressures) and financial asset price dynamics might become desynchronised and change incoherently or, in some cases, even diversely. This, in turn, might cause accumulation of imbalances in the financial system and create 'bubbles' provoking financial crises. For example, an increase in output to a level above its potential (i.e. a positive output gap) is often accompanied by active growth in financial markets. For a certain period, demand stays at the same level and, therefore, prices are declining, whereas growth in financial markets increases the estimates of the value of real assets used as collaterals in lending (e.g. real estate), which further boosts lending, production, and ultimately, consumption. However, real assets cannot grow as fast as financial markets which, on top of that, might be driven by speculations. At a certain moment, financial resources increase so much that the number of eligibility criteria for their recipients decreases to a minimum. When the number of such borrowers rises significantly, problems with repayments also become apparent for the system as a whole. Ultimately, the 'bubble' bursts provoking a financial or credit crisis.

In this case, accommodative monetary conditions are tightening independently of monetary policy. Financial institutions promptly toughen lending conditions 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. Furthermore, the economy might rapidly shift from a positive output gap to a negative one, that is, output might drop below its potential. 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), thus offsetting the decrease in the efficiency of IBL.

Therefore, the financial system might exacerbate the economy's deviation from an equilibrium and might even be 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 considers 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.

[1] For research on this issue at the Bank of Russia, refer to (1) Deryugina, E. and Ponomarenko, A. Real-time determination of credit cycle phases in emerging markets. Working Paper Series. No. 17. January 2017; (2) Deryugina, E., Ponomarenko, A. and Rozhkova, A. When are credit gap estimates reliable? Working Paper Series. No. 34. July 2018; (3) Kozlovtseva, I., Ponomarenko, A., Sinyakov, A. and Tatarintsev, S. Financial Stability Implications of Policy Mix in a Small Open Commodity-Exporting Economy. Working Paper Series. No. 42. June 2019; and (4) Ponomarenko, A. and Tatarintsev, S. Incorporating financial development indicators into early warning systems. Working Paper Series. No. 58. July 2020.

SECTION 4. MONETARY POLICY OPERATIONAL PROCEDURE IN 2024 AND 2025–2027

The operational objective of the Bank of Russia's monetary policy is to keep short-term money market rates close to the key rate. Whatever the situation with the banking sector liquidity is, the effective operational procedure enables the Bank of Russia to efficiently manage money market rates

Within the inflation targeting regime, 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 and, then, other interest rates in the economy.

The operational objective of the Bank of Russia's monetary policy is to keep overnight money market rates close to the key rate. The main indicator of the cost of borrowing in the overnight segment, or the operational benchmark of monetary policy is RUONIA,[1] the weighted average interest rate on unsecured overnight interbank ruble loans (deposits). This is the rate for the shortest maturities and, therefore, its level does not depend on maturity risk premiums. In addition, interest rates in this segment are not affected by prices and availability of securities or foreign currency needed to conduct transactions in the secured segments of the money market. As a result, the values of RUONIA depend on credit institutions' need for borrowings or deposits. Hence, providing liquidity to credit institutions or absorbing it from them, the Bank of Russia directly influences RUONIA. Overnight rates are a starting point for the monetary policy transmission mechanism, helping translate the monetary policy signal into the economy.

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.[2] The main operations of monetary policy are one-week auctions. The limit (i.e. the maximum amount of funds provided or absorbed by the Bank of Russia) is determined based on the liquidity forecast. After the auction, the banking sector liquidity during the next week should be on average the same as the amount of funds that banks need to comply with the reserve requirements and to process payments and settlements. The key rate is the minimum interest rate at a one-week liquidity providing auction and the maximum one at a liquidity absorbing auction. The key rate is the centre of the interest rate corridor, the bounds of which are determined by interest rates on the Bank of Russia's standing facilities. Such an interest rate corridor is called symmetrical.

As a result, banks having a liquidity surplus may either lend the funds in the money market or opt for standing deposit facilities at an interest rate equalling the lower bound of the interest rate corridor. Similarly, banks experiencing a liquidity deficit may raise funds either in the market or from the Bank of Russia at an interest rate equalling the upper bound of the interest rate corridor. If the Bank of Russia has set the limit of an auction appropriately and it has been fully drawn down, the supply of liquidity in the money market will be equal to the demand for liquidity. Owing to the symmetrical corridor, interest rates at which money market participants are willing to transact with each other will be close to the centre of the corridor, that is, the key rate. Through its monetary policy operational procedure, the Bank of Russia seeks to moderate excessive volatility of money market rates and encourage credit institutions to conduct transactions in the money market. Given these objectives, the interest rate corridor is 200 bp wide. The international experience shows that, when an interest rate corridor is too

[1] For details, refer to Yatsyk, O. et al. The operational procedure of monetary policy. Analytical note. 2023.

[2] Hereinafter, liquidity means funds deposited by banks in correspondent accounts with the Bank of Russia.

narrow, this disincentivises credit institutions from transacting in the money market due to a reduction in their costs when they use the central bank's standing facilities. However, when the interest rate corridor is too wide, money market rates might be very volatile.

Within the framework of the inflation targeting regime, required reserves are an instrument that helps ensure the predictability of credit institutions' demand for liquidity. This enables the Bank of Russia to carry out its main operations on a weekly basis without conducting daily liquidity providing and absorbing operations. Furthermore, credit institutions are allowed to maintain the required amount of reserves in correspondent accounts with the Bank of Russia not every day but only on average over an AP. This mechanism enables credit institutions to flexibly manage their liquidity without borrowing or depositing funds in the market at too high or, to the contrary, too low interest rates.[3]

If needed, the Bank of Russia can conduct one- to six-day fine-tuning deposit or repo auctions. The Bank of Russia's operational procedure encourages credit institutions to efficiently manage their liquidity without relying excessively on Bank of Russia standing facilities.

Primary and supplementary mechanisms for providing liquidity

From 16 October 2023, the Bank of Russia conducts liquidity providing operations within the PM and SM. Nevertheless, the Bank of Russia's approaches to managing liquidity and money market rates have remained unchanged. The terms of operations (interest rates, collaterals, and maturities) within each of these mechanisms vary depending on the purpose of a credit institution raising liquidity. Operations within the PM are aimed at achieving the operational objective of monetary policy, i.e. keeping money market rates close to the key rate. Collaterals for the PM operations that may be accepted by the Bank of Russia include Russian government bonds and Bank of Russia bonds, as well as corporate, subfederal and municipal bonds put on the Bank of Russia Lombard List provided that their issuer has a credit rating not be below 'AA-' from at least two of the following rating agencies: ACRA (JSC), JSC Expert RA, NCR, and NRA LLC. Operations within the PM may also be secured by claims under loan agreements provided that the obligor has a credit rating not be below 'AA-' from at least two of the rating agencies. With high-quality collateral, banks can raise liquidity through one-week repo auctions, fine-tuning operations, one-month and one-year repo auctions, overnight standing facilities, and loans for up to three months secured by non-marketable assets. As to the SM operations, the Bank of Russia provides liquidity to credit institutions that do not have sufficient amounts of collateral that would conform to the PM requirements. Possible collaterals that credit institutions may use for operations within the SM include all other securities and claims under loan agreements in the general collateral pool accepted by the Bank of Russia. However, the Bank of Russia provides liquidity through these operations at higher interest rates (+1.75 pp to the key rate) and for no more than six months. Credit institutions choose operations for raising liquidity at their own discretion. Intraday loans taken out by banks may be backed by any collaterals allowed within the PM and SM operations.

After the transition to the PM and SM, the Bank of Russia has continued to pursue the countercyclical approach to collaterals for its operations. This means that, if the banking sector needs more liquidity, the Bank of Russia may expand the list of collaterals allowed for the PM operations, in the first place by including assets acceptable within the SM. The transition to the PM and SM has made the procedure for amending the requirements for collaterals more flexible. Collaterals within the SM make it possible to form the required stock of assets and, if the liquidity situation changes, to shift the assets to the PM almost instantaneously.

[3] The averaging mechanism obliges credit institutions to maintain the required amount of funds in their correspondent accounts not every evening, but only on average over an AP (4–5 weeks). For details, refer to Yatsyk, O. et al. Required reserves with the Bank of Russia. Analytical note. 2023.

Planned improvements to the operational procedure and other modifications

The Bank of Russia will further develop the Bank of Russia Payment System (PS) to ensure that the service of speedy and non-speedy money transfers is available to banks and their clients on a 24/7 basis.

After switching to the new functioning mode of the Bank of Russia PS, the schedule of liquidity providing and absorbing operations will change. The planned modifications will help credit institutions enhance their capacities to manage liquidity. As a result, the financial sector will become more resilient to rapid changes in the liquidity level.

Furthermore, it is planned to create a single pool of assets – securities and claims under loan agreements. This will enable banks to use the entire amount of an intraday loan available to them to process clients' payments at the beginning of a business day, that is, to use the collateral available for any central bank loans. That said, the approaches to managing banks' liquidity and the liquidity providing mechanisms will not change. The Bank of Russia has started discussing the proposed modifications with the banking community and will continue the discussion with all parties concerned. Based on the findings of the discussion, the Bank of Russia will make a decision on the parameters of its operations.

In 2024, the Bank of Russia has continued the pilot testing of the digital ruble on real transactions. As of the end of the testing, the Bank of Russia will make a decision on its issue. The introduction of the third form of the national currency – the digital ruble – will impact the banking sector liquidity (see Appendix 8 'The impact of the digital ruble on monetary policy'), but this effect will be limited and time-extended. The Bank of Russia will take into account households' and companies' demand for the digital ruble in the course of liquidity providing and absorbing operations in order to maintain money market rates close to the key rate. With regard to compliance with the reserve requirements, the Bank of Russia will allow credit institutions to include balances of their digital ruble accounts (along with vault cash) in the amount of funds that is excluded from the calculation of the RR in rubles. They will be excluded in the amount of 25% of the RR in rubles calculated before its reduction by the said value. This clause will become effective on 1 January 2025. The introduction of the digital ruble will not affect the Bank of Russia's operational procedure; it might only change the amounts and direction of the Bank of Russia's operations. In the future, the Bank of Russia will consider the possibility of including liabilities related to issued digital financial assets in credit institutions' reservable liabilities similarly to other instruments used to raise funds.

The Bank of Russia is going to explore the issue of establishing a separate urgent liquidity providing mechanism for financial market participants other than credit institutions. Such a mechanism will be launched by the Bank of Russia in the case of crisis developments for a limited period of time. These operations are planned to be organised on the basis of the exchange infrastructure.

In 2024, the Bank of Russia has achieved the operational objective of its monetary policy

Overall, the Bank of Russia's operational procedure is effective in terms of attaining the monetary policy objectives: on the one hand, money market rates stay close to the key rate, which is the operational objective of the Bank of Russia's monetary policy, while on the other hand, the Bank of Russia creates incentives for credit institutions to transact with each other in the money market.

In 2024, overnight money market rates have been predominantly in the lower part of the interest rate corridor. The average deviation of RUONIA from the Bank of Russia key rate (the spread) was -23 bp in January–September 2024, which corresponds to the 2023 average. The spread volatility increased to 33 bp over January–September 2024 vs 28 bp in 2023.

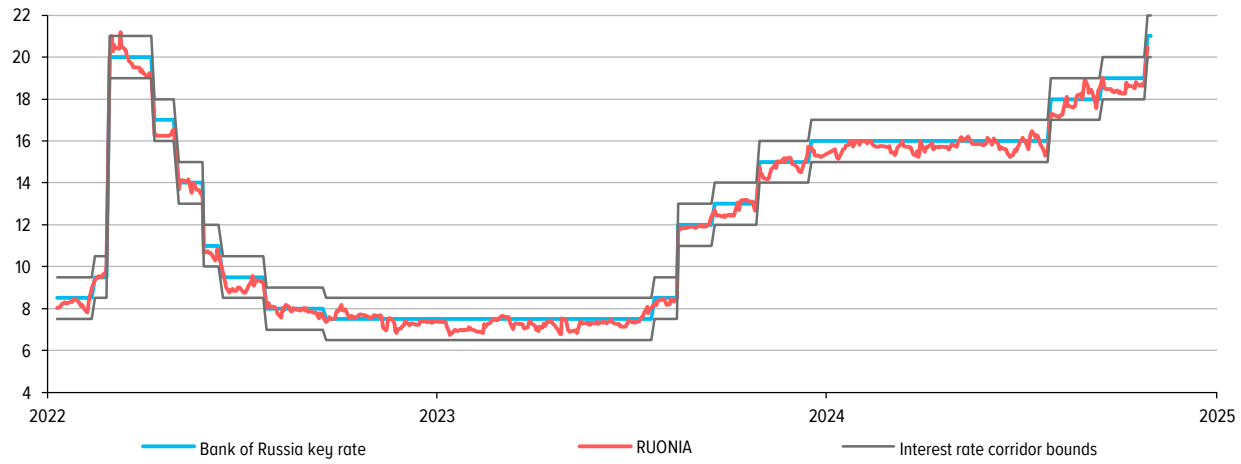
The structural liquidity surplus increased markedly in early 2024 and averaged ₽1.7 trillion over the January RR averaging period.[4] This was driven by an inflow of budgetary funds and seasonal return of cash to banks. However, in contrast to the previous year, this liquidity was rather quickly distributed across credit institutions. As a result, banks made their RR averaging more uniformly than in December. Furthermore, there was a rise in demand in Moscow Exchange's repo segment, owing to which borrowers' demand for overnight funds in the IBL segment was more predictable. Therefore, already in the January AP, the negative spread between RUONIA and the key rate narrowed to average -10 bp (vs -45 bp in the December AP).[5]

Beginning from the February AP, the average spread expanded despite the decline in the liquidity surplus that started then. This was caused by the cancellation from 1 March 2024 of the easing related to the LCR. By that moment, not all SICIs had aligned the structure of their balance sheets with the regulatory requirements. Therefore, banks continued to transform their balance sheets after 1 March 2024 as well. To comply with the LCR, banks increased borrowings in the money market for longer than overnight and raised more loans from the Bank of Russia (for details, see Box 9 'The LCR impact on banks' transactions and the money market'). This in turn reduced banks' need for short-term borrowings in the IBL segment and had a downward effect on RUONIA. As the banking sector adapted to the new regulatory requirements, the spread narrowed to average -7 bp already in the May AP. During the June AP, volatility increased temporarily and the spread expanded, which was associated with the planned reduction in the available amount of the ICL.

Similarly to previous years, an important liquidity factor in 2024 was budget operations that increased the structural liquidity surplus in January 2024. The reason was that, because of budget expenditures and the FT's deposits and repos, banks continued to receive the funds credited to the budget accounts with the Bank of Russia back in December 2023. Then, the Government converted part of the NWF's assets, including ₽2.9 trillion in addition to fiscal rule-based funding. Concurrently with that, the Bank of Russia resumed operations in the domestic FX market associated with replenishing and using the NWF's resources, including taking into account all the operations with the NWF's resources conducted in 2023. However, while operations mirroring the current fiscal rule-based operations of the Ministry of Finance had a neutral effect on liquidity, the postponed operations caused an outflow of liquidity from the banking sector (see Box 6 'Bank of Russia operations in the FX market'). As a result, the surplus was contracting gradually beginning from the February AP.

MONEY MARKET RATES
(% P.A.)

Chart 4.1



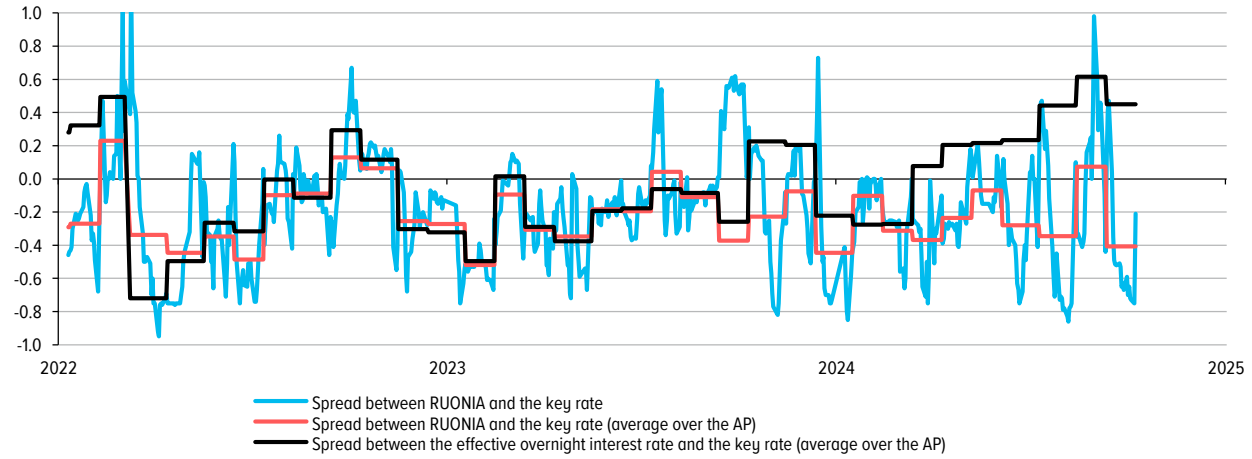
Source: Bank of Russia.

[4] The January AP – from 17 January 2024 through 23 February 2024.

[5] The December AP in 2023 – from 13 December 2023 through 16 January 2024.

SPREAD BETWEEN RUONIA AND THE KEY RATE AND BETWEEN THE EFFECTIVE OVERNIGHT INTEREST RATE AND THE KEY RATE *Chart 4.2*

(PP)



Source: Bank of Russia.

In 2024, the FT has continued to enhance and extensively use instruments for depositing temporarily available budgetary funds with credit institutions. Specifically, the FT has been using long-term top-up bank deposits and has increased deposits in demand accounts. As a result, the average balance of the TSA with the Bank of Russia has contracted and become stabler. The FT's deposits and repos make it possible both to offset the outflows of the funds that banks transfer to the TSA as payments of taxes and dividends, for OFZ purchases, etc. to the budget and to reduce the impact of the inflows in the form of expenditures. The effect of budget operations on liquidity thus becomes more predictable and less volatile.

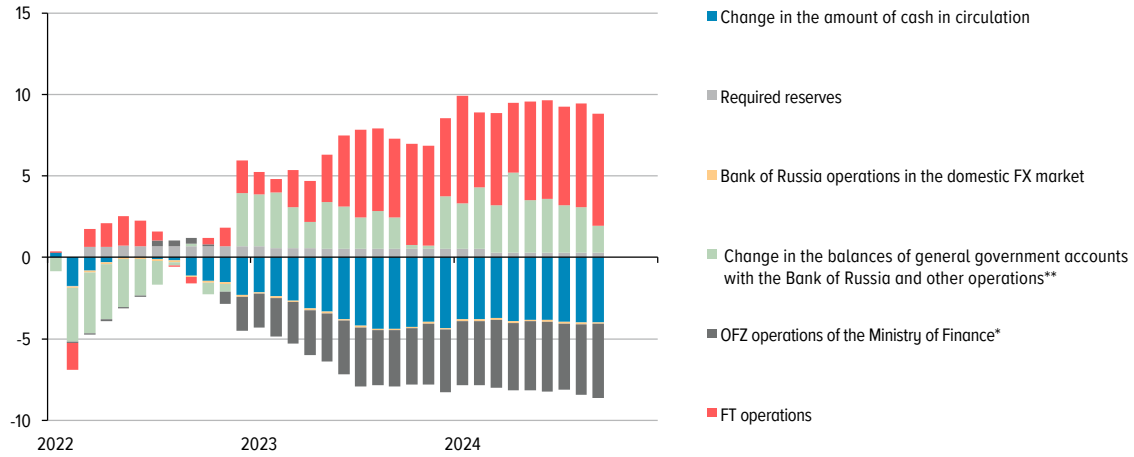
Another driver of the liquidity inflow into the banking sector over 2024 H1 was the return of cash to banks. This is because the demand for cash has generally normalised and deposit rates remain attractive. Overall, the proportion of cash in total money supply edged down by 1.6 pp from the beginning of the year to 15.8% as of early September 2024.

The RR that credit institutions are obliged to keep in their accounts with the Bank of Russia were up by ₽0.5 trillion over January–September 2024. This was associated with the growth of bank deposits and, accordingly, the amount of reservable liabilities. As a result, credit institutions increased the demand for Bank of Russia liquidity. According to the results of the RR regulation over August 2024, the proportions of liabilities in rubles and friendly states' currencies rose to 88% and 6% of the reservable liabilities, respectively.

In 2024, the Bank of Russia has been conducting its operations mainly in the form of deposit auctions to absorb excess liquidity. As the liquidity surplus in the banking sector was contracting, the Bank of Russia was reducing the limits of deposit auctions. However, after the LCR-related easing was cancelled, banks began to extensively raise standing lending facilities. Therefore, to absorb this inflow of liquidity, the Bank of Russia again raised the limits of deposit auctions.

Furthermore, in 2024, banks have maintained the demand for Bank of Russia standing deposit facilities. The Bank of Russia also takes into account these operations when determining the limits of its auctions and, accordingly, they do not affect the achievement of the operational objective of its monetary policy. However, the demand for both the Bank of Russia's standing deposit and lending facilities simultaneously limits the amount of funds that may be distributed in the money market. Nevertheless, the difference in interest rates on these transactions, that is, the 200 bp width of the interest rate corridor of the Bank of Russia, still encourages credit institutions to transact with

FACTORS OF BANKING SECTOR LIQUIDITY *Chart 4.3*
(CUMULATIVE, ₽ TN)

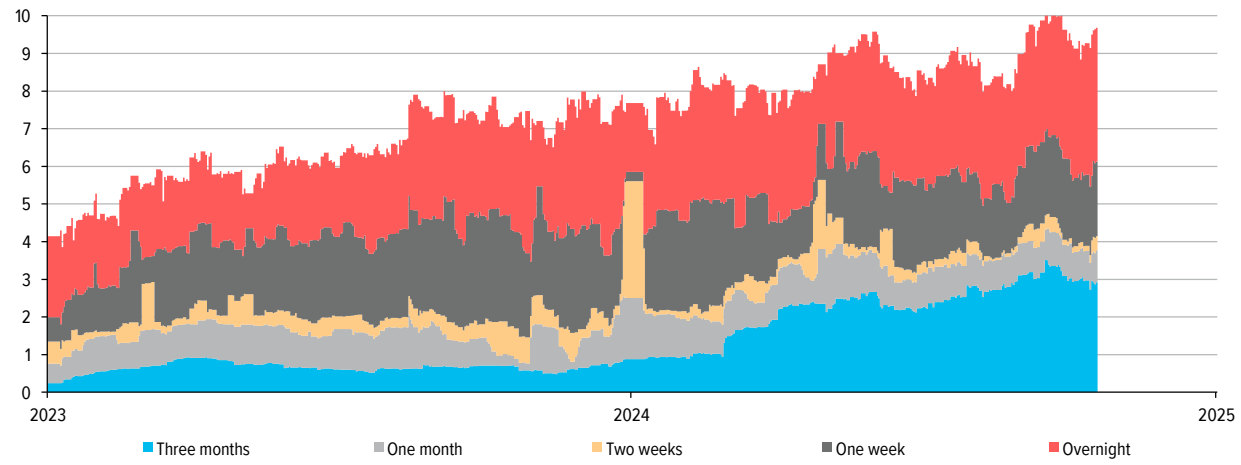


** Excluding coupon payments.*
*** Excluding the FT's deposits and repos and OFZ operations of the Ministry of Finance; including operations of the Ministry of Finance to buy (sell) foreign currency in the domestic FX market and other operations.*
Source: Bank of Russia.

each other at interest rates close to the key rate. Specifically, the amount of banks' open positions in the IBL and repo segments has continued to grow in 2024. When the money market is active, it helps better translate monetary policy signals into interest rates in the economy and is an important indicator of the liquidity situation in the banking sector.

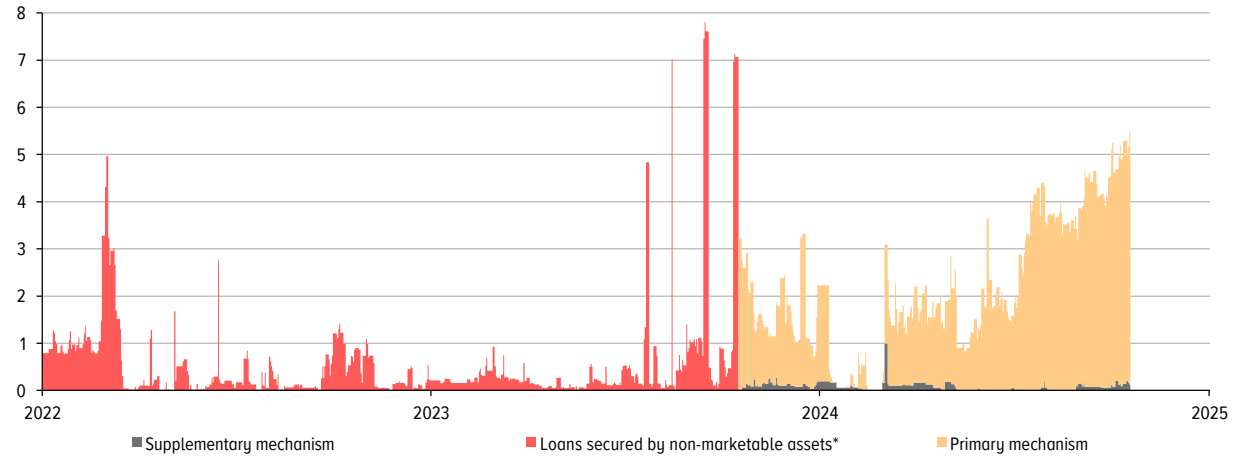
From 4 March 2024, credit institutions were allowed to withdraw ahead of schedule the funds they deposited with the Bank of Russia following the auctions for more than one day. Interest on the deposit amount withdrawn ahead of schedule shall be accrued at an overnight deposit rate effective on the day for which interest is accrued. A credit institution thus earns income from the deposit withdrawn ahead of schedule in an amount equivalent to the payment for standing deposit facilities. Banks can thus manage their liquidity more flexibly and, where needed, may use their funds. Nonetheless, they are still incentivised to withdraw the funds ahead of schedule solely when it is absolutely necessary. In 2024, banks needed to withdraw one-week deposits ahead of schedule only during certain periods.

OPEN POSITIONS FOR UP TO THREE MONTHS IN THE IBL AND REPO SEGMENTS OF THE MONEY MARKET *Chart 4.4*
(₽ TN)



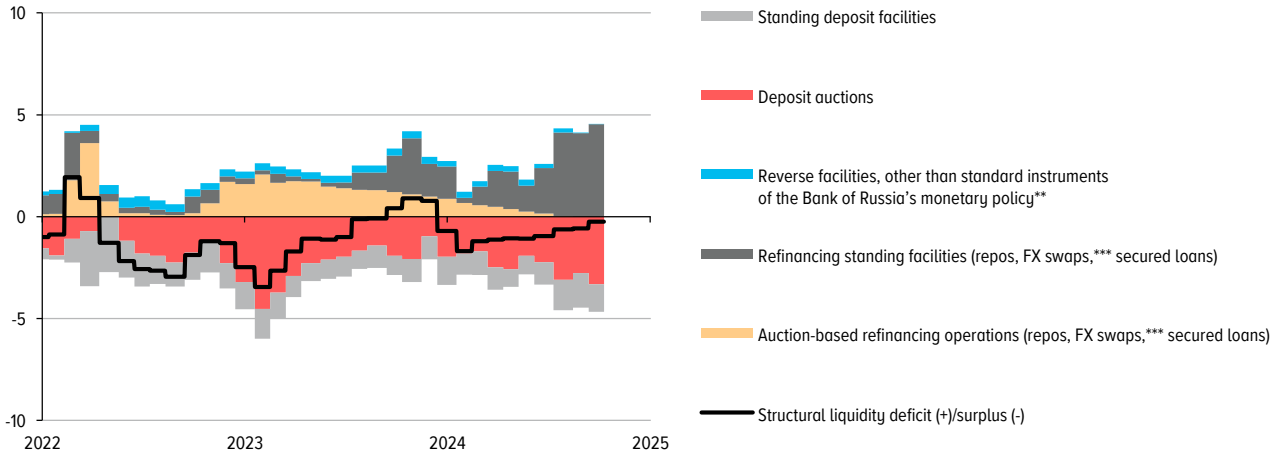
Source: Bank of Russia.

BANK OF RUSSIA LOANS SECURED BY NON-MARKETABLE ASSETS *Chart 4.5*
(₽ TN)



** Claims under loans secured by non-marketable assets issued before the introduction of the PM and SM.*
Source: Bank of Russia.

STRUCTURE OF BANK OF RUSSIA OPERATIONS (AVERAGE OVER THE AP)* *Chart 4.6*
(₽ TN)



** 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 ICLs, 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.

On the last day of the APs, the Bank of Russia continued to carry out fine-tuning deposit auctions. They enabled the Bank of Russia to absorb excess liquidity from banks and maintain money market rates close to the key rate at the moment when the mechanism of RR averaging did not allow banks to fully offset temporary imbalances between the demand for liquidity and its supply. Furthermore, the fine-tuning deposit auctions on other days of the APs supported money market rates in situations where borrowers' and lenders' behaviour was affected by their strategies for ensuring compliance with the LCR. Thus, if the available amount of the ICL decreases during an AP, banks may change their RR averaging strategies. A decline in demand in the money market attributed to this factor cannot always be offset promptly through market methods. In this case, fine-tuning deposit auctions enable the Bank of Russia to support money market rates amid a temporary reduction in large borrowers' demand for liquidity.

In early 2024, as budgetary funds were received by banks, they quickly decreased their debt on Bank of Russia loans. In January–February 2024, the daily debt on loans within the PM and SM for liquidity provision averaged ₽0.5 trillion. However, in March 2024, after the cancellation of the LCR-

related easing, banks increased the demand for loans secured by non-marketable assets. They were predominantly issued within the PM. The current structure of liquidity provision within the PM and SM is consistent with the goals of the transformation of the liquidity providing mechanism.

In 2024, the Bank of Russia has not conducted one-month or one-year repo auctions. That said, until mid-July, banks were gradually returning the funds earlier raised within one-year operations according to the schedule. Long-term repo auctions 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.

Other operations of the Bank of Russia

In addition to liquidity providing and absorbing operations aimed at managing money market rates, the Bank of Russia grants loans to aid the priority industries. These are loans at interest rates below the key rate issued to support investment projects, SMEs, and non-commodity exporters. Nevertheless, the amount of funds that can be provided at lower interest rates is limited and these mechanisms are often temporary. This enables the Bank of Russia to maintain the effectiveness of its interest rate policy.

In 2024, the Bank of Russia has continued to conduct FX swaps to sell yuan for rubles. These transactions are aimed at limiting volatility of money market rates in the market segment of FX swaps in the conditions of a temporary imbalance between the demand for and supply of yuan liquidity. In view of this, from 25 March 2024, the Bank of Russia temporarily increased the maximum daily amount of FX swaps to ¥20 billion only on the first two and the last two business days of each month. From 14 June 2024, after the enactment of the sanctions against the Moscow Exchange Group, the Bank of Russia was ready to provide up to ¥20 billion to banks on a daily basis and up to ¥30 billion in August, which exceeded banks' demand.

The banking sector is forecast to maintain a liquidity surplus in 2024. Over the next three years, the banking sector will shift towards a deficit that will then be gradually expanding

The liquidity surplus averaged ₽0.7 trillion over the December AP[6] in 2023. This is slightly more than the range from a surplus of ₽0.4 trillion to a deficit of ₽0.5 trillion forecast by the Bank of Russia in MPG 2024–2026.

The main reason for the deviation was a lower-than-expected growth rate of the demand for cash. In November–December 2023, driven by the inflow of households' funds into deposits, cash continued to return to banks. The amount of this return exceeded the forecast. These dynamics partially offset increased cash outflows from banks in previous years.

The inflow of liquidity through budget operations was generally consistent with the forecast. Making its inflation forecast and monetary policy decisions, the Bank of Russia takes into account the impact of budget operations and the sources of budget deficit financing. Therefore, this factor does not involve any additional inflationary risks. That said, part of the funds credited to the budget accounts with the Bank of Russia in December 2023 was received by credit institutions through budget expenditures and the FT's deposits and repos at the beginning of January 2024. This calendar effect influenced the amount of the surplus as of the end of the year but did not impact the daily average of the liquidity balance over the AP. This is the most insightful measure to reflect the long-term liquidity

[6] The December AP in 2023 – from 13 December 2023 through 16 January 2024.

situation in the banking sector, and this measure depends on the effect of short-term and calendar factors to a lesser extent.

The structural liquidity surplus over the December AP in 2024 is forecast to average from ₽0.2 trillion to ₽1.0 trillion. Depending on the fiscal policy pursued and the Bank of Russia's decisions on mirroring the operations with the NWF's resources, this amount might change significantly. Making its estimates, the Bank of Russia relies on the fiscal projections announced by the Ministry of Finance and its own macroeconomic assumptions (see Box 7 'Fiscal policy in 2024–2027 under the baseline scenario and its impact on the economy'). Budget operations in 2024 are expected to ensure an inflow of liquidity into banks. This will become possible owing to, among other things, the use of the NWF's resources in addition to fiscal rule-based funding to partially cover this year's budget expenditures and the funds received in January 2024 that were not credited to banks in December 2023. This inflow through the budget channel will be offset by the operations in the domestic FX market conducted by the Bank of Russia during 2024 to mirror the operations replenishing and using the NWF's resources, including taking into account all the operations with the NWF's resources performed in 2023.

The change in the amount of cash in circulation is forecast to range from -₽0.2 trillion to +₽0.2 trillion as of the end of 2024. The return of cash to banks, the amount of which is elevated compared to its seasonal dynamics, is expected to decrease in 2024 H2 but will continue to affect liquidity in 2024.

Over the next three years, the banking sector will shift from a liquidity surplus towards its deficit which will then be gradually expanding. The Government will continue to progressively normalise fiscal policy in 2025–2027 and return to expenditure budgeting in accordance with the long-term parameters of the fiscal rule[7] from 2025. The effect of budget operations on the banking sector liquidity will decrease owing to regular fiscal rule-based operations in the domestic FX market to buy (sell) foreign currency in 2025–2027 as well as the operations conducted over 2024 to mirror investments from the NWF in permitted financial assets inside the Russian economy and to mirror the operations beyond the framework of the fiscal rule.

An outflow of liquidity from banks over 2025–2027 will be associated with an 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 will be gradually contracting, including owing to a further expansion of the practice of non-cash payments. Furthermore, banks' RR will be growing in line with the overall expansion of broad money.

[7] The fiscal rule implies that the maximum amount of federal budget expenditures is determined taking into account basic OGR calculated with equilibrium oil and gas prices equalling $60 per barrel and $250 per 1,000 cubic metres, respectively.

BOX 9. THE LCR IMPACT ON BANKS' TRANSACTIONS AND THE MONEY MARKET

The cancellation of the regulatory easing and progressive toughening of the requirements for the LCR are to encourage banks to enhance the structure of their balance sheets and act as an additional autonomous factor tightening monetary conditions

The LCR (N26/N27) is a mandatory ratio set by the Bank of Russia for SICIs that characterises how well they would ride out any disruptions in the case of stress outflows of funds over a 30-day period.[1] Excluding the alternatives to comply with the ratio,[2] the LCR is calculated as the ratio of HLAs to NECOs expected over 30 calendar days.

$$\text{LCR}\left(\text{H26}, (\text{H27})\right) = \frac{\text{HLAs}}{\text{NECOs}} * 100\% = \frac{\text{HLAs}}{\text{ECOs-min (ECIs; 0.75 * ECOs)}} * 100\%,$$

where:
ECIs – expected cash inflows; and
ECOs – expected cash outflows.

HLAs comprise banks' demand and overnight funds with the Bank of Russia, vault cash, and unencumbered high-quality and liquid securities. Banks will be able to use these assets quite quickly to raise the liquidity needed and process payments and settlements. NECOs are mainly clients' funds and contingent liabilities.

Accordingly, the LCR of 100% and higher means that banks have sufficient HLAs to cover possible outflows of clients' funds as quickly as possible.

Banks may improve their LCR values by changing the structure of their balance sheets. To this end, they may either increase their HLAs or reduce expected NECOs by raising stabler and longer-term funding. Certain operations regularly used by banks to raise liquidity have a neutral effect on the LCR (Table 9.1). Specifically, funds raised in the unsecured IBL segment improve the LCR only where the term to maturity is over 30 days, while OFZ-backed repos are almost neutral for the LCR regardless of their maturity. Furthermore, in order to comply with the LCR, a bank may either limit the growth rate of its balance sheet by increasing the proportion of HLAs on the asset side while reducing the loan portfolio, or take measures to raise funds from individuals and legal entities.

Table 9.1

Type of operations		Effect on the LCR	Estimated effect on HLAs (adjusted for changes in NECOs)
Funds raised (amounting to X) and investment in HLAs-1 (correspondent account with the Bank of Russia)			
IBL	Maturity – up to 30 days	■	–
	Maturity – over 30 days	↑	ΔHLAs = +X × 100%
Repos	Secured by HLAs-1 of any maturity	■	–
	Secured not by HLAs-1 for up to 30 days	■	ΔHLAs depend on the rate of discount and the exchange discount
	Secured not by HLAs for over 30 days	↑	ΔHLAs = +X × 100%
Government funds	Operations secured by HLAs (FT repos)	■	–*
	Unsecured operations (deposits of constituent territories and the FT) for up to 30 days/ over 30 days	↑	ΔHLAs = +X × 60% / ΔHLAs = +X × 100%
Legal entities/ individuals' funds	Legal entities' funds for up to 30 days/over 30 days	↑	ΔHLAs = +X × 60% / ΔHLAs = +X × 100%
	Individuals' funds	↑	ΔHLAs = +X × 90%
Operations with the Bank of Russia	Bank of Russia loans of any maturity	↑	ΔHLAs = +X × 100%
	Bank of Russia repos of any maturity	■	–

* *The effect on HLAs is minor as repos with the FT are mostly OFZ-backed. Operations backed by other securities account for a small amount.*

[1] For details about the LCR calculation methodology, refer to Bank of Russia Regulations No. 421-P and No. 510-P.

[2] The Bank of Russia's ICL and SICIs' and group participants' assets denominated in certain foreign currencies in the amount exceeding the outflow in these currencies.

Beginning from 1 March 2024, the Bank of Russia terminated the regulatory easing related to compliance with the LCR that had been effective from 2022. Due to rising volatility in financial markets, a rapid outflow of clients' funds and a shortening of maturities of their deposits, the LCR values in a number of banks worsened in spring 2022, following which the Bank of Russia introduced temporary regulatory easing in relation to the LCR. By 2024, banks had significantly enhanced their financial stability and profitability. The regulatory easing for the LCR thus ensured the support it had been intended for, and the Bank of Russia decided not to extend the easing in early 2024. The return to compliance with the LCR encourages SICIs to create a buffer of HLAs and improve the structure of their liabilities.

It might take quite a long time for a bank to change the structure of the clients' part of its balance sheet. For banks to seamlessly switch from the easing, the Bank of Russia updated the earlier effective ICL mechanism in advance, namely in December 2023, in order to encourage banks to maintain their LCRs at the level of 80% on their own.[3] To this end, the Bank of Russia introduced differentiated rates for using the ICL. The part of the ICL limit enabling a credit institution to raise its LCR from 80% to 100% is paid for at 0.1% p.a., while the remaining part of the limit is paid for at 1.5% p.a. As a result, in 2024, most SICIs used the ICL primarily to raise their LCR above 80%. The amount of the ICL available to increase the LCR to 100% has been consistently reduced every six months.[4]

From the beginning of 2024, SICIs were seeking to improve their LCR primarily through less time-consuming measures affecting a small proportion of banks' balance sheets. In the first place, SICIs considerably expanded funds raised in the money market for over 30 days. Transactions were conducted both in the IBL segment and through repos backed by assets other than HLAs. Second, the cancellation of the LCR-related easing impacted credit institutions' demand for deposits and repos with the FT. Banks notably decreased the demand for OFZ-backed repos. As a result, the FT mostly deposited its funds through deposit auctions. Deposits for over 30 days were the most demanded ones among SICIs. In the course of the bidding process, demand was 1.5–2 times higher than supply, which was pushing up the rates. Third, similarly to FT deposits, SICIs raised the demand for budgetary funds of the constituent territories of the Russian Federation. Thus, interest rates at deposit auctions of the Department of Finance of the City of Moscow surged in 2024 H1.

SICIs raise Bank of Russia loans against non-marketable assets as an offsetting item for the shortage of HLAs that was not fully covered from other sources. From March 2024, the demand for loans rose. Over the course of a day from March to mid-October 2024, banks' debt on these transactions averaged ₽2.8 trillion. These loans were predominantly issued within the PM. Banks having sufficient collateral may raise loans from the Bank of Russia at any moment but, due to high interest rates on them, SICIs seek to use them the least.

Through its auctions, the Bank of Russia regulates the overall amount of liquidity in the banking sector. Furthermore, transfers of funds across banks (e.g. as a result of clients' transactions) may affect certain SICIs' LCR and, accordingly, their demand for standing lending facilities provided by the Bank of Russia. The Bank of Russia cannot always predict how the amount of these operations might change, which can affect the supply of liquidity. This might impair the efficiency of liquidity management by the Bank of Russia. Nevertheless, the mechanism of RR averaging largely offsets such temporary imbalances in the banking sector liquidity and mitigates their impact on money market rates.

If SICIs' need for regulatory liquidity (to comply with the LCR) and physical liquidity (to comply with the reserve requirements) is the same, they might be less interested in raising funds in the IBL segment for over 30 days as these transactions will not allow them to improve their LCR. This might cause a reduction in money market rates within the interest rate corridor. Such a situation occurred during certain periods in March and June 2024 when RUONIA deviated downwards from the key rate (Chart 9.1). However, this does not mean a lower cost of short-term liquidity for banks: the effective interest rate on short-term funding (i.e. taking into account the cost of raising liquidity through the Bank of Russia's standard operations) remains high even when the spread between RUONIA and the key rate is negative. From March 2024, this indicator was 20–40 bp above the key rate for the most part.

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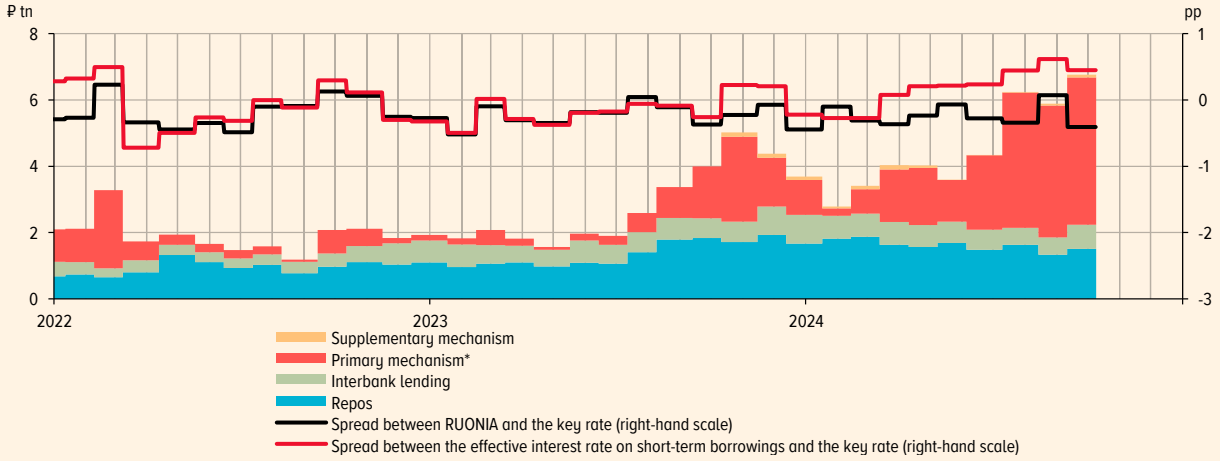
[3] The Bank of Russia allows banks to include additional assets (claims) in the LCR calculation. In particular, SICIs may include the ICL opened by the Bank of Russia according to the signed agreement in the calculation of the LCR numerator. The ICL enables banks to raise liquidity from the Bank of Russia pursuant to the terms of the PM and SM. Besides, at the moment of the ICL opening, banks are not required to provide backing in advance. The rate on the ICL limit should encourage SICIs to enhance the structure of their balance sheets.

[4] SICIs shall comply with the LCR on their own (without using the ICL) at the following levels: at least 40% from 1 March 2024, at least 50% from 1 July 2024, at least 60% from 1 January 2025, at least 70% from 1 July 2025, and at least 80% from 1 January 2026.

AMOUNT AND COST OF OVERNIGHT LENDING (AVERAGE OVER THE AP) *Chart 9.1*



** The standard liquidity providing mechanism effective until 16 October 2023 was taken into account as part of the PM operations.*
Source: Bank of Russia.

The necessity for SICIs to comply with the LCR influences the pricing of assets included in HLAs as they are becoming increasingly attractive to banks compared to any other assets. Specifically, in late 2023 and early 2024, banks demonstrated higher demand for OFZs, whereas the supply of government bonds by banks and the Ministry of Finance was limited. As banks are among the largest participants in the government bond market, that was a reason why the rise in OFZ yields was less notable than the increases in the key rate and interest rates on assets other than HLAs.

Thus, the cancellation of the LCR-related easing influences not only pricing in the money market but also monetary conditions in general. On the one hand, SICIs' need for stabler and longer-term funding makes their liabilities more expensive. On the other hand, the effort to increase the proportion of HLAs on the asset side may help slow down the expansion of lending. The observed rise in the cost of short-term funding and potential effects on banks' balance sheets are evidence that the cancellation of the LCR-related easing was a one-off factor of monetary tightening. However, this influence is limited as SICIs may use the ICL and raise standing lending facilities from the Bank of Russia.

In 2024–2025, the Bank of Russia will continue to gradually increase the requirements for banks to comply with the minimum level of the LCR. Banks will therefore need to step up their efforts to transform the maturity structure of their balance sheets. As banks adapt to the changed regulation, the impact of the LCR on the cost of short-term liquidity will be weakening. To enhance the regulation of short-term liquidity risks, the Bank of Russia has developed a procedure for calculating a new (national) LCR to become effective from the beginning of 2026 and replace the LCR.

Appendix 1. Monetary policy transmission mechanism in Russia

Monetary policy affects inflation through several channels, and this impact is extended over time. The interest rate channel is the main one of them

The primary goal of the Bank of Russia's monetary policy is to ensure price stability, that is, steadily low inflation. The core instruments used to achieve this goal are the key rate and signals regarding its future changes (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 (see the Diagram). The complex of the 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 not only by the key rate but also by 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 to monetary policy and their possible changes in the future.

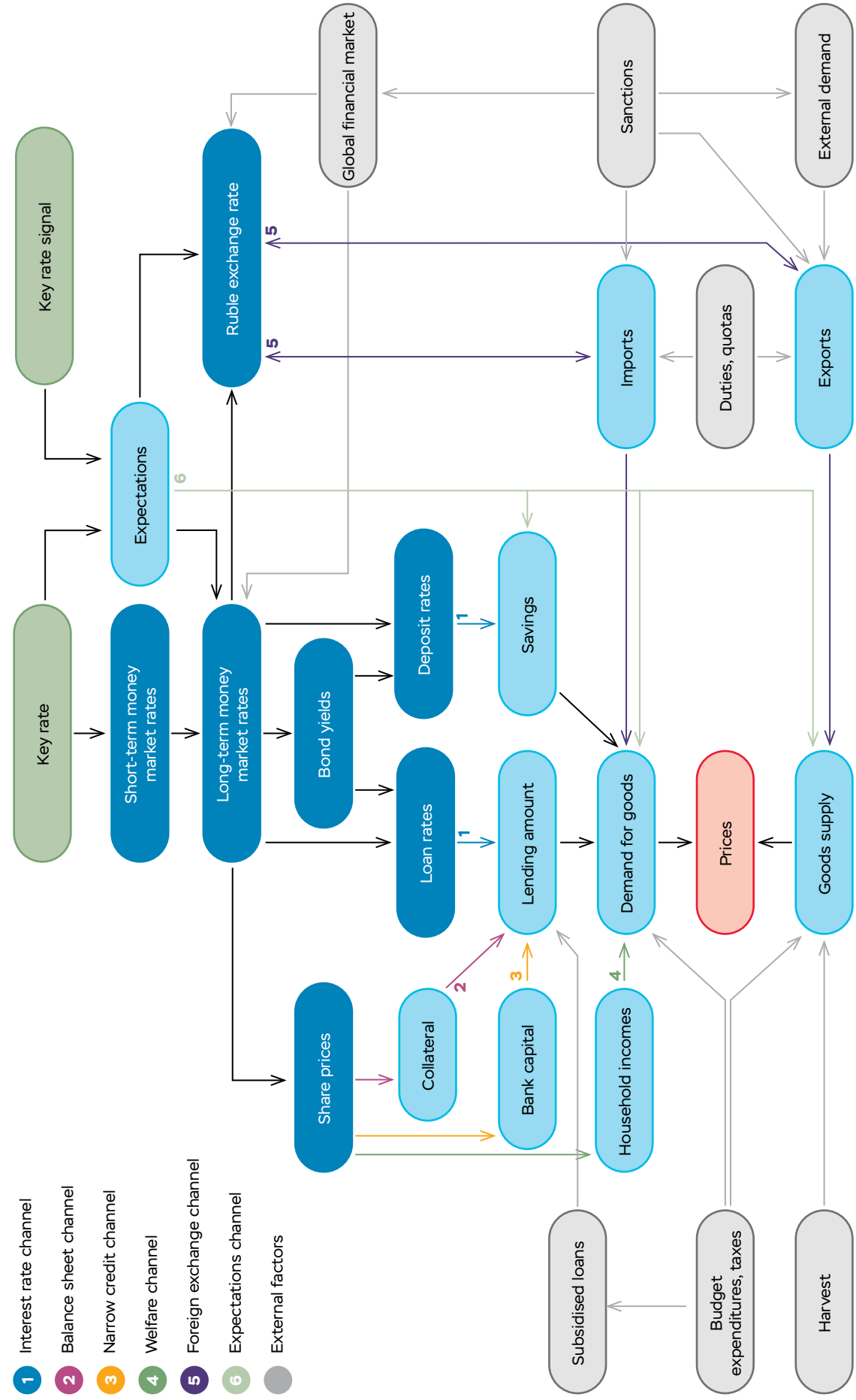
Secondly, just as the economy in general, the transmission mechanism is evolving. This evolution has been especially notable in recent years when the extensive changes induced by the coronavirus pandemic and the geopolitical instability of 2022–2024 have inevitably affected all economic processes, including the elements of the transmission mechanism. However, even when changes are not that significant (e.g. shifts in the sectoral structure of the Russian economy), they still impact the functioning of the transmission mechanism. Therefore, the approaches to pursuing monetary policy might be modified as well in order to reflect changes in the conditions of its implementation. Hence, 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 decline, 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 most important of these interdependencies is the impact of monetary policy on economic growth. Such influence is effective when monetary policy 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 8 'The concept of a long-term 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 factors of production are underutilised, accommodative monetary policy might push down market interest rates in the short term below a neutral level (see Appendix 7 'Neutral interest rate and its estimate') and boost economic

[1] Previously, there were also specific factors affecting 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.

Monetary policy transmission mechanism in Russia



growth through an increase in the utilisation of factors of production. 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 key rate on interest rates and yields in the main segments of the Russian financial market. This impact is translated over the course of several stages (see the Diagram).

At the first stage, a key rate change almost simultaneously 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 2024 and 2025–2027'). 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, medium- and long-term interest rates are influenced not only by the current level of overnight rates, which depends on the key rate, but also by expectations of future changes in this level that are determined by, in particular, the Bank of Russia's communication, 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 OFZs. These market participants always have a choice between lending in the money market or investment in the securities market. Choosing an alternative 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 of 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 OFZs, 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 of 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 (e.g. like in

[2] Hereinafter (including in the Diagram), the most general logic of economic processes is characterised. Alongside the causal relationships described, there are also more specific interdependencies having an effect only in certain circumstances or in the short run. Thus, bond yields might be affected by changes in banking regulations (in particular, the situation in the OFZ market in 2023 was influenced by the modifications in the regulation of the banking sector liquidity: see Box 9 'The LCR impact on banks' transactions and the money market'), expectations regarding fiscal policy (through both the estimate of inflationary risks and expectations of an increase in the supply of government bonds: see Box 7 'Fiscal policy in 2024–2027 under the baseline scenario and its impact on the economy'), and inflation (investors are not interested in investing funds at an interest rate that does not offset the depreciation of their investment caused by inflation, which might constrain a decline in bond yields if monetary policy is ultra-accommodative).

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 not only on the level of the key rate but also on expectations regarding its future change, medium- and long-term interest rates often start to change not after but rather before a key rate change when market players have strong expectations of an upcoming key rate change. Examples of this are 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 the influence of expectations on long-term interest rates is a mild response of the latter to significant key rate increases. Market participants presume 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 in 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 during two weeks, IBL rates for less than one year go up by 0.6–1 pp, IBL rates for one to three years – by 0.2–0.5 pp, and IBL rates for over three years – by 0.1–0.2 pp.[3] The longer the time to maturity, the weaker the response of interest rates to the 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.

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 substitutes for banks. Large corporates can raise funds in both the credit and bond markets. Accordingly, loan rates and bond yields should be comparable (adjusted for differences in costs, risk levels, and regulatory standards). Secondly, further development of the securities market infrastructure simplifies investment in bonds for individuals. Thus, if deposit rates grow more slowly (or decrease faster) than bond yields, some depositors opt for bonds, which forces banks to adjust their deposit rates. Thirdly, most 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 loan 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 loan rates, a wide use of credit lines (as a result, terms of another tranche depend not only on the current market situation but also on 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 also a factor limiting the potential for interest rate decreases. Where deposits do not protect savings against depreciation caused by inflation, they become an unattractive option for depositors, and banks are unable to respond to a reduction in long-term interest rates by changing deposit rates (funded from the money raised through loans) commensurately.

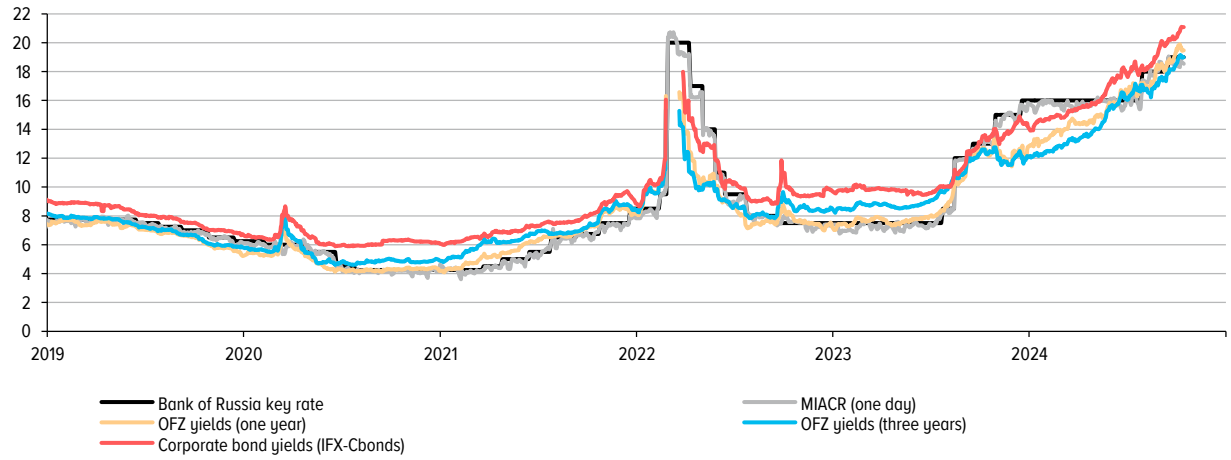
The dynamics of deposit rates (and retail loan rates to a certain extent) respond to changes in money market rates and bond yields with a certain time lag because these are standard instruments. Changes in interest rates on these instruments are subject to decisions on banks' interest rate policies. In addition, loan and deposit rates depend on the specifics of banking business that is exposed to

[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 loan rates for up to one year by 0.6 pp, it is implied that a decline in an overnight interest rate by 1 pp decreases loan rates for up to one year by 0.6 pp alike. Besides, all estimates are made when all other things are equal, that is, factors influencing the resulting indicator remain the same.

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 loan rates more slowly than deposit rates. To the contrary, when interest rates go up, banks raise their loan rates faster.

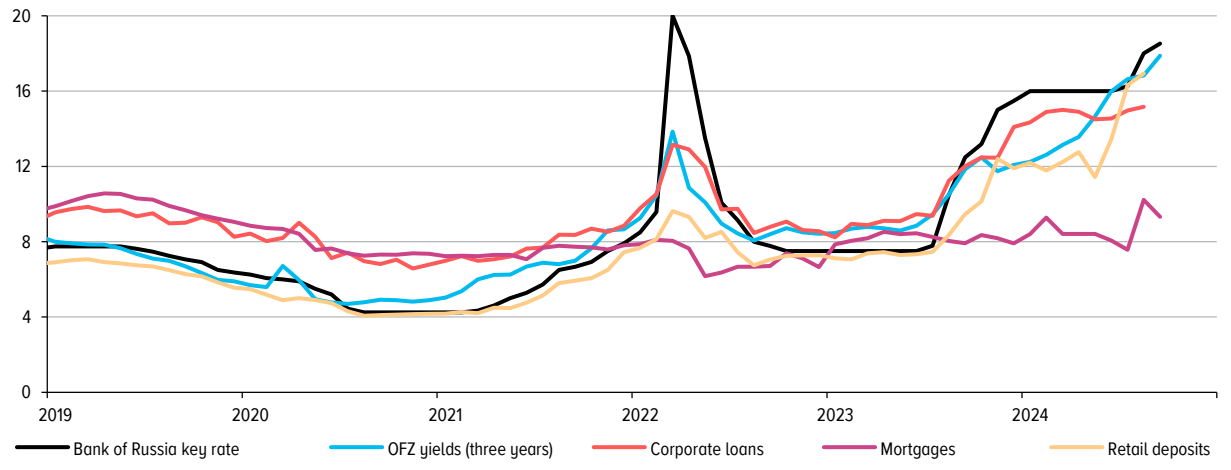
There is another factor that has become more important in recent years and is influencing loan rates – subsidised lending programmes widely used to support the economy as a whole and its individual industries. Borrowing costs for ultimate borrowers under most large-scale subsidised lending programmes 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 loan rates (see Box 10 'Subsidised lending and its impact on the transmission mechanism').

MONEY MARKET RATES AND BOND YIELDS *Chart A-1*
(% P.A.)



Source: Bank of Russia.

INTEREST RATES ON BANKS' LONG-TERM RUBLE TRANSACTIONS *Chart A-2*
(% P.A.)



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 clients' transactions and on money and securities market operations impact the relative attractiveness of financial transactions to banks, increase banks' operations in more attractive market segments, and are conducive to respective adjustments in interest rates. As a result, in the longer term, changes in the key rate or expectations regarding its level are translated into loan and deposit rates.

Furthermore, the Russian financial market is developing, which accelerates, to a certain extent, the response of deposit and loan rates to monetary policy changes. As online banking is becoming increasingly widespread and more advanced, agreements are concluded more quickly; the standardisation of loan agreements simplifies transactions and makes the market more heterogeneous; and the expansion of aggregators strengthens competition among banks, encouraging them to respond to developments faster. The decision on fee-free money transfers by individuals across their accounts opened with various banks within the monthly limit of ₽30 million, which came into force in 2024, may become an additional factor of competition among banks in the deposit market.

In particular, according to the Bank of Russia's estimates, in 2018–2024, over 80% of changes in OFZ yields were transmitted to long-term loan rates (in both the corporate and retail segments of the market) within three to four months.[4] In 2013–2017, this process took from four to six months. The adjustment of long-term deposit rates to monetary policy has accelerated as well, specifically from ten months in 2013–2017 to four months afterwards. In recent years, short-term interest rates have been responding quickly to changes in the economic situation. More than 80% of changes in OFZ yields are now translated into short-term loan and deposit rates during one to two months as compared to up to four months in 2013–2017.

Money market rates, bond yields, and loan 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. Certain chains of the cause and effect relationships ensuring this impact are called the transmission mechanism channels of monetary policy.

The interest rate channel of the transmission mechanism

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

Loan 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 of this effect was the rise in housing prices in Russia during the effective period of the extensive subsidised mortgage lending programmes.

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 expensive purchases.

[4] Hereinafter, the ratio between OFZ yields and average market rates is described. 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 completely adjust to the changed situation.

According to the Bank of Russia's estimates, a change in loan 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 inflationary 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 2024, banks' claims on organisations accounted for 51% of GDP, which is 1.5 times more than as of early 2013, while those on households were up from 12% to 21% of GDP over the said period. Funds with banks were growing as well: corporate deposits included in money supply increased from 17% as of early 2013 to 28% of GDP, while retail deposits – from 21% to 28% of GDP.

As the amounts of financial transactions have been rising, the interest rate channel of the transmission mechanism has been becoming increasingly important because of growth in potential demand that may be influenced by the dynamics of market rates. Lending has become the main source of demand in certain market segments. Specifically, mortgages backed by shared construction agreements issued over 2020–2023 totalled ₽8.8 trillion, which is nearly 70% of the amount transferred to escrow accounts over the said period. Car loans issued over the same period totalled ₽3.9 trillion, which is almost 40% 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 has also been influenced by a wider use of variable rate loans. These loans accounted for nearly a half of the corporate loan portfolio by mid-2024, compared to about a third in early 2020. A change in the key rate and dependent interest rates has an instantaneous effect on borrowers' interest expenses on variable rate loans, affecting their willingness to increase other expenses, raise additional borrowings, or repay earlier raised loans ahead of schedule. Concurrently, due to the growing popularity of these loans, the demand for new loans is affected not only by the current level of interest rates but also by expectations of its future change. If borrowers expect interest rates to go down soon, they might increase their borrowings despite currently high interest rates. To the contrary, if borrowers assume that interest rates might go up in the near future (e.g. if inflationary risks materialise), the stimulating effect of low interest rates on lending weakens.

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 higher 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 amid the escalation of geopolitical tensions in recent years has been distorting the functioning of the interest rate channel as interest rates on a considerable proportion of credit transactions do 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 has caused a notable decline in the affordability and accessibility of foreign financial instruments. Russian companies have been substituting foreign debts with domestic borrowings, primarily in rubles. Dedollarisation of loans and deposits has continued: the increase in Russian banks' assets and liabilities described above has been driven predominantly by ruble transactions, whereas foreign currency-denominated transactions have been either declining or growing more slowly compared to those in rubles. As a result, ruble-denominated financial instruments have become more important to Russian companies and households, while returns on these instruments are influenced by the Bank of Russia's monetary policy. This has been increasing the role of the interest rate channel of the transmission mechanism in the national economy.

Until recently, the above effects were offsetting each other to a certain extent. However, factors impairing the efficiency of the interest rate channel were transitory and, by now, have already diminished: consumer activity has been rising steadily, while a number of subsidised lending programmes have been terminated or limited. 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.

Analysing the influence of interest rates on prices, experts sometimes speak of the cost channel alongside the interest rate channel. A rise in interest expenses caused by higher interest rates exerts upward pressure on prices through the cost channel.

Nevertheless, the impact of the latter on the overall efficiency of the transmission mechanism is limited. In the first place, Russian non-financial companies' interest expenses do not exceed 5% of the cost of their sales and, therefore, the effect on prices within the logic of the cost channel is relatively small. Second, although changes in interest rates might significantly affect costs of certain highly leveraged companies, the overall potential of the pass-through of interest expenses to prices is limited. The extent of the pass-through depends on competition among manufacturers and the demand for their products which, in turn, is influenced by the level of interest rates.

Thus, when interest rates go up, interest expenses increase. However, the demand for products declines. Seeking not to lose the market share (including due to competition with less leveraged companies that are, accordingly, less dependent on interest rate movements), manufacturers offset part of the rise in costs through their margin rather than higher prices. Contrastingly, when interest rates go down, the demand for products grows and companies are thus able not to reduce prices, while competing for buyers, but rather increase their margin as a result of lower interest expenses.

Furthermore, companies raising fixed rate loans to cover their costs face an increase in interest expenses not instantaneously after a rise in interest rates but rather at the moment when they decide to refinance their loans or raise new ones. Concurrently, higher market rates immediately begin to reduce the affordability of loans and thus contain the demand financed through them. As a result, compared with the interest rate channel, the effect of the cost channel on price dynamics is considerably weaker.

Transmission mechanism channels related to the impact of interest rates on asset prices

Interest rates driven by monetary policy influence securities prices as well. 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, accordingly, their price) goes up when market rates go down, driven by higher affordability of broker loans and expectations of an increase in demand in the economy, companies' revenues, and returns on equity investment.

Securities prices impact demand in the economy through several channels simultaneously. First, securities can be used to back bank loans. Interest rates on collateralised loans are normally lower than those on unsecured loans. In addition, banks can issue a secured loan to a borrower even when the latter is not assessed as sufficiently reliable to receive an uncollateralised 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 not only by banks' clients but also by 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 3% 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 no more than 15%) and a considerable capital cushion. During the first months of 2024, the capital adequacy ratio N1.0 exceeded 12%, which is 1.5 times higher than the minimum level. Furthermore, the potential effect of the pass-through of losses from securities revaluation to capital is limited by the possibility of regulatory easing as in 2014–2022. Nonetheless, the Russian bond market has been expanding nearly 1.5 times faster than the credit market over the past decade. If this trend continues, the role of securities might be expected to increase further for both borrowers and investors. Accordingly, the balance sheet channel and the narrow credit channel might both become more important.

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 the amount of their financial cushion when planning their expenses. When prices for securities and, as a result, 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 2024, people's investment in bonds and listed shares amounted to approximately 22% of deposits and foreign cash holdings. 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 has been 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, and foreign investors' exit from the Russian market in 2022–2024 more notably than by monetary policy changes.

The interest rate channel of the transmission mechanism and other channels related to asset prices ensure the effect of monetary policy on aggregate demand in the economy, thus contributing to a temporary rise or slowdown in economic activity. If there is a gap between the current level of economic activity and the potential one (an output gap; see Box 8 'The concept of a long-term economic equilibrium and deviations of key macroeconomic variables from it'), this gap impacts the inflation rate.

According to the Bank of Russia's estimates, 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 if it is growing or decreasing. The impact of the output gap on inflation has become much stronger in 2022–2024 because of lower cross-border mobility of capital (due to the sanctions in place concerns about new sanctions, and the capital controls) and the changed nature of the influence of domestic demand on foreign trade transactions.

The foreign exchange channel of the transmission mechanism

Interest rates on ruble-denominated financial instruments forming under the influence of monetary policy impact 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. According to the Bank of Russia's estimates, a 1 pp change in the overnight IBL rate[5] leads to an approximately 0.2% adjustment of the real effective exchange rate of the ruble.[6] This 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 associated with 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. In the first place, 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, the ruble weakening results in growth of the ruble value of both imports to Russia (which makes Russian manufacturers more competitive and expands their opportunities to raise prices for their products competing with more expensive imports) and exports from Russia (which encourages domestic exporters to expand exports or increase prices in the domestic market). 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, the effect of the exchange rate on inflation was moderate in the past (a 1% decrease in the nominal effective exchange rate[7] caused a rise in inflation by no more than 0.1 pp), while in recent years, the pass-through of exchange rate movements to inflation has slowed down. It might take up to one year for exchange rate dynamics to fully translate into consumer prices (compared to six months in the recent past). However, spikes in the exchange rate might significantly alter prices already in one to two months.

First of all, the dynamics of demand and supply in the FX and commodity markets have been notably affected by the shocks associated with the disorganisation of the global commodity market during the 2020–2021 pandemic and changes in logistics, settlements and pricing in foreign trade amid the sanctions and shifts in the geographical structure of foreign trade transactions caused by growing geopolitical risks in 2022–2024 (see Appendix 4 'One-off supply-side inflation factors'), thus considerably distorting the effect of monetary policy.

Secondly, rising risks have triggered large-scale structural shifts influencing the efficiency of the foreign exchange channel of the transmission mechanism. The sanctions and capital controls have weakened the relationships between the Russian and foreign financial markets and, consequently, the effect of ruble interest rates on the foreign exchange rate.[8] Furthermore, because of the sanctions, the terms of foreign exchange transactions could differ for certain market participants. A wider use of friendly states' currencies has been constrained due to insufficiently developed domestic and foreign infrastructure processing related transactions. Partial substitution of unfriendly states' currencies in

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5 Refer to Orlov, A. and Sharafutdinov, A. Quarterly Projection Model for Russia with the Labour Market Component. Analytical note. 2024.

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

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

8 For details about these constraints and their effects on the functioning of the transmission mechanism, refer to Box 10 in MPG 2024–2026.

foreign trade with rubles has reduced and slowed down the pass-through of exchange rate dynamics to domestic prices. Finally, the growing importance of domestic demand and production, which manifests itself in the declining proportions of imports and exports in GDP, has been weakening the role of the foreign exchange channel. Furthermore, a reduction in the demand for foreign currency from importers and its supply by exporters, decreasing the depth of the FX market, has been creating the preconditions for stronger fluctuations of the ruble exchange rate, which partially offsets the weakening of the price response to them.

The majority of the above economic changes that have happened in recent years and have been 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-denominated financial instruments can remain for a long time, thus weakening the influence of interest rates on the exchange rate and the effect of the exchange rate on foreign trade. Moreover, the toughening of the sanctions and restrictions enacted against Russia limits the range of potential counterparties for Russian exporters and importers, which also slows down the adjustment of foreign trade transactions to exchange rate movements. The above changes make the foreign exchange channel of the transmission mechanism less important.

The inflation expectations channel of the transmission mechanism

The above transmission mechanism channels are complemented by the inflation expectations channel. Expectations about future movements of product 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 rise in prices for their products, which might compromise their competitiveness, and households – to maintain moderate consumer activity 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 loan 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 have been hindering 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. Moreover, in 2024, the surge in demand persistently surpassing supply in the labour market, coupled with considerable government support for the economy, has resulted in a high level of consumer financial confidence. These conditions are weakening the incentives to squeeze lending amid higher interest rates, which also reduces the efficiency of the inflation expectations channel. Seeking to support its efficiency, 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.[9]

In countries where inflation expectations are not anchored and the economically active population has the experience of living in the conditions of high inflation, accommodative monetary policy might boost the economy during a short period, but afterwards, the functioning of the transmission mechanism starts to distort.

Low deposit rates that form under the influence of accommodative monetary policy and are disproportionate to inflation reduce the demand for deposits. People may withdraw funds from deposits into the product market (which directly accelerates inflation), the FX market (which increases dollarisation of the national financial system, weakens the national currency, and pushes up domestic prices for imports), and 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.

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 loan rates that could cover banks' risks. A contraction in long-term lending might in turn adversely affect investment climate in the country and the 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 issued in foreign currencies). When foreign currency lending goes up, banks have to raise more funds in the foreign currency deposit market, which further increases dollarisation of the economy.

Growing dollarisation not only makes 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 be forced 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 modifications are described above. They might continue to change further in the medium term.

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

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 might continue into the future. One of the most evident of them has been the process of dedollarisation of the national financial sector (foreign currency instruments in retail deposits being part of money supply accounted for 8% as of early 2024 vs 17% as of early 2013, and the proportion of banks' foreign currency claims on organisations dropped from 15% to 12% 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 2013–2023, Russian companies' external debt in the ruble equivalent increased by a factor of 1.6, while their liabilities on internal loans and bonds quadrupled). This trend might be expected to continue given that the accessibility and affordability of external borrowings have worsened. The Bank of Russia's monetary policy directly influences the domestic financial sector. Therefore, this trend will enhance 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 households' savings. Nevertheless, this percentage resumed growth already in 2023, having exceeded the maximum levels of late 2021–early 2022 by the middle of 2024.

Another trend of the past few years is the deepening digitalisation of the financial sector. The spread of online banking, internet trading, and financial aggregators has significantly simplified the transfer of private funds across both banks and Russian financial market segments, thus increasing market participants' competition for clients. This has accelerated the response of market segments to changes in the situation in other segments, which enhances the efficiency of all the channels of the transmission mechanism.

Secondly, the functioning of the transmission mechanism has been distorted by certain consequences of the events that occurred in 2020–2024. 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 securities prices (limiting the efficiency of the welfare channel, as well as the balance sheet and narrow credit channels).

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 2022–2024 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 these processes has been weakening the dependence of the domestic market 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. This trend may be expected to continue in the medium term.

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 to 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 inflationary risks, as well as by decreasing inflation expectations closer to the target and, accordingly, reducing demand-side inflationary risks.

BOX 10. SUBSIDISED LENDING AND ITS IMPACT ON THE TRANSMISSION MECHANISM

Implementing its monetary policy, the Bank of Russia takes into account the considerable amount of credit to the economy under subsidised programmes. Subsidised loans are weakly responsive to monetary policy changes. The larger the proportion of these loans is, the more significantly the key rate should be changed to influence credit activity, demand, and inflation

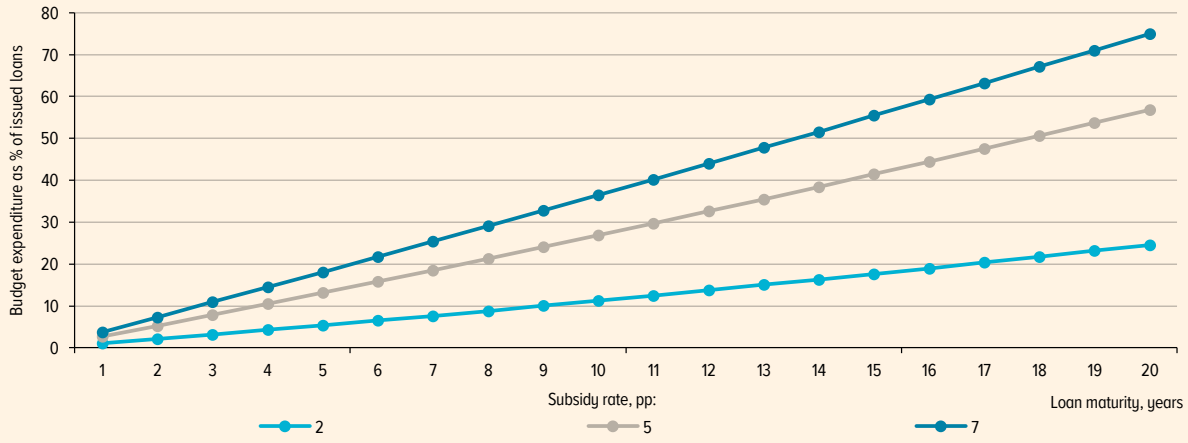
With regard to certain types of credit transactions, the effect of monetary policy on interest rates for ultimate borrowers notably differs from the market logic described above. If the amount of such transactions is significant, the central bank needs to take them into account when planning and implementing its monetary policy. One of the most widespread types of such transactions are subsidised loans under government programmes where banks issue loans to certain categories of borrowers at lower interest rates, while the difference between market and subsidised rates is covered by the government through subsidies.

In terms of fiscal policy, subsidised lending is an appealing instrument to boost demand because it can promote a local increase in demand that might exceed manifold the current budget expenditures for subsidising interest rates. However, this subsidising is only effective when a programme offers only short-term loans for a limited period. Where maturities of subsidised loans become longer, the overall expenditures for subsidising interest rates on them might be comparable with the loan amount (Chart 10.1). Moreover, the expenditures for subsidising interest rates on long-term loans issued earlier limit the flexibility of fiscal policy many years after the one-off stimulating effect of such loans has been exhausted.

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. As a result, a key rate reduction might be insufficient to prop up demand, including because of the long time lags of the impact of monetary policy decisions on demand dynamics. This effect is relevant primarily to countries where monetary policy rates are close to zero. Therefore, during the coronavirus pandemic, many central banks worldwide were implementing funding for lending (FFL) programmes aimed at boosting specific credit market segments. More than a third of the 27 FFL programmes launched by 14 large central banks were meant to restore the efficiency of monetary policy.[1]

On the other hand, if subsidised lending programmes remain in effect for a long time, they hinder the efficient implementation of monetary policy. Generally, monetary policy has a very weak effect on interest rates on subsidised loans. Therefore, an increase in subsidised lending, all else being equal, does not only ease monetary conditions in the economy, but also distorts the functioning of the interest rate channel of

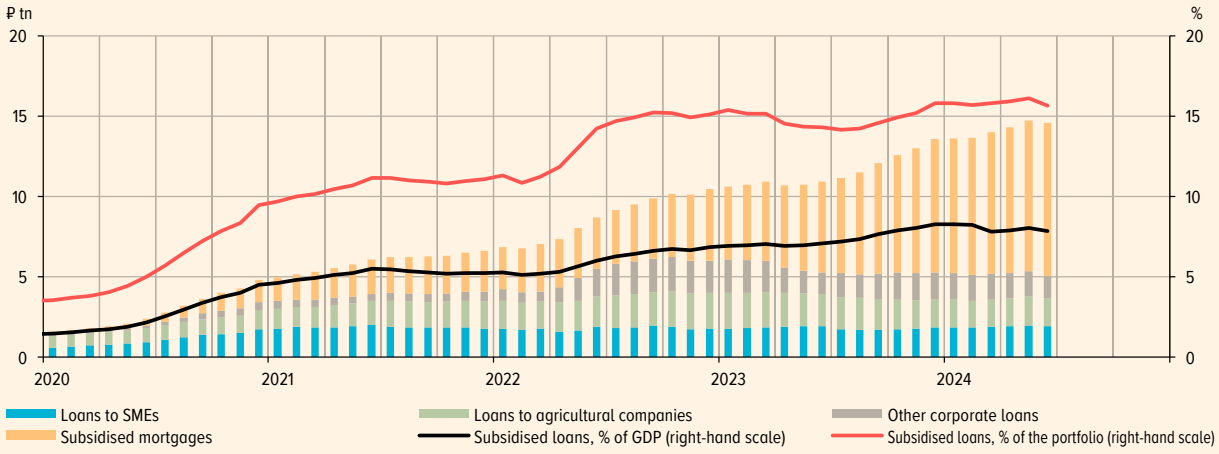
DEPENDENCE OF BUDGET EXPENDITURE FOR SUBSIDIES ON THE SUBSIDY AMOUNT AND LOAN MATURITY *Chart 10.1*



Source: Bank of Russia.

[1] BIS Review Funding for lending programmes.

STRUCTURE OF THE SUBSIDISED LOAN PORTFOLIO* *Chart 10.2*



** Corporate loans are loans to resident non-financial organisations and individual entrepreneurs. Subsidised corporate loans – loans granted under government programmes at subsidised interest rates. Subsidised mortgages excluding regional subsidised programmes.*
Source: Bank of Russia.

the transmission mechanism. The higher is the percentage of subsidised loans in the economy, the more significant should be a key rate change to ensure an adequate effect on credit activity, demand, and inflation.

The overall economic effect of subsidised lending programmes is still a matter of dispute. In the first place, these loans have the so-called substitution effect. This is a situation where borrowers who were not ready to raise loans on market terms use a subsidised programme. As a result, subsidising does not increase the amount of lending and demand in the economy, but only augments the burden on the budget.

Second, 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 subsidised lending programmes, the central bank has to pursue tighter monetary policy. A reduction in the interest rate for some groups of borrowers is accompanied by its increase for all others. Ultimately, subsidised loans are paid for by both tax payers (through budgetary subsidies) and unsubsidised borrowers (through loans issued at higher market rates).

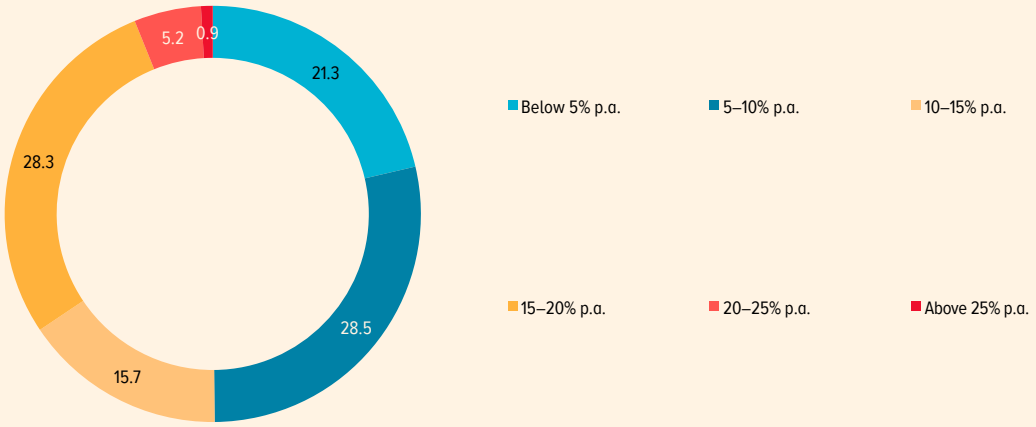
Subsidised mortgage programmes for households. Subsidised mortgage lending is presently the largest area of subsidised lending in Russia, accounting for nearly ₽9 trillion (of the overall portfolio of subsidised loans worth ₽14 trillion as of 1 July 2024; Chart 10.2).[2] Approximately a half of the subsidised mortgage portfolio was accounted for by loans issued under the government subsidised mortgage programme for new housing available to a wide range of borrowers that was launched during the pandemic period to shore up the construction industry and make housing more affordable for people. Over the effective period of the programme, borrowers received 1.6 million loans worth ₽6 trillion, which enabled them to purchase housing with the total area of 76 million square metres.

However, as it is impossible to increase housing construction as quickly as mortgage lending, the expansion of subsidised mortgage lending nearly doubled new housing prices, with their growth rate significantly exceeding that of wages and inflation. As a result, housing became less affordable for people as the surge in prices completely eroded the benefits of low interest rates on subsidised mortgages. Furthermore, over the effective period of the programme, budget expenditures for paying the subsidies reached already ₽0.5 trillion. If loan repayments are made regularly during 10 years and the key rate dynamics are consistent with the Bank of Russia's baseline forecast (see Section 3 'Macroeconomic scenarios and monetary policy in 2024 and 2025–2027'), additional budget expenditures for subsidising the interest rates may reach up to ₽1.2 trillion over the

[2] 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, the estimates are made 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 auto loans, etc.). Hence, the actual amount of subsidised lending exceeds the estimates given in the Box.

PORTFOLIO OF RUBLE LOANS TO NON-FINANCIAL BORROWERS AT FIXED RATES, BROKEN DOWN BY LOAN RATE (AS OF 1 JULY 2024) *Chart 10.3*

(%)



Source: Bank of Russia.

next 10 years until the loans issued under the non-targeted subsidised mortgage programme are fully repaid. The overall budget expenditures thus potentially exceed a fourth of the amount of the subsidised loans issued under this programme.

Concessional corporate lending programmes. A number of concessional programmes for businesses have definitely proven to be effective, with the burden on the budget being moderate (e.g. the Payroll Fund 0 and Payroll Fund 2.0 programmes that helped alleviate the negative consequences of the pandemic and avoid a slump in employment). Generally, where concessional lending is a temporary anti-crisis measure implemented to support the affordability of credit for the most vulnerable or top-priority industries amid extreme tightening of lending conditions, it may be efficient, while the above disadvantages of this instrument are less important. A decrease in the demand for and supply of loans reduces room for the substitution effect. Anti-crisis measures to support 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.

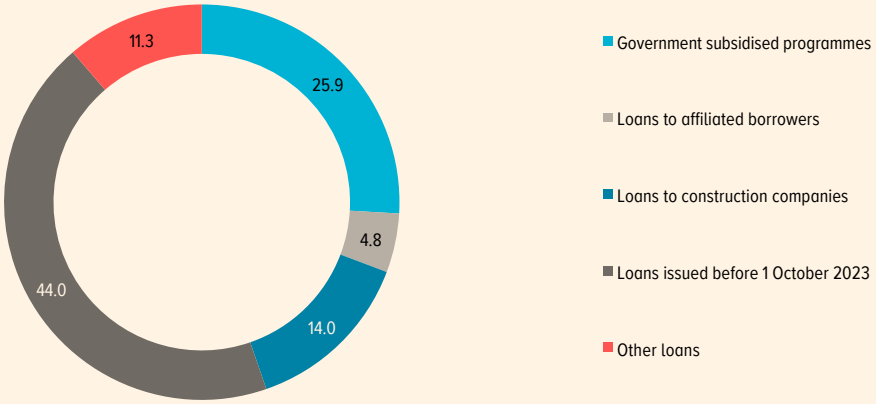
Furthermore, in contrast to subsidised mortgage lending, adverse proinflationary implications of the expansion of concessional corporate lending and, accordingly, the necessity to tighten monetary policy to offset its impact are lower. On the one hand, the demand funded through concessional corporate lending programmes is considerably less concentrated and its pressure on prices is not that strong. On the other hand, successful implementation of leveraged investment projects may in the medium term boost the economic potential and to a certain extent alleviate the inflationary consequences of the initial stimulation of demand.

In addition, it should be noted that subsidised interest rates are not the only form of government support in corporate lending. By mid-2024, the cost of debt servicing for nearly a half of the fixed-rate loan portfolio did not exceeded 10% p.a. (Chart 10.3). Many of these loans were certainly market-based – they were issued during the period of lower interest rates and connected with developers' project financing or lending to bank-affiliated companies (Chart 10.4). However, part of these loans are related to alternative lending support mechanisms (government guarantees, subsidised funding to lending banks, and direct lending at low interest rates with the engagement of government development institutions, the NWF and other government agencies). These mechanisms also involve both extra burden on the budget (in the form of lost profits, contingent liabilities to creditors, etc.) and inflationary risks. Therefore, the actual level of economic imbalances associated with concessional lending in general is higher in the Russian economy than might be assumed based on the statistics given in Chart 10.2.

The Bank of Russia believes that government subsidised lending programmes are an efficient economic policy instrument to address such tasks as countercyclical stimulation of recovery in demand during economic downturns and targeted aid to certain groups of borrowers or individual industries. However, when applied to a wide range of borrowers during a long time, this instrument becomes less powerful due to a stronger substitution effect, increasing burden on the budget, and weakening potential for growth in market-based

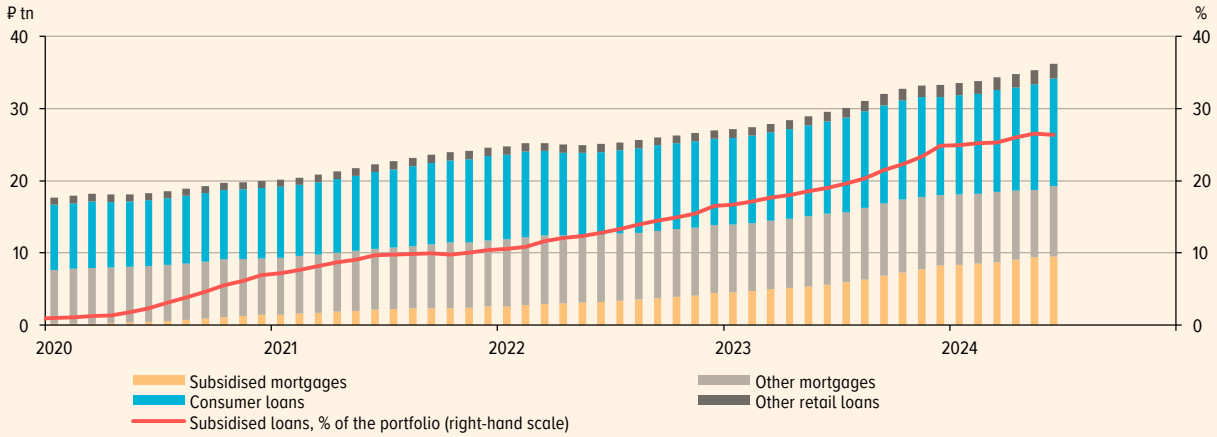
PORTFOLIO OF RUBLE LOANS TO NON-FINANCIAL BORROWERS AT FIXED RATES BELOW 10% P.A. (AS OF 1 JULY 2024) *Chart 10.4*

(%)



Source: Bank of Russia.

RETAIL LOAN PORTFOLIO* *Chart 10.5*



** Subsidised mortgages excluding agricultural mortgages and regional subsidised programmes; other retail loans including subsidised auto loans.*
Source: Bank of Russia.

lending to the economy at a pace compatible with price stability. Lending to the economy in general is affordable when, first and foremost, inflation is predictably low and, accordingly, investors' inflationary risks go down, which enables borrowers to raise loans on market terms without accumulating imbalances in the economy.

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

The transfer curve is a reference point for banks to establish loan and deposit rates. Banks build their transfer curves based on risk-free curves or their internal assessments

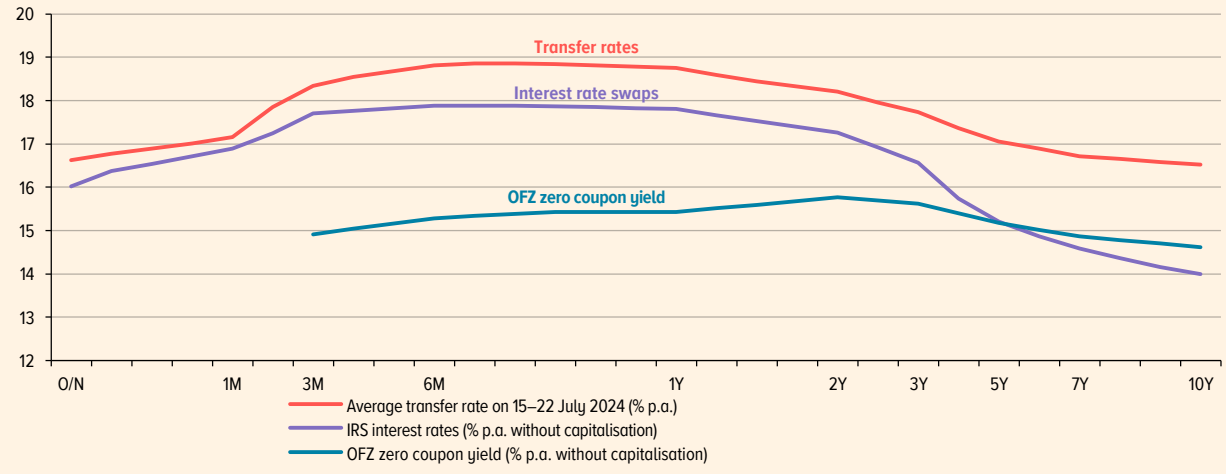
The transfer curve is a set of internal transfer interest rates on transactions of various maturities that are established by a commercial bank and are the same for all its business units. The transfer curve is the core of the intrabank system of bank product pricing that enables credit institutions to determine a coherent range of prices for operations in various market segments and, when needed, to adjust the structure of their balance sheets by choosing between various sources of funding and areas of investment. In order to determine price conditions for any transaction (whether a credit, deposit or securities transaction) of a particular maturity, a bank needs to set the transfer rate for this maturity and assess costs and risks associated with a given transaction. Furthermore, the use of the transfer curve 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 an 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 of ruble yields, which is usually referred to as risk-free in banks' internal documents, is based on yields of such instruments as OFZs and IRSs. 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 credit and deposit 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 through transfer rates into all other interest rates in the economy.

Transfer rates are only a reference point in bank product pricing. An interest rate on each type of asset-related transactions should be no less than the transfer rate for the same 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, an interest 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

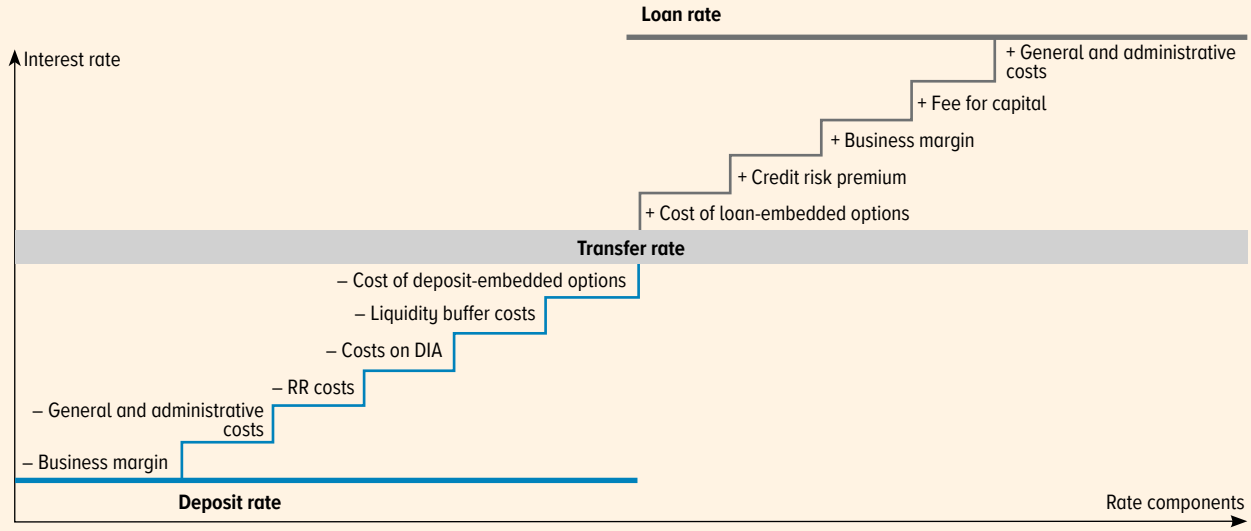
TRANSFER RATES OF SYSTEMICALLY IMPORTANT BANKS AND MARKET MEASURES OF YIELDS BEFORE THE KEY RATE DECISION ON 26 JULY 2024 *Chart 11.1*

(%)



Note. Transfer rates are given as the average for SICIs.
Sources: Bank of Russia, CBonds, surveys of credit institutions.

FORMATION OF DEPOSIT AND LOAN RATES FOR BANKS' CLIENTS USING THE TRANSFER CURVE *Chart 11.2*



Source: Bank of Russia.

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 bank product pricing, adjusting the response of deposit, loan and corporate bond rates to changes in the level and slope of the risk-free curve. The main costs and risks comprise operational costs, credit risks to individual segments and borrowers, and expenses on payments to the deposit insurance system and contributions to the RR (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 included in loan 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. Specifically, in 2014, an important factor influencing interest rate dynamics in long-term retail lending was changes in the market structure, namely the replacement of long-term consumer and car loans with lower-risk mortgages. As a result, lower risk premiums caused a reduction in long-term interest rates in retail lending despite the increases 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 a rise in loan rates due to more significant growth 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 (a loan or deposit). Embedded options enable a bank or a borrower to change the amount or time of cash flows. Thus, in the case of a deposit, a client is entitled to withdraw the funds ahead of schedule or, to the contrary, deposit additional funds at the earlier fixed interest rate. In the case of a loan, embedded options provide for automatic currency conversion at a certain exchange rate level or allow raising additional funds within the opened credit line. Furthermore, 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 have 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.

Modifications in the calculation of the transfer curve might also cause significant transformations in the functioning of financial markets. Until 2015, the benchmark for pricing bank products with maturities of over 30 days was OFZs. From 2016, the spread between OFZs and IRSs (the swap spread) averaged from -0.67 to -0.26 for maturities from one to three years. However, in 2023 Q4, it significantly expanded due to changes in the ratio between demand and supply in the short-term OFZ market. On the one hand, the Ministry of Finance preferred to offer primarily long-term bonds, smoothing public debt repayments, which limited the supply of short-term OFZs. On the other hand, SICIs increased the demand for these bonds, which might be explained by two factors. First of all, higher demand for OFZs as highly liquid assets was associated with banks' preparations for the cancellation from 1 March 2024 of the LCR-related easing introduced after materialisation of geopolitical risks in 2022. Secondly, amid the gradual tightening of monetary policy, banks were seeking to reduce interest rate risks and, therefore, opted for investment in shorter-term OFZs for no more than three years as banks could quickly sell/redeem them and reinvest the funds in higher-yield securities. As a result, the short end of the zero coupon yield curve turned out to be notably below the key rate and money market rates, which nonetheless had almost no effect on the transfer curve. The reason for that was banks' transition to the IRS as the market benchmark for calculating transfer rates because it was more suitable for the new reality. Thus, despite the changed situation in the debt market, the mechanism for determining transfer rates by banks remained effective, accurately reflecting the actual level of the key rate and its path expected by market participants.

BOX 12. REGIONAL HETEROGENEITY OF THE RUSSIAN ECONOMY AND THE FUNCTIONING OF THE TRANSMISSION MECHANISM

The Bank of Russia pays particular attention to exploring regional specifics of the economy and takes into account how they might influence the transmission of monetary policy decisions

Russia belongs to a group of economies with pronounced regional heterogeneity, which can be explained by the geography of the country. Thus, Far Eastern regions carry out foreign trade mostly with Asia, while the western part of Russia – with Europe. Furthermore, the heterogeneity might be associated with differences in the structure of the regions' economies. In particular, the southern regions traditionally have well-developed agriculture and tourism, whereas the northern regions specialise in mining and quarrying. The distribution of industrial enterprises across the regions is also uneven.

Single monetary policy cannot fully correlate with the business cycle of each of the regions and, therefore, its influence on their economies, namely **inflation**, **output**, **investments**, **unemployment**, etc., is not uniform. The heterogeneity of the response of the regional indicators to the monetary policy pursued is attributed to their sensitivity to interest rate changes, in the first place. The sensitivity in turn depends on the **sectoral composition of the regional economies**, the ratio between small firms and large businesses – market leaders, and the amount of loans issued to small firms. Second, interest rates set by banks are also important as they vary across the regions depending on banking competition, risk levels, and the quality of institutions. **The transmission mechanism of monetary policy decisions is more efficient in the regions characterised by a more diversified sectoral structure of the economy, high quality of life and low inequality, a mature banking sector and financial inclusion, low credit risk, and a mature credit and deposit market.**

The **main factors of regional heterogeneity** today are as follows:

- **The sectoral composition of a region's economy** and the size of enterprises in the region: the larger is the share of manufacturing and the smaller is the share of industries and companies with multiple subsidised programmes, the stronger is the economy's response to monetary policy measures.
- **Credit risk and debt burden in a region**: the higher are their levels, the weaker may be the interest rate channel of the transmission mechanism.
- **Banking competition**: the higher is its level, the better is the response of regional banks' interest rates to monetary policy measures.
- **Per capita income**: monetary policy tightening decreases income inequality more significantly in regions with higher per capita income.
- **Sources of income and intra-regional income inequality:** as the key rate decreases, labour incomes, returns on assets and business profits grow, while transfer payments do not change, all else being equal. This ensures a stronger response to monetary policy measures among economic agents with higher incomes.
- **Differences in regional households' marginal propensity to save and consume**: higher-income groups characterised by a higher marginal propensity to save respond to monetary policy tightening more strongly.
- **Life quality in a region, its economic development in general, and accessibility of financial services**: the higher are their levels, the more efficient is the interest rate channel as a core channel of the transmission mechanism.

When making its monetary policy decisions, the Bank of Russia analyses the current economic situation not only in the country as a whole but also in its regions. This helps better comprehend the specifics of the functioning of the transmission mechanism as well as the reasons why the Russian economy can respond to monetary policy heterogeneously and with a certain time lag. The main objective of the regional analysis is to identify the trends that are emerging at the level of the regions, each of which has its sectoral specialisation and peculiarities associated with various factors of heterogeneity, and to find out how widespread these trends may become across the country.

Thus, factors influencing the harvest and, consequently, food prices first emerge in the southern regions, the Urals, and Siberia. Due to their climate and other conditions, these regions account for the largest part of the country's harvest. Price dynamics in these regions are a leading indicator for all other regions where prices change as food products are supplied. Analysing the situation in agriculture in these regions, including information on sowing and harvesting, the condition of winter crops and crop areas, weather conditions in agricultural regions, and large agricultural enterprises' expectations about the harvest, it is possible to assess the main risks pushing up producer costs that are included in input and output prices of future products.

The regional analysis is thus a useful tool for making monetary policy decisions. In the first place, the impact of these decisions varies across the regions. Secondly, the analysis of economic indicators in the regions helps better understand the factors of their future dynamics. Finally, new trends in economic activity start to emerge in individual regions earlier than across the country as a whole. This information is helpful in making timely decisions.

Appendix 2. Inflation measures used by the Bank of Russia

To comprehensively analyse price dynamics, the Bank of Russia uses multiple measures of current inflationary pressures and underlying inflation in addition to the annual inflation rate

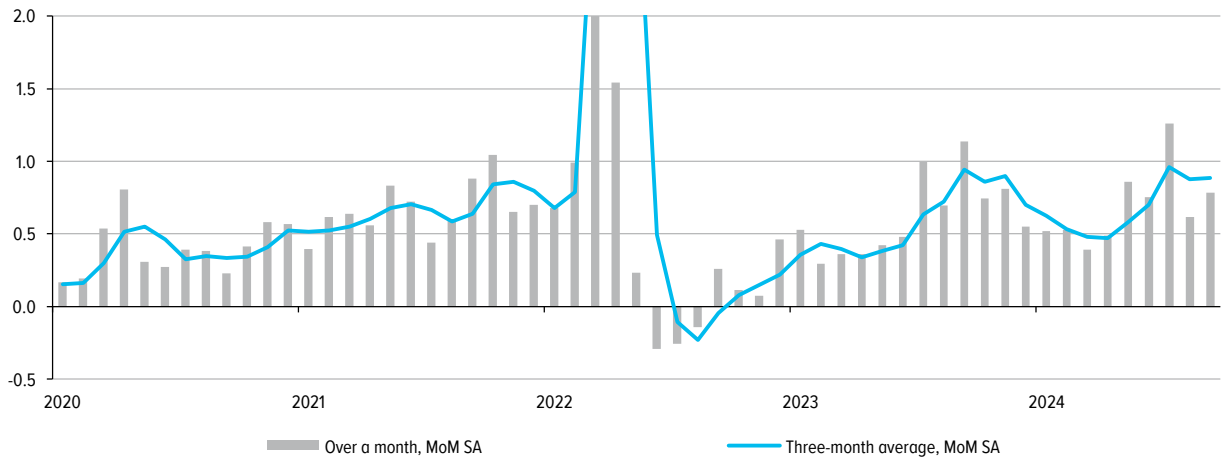
The Bank of Russia's monetary policy is aimed at ensuring price stability. The Bank of Russia's target is annual inflation of close to 4%. The target measure is the CPI calculated by Rosstat. In 2024, the CPI has been calculated based on prices for 566 products and services. This index has been widely used in the economic practice. The annual growth rate of the CPI is a convenient measure to analyse long-term price trends. To assess current inflationary pressures, the Bank of Russia uses a number of additional measures.

Measures of current price dynamics

Current price dynamics are analysed based on the CPI growth rate month-on-month (MoM). This measure can be used to analyse changes in the CPI over a year but is very sensitive to seasonal price fluctuations. Seasonal factors have a notable impact on prices. However, as they are normally the same every year, they do not affect the annualised price growth rate. The analysis is based on seasonally adjusted prices to ensure that the MoM growth rate of the CPI reflects price growth acceleration/deceleration excluding seasonal fluctuations.

Seasonal adjustment eliminates the impact of transitory factors on monthly price increases, thus making them stabler for the analysis. However, even when seasonally adjusted, the MoM growth rate of the CPI is still a rather volatile measure. Prices for certain goods may notably fluctuate due to short-term shocks that often abate over the course of a month. The attenuation of short-term fluctuations is evident from the comparison of the seasonally adjusted CPI with the average growth rate (MoM SA) of the CPI over the past three months that is used to smooth out sharp price fluctuations. Thus, in November 2023–April 2024, the MoM price growth (SA) was accelerating and then decelerating alternately. However, the three-month average growth rate (MoM SA) was steadily declining, which was evidence of a nascent disinflation trend.

CONSUMER PRICE INDEX, SA *Chart A-3*
(%)



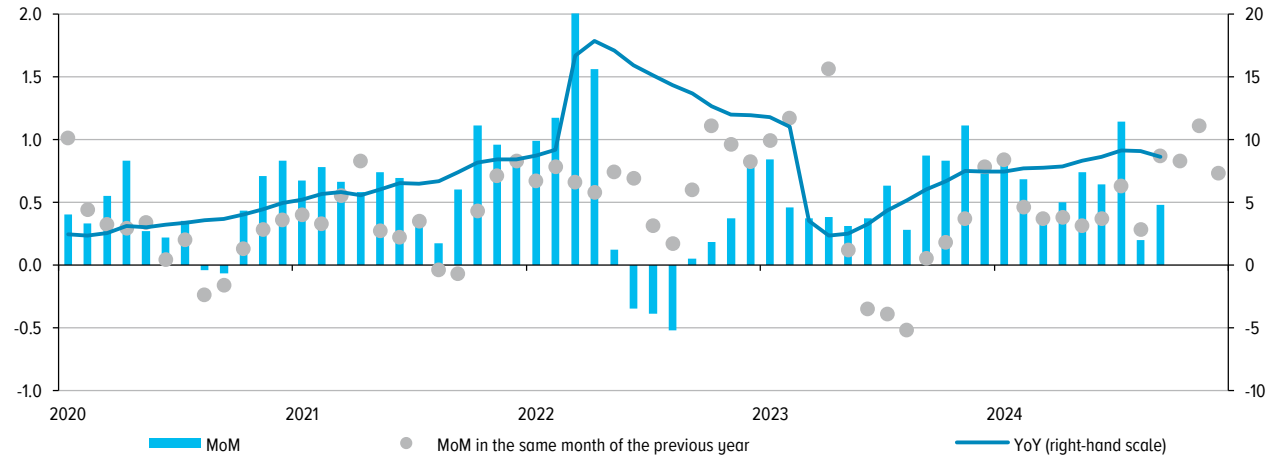
Source: Bank of Russia.

Ratio between monthly and annual price increases

The year-on year (YoY) rate of inflation is calculated from the MoM price increases over the past 12 months. For example, inflation in April (YoY) is calculated based on the 12 MoM price growth rates from May of the previous year through April of the current year. The change in the annual inflation rate for two adjacent months is normally small: for adjacent months, 11 of the 12 MoM price increases are identical. During an individual month, annual inflation changes by the difference between the MoM price increases over this month and the same month of the previous year (the influence of the corresponding month on annual inflation is often referred to as the base effect). Thus, in April 2024, annual inflation edged up by 0.12 pp to 7.84%, which is equal to the difference between the MoM growth rates in March 2024 (0.50%) and March 2023 (0.38%).

Hence, the dynamics of annual inflation and MoM growth rates may differ. Annual inflation decelerates when MoM price growth rates are lower than those recorded in the corresponding months of the previous year.

RATIO BETWEEN MONTHLY AND ANNUAL PRICE INCREASES *Chart A-4*
(%)



Source: Bank of Russia.

Measures of underlying inflation

Underlying inflation is the component of the overall price dynamics that is typical of the majority of product groups. It is especially important for analysing medium-term inflation trends and forecasting inflation when preparing key rate decisions. To track the underlying component, it is necessary to remove the so-called distortions.

Basically, distortions imply transitory and irregular price fluctuations frequently caused by changes in relative prices for particular products and services. The paths of prices for certain products significantly differ from most others, which creates outliers in the distribution of price increases. These swings are attributed to temporary factors that quickly dwindle. They decrease the accuracy of the forecast if they are taken into account in the analysis of medium-term price movements.

It is not always possible to differentiate between various factors in terms of their nature and duration and, consequently, to accurately isolate the underlying component of inflation. Therefore, central banks rely on various indicators of underlying inflation and apply multiple approaches to measuring them. These approaches are divided into statistical and model-based ones. Statistical approaches rely on a certain calculation algorithm removing all distorting components from the data. Model-based approaches use an estimate of an equilibrium path of inflation within a certain model.

There is no universal measure of underlying inflation that could be the best one in any situation. In practice, each of these measures has its pros and cons. Accordingly, it is necessary to continuously monitor a wide range of data.

The Bank of Russia uses multiple measures of underlying inflation to analyse price dynamics. This section gives a few examples of such measures, but the list is not exhaustive.

Statistical subindices excluding a fixed or variable set of components

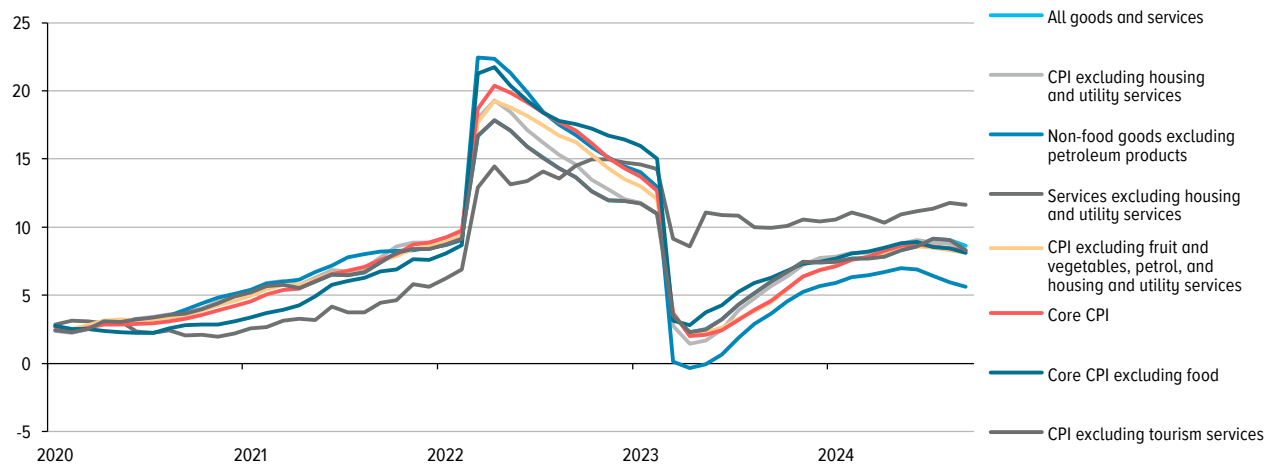
The first approach excludes specific components from the consumer basket. Normally, these are components that are traditionally characterised by high volatility (e.g. fuel, fruit and vegetable prices) and seasonal fluctuations (e.g. fruit and vegetable prices) or are administered (e.g. alcohol and utility prices). The weights of the remaining CPI components in the basket are adjusted so that they account for 100% of the new basket. The weighted average of the subindices calculated that way is a modified measure of core inflation. Particular examples of this approach are as follows:

- Rosstat's core inflation;
- the CPI excluding housing and utility services;
- the CPI excluding fruit and vegetables, petroleum products, and housing and utility services;
- core inflation excluding food products;
- growth in prices for non-food goods excluding petroleum products;
- growth in prices for services excluding housing and utility services; and
- growth in prices for food excluding fruit and vegetables.

To calculate inflation, Rosstat regularly updates the basket by adding new products and services becoming more demanded and removing obsolete ones. Price characteristics of new products and services may differ from the previous ones. Therefore, such updates have a notable effect on the intra-annual seasonality of price dynamics. Furthermore, the methodology for calculating changes in prices for individual goods and services can be upgraded, which will also influence the seasonality of price dynamics.

A vivid example of price volatility associated with changes in the methodology is prices for tourism services. Specifically, in 2023, Rosstat updated the list of tourist destinations abroad and added trips to the Black Sea coast and Crimea. From 2021, the dates for monitoring prices within a month were changed. As a result, price dynamics started to take into account New Year tours that had previously

ANNUAL GROWTH IN INFLATION SUBINDICES EXCLUDING A FIXED SET OF COMPONENTS *Chart A-5*
(%)



Source: Bank of Russia.

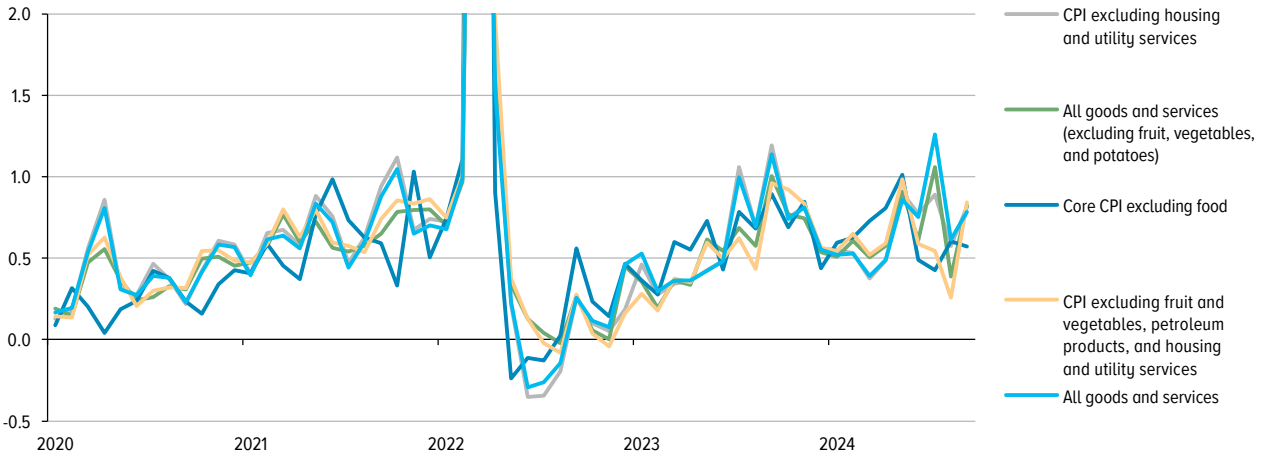
been beyond the scope of the monitoring. Such changes in the seasonality worsen the quality of the assessment of seasonally adjusted data and increase their volatility. This is why the Bank of Russia also analyses price dynamics excluding tourism prices.

In 2024 Q1, the growth of the CPI was slowing down overall, with the measures of underlying inflation being stable. This suggests that price dynamics were mostly driven by one-off factors. Furthermore, their contribution in January–February 2024 was mostly positive, while in March–April 2024 – negative.

The approach excluding a variable set of components removes specific components from the overall measure of price dynamics based on a certain criterion. The composition of the basket for calculating the measure changes every month. The advantage of this approach is that it eliminates one-off spikes 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:

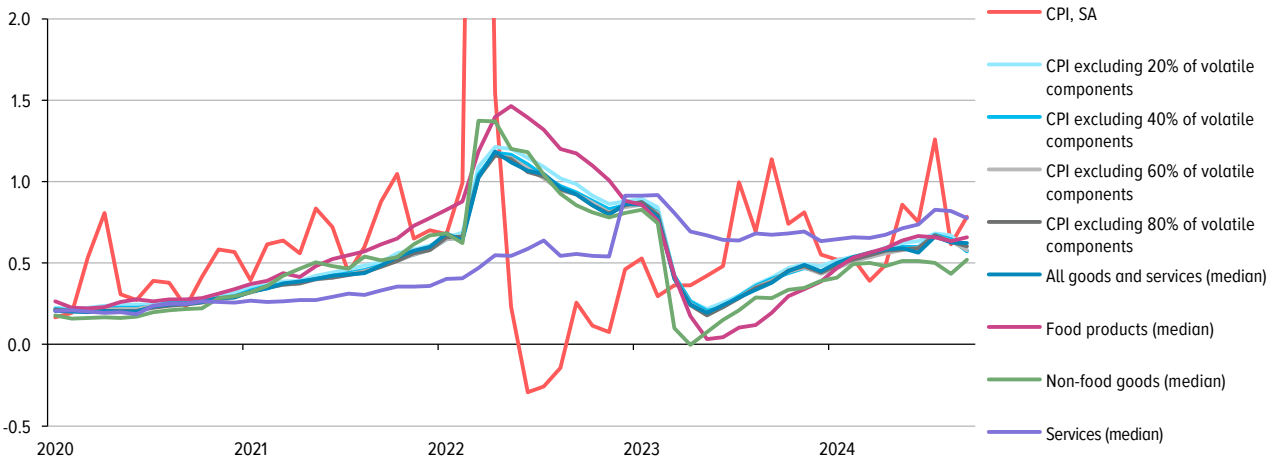
- the median of the overall distribution of price increases;
- the medians of increases in prices for components strongly and weakly dependent on exchange rate dynamics;

MONTHLY GROWTH IN INFLATION SUBINDICES EXCLUDING A FIXED SET OF COMPONENTS, SA *Chart A-6*
(%)



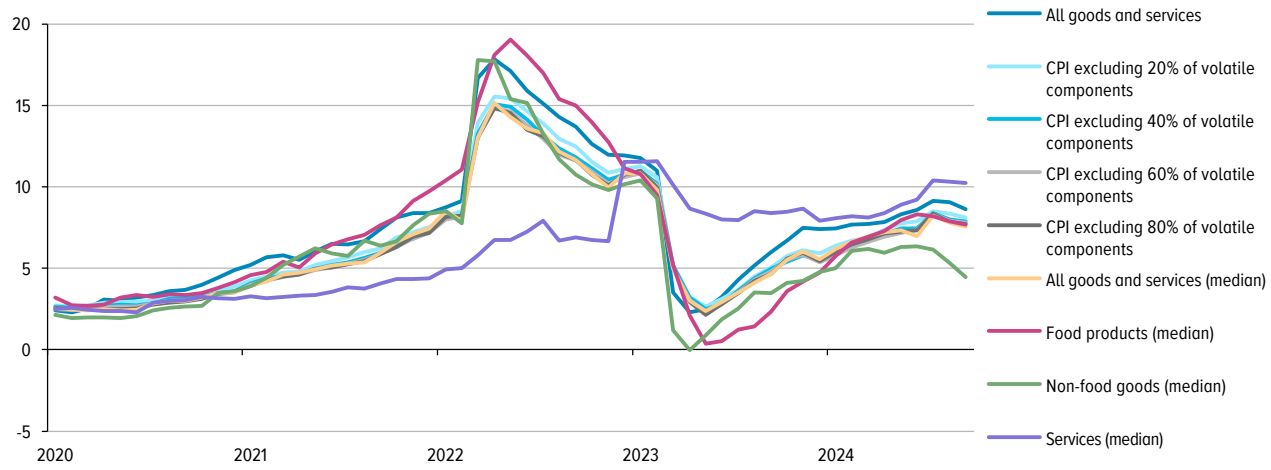
Source: Bank of Russia.

MONTHLY GROWTH IN INFLATION SUBINDICES EXCLUDING A VARIABLE SET OF COMPONENTS *Chart A-7*
(%)



Source: Bank of Russia.

ANNUAL GROWTH IN INFLATION SUBINDICES EXCLUDING A VARIABLE SET OF COMPONENTS *Chart A-8*
(%)



Source: Bank of Russia.

- the measure trimming the distribution of prices: 20%, 40%, 60%, and 80% (the truncation based on the optimality criterion, that is, the parameters ensuring that the trimmed measure is the closest to the average price growth rate based on historical data);
- the measure excluding the most volatile (10%, 20%, 30%, and 40%) inflation subindices over the past 3 or 24 months; and
- 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.

When adjusted for volatile or extreme observations, the dynamics show that the growth rate of prices for most goods and services has been steadily elevated from December 2023.

Model-based measures of underlying inflation

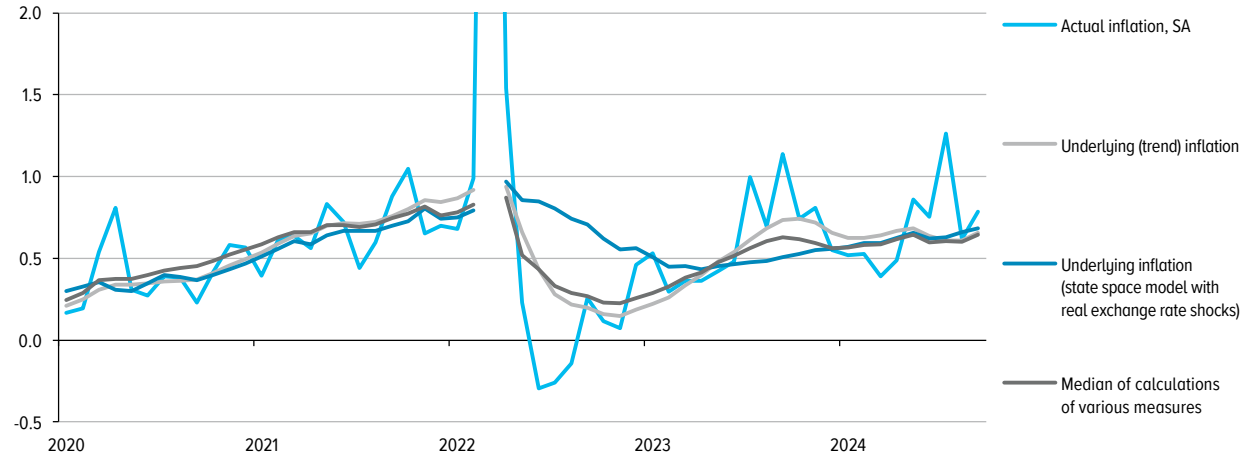
For the purpose of model-based measurements, underlying inflation means the price growth rate observed in the economy when there are no supply or demand shocks, one-off changes in relative prices, or any other shocks, that is, when the economy stays in an equilibrium. To isolate the contribution of shocks, econometric models are built to estimate how the factors causing the economy's deviation from an equilibrium affect inflation. As an equilibrium in the economy is unobservable, underlying inflation, defined as above, is also an unobservable variable. To estimate it, the Bank of Russia uses:

- models measuring trend inflation (e.g. a dynamic factor model taking into account 46 subindices of the CPI); and
- models of unobservable components adjusted for various shocks, including shocks of the real foreign exchange rate.

The analysis of the data for 2023 H2 and 2024 H1 shows that, despite certain swings, underlying inflation continued to decelerate. This suggests that inflation processes stabilised, although the price growth rate remains elevated due to high demand surpassing the capacities to expand supply.

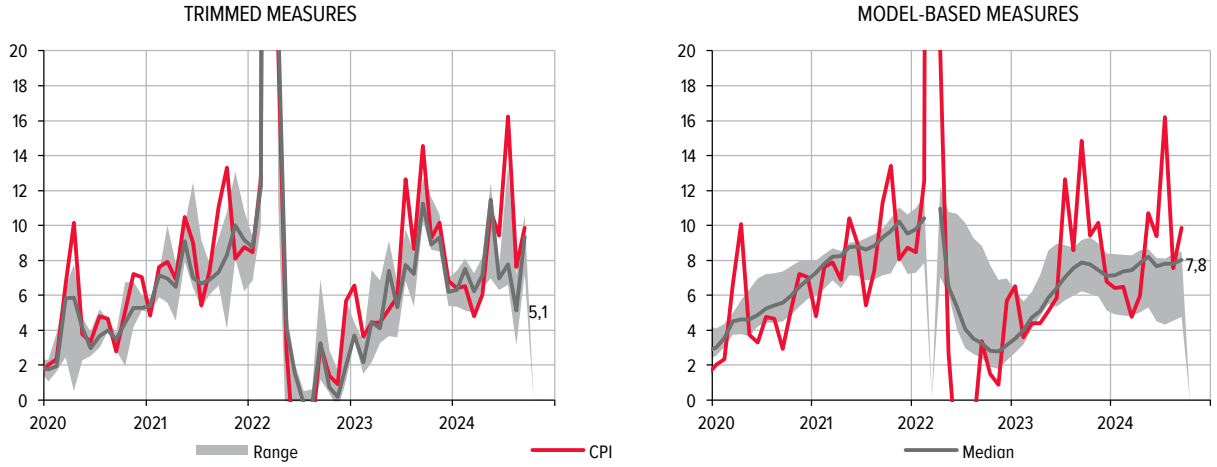
Using various measures, the Bank of Russian is thus able to analyse inflation comprehensively. Specifically, statistical measures of underlying inflation helping analyse each particular data point generally indicate that current price pressures remain elevated. Contrastingly, model-based measures that are largely aimed at gauging an equilibrium level of inflation show that current price pressures are weaker than in 2021–early 2022.

MONTHLY GROWTH IN UNDERLYING INFLATION CALCULATED BASED ON MODELS *Chart A-9*
(%)



Source: Bank of Russia.

MEDIAN OF TRIMMED AND MODEL-BASED MEASURES *Chart A-10*
(%)



Source: Bank of Russia.

The Bank of Russia analyses multiple measures of underlying inflation. When making decisions, the Bank of Russia also scrutinises the dynamics of certain measures taking into account their individual peculiarities and aggregates the measures to assess the central tendency. One of the ways to illustrate the central tendency of the measures is their median. Most frequently, the medians of the statistical and model-based measures are assessed separately.

Appendix 3. Quantitative analysis of reasons for the inflation deviation from the target and decomposition of GDP dynamics into shocks

In 2023, inflation deviated upwards from the target primarily due to a greater-than-expected rise in producer costs, higher budget expenditures, and the key rate level that was insufficient to slow down inflation in these conditions

The traditional quantitative analysis of the reasons behind the inflation deviation from the 4% target provides a more detailed and structured assessment of the inflation dynamics in the Russian economy over 2023. This analysis has been expanded in MPG 2025–2027. As long as the dynamics of aggregate demand and supply in recent years have been a great contributor to the understanding of the nature of inflation in Russia, the current analysis has been complemented with the assessment of the decomposition of the GDP dynamics into shocks. Nevertheless, the decomposition into shocks differs from that into factors. The main difference in the interpretation is as follows: the decomposition into shocks shows how external (exogenous) shocks not explained by the model have been affecting the dynamics of a macro indicator, whereas the decomposition into factors identifies internal (endogenous) factors captured by the model that have been contributing to the dynamics of a certain macro indicator. Furthermore, any decomposition reflects the average dynamics of an indicator over a year in general affected by changes in the factors of previous periods (given the lagged structure of the model), which might significantly influence the interpretation of the shocks over the course of a year (the year 2023 was uneven in terms of the dynamics of macroeconomic indicators over the course of the quarters). In addition, all decompositions are based on certain vintage data revised retrospectively by Rosstat, which complicates the comparative analysis of decompositions from different periods.

All the decompositions are based on the Bank of Russia's Quarterly Projection Model with the block covering the labour market.

Decomposition of the inflation deviation from the target into shocks

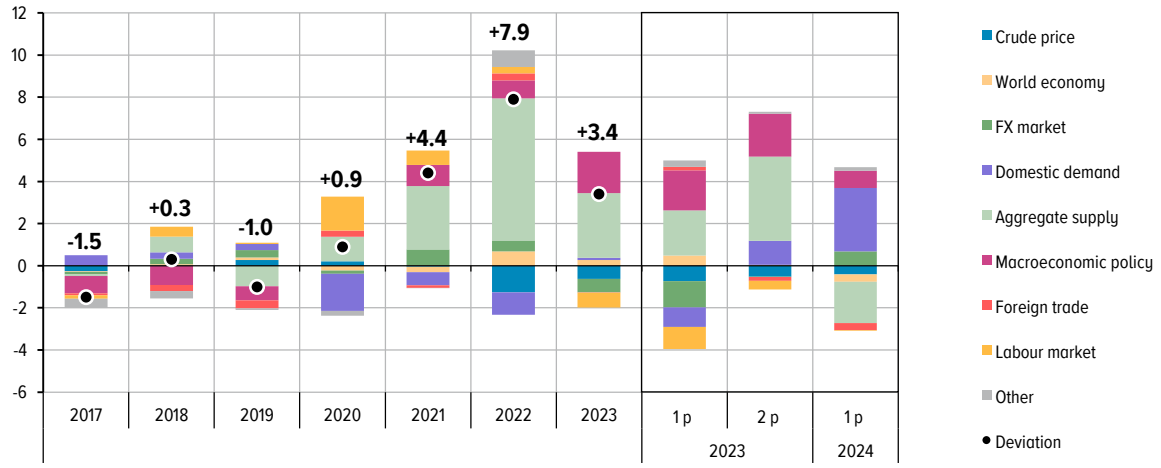
Chart A-11 shows the decomposition of the deviation of inflation from the 4% target into shocks. For the period of 2017–2022, the chart shows the annual inflation rate (% in December YoY), while for 2023–2024, the chart presents the price growth rates for six months (SA).

In **2023**, inflation deviated upwards from the target by 3.4 pp. The impact of various shocks over the course of the year was **extremely uneven**.

Aggregate supply. The proinflationary impact was still primarily caused by the **aggregate supply shocks** (+3.1 pp). This was associated with both high inertia (the aggregate supply shocks had soared in 2022) and stronger influence of higher producer costs than assumed by the model. The FX market shocks could also affect costs: despite the considerable appreciation of the ruble in 2022, prices for imports were declining to a lesser extent, thus creating a buffer weakening the dependence of prices for imports on the exchange rate. In mid-2023, following the depreciation of the ruble, importers raised product prices again. The specific feature of the interpretation of such dynamics in the model is that it might involve uncertainty in the course of differentiation between the shocks, due to which some exchange rate shocks might be taken into account as aggregate supply shocks. Moreover, the toughening of the export-related sanctions by unfriendly states made it necessary to search for alternative routes of imports from abroad, which was also a supply factor that accelerated inflation.

DECOMPOSITION OF THE INFLATION DEVIATION FROM THE 4% TARGET INTO SHOCKS*
(PP ON AVERAGE OVER THE PERIOD)

Chart A-11



** For 2023–2024, the chart shows the decomposition of the growth rates over six months (SA).*
Source: Bank of Russia calculations.

World economy. The impact of the **world economy shocks** on inflation in Russia turned out to be relatively small as of the end of the year (0.3 pp): tight monetary policies in most foreign countries were decreasing the external demand for domestic goods and services. Concurrently, despite lower global prices for most commodities in 2023, their relative prices remained fairly high. As a result, the contribution of the **crude price shocks** to inflation was negative (-0.6 pp).

FX market. Despite the ruble depreciation in 2023, the **FX market shocks** had a downward effect on inflation (-0.6 pp). This result should be interpreted as follows: the model assumed a weaker path of the exchange rate due to the restrictions in foreign trade and higher domestic demand, including for imports. However, the actual exchange rate in 2023 turned out to be stronger than assumed in the model. That was partially attributed to the key rate increase in 2023 H2 and higher sales of foreign currency earnings by exporters. Another reason was the time-lagged effect of the exchange rate pass-through in the model: the ruble strengthening in 2022 H2 influenced the decomposition of inflation over 2023 H1, whereas the ruble weakening in mid-2023 – the decomposition of inflation over 2024 H1. Furthermore, as noted above, the FX market shocks could be partially taken into account as supply-side shocks having a proinflationary effect.

It should be noted that, in 2024, the real effective exchange rate has returned to the 2017–2021 average. The adjustment of the exchange rate is commensurate to the actual inflation rate, the dynamics of which have been driven by the situation in the real sector of the economy.

Labour market. As regards the **labour market shocks**, they also had a decelerating effect on the price growth rate (-0.7 pp). The model assumes that, given the progressing structural transformation of the economy, workforce engagement should be higher than it actually was in 2023. Ultimately, although domestic companies had to increase costs for new employees and wages, their proinflationary effect was offset by higher labour intensity.

Domestic demand. In 2023, there was no evident effect of the **demand shocks**, which was associated with several factors. The first one is that the domestic demand dynamics were diverse over the course of 2023, due to which the average trend over the year cannot be sufficiently representative. The recovery of domestic demand ended only in early 2023, and given the time-lagged effects of 2022, the demand shocks were decelerating inflation. Nevertheless, the trend reversed in 2023 H2 when the economy already became overheated, and the demand shocks began to speed up inflation.

Moreover, in 2024 H1, the domestic demand shocks were the main reason why inflation was moving away from the target. Secondly, the absence of an apparent effect of the demand shocks in the annual decomposition might be attributed to the redistribution of their effect to other identified shocks. Thus, the current decomposition isolates a group of macroeconomic policy shocks to show the impact of the economic policy decisions made. However, these shocks indirectly take into account higher domestic demand driven by the fiscal stimulus, which makes it difficult to accurately distinguish between their effects on inflation.

Macroeconomic policy. The second largest contributor was the **macroeconomic policy shocks** (+2.0 pp). The continuing expansion of budget expenditures was a major factor, whereas the key rate increase in 2023 turned out to be insufficient to decelerate high inflation. Taking into account the transmission and the lagged structure of the model, the monetary policy tightening in 2023 H2 will first affect the growth rates of economic activity and, through them, the inflation dynamics over 2024 H1. Therefore, the impact of the monetary tightening in late 2023 is more apparent in the decomposition of the GDP dynamics.

Decomposition of annual average GDP growth into shocks

The analysis of the demand and supply shocks in the GDP dynamics is presented in Chart A-12.

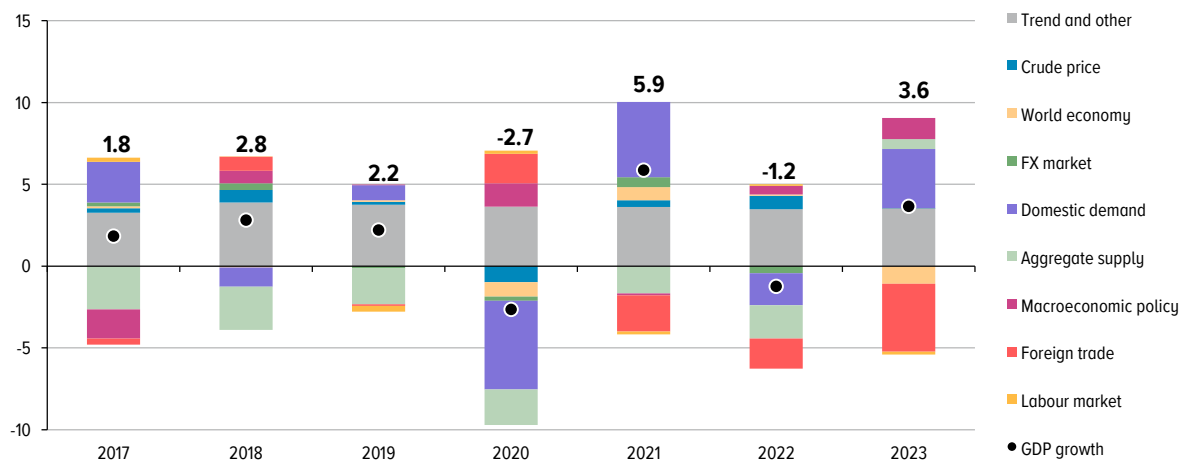
In **2023**, the Russian economy was adapting to the sanctions and developing in the conditions of the structural transformation. Russia's GDP (the output approach) was up by 3.6%.

Domestic demand and aggregate supply. The major driver of the GDP growth was the **domestic demand shocks** (+3.6 pp). This correlates with higher credit activity than modelled endogenously. As in the case of the decomposition of the inflation dynamics, the impact of the demand shocks was uneven over the course of 2023, intensifying in the second half of the year. Furthermore, in 2023, the **aggregate supply shocks** had a positive effect (+0.6 pp) on the growth rate of domestic output, which might suggest a more significant increase in the economy's potential.

Foreign trade. Concurrently, the **foreign trade shocks** had a negative effect (-4.2 pp) due to the gradually expanding embargo imposed by the countries – major consumers of Russian energy resources and the search for new sales markets by Russian oil and gas exporters.

DECOMPOSITION OF GDP DYNAMICS INTO SHOCKS
(PP ON AVERAGE OVER THE YEAR)

Chart A-12



Source: Bank of Russia calculations.

World economy. Another negative factor was the **world economy shocks** (-1.1 pp) because of tight monetary policies in foreign countries, which caused a decline in the external demand for domestic goods and services.

Labour market. Due to staff shortages, the **labour market shocks** had a small negative effect (-0.2 pp) on the growth rate of GDP in 2023. Combined with the positive contribution of aggregate demand, this might also be interpreted as an increase in labour intensity.

Macroeconomic policy. The **macroeconomic policy shocks** had a positive effect (+1.3 pp) on the expansion of the domestic economy over 2023. Considerably higher budget expenditures in 2022 and 2023 were fuelling both final consumption and investment demand. Coupled with accommodative monetary policy in 2022 H2–2023 H1, this was driving the expansion of domestic output.

Overall, the understanding of the nature of the processes in the economy has changed only slightly. Nevertheless, the opportunity to scrutinise the decomposition of not only inflation but also GDP dynamics into shocks and 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

Implementing its monetary policy, the Bank of Russia takes into account one-off inflation factors as, with no monetary policy response, they might affect inflation expectations and cause a persistent deviation of inflation from the target

What are one-off 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 underlying 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 dynamics might be accompanied by changes triggered by one-off supply 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 that stem from them are associated with supply-side changes rather than demand dynamics. The central bank's monetary policy cannot influence the reasons causing such price changes directly. Nevertheless, this does not mean that, making its monetary policy decisions, the central bank should ignore the part of the price changes provoked by such one-off factors. First of all, the dynamics of prices for those goods that have been strongly affected by one-off factors have been impacted by underlying inflation as well. Secondly, if the influence 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 underlying inflation.

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

Due to the events of recent years, central banks now focus much more on one-off supply-side inflation factors. During the pandemic in 2020–2021, disruptions in production and logistics chains had a notable effect on inflation worldwide. The sanctions enacted in 2022–2024 have caused even stronger shocks in Russia's economy.

Disruptions in imports. As foreign manufacturers and service providers had exited the Russian market and domestic companies had faced difficulties with servicing foreign trade transactions, this entailed a surge in costs across a wide range of products and services. A part of the sanctions affected only specific markets: e.g. Japan's ban on the export to Russia of vehicles with an engine capacity of over 1.9 litres from August 2023 accelerated the growth of prices for foreign-made cars.

Regulated tariffs. An important supply-side factor of price dynamics is administrative regulation. Prices may be regulated directly or through tariffs and subsidies. An example of direct regulation is the establishment of the maximum indexation of the housing and utility tariffs for households. Normally, an increase in the tariffs is not a one-off supply factor and is taken into account in inflation dynamics as a seasonal factor. However, if there are any deviations from the indexation schedule or

changes in the indexation amounts, the impact might be quite strong. The rescheduling of the tarriff indexation from July 2023 to December 2022 decelerated annual inflation in 2023. Contrastingly, as the tariff indexation has been more significant from July 2024, it has had a notable effect on annual inflation (+0.6 pp). The regulation of prices through tariffs and subsidies primarily involves one-off proinflationary effects. Thus, the increase in VAT on burger sales from 10% to 20% beginning from October 2023 pushed up prices in public catering in both October (1.32 pp SA higher than the CPI) and subsequent months. Another example is the rise in the recycling fee from 1 August 2023, which accelerated the growth of car prices (on average, 0.62 pp SA faster than inflation until the end of 2023).

Petroleum products market. As to the petroleum products market, another example of a proinflationary effect is the change in the indirect price regulation parameters. From May through September 2023, prices in this market were growing more significantly than the CPI (on average, 1.19 pp SA faster), which was caused by the adjustment of the damper parameters. After the return to the previous damper parameters in October–November 2023, prices adjusted downwards. However, as of the end of the year, the growth rate of prices for petroleum products still exceeded the CPI. When implementing its monetary policy, the Bank of Russia also takes into account indirect effects of the rise in prices for petroleum products. The proinflationary impact of this factor might be more persistent and span a wide range of goods and services due to its long-lasting influence on producer costs (e.g. on transportation) and inflation expectations.

Fruit and vegetables. Fruit and vegetable prices are characterised by pronounced seasonality and generally high volatility. Thus, in 2023 H2, disruptions in exports and the ruble weakening sped up the growth of banana prices. In January–February 2024, there was a rise in prices for greenhouse vegetables (cucumbers and tomatoes) due to increased greenhouse heating costs amid the cold weather. Nevertheless, already from the end of 2024 Q1, as the effect of the one-off factors diminished, prices for these fruit and vegetables started to trend downwards.

Meat products market. Prices for meat and animal products had a notable effect on inflation in 2023. The surge in prices for these products was provoked by the worsened epizootic situation. Disease outbreaks frequently force animal farms to kill all the livestock for anti-epidemic purposes. Specifically, Russian farms faced swine and bird disease outbreaks in 2023 H2. This one-off supply factor caused a spike in prices for meat products and eggs. Moreover, the proinflationary pressure in this segment was amplified by low accessibility and higher prices of imported vaccines, vitamins, and other products for the livestock. Due to the sanctions and the unfavourable epizootic situation, supply was limited, and coupled with steadily high demand, this pushed prices upwards. The monthly average growth rates of prices for meat products and eggs in 2023 H2 were 0.68 pp and 4.94 pp (SA) higher than the CPI, respectively.

Government regulation measures. The Russian Government may use customs regulation mechanisms in certain industries in order to reduce the impact of one-off supply factors. Thus, in response to the surge in egg prices provoked by the unfavourable epizootic situation, the Government cancelled the customs duties on imported eggs for the supplies of up to 1.2 billion eggs from 1 January through 30 June 2024. This measure was aimed at decreasing the demand and supply gap and helped lower egg prices in 2024 Q1. The cancellation of the customs duties on imported tomatoes and chicken stabilised prices for these products as well. As to the non-food segment, the Government banned petrol exports from Russia from March through May 2024, simultaneously raising the minimum limits on diesel fuel sales.

Furthermore, the authorities of the constituent territories of the Russian Federation signed price stabilisation agreements with retailers. From May 2023, these agreements have been used to establish

maximum allowable retail prices for certain types of socially important basic food products (eggs, buckwheat, chicken).

Government regulation measures may be effective in the short run. However, they involve negative effects as well. Pricing in the conditions of a market economy reflects changes in the ratio between demand and supply, while any intervention in market mechanisms prevents producers from responding to these changes.

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 factors, that might affect underlying inflation.

TOURISM SERVICES AND ONE-OFF SUPPLY FACTORS

The pandemic of 2020–2022 entailed a reduction in tourism services as external supply contracted. Due to the cancellation of foreign flights at the outbreak of the pandemic and their subsequent restriction, additional polymerase chain reaction tests, mandatory vaccination, and other factors, tourists started to prefer domestic destinations. Because of the restrictions on flights and the issue of visas, as well as difficulties with using Russian payment instruments abroad as part of the sanctions in 2022–2024, foreign tourism has become even less accessible. Thus, over the past four years, the Russian economy has faced long-lasting one-off supply factors in the tourism industry.

In particular, the sales of summer foreign tour packages decreased by 15–20% in June–August 2024, compared to the summer of 2021. Consumers opt for friendly countries (Turkey is the leader among them accounting for nearly 56% of the tourist flow in June–August 2024) and domestic destinations. However, the reduction in outbound tourism cannot be fully offset by domestic supply today, which is explained by limited accommodation and transport capacities.

Concurrently, the rise in households' incomes from 2021 and the shift in preferences towards higher consumption of services have considerably increased the demand for tourism. As a result, the aggregate demand for tourism services exceeds the capacities of supply. This has pushed up prices for both domestic and foreign tourism.

Appendix 5. Households' and businesses' perception of inflation and inflation expectations

Inflation expectations remain high and unanchored, which requires a higher level of the key rate. To change this, inflation should be maintained close to 4% for a long time

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

The performance 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. 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 neither raise additional loans nor rush to use their savings as their expectations about a longer-run real interest rate remain unchanged. Hence, when inflation expectations are anchored, they prevent demand from soaring in a situation of short-term spikes in prices. Anchored inflation expectations limit the acceleration of inflation in response to transitory 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 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 real interest rates 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 pressures will be amplified, 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.

Estimates of inflation expectations and observed inflation based on household surveys in Russia and abroad almost always exceed actual inflation rates. This difference is ascribed to certain perception patterns: people tend to notice and actively respond to price growth, whereas declining or stable prices usually attract less attention. Therefore, people estimate inflation, being guided primarily by those product prices that have increased most significantly. In addition, people generally focus on the items they purchase frequently, e.g. every day. These can be food, petrol, and non-food basics.

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 underlying inflation.

To analyse households' and businesses' inflation expectations, the Bank of Russia relies, in the first place, 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.[1] Additional sources of data on economic

[1] The results of the monitoring of companies are presented in the monthly information and analytical commentary Monitoring of Businesses: Assessments, Expectations and Comments.

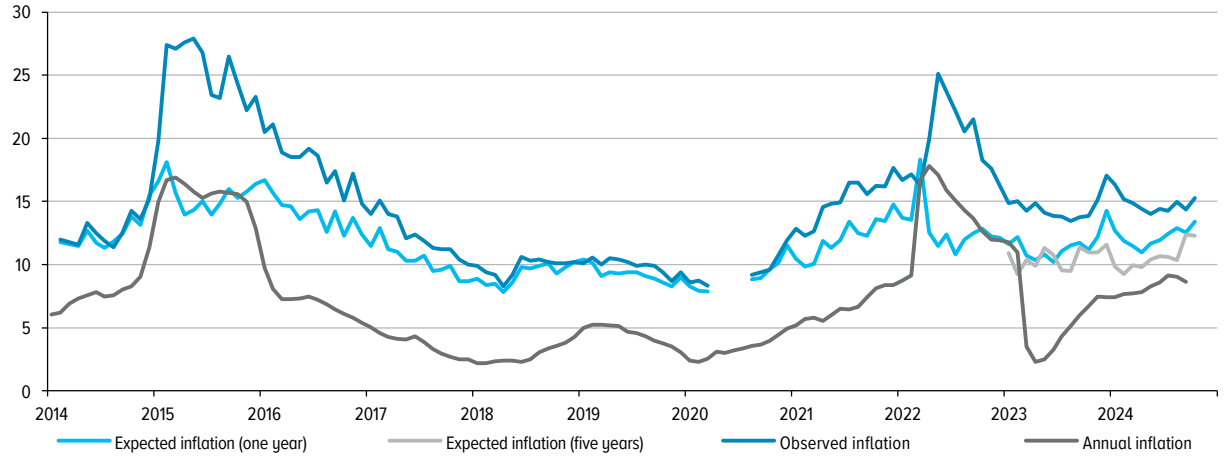
agents' inflation expectations include analysts' inflation forecasts and estimates of breakeven inflation for OFZ-IN bonds.[2]

According to InFOM's survey, **households' inflation expectations** remained elevated over 2023 H2 and January–October 2024. They surged in November–December 2023 amid the acceleration of the current price growth rates. By December 2023, inflation expectations peaked at 14.2%, after which started to go down. They lowered to 11.0% over January–April 2024, but then started to rise again from May 2024, reaching 13.4% by October 2024. Over this period, inflation expectations were driven mostly by the current price growth rates, specifically their rise in autumn 2023, decline in 2024 Q1, and acceleration from 2024 Q2. This is evidence that inflation expectations are unanchored.

The changes in **inflation observed by households** over 2023 H2 and January–October 2024 were also generally consistent with the dynamics of the current price growth rates. Inflation surged from 13.8% to 17.0% over September–December 2023, slowed down to 14.0% over January–May 2024, and then was changing slightly in June–October 2024 staying in the range of 14.2–15.3%. The actual price dynamics translated into households' estimates of current and future inflation predominantly through changes in prices for visible goods. Respondents' concerns about rising prices for the most frequently purchased goods and services increased over September–December 2023. By October 2024, respondents most often complained about rising prices for meat, poultry, milk and dairy products, as well as higher housing and utility rates.

The dynamics of both inflation expectations and observed inflation in the subgroups of respondents with and without savings were generally similar in 2023 H2 and January–October 2024. However, the level and volatility of the estimates of observed and expected inflation were higher among respondents without savings compared to those with savings. Over the period under review, inflation expectations among respondents with savings ranged from 9.4% in October 2023 to 12.2% in December 2023 and then edged down to 12.1% in October 2024. Inflation expectations among respondents without savings ranged from 12.0% in July 2023 to 16.3% in December 2023, decreasing to 15.0% in October 2024. Inflation expectation of respondents with savings may be considered to be more rational as people in this subgroup tend to have higher incomes and, seeking to preserve their savings, track the economic situation more attentively.

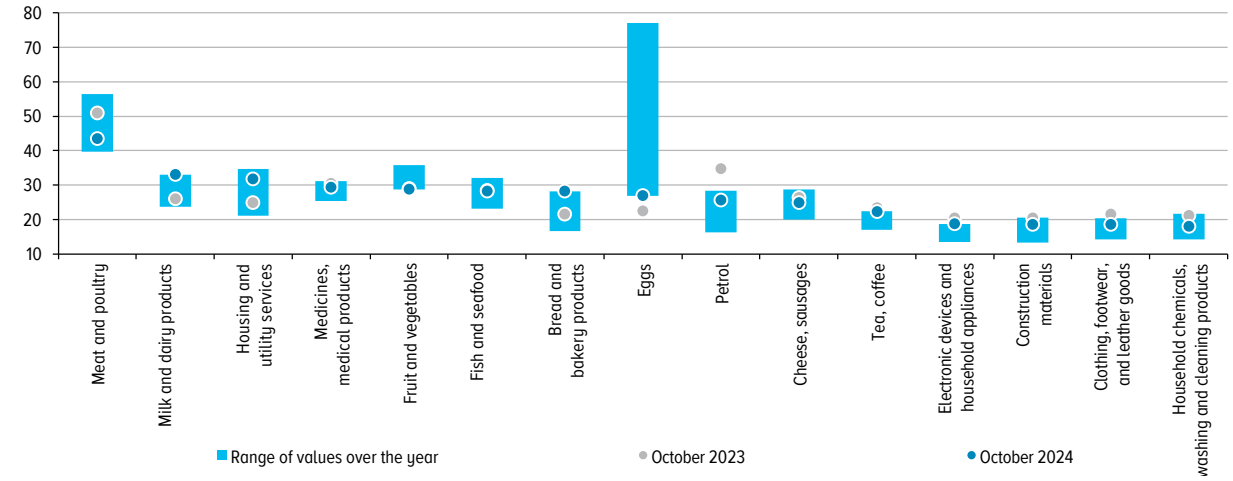
INFLATION OBSERVED AND EXPECTED BY HOUSEHOLDS (MEDIAN ESTIMATE) *Chart A-15*
(%)



Sources: InFOM, Rosstat, Bank of Russia calculations.

[2] Various economic agents' inflation expectations are analysed in the monthly information and analytical commentary Inflation Expectations and Consumer Sentiment.

DISTRIBUTION OF RESPONSES TO THE QUESTION 'WHAT MAIN PRODUCTS AND SERVICES SHOWED VERY HIGH GROWTH RATES OVER THE PAST MONTH?' *Chart A-16*
(% OF ALL RESPONDENTS)

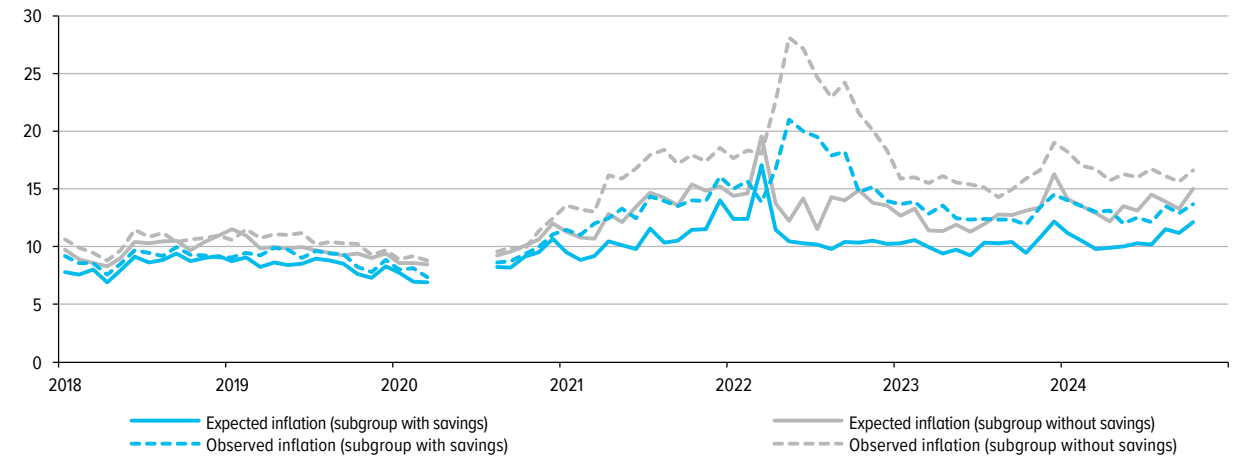


Source: InFOM.

According to the Bank of Russia's monitoring of businesses, **companies' price expectations** (the balance of responses) for the next three months remained elevated over 2023 H2 and January–October 2024. The average price growth rate expected in the next three months (in annualised terms) quantifying **companies' inflation expectations** stayed above 4% in 2023 H2 and January–October 2024, ranging between 4.3% in July 2023 to 7.6% in January 2024.

Businesses' price expectations notably rose in August 2023, following the ruble weakening and the acceleration of cost increases in summer. They were then fluctuating slightly from September 2023 through January 2024 and somewhat lowered in February 2024. This was associated with a slower rise in demand and costs, as reported by respondents. In spring 2024, inflation expectations generally remained almost the same. However, certain industries (in particular, retail) recorded their increase from March 2024. In retail, this trend was most noticeable. Moreover, the levels of both price and inflation expectations in retail throughout the entire period from mid-2023 were considerably higher than across the economy as a whole. The annualised price growth rate expected in the next three months averaged 8.3–14.2% from July 2023 to October 2024. Over June–October 2024, price expectations increased already in the majority of industries and the economy in general.

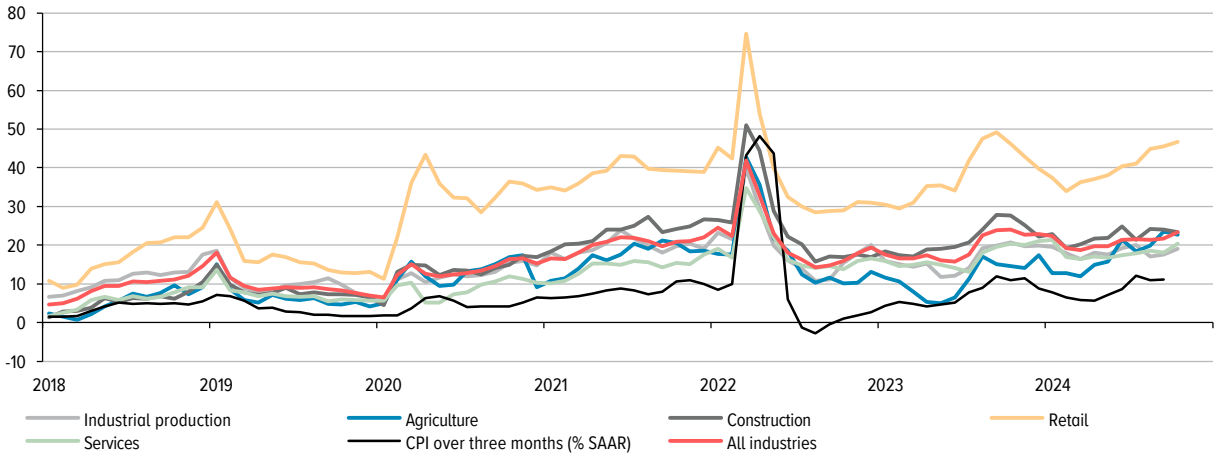
EXPECTED AND OBSERVED INFLATION BY RESPONDENT SUBGROUP (MEDIAN ESTIMATE) *Chart A-17*
(%)



Source: InFOM.

COMPANIES' PRICE EXPECTATIONS, BY KEY INDUSTRY
(BALANCE OF RESPONSES, P, SA)

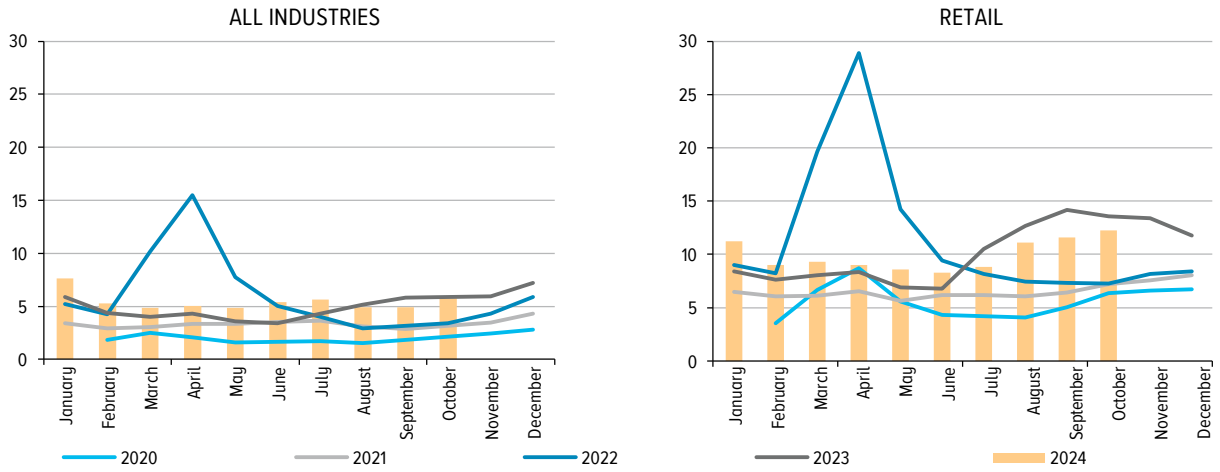
Chart A-18



Sources: Bank of Russia, Rosstat.

AVERAGE PRICE GROWTH EXPECTED BY COMPANIES IN THE NEXT THREE MONTHS
(% IN ANNUALISED TERMS)

Chart A-19



Source: Bank of Russia.

Overall, households' inflation expectations and companies' price expectations were elevated in 2023 H2 and January–October 2024, which remains an important factor taken into account to make 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 close to the 4% target for a long period will help decrease and anchor inflation expectations.

Appendix 6. The Bank of Russia's communication on monetary policy issues

The Bank of Russia has enhanced communication transparency in 2024 and will continue to make its communication more comprehensible and targeted

Within the framework of the inflation targeting regime, communication is an essential instrument of monetary policy. Through its communication, the central bank seeks to strengthen confidence in its monetary policy, reduce inflation expectations and anchor them at a low level, and ensure the predictability of interest rates in the economy. Seeking to provide information in a timely and comprehensive manner, the Bank of Russia has been actively improving its communication since the transition to inflation targeting by expanding the target audience and communication channels.

Based on the findings of the assessment of the effectiveness of its communication[1] as part of the Monetary Policy Review and their discussion with the public in 2023, the Bank of Russia has made a number of important decisions on improving its communication.

Changes in communication with professionals in 2024

As regards the professional community, the Bank of Russia has changed its communication as follows:

1. **From February 2024, the Bank of Russia started to release the Summary of the Key Rate Discussion (hereinafter, the Summary).** The publication covers the main aspects of the deliberations about a key rate decision during the quiet period and at the meeting of the Bank of Russia Board of Directors. The Summary describes such issues as the economic situation, inflation, monetary conditions, the external environment, their developments relative to the Bank of Russia's forecast and its possible scenarios, and alternatives to the key rate decision. The Summary presents the views without specifying individual participants in the discussion – members of the Bank of Russia Board of Directors and the senior executives of the Bank of Russia Departments and Main Branches. The professional community highly praised the quality of the new material.

2. As part of the core rounds, alongside the Summary, the Bank of Russia also publishes its Commentary on the Medium-term Forecast detailing the assumptions and parameters of the macroeconomic forecast (until the end of 2023, this information was disclosed in the Monetary Policy Report).

3. In May 2024, the Bank of Russia launched a new service to access statistics, including via an open API.[2] According to the findings of a survey of analysts carried out in January 2023, the absence of such a service was one of the key difficulties for the professional community when working with the regulator's data. The new application functions as an intermediary between the central bank's data and analysts who can now update the information much faster and more conveniently.

4. In 2024, the Bank of Russia has increased the number of executives' external communications on individual urgent issues of monetary policy. Ad hoc commentaries on the Board of Directors' opinion regarding released statistics and current developments have helped efficiently meet analysts' information needs. This was also one of the requests from professionals received in the course of the preparation of the Monetary Policy Review.

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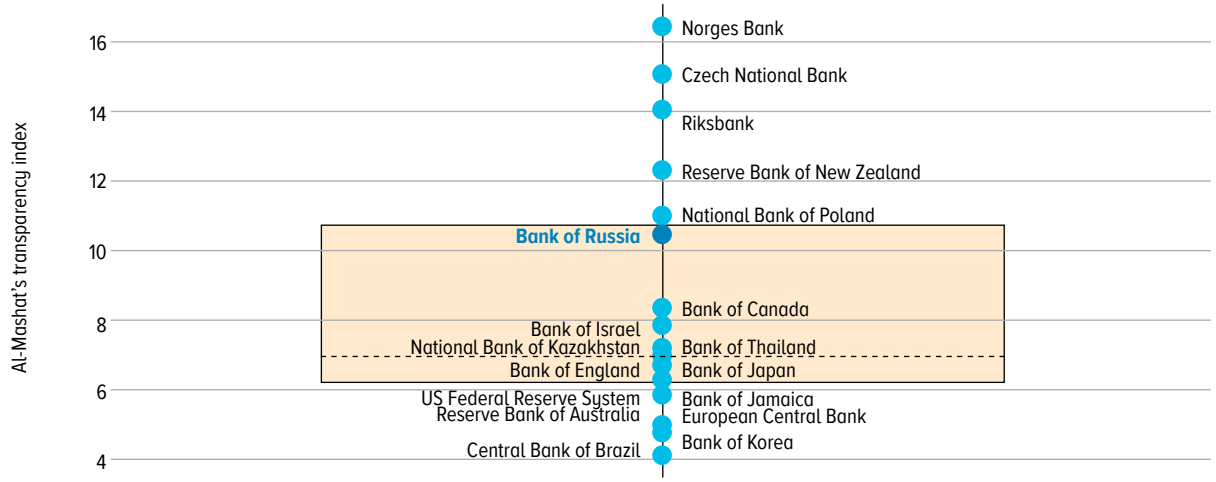
1 For details, refer to the Research and Analytical Notes subsection in the Monetary Policy Review section on the Bank of Russia website.

2 API – application programming interface.

DISTRIBUTION OF CENTRAL BANKS BASED ON AL-MASHAT'S TRANSPARENCY INDEX *Chart A-20*



Note. The shaded rectangular shows the central tendency of 10–90% and the dashed line – the median.
Sources: Kostanyan, A. et al. 2022. FRAS Marl I Central Bank Transparency and Credibility Measures. Technical Report, CBA Working Paper; Bank of Russia calculations.

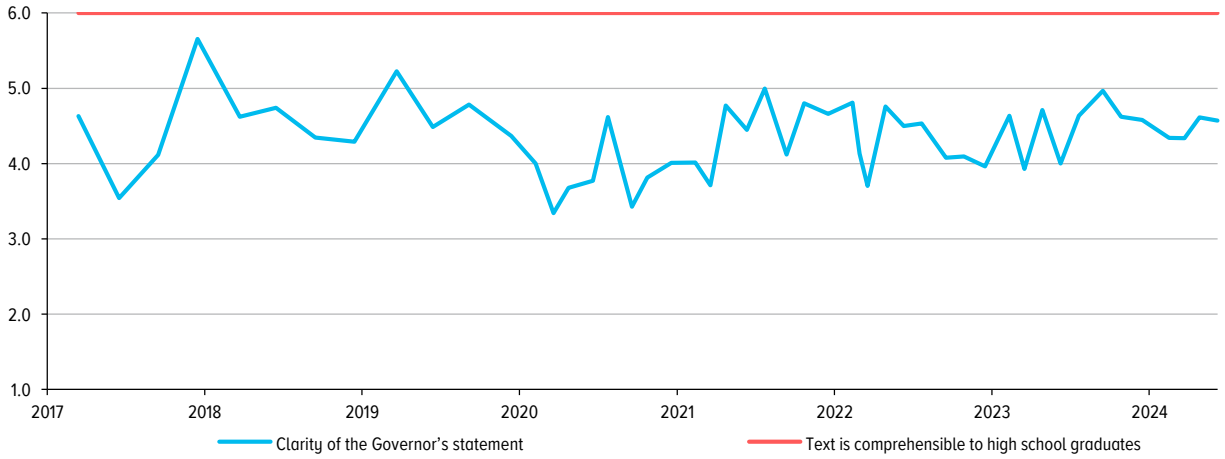
One of the requests from the professional community was publication of the codes of the Bank of Russia's forecast models. The related materials are to be released in 2024 H2. Publication of the codes of forecast models is an important stage of a more mature approach to communication with the professional community. Analysts will thus get technical access to the logic of macroeconomic forecasts that the Bank of Russia relies on when making its key rate decisions. Nevertheless, it is necessary to remember that any conclusions from model-based calculations are only a recommendation to the Board of Directors. All decisions and forecasts are approved collectively by the members of the Board of Directors whose professional opinions may differ from model-based conclusions.

Furthermore, the professional community suggested expanding the list of the parameters published in the macroeconomic forecast. According to the international experience of releasing macroeconomic forecasts and central bank transparency indices,[3] additional indicators to be published by the Bank of Russia could be the forecasts of the exchange rate and market labour indicators. As for now, the Bank of Russia has decided to postpone the discussion of when to launch the release of these additional indicators until autumn 2025. The reasons for this decision are as follows. First, the release of the unemployment forecast requires the publication of the description of the QPM with the block covering the labour market in order to make these estimates interpretable. Second, the domestic FX market faced significant changes in June 2024 related to the suspension of trading of the USD/RUB and EUR/RUB currency pairs on Moscow Exchange due to the sanctions. As the system of exchange rate calculations has altered, the information on the exchange rate should be disclosed more cautiously so as to avoid excessive volatility in the FX market. The Bank of Russia is still determined to increase the number of indicators published in the macroeconomic forecast. These steps are needed to make monetary policy decisions more predictable and enhance market participants' confidence.

Overall, owing to the release of the Summary of the Key Rate Discussion, the Bank of Russia has improved its transparency over the year. In terms of transparency of its communication, the Bank of Russia stays in the upper half of the central banks' rating. There are special indices used in the world to assess how successful central banks are in their communication. In particular, these are the indices

[3] Dincer, N. and Eichengreen, B. 2008. Central Bank Transparency: Where, Why, and With What Effects? Chapters, in: Touffut, J.-P. (ed.), Central Banks as Economic Institutions, Chapter 6, Edward Elgar Publishing.

CLARITY OF THE BANK OF RUSSIA GOVERNOR'S STATEMENT FOLLOWING THE BOARD OF DIRECTORS' KEY RATE MEETING *Chart A-21*



Source: Bank of Russia calculations.

developed by Dincer and Eichengreen (2008, 2014) and Al-Mashat et al. (2018). These indices list indicators and types of materials a central bank can publish. Each component is scored.

The transparency of a country's financial authorities to professional market participants is annually assessed by the Institute of International Finance (IIF). In its Principles for Stable Capital Flows and Fair Debt Restructuring report, the IIF ranks countries based on the index of authorities' transparency to institutional investors and the transparency of data released by authorities. In 2024, the Bank of Russia representing the country in this rating has been ranked 23rd out of 41 regulators with 36.63 scores out of the maximum 50, which is 3.13 more than in the previous year.

The Bank of Russia also focuses on enhancing its communication with the general public

Based on the findings of the Monetary Policy Review, the Bank of Russia's researchers have concluded that there is still significant room for improving mutual understanding in this area. This is evidenced by high and unanchored inflation expectations, in the first place.

The key areas for enhancing the Bank of Russia's communication with households are as follows: 1) increasing the comprehensibility of the main information and analytical materials; 2) expanding the coverage of target audiences in the Russian regions and making communication materials more targeted; 3) expanding collaboration for educational purposes; and 4) developing communication in social media.

Increasing the comprehensibility of information and analytical materials

The Bank of Russia has started to apply its in-house neural network model to assess the clarity of its texts on monetary policy and inflation in the Russian regions. The neural network based on the Transformer architecture measures how comprehensible the Russian text is taking into account 44 linguistic parameters.[4] The model scores texts from 1 (texts can only be understood by doctors of economics) to 10 (texts are comprehensible to elementary school pupils). The Bank of Russia targets the level from 5 to 6 (texts are comprehensible to high school graduates).

[4] Evstigneeva, A. and Sidorovskiy, M. 2021. Assessment of Clarity of Bank of Russia Monetary Policy Communication by Neural Network Approach. Russian Journal of Money and Finance, 80 (3), pp. 3–33. doi: 10.31477/rjmf. 202103.03.

Furthermore, beginning from 2024, writing its texts on monetary policy, the Bank of Russia follows the Style Guide containing the main rules on how to avoid bureaucratic language and make economic texts clearer to the general public.

Expanding the coverage of target audiences in the Russian regions and making communication materials more targeted

As regards communication on monetary policy in the Russian regions, the objectives of the Bank of Russia are to:

- explain monetary policy taking into account the specifics of each particular target audience, including its interests and awareness of monetary policy;
- promote target audiences' interest and confidence in the Bank of Russia's analytical materials on the economy and inflation; and
- enhance the efficiency of interaction and communication practices in order to improve the understanding of monetary policy and confidence in the Bank of Russia.

To achieve these objectives, beginning from 2024, the Bank of Russia has increased the number of communication sessions with large, medium-sized and small businesses in Russian regions. These sessions are also attended by representatives of authorities and the financial (including banking) and academic communities. Such meetings enable the regulator and businesses to share their views of the economic situation in the country and a specific region, inflation, and monetary policy goals and decisions.

In the future, the Bank of Russia will pay particular attention to communication with SMEs. To this end, the regulator is going to broaden the outreach to this target audience in the Russian regions and create tailored content on monetary policy. These materials will cover both theoretical aspects and the key points of the Bank of Russia's current policy. This will help improve businesses' understanding of the Bank of Russia's actions and confidence in medium-term forecasts for companies to take them into account in their financial decisions and, ultimately, enhance the efficiency of the transmission of key rate decisions in the economy.

Expanding collaboration for educational purposes

In 2024, the Bank of Russia has expanded communication with students of secondary vocational education institutions and universities, especially in the Russian regions. There are multiple forms of this communication, including public lectures by Bank of Russia representatives, business games, quizzes, and contests. From January through June 2024, the Bank of Russia held over 300 events across Russia.

Training workshops for professors have become a new form of communication with universities in 2024. Such workshops have already been held in 10 Russian regions. Their aim is to provide professors with educational materials containing relevant information on monetary policy. By using these materials in the course of teaching, professors will help students better understand the Bank of Russia's monetary policy.

The Bank of Russia has also been focusing on improving research and analytical competencies in communication as part of the collaboration with the EAEU central banks. To this end, in 2023 H2–2024 H1, Bank of Russia specialists carried out topic-related trainings for the central banks of Kazakhstan, Uzbekistan, Tajikistan, Kyrgyzstan, and Belarus. Sharing experience in the rapidly developing area of communication that is increasingly using machine learning and advanced sociology methods is essential for advancing this area.

Developing communication in social media

In 2024, the Bank of Russia has been expanding communication on monetary policy in social media as they are now one of the main information channels for the general public. To enhance the comprehensibility of its communication and promote confidence in its monetary policy, the Bank of Russia has diversified the content to tailor it to various target audiences and venues. A particular focus has been put on direct dialogue with people.

The audience of the Bank of Russia's accounts and educational project Financial Culture in the social networks OK and VK and in Telegram is constantly growing. By the end of October 2024, the number of followers of these accounts exceeded 498,000. Such topics as inflation, the macroeconomic situation in the country, and key rate decisions are traditionally the most popular ones among users giving rise to ongoing lively discussions and multiple comments and questions. The Bank of Russia will continue to search for new formats in order to promote its monetary policy and expand direct dialogue with internet users.

Appendix 7. Neutral interest rate and its estimate

The updated estimate of the longer-run nominal neutral rate for Russia is 7.5–8.5%. The Bank of Russia considers the neutral rate as a benchmark for the level of interest rates in the economy over a long period

Macroeconomists have always been looking for a way to identify a certain **equilibrium** level of interest rates to be the reference point determining whether current interest rates are restraining or stimulating economic activity. The concept of an overall macroeconomic equilibrium is detailed in Box 8 'The concept of a long-term economic equilibrium and deviations of key macroeconomic variables from it'.

The term 'neutral interest rate' has been used in the macroeconomic literature for over a century[1] already, but the modern view of this concept has gained momentum in recent decades.[2] Today, the most widespread concepts in both the economic literature and global regulators' communications are the **neutral** or **natural** rate of interest. The neutral rate is defined as an interest rate that neither decelerates nor accelerates inflation.[3] Concurrently, the natural rate is defined as an interest rate level that would have prevailed in an economy if there were no nominal rigidities (that is, if prices were absolutely flexible).

Furthermore, there are **short-** and **long-term** values of both equilibrium interest rates. Driven by **cyclical factors**, shorter-run rates hover around their long-term peers, the values of which are determined by **structural factors**. Estimated longer-run equilibrium rates correlate with a situation where the economy is on a sustainable long-term growth path, inflation is at the target, and inflation expectations are anchored – in this case, with the key rate kept at a level of the longer-run neutral rate, the economy will be expanding at its potential pace while inflation will remain at the target. When discussing the current monetary policy stance, this is the shorter-run neutral rate that should be referred to. Due to high uncertainty and a broad range of its estimates,[4] **similarly to other central banks, the Bank of Russia releases only estimates[5] of the long-term neutral rate** and considers it as the benchmark for the level of interest rates in the economy over long periods (normally, the key rate at the end of the forecast horizon is in line with the current estimates of the neutral interest rate). Nevertheless, it should be noted that, making its monetary policy decisions, the Bank of Russia factors in the direction and extent of the current deviation of the short-term neutral rate from the longer-run rate and the future dynamics of the former.

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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 Obstfeld, M. 2023. Natural and Neutral Real Interest Rates: Past and Future, NBER Working Papers.

3 It should be noted that we are referring exactly to the idiosyncratic effect of monetary policy, that is, inflation may notably change due to other factors (e.g. fiscal policy, the situation in international commodity markets, or inflation expectations), even if the key rate is at a neutral level.

4 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 (e.g. refer to 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). Ruch, F. U. Neutral Real Interest Rates in Inflation Targeting Emerging and Developing Economies. Policy Research Working Paper 9711. The World Bank. June 2021.

5 The nominal neutral rate is the total of the real neutral rate and expected inflation. In the case on long-term neutral rates, the Bank of Russia's inflation target of 4% is taken as the level of expectations.

The real neutral rate is determined by the economy's structure, the ratio between the demand for investment and the supply of savings, fiscal policy parameters, demographic trends, the level of inequality, the parameters of the economy's openness, the level of risks associated with investment in financial and non-financial assets, and economic agents' risk appetite. The following factors are critical, among others:

1. Total factor productivity growth. The faster is the increase in total factor productivity, the higher is the neutral rate, as high productivity of capital encourages businesses to make larger investments and, accordingly, pay more for raising additional capital.

2. Demographics. 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 characterised by a higher saving ratio increases in the population structure, the neutral rate will go down.

3. Fiscal policy. Equilibrium interest rates in the economy are influenced by fiscal policy through several channels simultaneously. When the ratio between government debt (or the budget deficit in general) to GDP rises, the demand for borrowings goes up, making investment in the economy more expensive[6] and increasing equilibrium rates. Furthermore, when the debt burden in the national economy is high, the risk premium for international investment in the country's economy rises, especially when foreign currency borrowings account for a large share. In addition to government debt, there are also various tax rates set by fiscal authorities. These tax rates can impact households' decisions to save and businesses' demand for capital, which shifts the equilibrium in the capital market and, accordingly, determines new equilibrium interest rates. Thus, an increase in investment income tax for individuals will squeeze the supply of capital in the economy and cause a rise in equilibrium interest rates.

4. Financial sector maturity and regulation. When the banking sector and capital markets are more mature, they contribute to the growth of the saving ratio in the economy and, accordingly, help decrease the neutral rate. This effect is also facilitated by economic agents when they extend their planning horizon, thus prioritising future rather than present consumption, which encourages savings owing to an increase in the supply of financial capital.

5. Neutral rate levels in other economies. The neutral rate in an economy with a high level of financial account openness will be comparable with the neutral rate in the global financial market (the external interest rate), adjusted for the country risk premium and the inflation volatility premium. The country premium characterises 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.

That said, **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**.

The methods applied by macroeconomists to estimate the neutral rate may be conveniently classified into three groups:

- **Structural** models provide for a clearer (micro-based) structure of an economy – mechanisms of decision-making by economic agents and the rules for their interactions. The main structural models are dynamic stochastic general equilibrium (DSGE) models and overlapping generations (OLG) models. The latter also incorporate demographic trends.

[6] Rachel, L. and Summers, L. (2019). On Falling Neutral Rates, Fiscal Policy, and the Risk of Secular Stagnation. Brookings Papers on Economic Activity. Spring 2019.

- **Semi-structural** models became widespread beginning from the publication by Laubach and Williams (2003).[7] Similarly to non-structural models, they enable estimates relying primarily on available data, while taking into account certain theoretical macroeconomic interrelations, that is, remaining quite close to the logic of micro-based structural models. The model developed by Laubach and Williams (2003) was then modified several times for it to incorporate the pandemic shocks and the case of a small open economy.[8]

- **Non-structural** models let the data speak for themselves with no content restrictions on macroeconomic or financial variables used to make estimates. This group encompasses a fairly wide range of methods, including filtration of a historical time series of ex-post real interest rates to identify a trend in them,[9] building a long-horizon forecast from reduced-form econometric models,[10] while assuming that the variables will converge towards their equilibrium values over a longer-term horizon. The approach based on adjustment of the yield curve for the term premium and isolation of market expectations regarding the long-term path of risk-free interest rates[11] stands out from other non-structural approaches. It is noteworthy that non-structural models are to a greater extent applicable to estimate neutral rates in advanced economies. As to developing economies with short and volatile time series of main macroeconomic indicators, it is rather complicated to make neutral rate estimates of this type.

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 volatility of the internal macroeconomic environment and country risk premiums. Ruch (2021)[12] demonstrates that the uncertainty about the level of the neutral rate in EMEs is twice as high, on average, as the rate of uncertainty seen for estimates in advanced economies (the 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 the estimates for commodity exporting EMEs is more than 40% higher than that for commodity importing EMEs.

Central banks of a number of large advanced economies and EMEs use a certain combination of the above approaches to estimate the neutral rate r*. For details, see the Table 'Reference annex: international experience'. This table provides a good illustration of the thesis about high heterogeneity of neutral rate estimates, which is related to both structural factors inside countries and differences in the methods they prefer.

Overall, it is possible to talk of decreases in estimated neutral rates in many advanced economies over 2000–2020 and in a number of EMEs over 2009–2020 (after the shock of the 2008 crisis). That occurred as a result of a slowdown in trend growth, among other factors, and could be due to multiple

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7 Laubach, T. and Williams, J. C. 2003. Measuring the Natural Rate of Interest / The Review of Economics and Statistics, MIT Press, vol. 85 (4), pp. 1063–1070, November.

8 Refer to, for example, Holston, K., Laubach, T. and Williams, J. C. 2023. Measuring the Natural Rate of Interest after COVID-19 // Staff Reports 1063, Federal Reserve Bank of New York, as well as Grafe, C., Grut, S. and Rigon, L. 2018. Neutral Interest Rates in CEEMEA – Moving in Tandem with Global Factors. Russian Journal of Money and Finance, 77 (1), pp. 6–25.

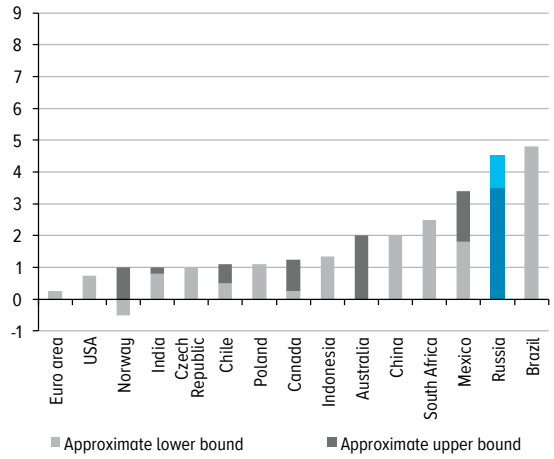
9 Del Negro, M., Giannone, D., Giannoni, M. P. and Tambalotti, A. 2019. Global trends in interest rates / Journal of International Economics, Elsevier, vol. 118 (C), pp. 248–262.

10 Lubik, T. and Matthes, C. 2015. Calculating the Natural Rate of Interest: A Comparison of Two Alternative Approaches. Richmond Fed Economic Brief.

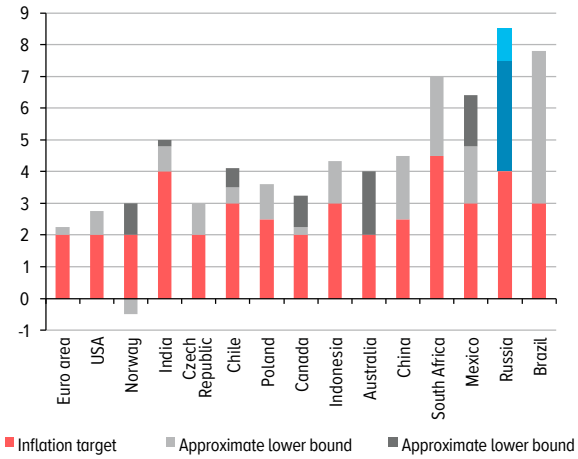
11 Analysts most often prefer regularly published estimates based on the models of Adrian, T., Crump, R. K. and Moench, E. 2013. Pricing the term structure with linear regressions / Journal of Financial Economics, Elsevier, vol. 110 (1), pp. 110–138. Kim, D. and Wright, J., 2005. An arbitrage-free three-factor term structure model and the recent behavior of long-term yields and distant-horizon forward rates // Finance and Economics Discussion Series 2005–33, Board of Governors of the Federal Reserve System (U.S.).

12 Ruch, F. U. Neutral Real Interest Rates in Inflation Targeting Emerging and Developing Economies. Policy Research Working Paper 9711. The World Bank. June 2021.

REAL R* ESTIMATE *Chart A-22*
(%)



NOMINAL I* ESTIMATE *Chart A-23*
(%)



The light grey area of the bars in the diagram shows the approximate lower bound of the estimated range of the neutral rate (or the estimate of the neutral rate if it is determined not as a range but as a point), and the dark grey area shows the approximate upper bound of the estimate.
The right-hand diagram (Nominal i estimate, %) lists the countries by the level of real r* and shows their inflation targets.*
Sources: publications by representatives of respective countries' central banks and international organisations.

reasons, including (1) lower labour productivity; (2) a reduction in the economically active population (population ageing); (3) rising income inequality; and (4) fiscal policy specifics (lower budget expenditures on social and infrastructure projects). Furthermore, as stated by Bernanke, another important reason for a decline in the US neutral rate could be (5) the so-called global savings glut and the inflow of these savings into the USA. The savings glut had formed predominantly in Southeast Asia after the 1998 crisis, entailing a contraction of investment, and in commodity exporting economies (mostly the Gulf States). This excess demand for risk-free assets expanded after the 2008 crisis, supported by, among others, US banks after the tightening of the US banking regulation. The changes (decline) in the US rate had a notable impact on the dynamics of other countries' estimated neutral rates.

However, the estimates of a longer-run neutral rate rose during the post-pandemic period, including because of a considerable expansion of fiscal stimuli over the pandemic period and a temporary yet significant increase in budget deficits. Advanced economies and some East European economies (that are integrated with the euro area's economy quite deeply, although to different extents) generally have lower estimates of the real neutral rate of around 1%, whereas a number of EMEs, including the five leading BRICS economies – higher estimates of about 2–4%. Given that the inflation targets in inflation targeting EMEs are significantly higher than in advanced economies, the estimates of the nominal neutral rate in most advanced and East European economies approximate 2–4%, while those in EMEs and BRICS are about 5–8%.

According to most research papers published before 2022, the quantitative estimates of the longer-run real neutral rate for Russia were close to the range from 1% to 3%. For example, Kreptsev et al. (2016)[13] forecast 1.0–3.2% (various models), the IMF (2019)[14] – 1–3% (various models), and Isakov (2019)[15] – 1.5–2.5% (various parameters). Drobyshevsky et al. (2021)[16] conclude that the neutral

[13] 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.

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

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

[16] 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.

rate of interest for Russia was continuously decreasing from 5% in 2016 to reach the level of 1% in 2020. Research by Porshakov and Sinyakov (2019)[17] 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). As to recent research papers, we can highlight the one by Grishchenko and Sinyakov (2024).[18] The authors estimate the impact of demographics on the long-run equilibrium interest rate and note that, over a multi-decade horizon, it will be trending downwards due to demographics just as worldwide.

In the new conditions, it has become more difficult since 2022 to estimate the neutral rate of interest relying on the previous models and approaches due to the changed interrelationships between the Russian economy and 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 – which depends on the pace of the accumulation of factors of production, the increase in their productivity, and the pace of technological progress – is playing a greater role.

The data array for 2019–2024 enables a new view of the main factors influencing the long-term level of the real neutral rate in the Russian economy. First of all, as compared to 2017–2019, fiscal policy has been notably adjusted: the increase in the basic prices for hydrocarbons within the framework of the fiscal rule assumes that a larger amount of cyclical OGR will be allocated to cover expenditures. Furthermore, during the five years of 2020–2024, the structural primary deficit has been positive, with both planned and actual expenditures surpassing the maximum level provided for by the fiscal rule. In addition, over 2020–2025, considerable resources from the NWF have been invested inside the Russian economy, significantly exceeding the highest annual averages on record, which suggests an additional expansionary effect exerted by fiscal policy. Overall, fiscal policy has been a key factor having an upward effect on the neutral rate in recent years. Secondly, with the enactment of the restrictions on international trade pushing up import costs and the consistent expansion of government demand, the need to ramp up domestic production and, accordingly, capital has risen. Concurrently, the utilisation rate of the available capacities has been growing, which is increasing the capital retirement rate and, combined with the demand for new capital, is shifting the neutral rate upwards. Thirdly, the persistence of external inflation, coupled with higher monetary policy rate paths in advanced economies, suggests a higher external neutral rate compared to the pre-pandemic period, which has a certain upward effect on Russia's neutral rate as well. Fourthly, changes in external conditions – the sanctions imposed, limited participation of the Russian economy in global capital markets, and rising uncertainty about the prospects of business projects compared to the period before 2022 – have caused an increase in the risk premium for international investment in Russia, on the one hand, and made Russia's domestic indicators less sensitive to cross-border capital flows, on the other hand. The alteration of the external environment generally exerts upward pressure on the neutral rate in Russia. Considering the above factors, the updated estimate of the **longer-run real neutral rate** for the Russian economy is **3.5–4.5%** p.a. With the inflation target of close to 4%, this corresponds to the **nominal neutral rate of 7.5–8.5%** p.a.

It should be noted that this range is also 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.

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[17] 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.

[18] Grishchenko, V. and Sinyakov, A. 2024. Demographics and equilibrium interest rates: Competing approaches and evidence from Russia // Journal of the New Economic Association. No. 1 (62), pp. 229–339.

REFERENCE ANNEX: INTERNATIONAL EXPERIENCE

Table A-1

	Year of neutral rate estimates	Nominal neutral rate, %	Inflation target, %	Approaches to estimating neutral rates
Norway	2022	1.5–2.5	2.0	(1) Yield curve decomposition; (2) semi-structural models (LW); (3) non-structural models (BVAR); and (4) structural models.
Canada	2024	2.25–3.25	2.0 ± 1	(1) Interest rate parity; (2) yield curve decomposition into expectations and the premium; and (3) OLG model. The estimate has been raised due to a higher estimate of r* for the main trading partner (USA) following an increase in the estimate of potential economic growth rates. Internal factors have had a neutral effect as a rise in labour productivity has been offset by a reduction in capital productivity.
Australia	2022	2.0–4.0	2.0–3.0	(1) Yield curve decomposition; (2) semi-structural models (LW); and (3) non-structural models (the Kalman filter, vector autoregressive models (Lubik–Matthews).
Czech Republic	2018	3.0	2.0 ± 1	Semi-structural model (LW) with rational expectations and a forward-looking interest rate rule. Both the trend growth of GDP and the strengthening/weakening of the equilibrium real exchange rate are taken into account.
Poland	2023	3.6	2.5 ± 1	(1) Time series assessments for decomposition into trend and stationary components (VAR); (2) semi-structural models (HLW); and (3) structural models (Brzoza–Brzezina). It is noted that the overall downward trend was associated with a reduction in r* in the euro area.
Chile	2022	3.8	3.0 ± 1	(1) VAR with a number of variables; (2) yield curve decomposition into expectations and the term premium; (3) semi-structural approaches according to the logic of the Euler equation, Phillips curve, and Taylor rule; (4) interest rate parity; and (5) sustainable consumption behaviour model.
Indonesia	2023	4.34	2.5 ± 1	IMF estimates (2023) through semi-structural (HLW) and non-structural models (the Hodrick–Prescott filter) and through yield curve decomposition.
China	2021	4.0–5.0	3.0	LW-based estimate jointly by Sun Guofeng from the People's Bank of China and Daniel Rees from the Bank for International Settlements. During the period of relatively high growth rates of 1990–2010, r* was estimated at 3–5%, but then declined to 2% by 2020. Considering the inflation target of about 2–3%, the nominal neutral rate (i*) is estimated at about 4–5%. According to the authors, approximately two-thirds of this reduction in r* was attributed to a decline in potential and trend growth rates.
India	2022	4.8–5.0	4.0 ± 2	Semi-structural models (LW); and non-structural models (the Kalman filter). It is noted that food price shocks in India are among the factors complicating the estimate of r*.
Mexico	2019	4.8–6.4	3.0 ± 1	(1) Modified Taylor rule incorporating the factor of the US Fed's monetary policy; (2) business cycle model for a small open economy; and (3) term premium and yield curve decomposition into expectations and the term/risk premium.
South Africa	2023	7.0	3.0–6.0	Adaptation of the LW model to a small open economy. After the global crisis of 2008, the estimates of South Africa's trend growth were decreased, which entailed a downward revision of r*: the South African Reserve Bank reduced the estimate of r* from 4.4% in 2000–2006 to 1.9% in 2017. The estimate was then raised to 2.5% in 2022–2023.
Brazil	2023	7.8	3.0 ± 1.5	(1) Estimates based on a LW model variation; (2) estimate based on Treasury Inflation Protected Securities (TIPS), the risk premium and the CDS/EMBI spread; (3) SAMBA model based on a two- or five-year rate; (4) low-frequency models: Beveridge–Nelson gap, Band–Pass gap, and semi-structural model gap; and (5) calculation of the real market rate discounted (adjusted) for the term premium depending on the period of 5–10–20 years (yield curve decomposition).

Appendix 8. The impact of the digital ruble on monetary policy

The digital ruble will not have a notable effect on the monetary policy transmission mechanism. In addition, the tools available to the Bank of Russia will enable it to offset any potential secondary effects of the introduction of the digital ruble on the transmission mechanism

In 2024, the Bank of Russia has continued the pilot testing of digital ruble transactions with the participation of a limited number of users. The digital ruble is the digital form of the Russian ruble issued in addition to the cash and non-cash forms. It is another instrument to make payments and money transfers. Just as cash, digital rubles are the Bank of Russia's liability.

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. Based on the digital ruble, financial intermediaries will be able to create innovative services, including using 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 individuals. As for businesses, digital ruble transactions will be much cheaper than non-cash payments: the fee for a digital ruble payment will equal 0.3% (C2B) and the one for a payment for housing and utility services – 0.2% of the payment amount. The Bank of Russia's fee for B2B transfers on its Digital Ruble Platform (hereinafter, the Platform) will equal ₽15 per transaction. As a result, banks will seek to retain their clients, offering them the most beneficial service terms.

The introduction of the digital ruble will not influence the structure of the banking system or the distribution of the functions between the Bank of Russia and credit institutions. As before, commercial banks will act as financial intermediaries, raising deposits, granting loans, and processing payments. The Bank of Russia will issue cash and digital rubles, implement monetary policy, regulate the financial sector, and process government payments.

After the introduction of the digital ruble, the Bank of Russia will continue to target inflation. The launch of the digital form of the national currency will not affect the mechanisms of monetary policy implementation. The Bank of Russia will continue to manage money market rates, conducting operations to provide liquidity to banks and absorb it from them. The digital ruble will partly replace cash and balances in bank accounts. People and businesses will decide at their own discretion which form of the Russian ruble to use, depending on its availability, convenience, transaction costs, and the level of interest rates on bank deposits. They will exchange cash and funds in their bank deposits for digital rubles through banks. Banks in turn will exchange cash and balances in accounts for digital rubles through the Platform. The amount of digital rubles in the economy will only be changing in the course of this exchange. The issue of the digital ruble will not increase the amount of money in the economy: only the structure of money supply will change but not its amount. Thus, the issue of the digital ruble will only influence economic agents' demand for cash and funds in bank accounts and will have no inflationary pressure.

The pilot testing of the digital ruble comprises several stages. In August 2023, the laws related to the introduction of the digital ruble became effective,[1] and the Bank of Russia began the pilot testing of the digital ruble on real transactions with the participation of a limited number of users.

[1] The Federal Laws 'On Amending Certain Laws of the Russian Federation' and 'On Amending Articles 128 and 140 of Part One, Part Two, and Articles 1128 and 1174 of Part Three 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.

From 1 September 2024, the Bank of Russia started a new stage of the testing of the digital ruble on real transactions. Previously, the pilot testing involved 600 individuals and 22 companies, while the expansion of the parameters has enabled the connection of up to 9,000 individuals and 1,200 companies. Transactions with the digital national currency are still available to clients of 12 banks participating in the pilot testing from the very beginning, that is, August 2023. In the future, the list of the participants will be extended. Currently, the Bank of Russia is carrying out organisational and technical work to connect another 19 banks. In the course of the pilot testing, the following transactions are conducted: opening of digital ruble accounts and money transfers to them, transfers from digital ruble accounts to bank accounts, C2C transfers, payments for goods and services, refunds, and smart contracts. In 2024, the participants in the pilot testing started to check new transactions, namely dynamic QR code-based payments and B2B digital ruble transfers.

The Bank of Russia, the Ministry of Finance, and the Federal Treasury are exploring the mechanisms of using the digital ruble in budget processes. This will help reduce expenses for administering budget payments and enhance the effectiveness of using budgetary funds.

The Bank of Russia is cooperating with other central banks developing their own digital currencies to conduct cross-border and FX transactions with central bank digital currencies. The option of using the digital ruble in cross-border settlements will be one of its key benefits.

The impact of the digital ruble on the banking sector liquidity will be taken into account in the forecast, while the operational procedure of monetary policy will remain unchanged

Economic agents' demand for the digital ruble will become an additional factor of the banking sector liquidity, that is, balances in their correspondent accounts with the Bank of Russia. The regulator will be issuing digital rubles, simultaneously writing off the same amount from a credit institution's correspondent account.[2] Banks will then transfer digital rubles from their digital ruble accounts to digital ruble accounts of their clients – individuals and legal entities.

The introduction of the digital form of the ruble will not increase money supply (M2). People and organisations will exchange cash and funds in bank accounts for digital rubles. However, 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 using 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.[3] As a result, the balance of cash in the credit institution's vault 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. Banks have no reasons to hold a very large amount of cash in their vaults. 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.[4] Thus, when cash is exchanged for digital rubles, 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.

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[2] Refer to Table A-7-1 in MPG 2023–2025.

[3] Refer to Table A-7-2 in MPG 2023–2025.

[4] 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.

Credit institutions' balances will change if a client decides to exchange the funds in bank accounts for digital rubles on the Bank of Russia's Platform.[5] Such a transaction will result in an outflow of liquidity from the banking sector. The Bank of Russia will take this into account when forecasting the banking sector liquidity and determining the direction and limits of its liquidity management operations. Reducing the amount of liquidity absorption or increasing the amount of its provision, the Bank of Russia will maintain money market rates close to the Bank of Russia key rate.

As a result of the transfer of funds from bank accounts to digital rubles, the banking sector might shift to a structural liquidity deficit faster. However, this only implies that, by providing the required amount of liquidity to banks, the Bank of Russia might turn from the net borrower of the banking sector in monetary policy operations into the net lender. This situation is normal and does not involve any failures or disruptions in the functioning of the banking sector. The Bank of Russia's operational procedure enables it to support banks' stability and ensure the continuity of payments 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 Bank of Russia will increase the amount of liquidity provided to credit institutions if they need it. That said, the monetary policy operational procedure will remain unchanged. As before, the Bank of Russia will seek to balance the demand for and supply of liquidity in the banking sector so as to keep money market rates close to the key rate.

The impact of the digital ruble on the monetary policy transmission mechanism will be minor overall, while its efficiency will increase in the long term

The issue of the digital ruble by the Bank of Russia will impact the monetary policy transmission mechanism. 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. After the end of the adaptation period, the adoption of the digital ruble will most probably have a minor effect that will be extended over time.

The Bank of Russia does not plan to use the digital ruble as a monetary policy instrument. The Bank of Russia has an efficient system of monetary policy instruments that enables it to regulate the banking sector liquidity and manage money market rates. In view of this, the Bank of Russia does not plan to accrue interest on balances in clients' digital ruble accounts. The regulator thus seeks to avoid competition with bank accounts where clients earn their income and to mitigate the risks of outflows of their funds.

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 in the course of 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.

[5] Refer to Table A-7-4 in MPG 2023–2025.

The impact of the digital ruble on financial stability: payment system advancement and stronger competition among banks

The introduction 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. To the contrary, the additional payment infrastructure to be established for the digital ruble will promote the resilience, reliability, and smooth functioning of the payment system and money settlements in general.

The gradual stage-by-stage introduction of the digital ruble 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 will be monitoring the effect of the digital ruble on the financial sector and, if needed, is ready to take all necessary measures to maintain financial stability.

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 so far. People and businesses are confident in the Russian banking system, which has been promoted by the transition to inflation targeting and the Bank of Russia's banking regulation and supervision measures. The deposit insurance system protects bank deposits to the extent required by law. Furthermore, as the digital ruble will be introduced step by step, the outflow of funds from bank accounts will not be significant. Hence, both banks and economic agents will be able to adapt to the digital form of the national currency. To this end, 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. Besides, the Bank of Russia will accrue no interest on funds in digital ruble accounts, thus avoiding competition with the banking sector for depositors' funds. Individuals and legal entities will be interested in depositing funds with banks offering positive real interest rates.

The issue of the digital ruble – a cheap and convenient payment instrument – will increase banking competition and more efficiently redistribute financial resources in the economy and revenues in the banking sector in favour of more resilient banks offering the most beneficial terms on their products.

The introduction of the digital ruble will affect neither the fundamentals of the functioning of the banking system nor the principles of monetary policy implementation. In the first place, the banking system will remain two-tier and credit institutions will continue to perform their core functions, that is, lend funds to the economy and accumulate households' savings. Simultaneously, the adoption of the digital ruble will promote conditions for redistributing revenues in favour of more efficient financial intermediaries, as well as advancing the payment infrastructure. In case of the transfer of funds from bank accounts to digital rubles and a structural liquidity deficit, 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 9. Financial market development

The Bank of Russia actively participates in the development and implementation of the policy on financial market advancement that is essential for the economy's successful structural transformation and higher efficiency of monetary policy

The Russian financial market is currently recovering. Furthermore, its main segments are advancing. In addition, the structural transformation of the Russian economy continues, while its financing requires a considerable amount of long-term funds. Given the effective sanctions, these funds can only be received from domestic sources, including household savings. Savings are transforming into investments in the financial market, while its maturity level is a factor influencing the pace of the economy's structural transformation and development.

Jointly with the Government of the Russian Federation, the Bank of Russia elaborates and implements financial market advancement policy. Its medium-term objectives are described in the Russian Financial Market Development Programme for 2024–2026 and have been generally attained as planned.

In the first place, it is worth highlighting the complex of measures aimed at advancing the capital market. Specifically, measures encouraging investors' activity in the capital market were implemented. In particular, efforts were put forth to expand the range of long-term saving and investment instruments as well as upgrade the existing ones. Specifically, the taxation procedure for long-term deposits was updated in order to develop long-term savings.[1] As part of the expansion of the range of instruments, it is worth emphasising the following measures: the launch of the long-term savings programme,[2] the creation of a new type of IIAs – type 3 IIAs,[3] and the introduction in the Russian market from 1 January 2025 of a new option for long-term investment – unit-linked life insurance.[4] To make capital market instruments more attractive to people, the Government set an investment tax deduction[5] for individuals' long-term savings applicable to agreements on non-governmental pension schemes and long-term savings and on type 3 IIAs. All these measures will be enhancing the attractiveness of capital market instruments to retail investors.

Institutional investors are equally important for the advancement of the capital market, including for facilitating the structural adaptation of the national economy. The measures to encourage their activity were also taken over the period under review. In particular, NPFs received more opportunities[6] for purchasing shares within IPOs to increase their pension resources. Alongside the earlier introduced incentive-based regulation for insurers and unit investment funds, the measures aimed at encouraging professional securities market participants[7] and NPFs[8] to invest in Russian issuers' bonds issued to finance projects promoting Russia's technological sovereignty and the structural adaptation of

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1 Federal Law No. 259-FZ, dated 8 August 2024, 'On Amending Parts One and Two of the Tax Code of the Russian Federation and Certain Laws of the Russian Federation'.

2 Federal Law No. 299-FZ, dated 10 July 2023, 'On Amending Certain Laws of the Russian Federation'.

3 Federal Law No. 600-FZ, dated 19 December 2023, 'On Amending Certain Laws of the Russian Federation'.

4 Federal Law No. 631-FZ, dated 25 December 2023, 'On Amending Certain Laws of the Russian Federation'.

5 Federal Law No. 58-FZ, dated 23 March 2024, 'On Amending Articles 102 and 126-2 of Part One and Part Two of the Tax Code of the Russian Federation'.

6 With respect to pension savings – Bank of Russia Ordinance No. 6732-U, dated 22 May 2024, 'On Amending Bank of Russia Regulation No. 580-P, Dated 1 March 2017'. With respect to pension reserves – Bank of Russia Ordinance No. 6759-U, dated 18 June 2024, 'On Amending Bank of Russia Ordinance No. 5343-U, Dated 5 December 2019'.

7 Bank of Russia Ordinance No. 6570-U, dated 9 October 2023, 'On Amending Bank of Russia Ordinance No. 5099-U, Dated 22 March 2019' and Bank of Russia Ordinance No. 6571-U, dated 9 October 2023, 'On Amending Bank of Russia Ordinance No. 5873-U, Dated 2 August 2021'.

8 Bank of Russia Ordinance No. 6598-U, dated 7 November 2023, 'On Amending Bank of Russia Ordinance No. 4060-U, Dated 4 July 2016'.

the country's economy[9] were implemented. In the medium term, the measures aimed at advancing the capital market and enhancing its role in financing the national economy will boost issuers' and institutional and private investors' activity. On the one hand, this will be decreasing the influence of large one-off transactions on pricing in the capital market. On the other hand, changes in securities prices will be impacting the behaviour of a wider range of economic agents. As a result, this will increase the role of the transmission mechanism channels related to the effect of interest rates on asset prices.

Activity in the Russian financial market will also be promoted by the measures fostering competition and freedom of choice for consumers, including depending on their preferences for various financial service providers. Specifically, individuals are allowed to make zero-fee transfers within the monthly limit of ₽30 million between their accounts (deposits) with different banks and to their wallets on financial platforms.[10] Competition conditions and financial consumers' awareness will be improving as a result of the amendments introduced to the rules for calculating the effective interest rate on a consumer loan (microloan) that shall now take into account all costs of a borrower that actually are the terms of a loan or influence the terms of a loan agreement.[11] Growing competition among banks will accelerate the impact of monetary policy decisions on bank product rates, thus enhancing the efficiency of the interest rate channel of the transmission mechanism.

To expand the options for international settlements, efforts were made to develop alternative mechanisms. In particular, digital rights were allowed to be used as consideration in foreign trade transactions.[12] International settlements will be facilitated owing to the expansion of opportunities available to banks with a basic licence to open correspondent accounts with foreign banks on an ongoing basis. This measure is also in line with the goals of further development of the proportionate regulation in the banking sector.[13] Furthermore, the procedure for opening branches of foreign banks from friendly countries was established from 1 September 2024.[14]

In order to ensure financial stability, a number of measures were taken to limit individuals' debt burden: credit institutions and microfinance organisations were obliged to calculate borrowers' DSTI in the cases stipulated by the law[15] and the risk-weight add-ons for mortgagors with high DSTI were raised further.[16] A new category of consumer loans (microloans)[17] was introduced for borrowers with high DSTI[18] for them to be able to raise consumer loans (microloans) from banks rather than microfinance

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9 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'.

10 Federal Law No. 482-FZ, dated 4 August 2023, 'On Amending Articles 29 and 36 of the Federal Law 'On Banks and Banking Activities'.

11 Federal Law No. 359-FZ, dated 24 July 2023, 'On Amending the Federal Law 'On Consumer Loans (Microloans)' and Certain Laws of the Russian Federation'.

12 Federal Law No. 45-FZ, dated 11 March 2024, 'On Amending Certain Laws of the Russian Federation'.

13 Federal Law No. 566-FZ, dated 12 December 2023, 'On Invalidating Parts Two and Nine of Article 5.1 of the Federal Law 'On Banks and Banking Activities'.

14 Federal Law No. 275-FZ, dated 8 August 2024, 'On Amending the Federal Law 'On Banks and Banking Activities' and Certain Laws of the Russian Federation'.

15 Federal Law No. 601-FZ, dated 29 December 2022, 'On Amending the Federal Law 'On Consumer Loans (Microloans)'.

16 Decision of the Bank of Russia Board of Directors, dated 22 December 2023.

17 Bank of Russia Ordinance No. 6621-U, dated 8 December 2023, 'On Amending Bank of Russia Ordinance No. 6406-U, Dated 10 April 2023'.

18 DSTI above 60%, loans of no more than ₽30,000 for up to one year and loans from ₽30,000 to ₽100,000 for one to three years.

organisations offering higher interest rates. From 1 July 2024, the Bank of Russia raised the risk-weight add-ons for unsecured consumer loans and set the add-ons for car loans.[19]

Jointly with the Government of the Russian Federation, the Bank of Russia will continue to implement financial market development policy in the following areas.

1. Enabling a stronger role of the financial market in financing the transformation of the economy while maintaining the stability 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, ensure active participation of various groups of investors and issuers in the market, develop long-term saving and investment instruments, and increase confidence in the financial market. Measures implemented in these areas will help strengthen the role of the financial market in funding the transformation of the country's economy and may also enhance the efficiency of the transmission of key rate decisions to the economy through the channels related to the financial market, namely the balance sheet and narrow credit channels.

Important measures planned to be implemented include, among others, the efforts to focus government support measures on long-term saving and investment instruments, in particular to expand the system of guarantees to type 3 IIAs[20] and voluntary life insurance agreements.

Another area of work is to increase the attractiveness of the Russian market to investors from friendly states. The partnership (Islamic) financing experiment will help expand opportunities for raising investment from countries having mature partnership (Islamic) financing instruments. Deeper cooperation between the Russian financial market and friendly states' financial markets will strengthen the influence of interest rates of the domestic financial market on the ruble exchange rate and, accordingly, help partially restore the role of the foreign exchange channel of the transmission mechanism.

To advance the capital market, it is also essential to implement measures boosting issuers' activity. In particular, the Government of the Russian Federation and the Bank of Russia have been discussing 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. Growing competition between the securities market and the market of bank loans as a source of funding for organisations will accelerate the impact of monetary policy impulses on bank loan rates, thus enhancing the efficiency of the interest rate channel of the transmission mechanism.

As regards the expansion of opportunities for banks to take part in financing the economy's transformation, the Bank of Russia especially focuses on extending maturities of bank deposits, including irrevocable saving certificates. In view of this, the Bank of Russia presented[21] a concept of differentiating the insurance compensation limit and the rates of contributions to the Compulsory Deposit Insurance Fund depending on deposit types, maturities and currencies. Relevant amendments to the regulation will be prepared following the discussion of this concept. To address the issue of credit risk diversification, the Bank of Russia will promote the development of the market of non-mortgage securitisation. Furthermore, the Bank of Russia is also considering a possible expansion

[19] Decision of the Bank of Russia Board of Directors, dated 26 April 2024.

[20] Specifically, the issue of creating a system for reimbursing the cost of assets recognised in IIAs opened after 1 January 2024 is being currently explored in order to encourage and protect individuals' investment in IIAs. Relevant Draft Federal Law No. 579984-8 'On Amending Certain Laws of the Russian Federation' (with regard to creating a system for reimbursing the cost of assets in IIAs) was approved by the State Duma in the first reading.

[21] For details, refer to the publication Differentiation of the Insurance Compensation Limit and the Rates of Contributions to the Compulsory Deposit Insurance Fund Depending on Deposit Types, Maturities and Currencies.

of the incentive-based regulation programme to encompass banks with a basic licence for them to participate in financing 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 depositing government funds and other socially important entities' funds with these banks. The Russian Government will be able to set different rating levels for various 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. Enhancement of corporate governance practices, including protection of minority investors and predictability of dividend payments, is critical for developing equity financing. Furthermore, the accessibility of high-quality and reliable information is crucial to build an environment of trust. Therefore, it is essential for securities issuers to disclose such information, and it is also important to establish the national system of financial and commodity indices.

2. Financial consumer and investor protection, increasing financial inclusion for households 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.

The Bank of Russia carries out work to develop a complex of measures aimed at protecting retail investors and improving approaches to their admission to the capital market in terms of testing procedures, recognition of individuals as qualified investors, the list of instruments available 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.

Measures aiming to protect financial consumers and investors help build an environment of trust in the Russian financial market. As a result, they will respond more reasonably to changes in the economic situation in general and the financial market in particular. This response will help enhance the efficiency of the expectations channel in the national economy. These measures as well as the measures increasing financial inclusion for people and businesses will expand the range of users of financial services whose economic behaviour is directly influenced by monetary policy. Accordingly, the overall efficiency of the monetary policy transmission mechanism will be improving.

3. Digitalisation of the financial market and development of the payment infrastructure

Facilitating digitalisation of 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.

The Bank of Russia will continue to develop technologies for data exchange in the market, which will expand the potential for providing financial services 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. Furthermore, the Bank of Russia plans to develop recommended Open Data model specifications for the non-financial market.

Additionally, the Bank of Russia will continue to develop the Digital Profile and the UBS, which will help reduce financial market participants' costs.

Jointly with the competent federal executive authorities and financial market participants, the Bank of Russia has been implementing measures aimed at expanding the list of services that financial institutions provide to individuals and legal entities through the Digital Profile. Moreover, it is planned to display new data in the Digital Profile and increase the number of organisations connected to it.

There are also plans to continue the advancement of financial and non-financial services provided using the UBS. In particular, the Bank of Russia will be further developing biometric payments for purchases. Pilot transactions have already been conducted by the moment. The plan for the future is to launch a full-scale solution and expand the use of biometric payments. People will thus be able to make payments based on their biometric personal data.

To develop innovative instruments in the financial market, the Bank of Russia has been enhancing the regulation of digital rights and advancing this segment of the financial market.

In order to promote innovations, the conditions for applying experimental legal regimes in the financial market will be developed further.

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. It is also planned to increase the set of the functions of the Faster Payments System. It is also planned to expand the schedule of the functioning of the Bank of Russia PS, which will create more opportunities for individuals and companies to make payments and transfers whenever convenient for them.

The key innovation in the area of cash circulation, payments and settlements will be the introduction of the digital ruble. On 15 August 2023, the Bank of Russia began the pilot testing of the digital ruble on real transactions with the participation of a limited number of users. The decision on scaling up the use of the digital ruble will be made based on the results of the pilot testing (see Appendix 8 'The impact of the digital ruble on monetary policy').

Overall, the efforts in the area of digitalisation of the financial market and advancement of the payment infrastructure will make payments and settlements faster and reduce related costs, thus accelerating the impact of changes associated with monetary policy decisions on transactions in the commodity and financial markets. This will be enhancing the efficiency of the transmission mechanism.

4. Development of the system of foreign trade payments and settlements

In the conditions of the geopolitical pressure from unfriendly countries, the Bank of Russia continues the work to arrange new channels for international settlements. The Bank of Russia has been developing correspondent relationships among credit institutions with a focus on settlements in national currencies and expanding financial messaging channels, other than the SWIFT.

As the barriers in foreign trade transactions associated with the geopolitical pressure are removed, the influence of the ruble exchange rate on foreign trade amounts will become less distorted, thus partially restoring the role of the foreign exchange channel of the transmission mechanism.

5. Ensuring financial stability

The Bank of Russia's priority is to maintain financial stability and depositors' and investors' confidence in the Russian financial system. Only a stable financial sector is able to ensure smooth processing of payments and transformation of savings into investment. Therefore, measures implemented in this area will ensure the efficient transmission of monetary policy decisions.

The key objectives are to completely phase out the regulatory easing and switch to the accumulation of capital buffers.

As the measures aimed at advancing the financial market are implemented, the Bank of Russia will evaluate their influence on the efficiency of the transmission mechanism and monetary policy.

Appendix 10. 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. The monetary programme indicators are calculated by the Bank of Russia in addition to the banking sector liquidity forecast and supplement the forecast indicators that the Bank of Russia takes into account when elaborating and implementing its monetary policy.

FORECAST OF KEY INDICATORS FOR MONETARY AUTHORITIES' ACCOUNTS (MONETARY PROGRAMME INDICATORS)[1] *Table A-2*
(AS OF PERIOD-END, ₽ TN, UNLESS INDICATED OTHERWISE)

	2023 (actual)	Baseline			
		2024	2025	2026	2027
1. Monetary base (narrow definition)	**18.5**	**18.7**	**19.6**	**20.6**	**21.9**
1.1. Cash in circulation (outside the Bank of Russia)	18.3	18.3	19.1	20.1	21.3
1.2. Required reserves[2]	0.2	0.4	0.4	0.5	0.5
2. Net international reserves	**51.6**	**50.4**	**50.3**	**51.6**	**51.9**
– $ bn[3]	576	562	561	576	579
3. Net domestic assets	**-33.1**	**-31.7**	**-30.8**	**-31.0**	**-30.1**
3.1. Net credit to general government	-6.8	-5.7	-7.2	-8.5	-8.8
3.2. Net credit to banks	-4.3	-5.4	-2.7	-1.5	0.0
3.2.1. Gross credit to banks	3.8	3.7	5.3	4.8	6.8
3.2.1.1. Claims on refinancing operations[4]	3.5	3.4	4.9	4.4	6.4
3.2.2. Credit institutions' correspondent accounts with the Bank of Russia	-4.5	-5.1	-5.5	-6.0	-6.5
3.2.3. Credit institutions' deposits with the Bank of Russia and coupon OBRs	-3.6	-4.0	-2.4	-0.2	-0.2
3.3. Other net non-classified assets[5]	-22.1	-20.7	-20.8	-21.1	-21.3

[1] *The monetary programme indicators calculated at a fixed exchange rate are based on the official exchange rate of the ruble as of the end of 2023, which was 89.7 rubles per US dollar, and at fixed cross exchange rates of the US dollar against foreign currencies as of the end of 2023.*
[2] *Credit institutions' RR 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 RR averaging procedure).*
[3] *The forecast change in net international reserves takes into account operations of the Ministry of Finance to buy (sell) foreign currency in the domestic FX 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.*
[4] *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.*
[5] *Include operations with the use of the money of the State Corporation Deposit Insurance Agency and the Fund of Banking Sector Consolidation, the Bank of Russia's net interest expenses, operations of the Ministry of Finance to invest the NWF's resources, the growth of the RR for foreign currency liabilities held in special accounts, and foreign currency revaluation of assets.*
Source: Bank of Russia.

Entry 1 'Monetary base (narrow definition)'

Changes in the monetary base in 2024–2027 will depend on the dynamics of the amount of cash in circulation. According to the Bank of Russia's baseline forecast, the change in the amount of cash in circulation will be close to zero as of the end of 2024. This is because the demand for cash has generally normalised and deposit rates remain attractive. However, cash in circulation is expected to start increasing again in 2025–2027 in line with nominal GDP dynamics. Further expansion of the practice of non-cash payments will limit the growth of this indicator.

The rise in the amount of the RR for ruble liabilities held in special accounts with the Bank of Russia in 2024 is associated with the increases in bank deposits and, consequently, reservable liabilities over 2023–2024 as well as with the annual recalculation of the RR. The total amount of the RR 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 RR accounts. In addition, a further increase in this indicator during the period in question is explained by the overall growth of money supply

(according to the national definition). The change in the RR 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 and sell foreign currency, the Bank of Russia's operations to mirror transactions with the NWF's resources beyond the framework of the fiscal rule, and operations with 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 financing a part of budget expenditures from the NWF in 2024 and returning to expenditure budgeting in accordance with the long-term parameters of the fiscal rule from 2025.

Entry 3.2 'Net credit to banks'

The value in Entry 3.2 'Net credit to banks' will be declining in absolute terms throughout the forecast period because of increases in the amount of cash in circulation and banks' overall RR.

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. This entry will be a balancing component of the monetary programme if the banking sector shifts towards a liquidity deficit and one-week liquidity providing auctions become the main operations to manage liquidity. As a result of changes in other items of the monetary programme, claims on the Bank of Russia's refinancing operations will increase in the baseline scenario.

The forecast for the value in Entry 3.2.2 'Credit institutions' correspondent accounts with the Bank of Russia' implies a uniform trajectory of RR averaging by credit institutions. The forecast takes into account the rise in this indicator over the period under review due to the 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. As a result of changes in other items of the monetary programme, the amount of deposits and coupon OBR offerings will decrease during 2024–2025 in the baseline scenario. The refinancing amount will continue to grow in 2026–2027, while the balance of standing deposit facilities will still total ₽0.2 trillion.

Entry 3.3 'Other net non-classified assets'

The changes in Entry 3.3 over the forecast horizon take into account the payment of interest by the Bank of Russia on standard liquidity absorbing and refinancing operations and the operations of the Ministry of Finance to invest the NWF's resources, foreign currency revaluation of assets, and the growth of the RR for foreign currency liabilities held in special accounts.

Appendix 11. Inflation targeting: cross-country comparisons

Inflation targeting economies account for nearly 70% of global GDP. This regime helps maintain price stability more efficiently and improves economic growth prospects

Inflation targeting: its effectiveness and use around the globe

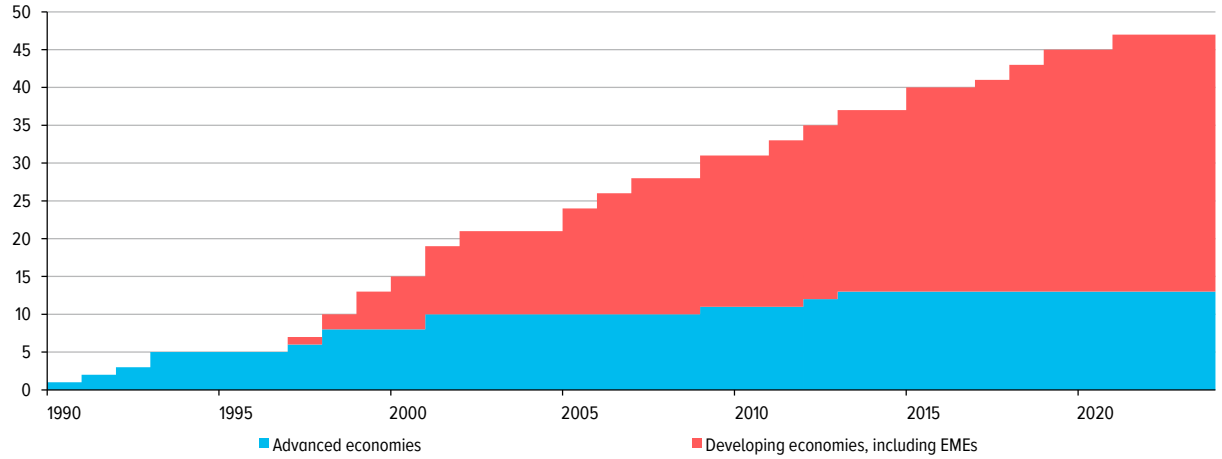
The role of inflation targeting countries in the world economy

In today's world, price stability, that is, low and steady inflation, is the key objective of central banks' monetary policies. In practice, central banks address this objective through the inflation targeting regime increasingly frequently. The 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 countries and integration associations[2] conduct monetary policies within the framework of inflation targeting, whether de jure or de facto. Assessments as of 2023 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.

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. As regards developing economies, the Czech National Bank[4] was the first one to transition to inflation targeting in 1997.

INFLATION TARGETING COUNTRIES
(NUMBER OF COUNTRIES)

Chart A-24



Sources: IMF Annual Report on Exchange Arrangements and Exchange Restrictions, 2022.

1 Refer to the Annual Report on Exchange Arrangements and Exchange Restrictions (2022).

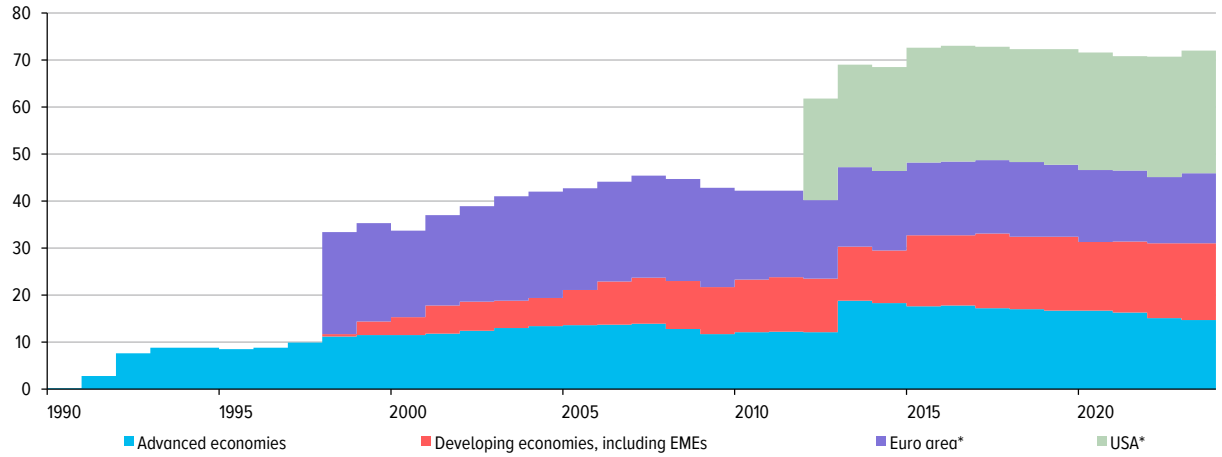
2 The only integration association among the inflation targeting economies is the Economic and Monetary Union of the European Union (the euro area) including 20 member states. The Republic of Seychelles is also classified as an economy whose central bank follows the inflation targeting regime. However, from 2021, the country's central bank has not been using any quantitative inflation target.

3 In practice, the USA and the European Economic and Monetary Union (the 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 inflation targeters, the US Fed and the ECB 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).

PROPORTION OF INFLATION TARGETING COUNTRIES IN THE WORLD ECONOMY
(% IN GLOBAL GDP)

Chart A-25



** The USA established its inflation target in 2012, and the euro area – in 1998.*
Sources: IMF, Bank of Russia calculations.

The Bank of Russia switched to inflation targeting in 2015. As to the BRICS member states, in addition to the Bank of Russia, the inflation targeting regime is officially used 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 applied as part of inflation targeting, and continues its development in this area.[5] As of 2022, central banks of 34 EMEs were inflation targeters, and this number continues to increase gradually.

Effectiveness of inflation targeting compared to other monetary policy regimes

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 effectiveness of this regime and the targeting of other macroeconomic indicators (e.g. monetary aggregates or national currency exchange rates). Most papers prove the benefit of inflation targeting not only for maintaining price stability but also for improving economic growth prospects.[6]

[5] A specific feature of 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 (rapid yet uneven) development of the markets, 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 influence 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. It is worth noting that, 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, for example, 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? European Economic Review. Volume 128, 2020.

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.

The flexibility of monetary policy within the framework of inflation targeting and of the 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]

Furthermore, in the long run, successful implementation of inflation targeting not only makes economic growth steadier[10] but also accelerates[11] it. However, in contrast to advanced economies, positive effects on developing economies' 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 developing economies, 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%. Furthermore, there has been a clear trend in the past decade towards lower inflation targets in developing economies as they accumulate experience in inflation targeting.[13]

As to the types of inflation targets, a point with a range of deviations is the most widely used one globally, especially in developing economies. Advanced economies use a point more often. A target range is the rarest type. Besides, target ranges are wider on average in developing economies than in advanced ones.

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7 Refer to Blinder (2000); Gürkaynak et al. (2006); Ötker and Freedman (2009); Kartaev (2015); Shmidt-Hebbel and Carrasco (2016).

8 This benefit is especially relevant to developing economies 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).

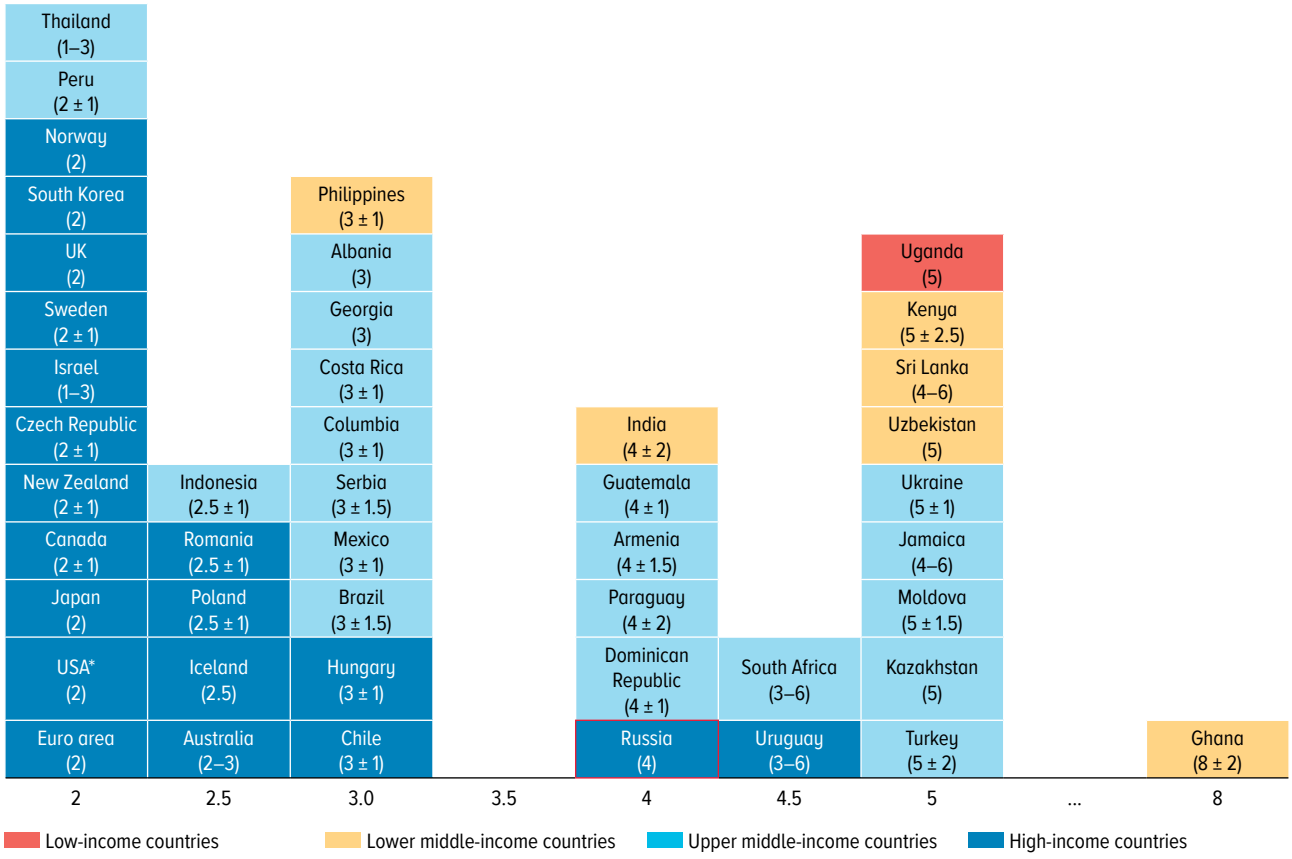
10 Refer to Mishkin (2004); Miller et al. (2012); Fratzscher et al. (2017); Balima et al. (2020); Ravenna and Ingholt (2021).

11 Refer to Hale and 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 to developing economies). 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 regime, central banks might use intermediate annual inflation targets.

13 Meshcheryakov, A., Sukhomlinov, A. and Glazova, A. Inflation Target Format. Analytical note. 2023.

INFLATION TARGETS IN INFLATION TARGETING COUNTRIES, GROUPED ACCORDING TO THE WORLD BANK *Chart A-26*
(%)



** From August 2020, the US Fed switched to flexible average inflation targeting (FAIT), maintaining inflation at around 2% on average.*
Note. The diagram is based on the World Bank's classification relying on the estimates of gross national income per capita for 2023.
Sources: central banks' websites, IMF Annual Report on Exchange Arrangements and Exchange Restrictions (2022), World Bank.

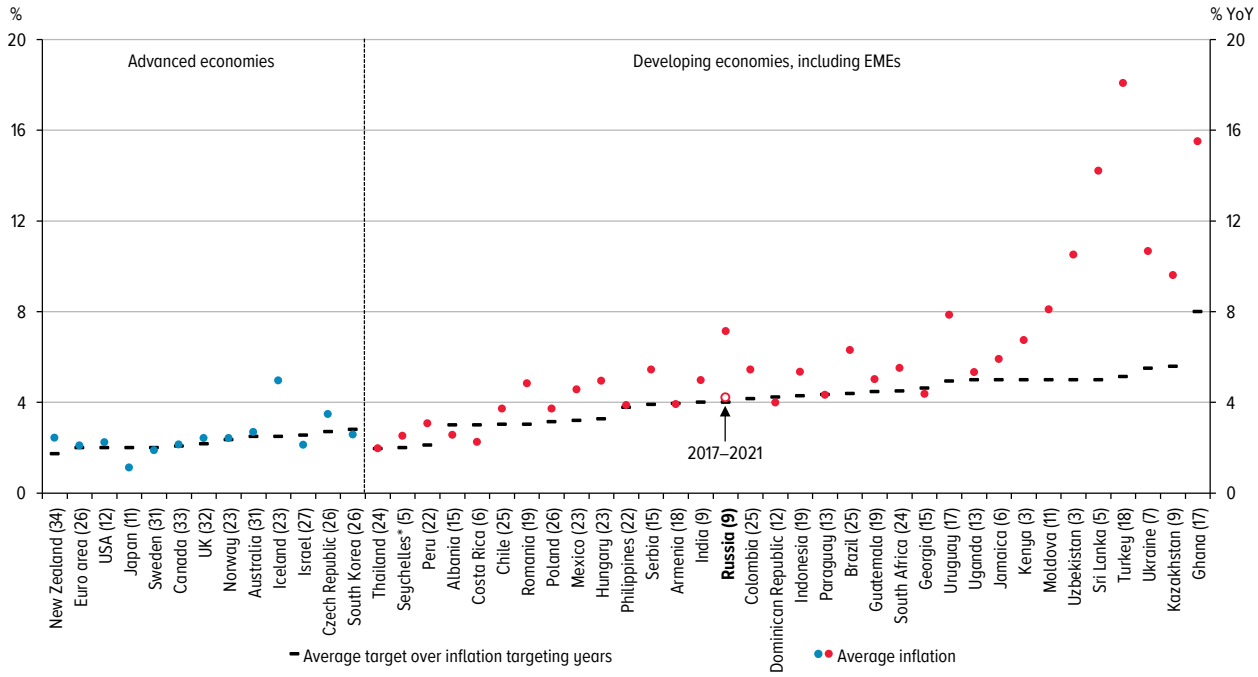
In practice, when choosing medium-term inflation targets (levels and types), central banks consider a broad range of factors.[14] On the one hand, these are multiple theoretical[15] optimality criteria of a target format. On the other hand, these are factors reflecting actual peculiarities of the conditions where monetary policy is implemented: overall stability of the macroeconomic environment, including the level of confidence in macroeconomic policy and institutions; the maturity level[16] of the inflation targeting regime and efficiency of monetary policy in maintaining low and steady inflation; the difference between the country's inflation target and the targets set by the 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.

[14] Meshcheryakov, A., Sukhomlinov A. and Kolosov, A. Factors Determining the Choice of Inflation Target Levels: Theory and Global Practice. Working paper. 2023. Magzhanov, T. and Meshcheryakov, A. What Determines the Choice of Inflation Target 'Width'? Working paper. 2023.

[15] 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 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.

[16] The average inflation targeting period is 26 years in advanced countries and 16 years in EMEs.

EFFECTIVENESS OF INFLATION TARGETING ACROSS COUNTRIES: AVERAGE TARGETS AND AVERAGE INFLATION OVER THE ENTIRE PERIOD OF INFLATION TARGETING (THROUGH SEPTEMBER 2024) *Chart A-27*



** For Seychelles, it is the public inflation target effective over 2019–2020.*
Note. Average inflation was calculated for the period from the transition to inflation targeting through September 2024. Respective inflation measures were applied for each of the countries, including the headline PCE – for the USA, the CPIF – for Sweden, and the core CPI – for Uganda. The period of inflation targeting in years is given in the brackets of the horizontal axis. Advanced and developing economies 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 with a range of deviations as its inflation target, the calculation of the target average is based on the 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: Cbonds, IMF, central banks' websites, statistical agencies' websites, Bank of Russia calculations.

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 a range) by no more than 2 pp on average in the majority of advanced countries and by no more than 4 pp – in most developing economies. 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.

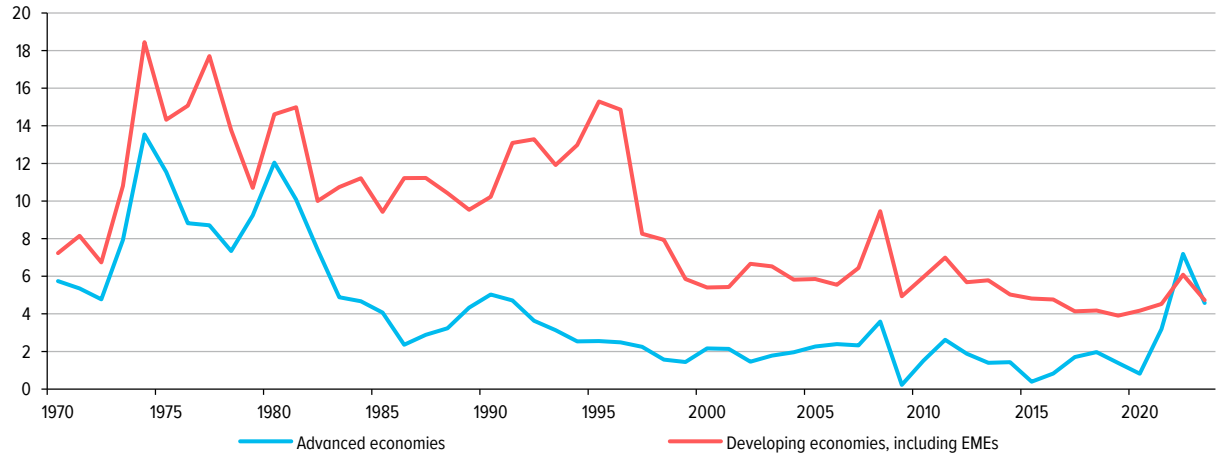
Inflation targeting practice: retrospective view

The 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 had declined stabilising close to 2% as a result of the central banks' consistent disinflation policies. The transition to inflation targeting that advanced economies' central banks 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 GFC, despite a number of crisis episodes (e.g. the dotcom crash in the early 2000s).

Contrastingly, developing economies were trying to temper high and volatile inflation for a longer time. Many of them were experiencing a transformational crisis moving from a centrally planned economy to a market-based one. In 1997–1998, they faced a capital outflow and depreciation of their national

INFLATION ACROSS GROUPS OF COUNTRIES, WEIGHTED BY GDP *Chart A-28*
(% YOY)



Sources: Ha, J., Kose, M. A. and Ohnsorge, F. 2021. One-Stop Source: A Global Database of Inflation. Policy Research Working Paper 9737, World Bank, Washington DC.

currencies triggered by the Asian financial crisis. Overall, the largest developing economies were able to stabilise inflation at multi-decade lows as late as the end of the 1990s. Many developing economies 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.

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 developing economies 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, a growing number of inflation targeting central banks in developing economies. The weakening of inflationary pressures 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[17] 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);[18] and gradual phasing-out of fiscal stimulus measures[19] after the end of the acute stage of the GFC and amid aggravation of problems with sovereign debt burden, especially after the European debt crisis of 2009–2010.[20] Furthermore, downward pressure on prices was put by the strengthening of global competition in retail in the conditions of rapid

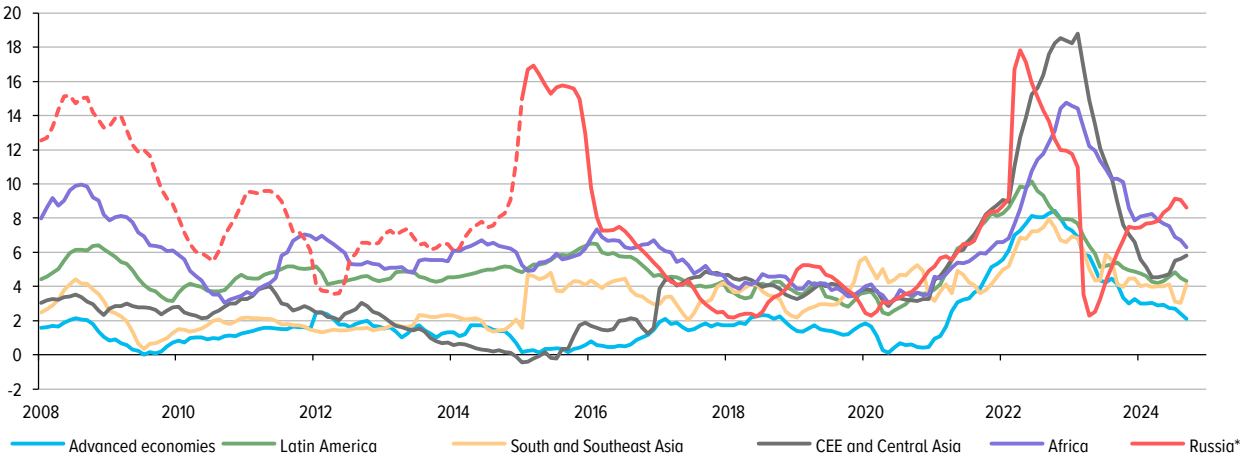
[17] Refer to Boar, C., Gambacorta, L., Lombardo, G. and Pereira da Silva, L. What are the effects of macroprudential policies on macroeconomic performance? BIS Quarterly Review. September 2017.

[18] Refer to, for example, Jones, B. Uncertainty and Risk Aversion – Before and After the Pandemic. Reserve Bank of Australia.

[19] Refer to Fiscal consolidation targets, plans and measures in OECD countries. Restoring public finances. 2012.

[20] Refer to Nelson, R., Belkin, P., Mix, D. and Weiss, M. The Eurozone Crisis: Overview and Issues for Congress. Congressional Research Service. 2012.

ANNUAL INFLATION ACROSS GROUPS OF COUNTRIES *Chart A-29*
(%)



** The dashed line reflects inflation in Russia before the transition to inflation targeting and the solid line – inflation after the transition.*
Note. The calculations were made using the average annual CPI change weighted by PPP-based GDP within each group (according to the World Bank). Countries are included in the calculations from the moment of their transition to inflation targeting. Groups of countries by region: 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, Colombia, 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; CEE and Central Asia – Poland, Hungary, Romania, Serbia, Albania, Moldova, Kazakhstan, Armenia, Georgia, Uzbekistan, and Ukraine; Africa – South Africa, the Republic of Seychelles, Ghana, Uganda, and Kenya.
Sources: Cbonds, World Bank, Bank of Russia calculations.

development of online retail (the so-called Amazon effect).[21] In addition, a slower increase in total factor productivity[22] and low risk appetite among economic agents, together, caused a substantial reduction in neutral interest rates of monetary policies in this group of countries.[23] This means that monetary policies of advanced economies' central banks that cut 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 pressures in major advanced economies remained low until the outbreak of the coronavirus pandemic.

[21] Refer to the speech by Janet Yellen, Chair of the US Fed's Board of Governors, at the conference Prospects for Growth: Reassessing the Fundamentals. 2017.

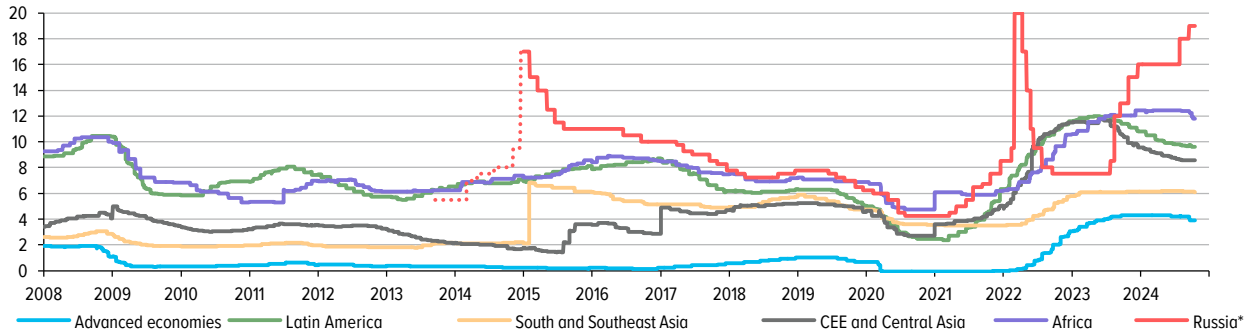
[22] Refer to Dieppe, A. 2021. Global Productivity. Trends, Drivers, and Policies. Washington, DC. World Bank.

[23] 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.

CENTRAL BANKS' WEIGHTED AVERAGE POLICY RATES BY REGION

Chart A-30

(%)

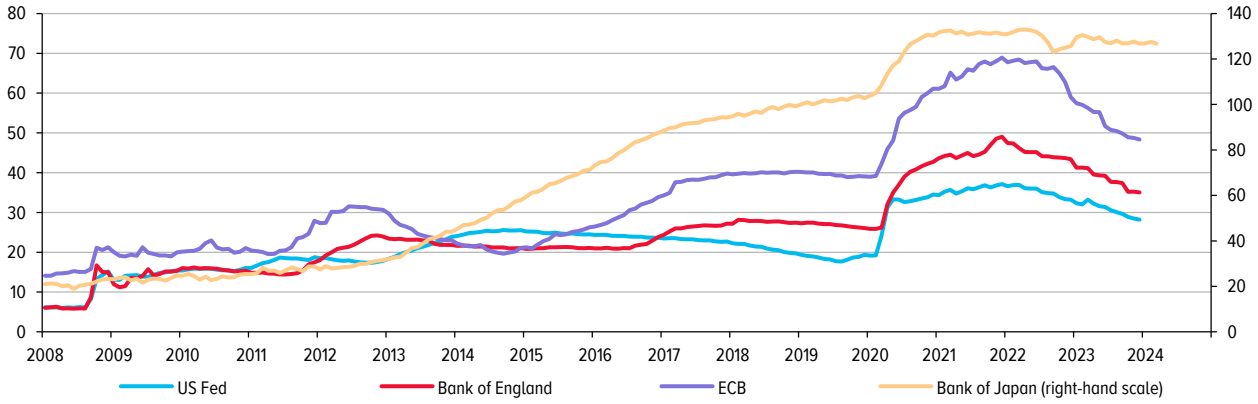


** The dashed line reflects the key rate in Russia before the transition to inflation targeting and the solid line – inflation after the transition.*
Note. The policy rate was calculated as the value of the central banks' policy rates weighted by a country's PPP-based GDP in the region (according to the World Bank) for the period since January 2008 through 18 October 2024. Groups of countries by region: 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, Colombia, 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; CEE and Central Asia – Poland, Hungary, Romania, Serbia, Albania, Moldova, Kazakhstan, Armenia, Georgia, Uzbekistan, and Ukraine; Africa – South Africa, the Republic of Seychelles, Ghana, Uganda, and Kenya.
Sources: Cbonds, Bank of Russia calculations.

G4 CENTRAL BANKS' BALANCE SHEETS

Chart A-31

(% OF GDP)

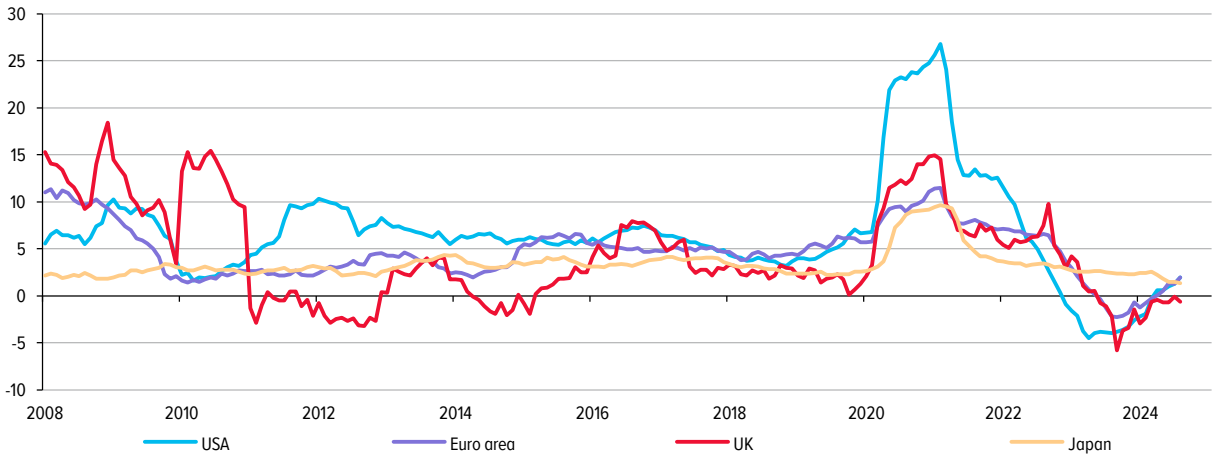


Note. The chart shows the ratio of the central bank's balance sheet size (on a monthly basis) to four-quarter nominal GDP (SA).
Sources: Cbonds, FRED, Bank of Russia calculations.

MONEY SUPPLY (M2 AGGREGATE) IN G4 ECONOMIES

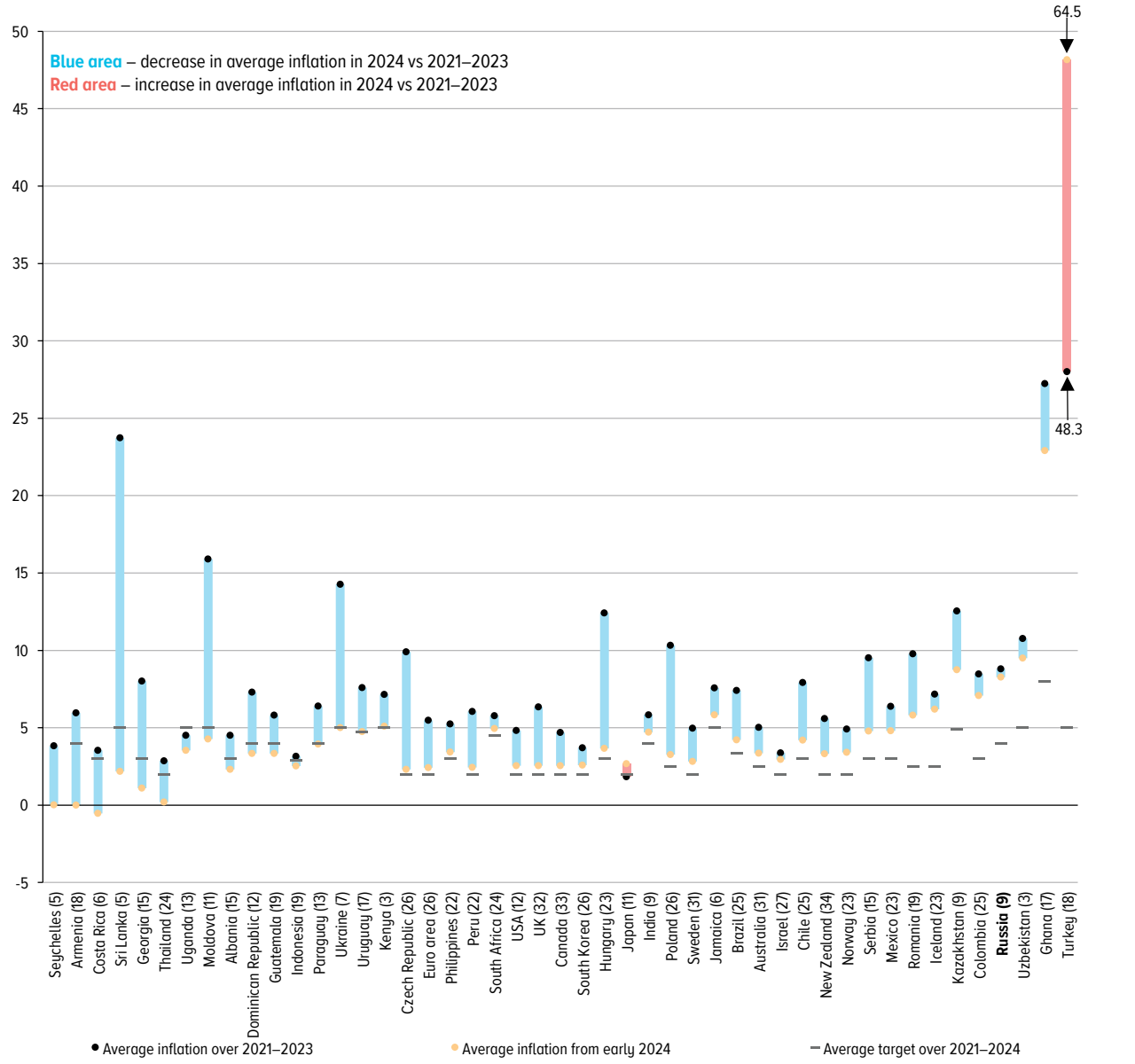
Chart A-32

(% YOY)



Sources: Cbonds, Bank of Russia calculations.

TARGETS (%) AND AVERAGE INFLATION (% YOY) IN 2021–2024 *Chart A-33*



Note. Average inflation rates were calculated based on monthly data for the period from January 2021 through September 2024. The calculations use the inflation measures targeted by the central banks of respective countries. The period of inflation targeting in years is given in the brackets of the horizontal axis. The countries were grouped by the extent and direction of the actual deviation of inflation from the target as of 2024. The 2021–2024 average target takes into account the pointwise value of the inflation target or the middle of the target range, as well as the revisions (if any) of the target levels over the period under review.
Sources: Cbonds, IMF, central banks' websites, statistical agencies' websites, Bank of Russia calculations.

Inflation dynamics in 2021–2024 and central banks' response

A long period of very low inflation after the GFC strengthened the conviction of advanced economies' central banks about steady decreases in neutral interest rates and the flattening of the Phillips curve.[24] Amid low inflation expectations, this flattening implied, in particular, that any acceleration of economic activity growth was not translating into inflation dynamics 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

[24] Refer to the speech by the Bank of England's Chief Economist Andrew G. Haldane at the National Science and Media Museum. Bradford, 2017.

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 developing 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 pressures 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 pressures worldwide beginning from late 2020.[25]

Despite some common trends, inflation dynamics after the outbreak of the pandemic varied across the globe. Inflation sped up most considerably in CEE and in Latin America. Nevertheless, although the pressure on prices was rising in South and Southeast Asia, it stayed moderate for a longer period amid the slump in economic activity and a slower recovery of demand due to anti-pandemic restrictions.[26] As to major advanced economies, their price growth rates peaked at 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. The recovery of the Asian region's economies was negatively affected by China's zero-COVID policy pursued through 2022, among other things.

At the early stages of the inflation acceleration, advanced economies' central banks believed that excessive inflationary pressures would fade in the short term without any monetary policy response[27] while underlying inflationary pressures would remain low. However, inflation was speeding up to hit new highs amid increasing prices for energy commodities and persistent demand and supply gaps.[28] As more signs of sticky inflationary pressures emerged, advanced economies' central banks started to adjust their signals regarding the time of monetary policy normalisation and, then, scale back their asset purchase programmes launched or expanded during the pandemic and switch to the cycle of policy rate increases.[29]

Due to the considerable and long-lasting price growth fuelled by both demand and supply shocks, it became more complicated for central banks to find a trade-off between inflation stabilisation and economic activity: a too fast increase in policy rates to rein in inflation could provoke a recession and higher volatility of output, whereas accommodative monetary policies pursued for too long could entail

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[25] Refer to the BIS Annual Economic Report 2022.

[26] Refer to Asian Development Outlook (ADO) 2021: Financing a Green and Inclusive Recovery.

[27] Refer to the speech by Jerome Powell, Chair of the US Fed's Board of Governors, at the symposium Reassessing the Effectiveness and Transmission of Monetary Policy. Jackson Hole, Wyoming. 2024.

[28] Refer to The International Monetary Fund, World Economic Outlook: Recovery During a Pandemic – Health Concerns, Supply Disruptions, Price Pressures. 2021.

[29] In 2021, the Central Bank of Iceland, the Czech National Bank, the Bank of Korea, and the Norges Bank were the first among advanced economies' central banks to begin raising their policy rates (in May, June, August, and September, respectively) as they had not been implementing QE programmes during the pandemic period. The unconventional measures implemented by advanced economies' central banks involved certain restrictions on them. When unconventional measures are used, policy normalisation usually starts from their phasing-out before an increase in short-term interest rates. The Bank of Canada was the first one among advanced economies to start rolling back its QE programme in April 2021, while the Reserve Bank of New Zealand was the first one to terminate its QE programme in July 2021. The G4 economies continued their stimulating asset purchase programmes, but accelerated their phasing-out in 2022–2023 as inflation risks increased (except for Japan).

an uncontrollable rise in prices, lower confidence in monetary policy,[30] 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. As central banks (especially in advanced economies) underestimated the persistence of inflationary factors, the inflation forecast paths sharply moved upwards and the period needed to return inflation to the targets became longer.[31]

In early 2022, inflationary pressures continued to intensify, while the dramatic escalation of geopolitical tensions exacerbated the supply shocks that had occurred during the pandemic. Nevertheless, the proinflationary impact of some factors that had triggered the inflation acceleration worldwide started to weaken beginning from mid-2022. Specifically, global prices for most commodities and food items were going down. 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.[32] Furthermore, governments in a number of countries were implementing fiscal measures, including energy subsidies,[33] to contain the growth of retail prices for goods and services. Combined with the earlier monetary policy tightening, this started to gradually decelerate annual inflation in most countries compared to the multi-year peaks reached in 2022.

The disinflationary effects of monetary tightening had been intensifying during 2023–2024. By mid-2024, inflation in most inflation targeting economies either slowed down to or even decreased below the targets. Concurrently, the growth rate of the world economy generally stayed resilient to high interest rates, which meant that the soft landing was achieved. This implied stable demand dynamics, resulting in a certain inertia of the inflation slowdown. In particular, moderate growth rates of prices for goods are accompanied by persistently high growth rates of prices for services in many countries. Compared to goods manufacturing, the services sector is characterised by a much larger proportion of labour costs in companies' overall costs. The elevated growth rates of nominal and real wages in recent years, provoked by overheating in the labour markets of many countries, have been passed through by businesses to output prices for services to a greater extent.

As inflation was gradually returning to the targets, although unevenly across the components, this was creating preconditions for starting the cycle of monetary policy easing worldwide. Central banks in a number of developing economies (especially in Latin America) were able to begin policy normalisation as early as mid-2023, whereas central banks in the largest advanced economies switched to a gradual reduction in their policy rates only in summer–autumn 2024. Moreover, taking into account persistently high proinflationary risks, central banks around the globe remain cautious when normalising their policies so as to avoid new spikes in inflation and stabilise inflation expectations. Specifically, in June–August 2024, the ECB and the Bank of England that were the first among advanced economies to cut their policy rates continued to stress the need to maintain tight monetary conditions to ensure a steady return of inflation to the targets.[34]

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30 Refer to, for example, 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.

31 Refer to Chart A-6-11 'Period to bring inflation back to targets over the forecast horizon across groups of countries' in MPG 2024–2026.

32 Refer to The World Bank. Global Economic Prospects. June 2023.

33 For example, the Energy Price Guarantee programme in the UK.

34 Refer to, for example, the ECB's press release, dated 6 June 2024.

Currently, another important aspect explaining central banks' particular cautiousness in the course of monetary policy normalisation is the re-estimation of neutral rate levels worldwide. Over recent years, central banks have become more convinced that the shocks that occurred in 2020–2024 have apparently entailed a steady rise in the global neutral rate of interest. As regards advanced economies influencing the global neutral rate to a greater extent, there are several factors pushing the neutral rate upwards.[35] On the one hand, these are considerably higher private and government investment expenditures related to the energy transition, digital transformation, and rearrangement of production and logistics chains due to geopolitical tensions in the world. On the other hand, these are larger government budget deficits in advanced economies, including as a result of government investment expenditures. Accordingly, in the long term, interest rates are unlikely to return to the levels observed after the GFC.

BOX 13. 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. The latter 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 ELB. The ELB is the point at which further policy rate cuts no longer produce 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 (ZLB).

When the policy rate is close to the ZLB while the economy is exposed to persistently high disinflationary or even deflationary risks or inflation steadily deviates downwards from the target, central banks may resort to unconventional instruments to additionally ease monetary conditions. These instruments are as follows:

- **Asset purchases** (as part of QE programmes or YCC) – purchases of financial assets (e.g. government bonds) in the open market by a central bank 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.

- **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 were employed by central banks in 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 as part of QE programmes are the most frequently used instrument when a central bank has no room for conventional monetary policy to prop up aggregate demand and reduce deflation risks.[1] However, these instruments might involve certain risks to the economy and financial system.[2] In particular, the use of unconventional measures might significantly distort market pricing of financial instruments (particularly, government debt) and make the financial (including FX) market extremely sensitive to the central bank's actions. If unconventional measures are in place for a long time, this might also adversely affect the government's fiscal discipline. Moreover, if monetary conditions remain highly accommodative for an extended period, this increases risks to the stability of the balance sheets of the banks purchasing financial assets and issuing loans (especially, long-term ones)

[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] Refer to, for example, The Effects and Side Effects of Unconventional Monetary Policy (the summary of the First Workshop on the Review of Monetary Policy from a Broad Perspective). Bank of Japan Reports & Research Papers, 2024.

[35] Refer to, for example, the speech by Isabel Schnabel, a member of the ECB's Executive Board, 'R(ising) star?'. Frankfurt. ECB. 20 March 2024.

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, particularly when this normalisation should progress quickly.

Over past years, the above risks materialised in a number of cases globally. 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.[3] Besides, the US Fed's and the Bank of England's experience in 2022–2023 proves that a rapid worsening of banks' balance sheets might notably limit the opportunities for tightening monetary policies and, consequently, for ensuring price stability.[4] Furthermore, the current amount of unrealised losses on US banks' balance sheets caused by the revaluation of government and mortgage-backed bonds resulting from the rise in interest rates remains significant compared to historical levels.[5]

The Bank of Japan began to phase out the unconventional measures in spring 2024, later than all other central banks worldwide. On the one hand, the delayed start (compared to other advanced economies) of monetary policy normalisation in Japan is explained by the country's long-term experience of low inflation during the 'lost decades'. Although inflation in Japan had stayed above the target of 2% over the past few years, the Bank of Japan concluded as late as March 2024[6] that it did see convincing evidence that inflation would steadily stabilise at the target in the medium term, having terminated its YCC programme and begun raising its short-term policy rate. On the other hand, the 'distortions'[7] accumulated in Japan's financial system over many decades restrict the pace at which the Bank of Japan may roll back its unconventional measures. The delayed policy normalisation was apparently an essential factor causing the depreciation of the yen in 2022–2024 and forced Japan's Ministry of Finance to conduct FX interventions for the first time over several decades in order to smooth the exchange rate volatility.

[3] Review of the Yield Target. Reserve Bank of Australia.

[4] Refer to, for example, Brunnermeier, M. Rethinking Monetary Policy in a Changing World. Finance and Development. March 2023.

[5] Refer to data from the Federal Deposit Insurance Corporation, FDIC Quarterly, vol. 18, No. 2.

[6] Refer to the Bank of Japan's monetary policy release Changes in the Monetary Policy Framework, dated 19 March 2024.

[7] The Bank of Japan, for example, is the holder of nearly 50% of the country's government debt.

INFORMATION ON INFLATION TARGETING COUNTRIES
(AS OF SEPTEMBER 2024)

Table A-3

No.	Country	Year of transition to inflation targeting	Target type	Target level, %[1]	Target range width	Average annual inflation after transition to inflation targeting, %[2]	Root-mean-square deviation of inflation from targets, %[3]
Advanced economies							
Europe							
1	Euro area	–	Point	2%		2.09	1.81
2	UK	1992	Point	2%		2.43	1.97
3	Iceland	2001	Point	2.5%		4.97	4.15
4	Norway	2001	Point	2%		2.41	1.63
5	Czech Republic	1997	Point with a range of deviations	2% ± 1 pp		3.47	3.65
6	Sweden	1993	Point with a range of deviations	2% ± 1 pp		1.89	1.57
Asia							
7	South Korea	1998	Point	2%		2.57	1.41
8	Japan	2013	Point	2%		1.12	1.62
Australia and Oceania							
9	Australia	1993	Target range	2–3%	1 pp	2.68	1.54
10	New Zealand	1990	Point with a range of deviations	2% ± 1 pp		2.43	1.89
North America							
11	USA	–	Point	2%		2.23	1.75
12	Canada	1991	Point with a range of deviations	2% ± 1 pp		2.14	1.40
Middle East							
13	Israel	1997	Target range	1–3%	2 pp	2.13	2.13
Emerging market economies							
Europe							
14	Albania	2009	Point	3%		2.56	1.62
15	Hungary	2001	Point with a range of deviations	3% ± 1 pp		4.95	4.80
16	Moldova	2013	Point with a range of deviations	5% ± 1.5 pp		8.10	8.34
17	Poland	1998	Point with a range of deviations	2.5% ± 1 pp		3.73	3.67
18	Russia	2015	Point	4%		7.14	5.43
19	Romania	2005	Point with a range of deviations	2.5% ± 1 pp		4.84	4.12
20	Serbia	2009	Point with a range of deviations	3% ± 1.5 pp		5.45	4.59
21	Turkey	2006	Point with a range of deviations	5% ± 2 pp		18.09	23.69
22	Ukraine	2017	Point with a range of deviations	5% ± 1 pp		10.67	8.02

No.	Country	Year of transition to inflation targeting	Target type	Target level, %[1]	Target range width	Average annual inflation after transition to inflation targeting, %[2]	Root-mean-square deviation of inflation from targets, %[3]
Latin America and the Caribbean							
23	Brazil	1999	Point with a range of deviations	3.0% ± 1.5 pp		6.31	3.45
24	Guatemala	2005	Point with a range of deviations	4% ± 1 pp		5.03	2.50
25	Dominican Republic	2012	Point with a range of deviations	4% ± 1 pp		3.99	2.50
26	Colombia	1999	Point with a range of deviations	3% ± 1 pp		5.45	2.91
27	Costa Rica	2018	Point with a range of deviations	3% ± 1 pp		2.26	3.26
28	Mexico	2001	Point with a range of deviations	3% ± 1 pp		4.57	1.89
29	Paraguay	2011	Point with a range of deviations	4% ± 2 pp		4.34	2.32
30	Peru	2002	Point with a range of deviations	2% ± 1 pp		3.08	2.22
31	Uruguay	2007	Target range	3–6%	3 pp	7.86	3.22
32	Chile	1999	Point with a range of deviations	3% ± 1 pp		3.73	2.78
33	Jamaica	2018	Target range	4–6%	2 pp	5.92	2.48
Asia							
34	India	2015	Point with a range of deviations	4% ± 2 pp		4.98	1.72
35	Indonesia	2005	Point with a range of deviations	2.5% ± 1 pp		5.35	2.84
36	Thailand	2000	Target range	1–3%	2 pp	1.97	2.29
37	Philippines	2002	Point with a range of deviations	3% ± 1 pp		3.88	2.02
38	Sri Lanka	2019	Target range	4–6%	2 pp	14.21	21.33
Middle East and Central Asia							
39	Armenia	2006	Point with a range of deviations	4.0% ± 1.5 pp		3.92	3.45
40	Georgia	2009	Point	3%		4.38	4.92
41	Kazakhstan	2015	Point	5%		9.60	5.99
42	Uzbekistan	2021	Point	5%		10.51	5.66
Africa							
43	Ghana	2007	Point with a range of deviations	8% ± 2 pp		15.51	14.47
44	Uganda	2011	Point	5%		5.33	4.42
45	South Africa	2000	Target range	3–6%	3 pp	5.51	2.43
46	Seychelles[4]	2019	–	–		2.52	–
47	Kenya	2021	Point with a range of deviations	5.0% ± 2.5 pp		6.74	2.30

[1] *The inflation target is usually set for the overall CPI in annualised terms. In rare cases, central banks use alternative measures but also in annualised terms. In particular, Uganda uses the core CPI, Sweden – the CPIF, and the USA – the headline PCE.*

[2] *Average annual inflation is calculated based on monthly data. 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).*

[3] *It shows the average deviation of inflation from the target in percentage points over the 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 point or the middle of the target range with a point announced by the central bank is taken as the inflation target. 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).*

[4] *Through 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 focus for the central bank.*

Sources: IMF, Cbonds, central banks' websites, statistical agencies' websites, Bank of Russia calculations.

CALENDARS AND TABLES

Calendar of key rate decisions for 2025

14 February 2025	**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
26 February 2025	Summary of the Key Rate Discussion
	Commentary on the Medium-term Forecast
21 March 2025	**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
2 April 2025	Summary of the Key Rate Discussion
25 April 2025	**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
12 May 2025	Summary of the Key Rate Discussion
	Commentary on the Medium-term Forecast
6 June 2025	**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
20 June 2025	Summary of the Key Rate Discussion
25 July 2025	**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
6 August 2025	Summary of the Key Rate Discussion
	Commentary on the Medium-term Forecast
12 September 2025	**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
24 September 2025	Summary of the Key Rate Discussion
24 October 2025	**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
1 November 2025	Summary of the Key Rate Discussion
	Commentary on the Medium-term Forecast
19 December 2025	**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
29 December 2025	Summary of the Key Rate Discussion

Schedule of Bank of Russia auctions in 2025

One-week repo and deposit auctions

In the situation of a structural liquidity surplus, the Bank of Russia plans 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 depositing by credit institutions	Date of repayments and interest payments by the Bank of Russia
09.01.2025	09.01.2025	15.01.2025
14.01.2025	15.01.2025	22.01.2025
21.01.2025	22.01.2025	29.01.2025
28.01.2025	29.01.2025	05.02.2025
04.02.2025	05.02.2025	12.02.2025
11.02.2025	12.02.2025	19.02.2025
18.02.2025	19.02.2025	26.02.2025
25.02.2025	26.02.2025	05.03.2025
04.03.2025	05.03.2025	12.03.2025
11.03.2025	12.03.2025	19.03.2025
18.03.2025	19.03.2025	26.03.2025
25.03.2025	26.03.2025	02.04.2025
01.04.2025	02.04.2025	09.04.2025
08.04.2025	09.04.2025	16.04.2025
15.04.2025	16.04.2025	23.04.2025
22.04.2025	23.04.2025	30.04.2025
29.04.2025	30.04.2025	07.05.2025
06.05.2025	07.05.2025	14.05.2025
13.05.2025	14.05.2025	21.05.2025
20.05.2025	21.05.2025	28.05.2025
27.05.2025	28.05.2025	04.06.2025
03.06.2025	04.06.2025	11.06.2025
10.06.2025	11.06.2025	18.06.2025
17.06.2025	18.06.2025	25.06.2025
24.06.2025	25.06.2025	02.07.2025
01.07.2025	02.07.2025	09.07.2025
08.07.2025	09.07.2025	16.07.2025
15.07.2025	16.07.2025	23.07.2025
22.07.2025	23.07.2025	30.07.2025
29.07.2025	30.07.2025	06.08.2025
05.08.2025	06.08.2025	13.08.2025
12.08.2025	13.08.2025	20.08.2025
19.08.2025	20.08.2025	27.08.2025
26.08.2025	27.08.2025	03.09.2025
02.09.2025	03.09.2025	10.09.2025
09.09.2025	10.09.2025	17.09.2025
16.09.2025	17.09.2025	24.09.2025

Auction date	Date of depositing by credit institutions	Date of repayments and interest payments by the Bank of Russia
23.09.2025	24.09.2025	01.10.2025
30.09.2025	01.10.2025	08.10.2025
07.10.2025	08.10.2025	15.10.2025
14.10.2025	15.10.2025	22.10.2025
21.10.2025	22.10.2025	29.10.2025
28.10.2025	29.10.2025	05.11.2025
05.11.2025	05.11.2025	12.11.2025
11.11.2025	12.11.2025	19.11.2025
18.11.2025	19.11.2025	26.11.2025
25.11.2025	26.11.2025	03.12.2025
02.12.2025	03.12.2025	10.12.2025
09.12.2025	10.12.2025	17.12.2025
16.12.2025	17.12.2025	24.12.2025
23.12.2025	24.12.2025	30.12.2025

Required reserve averaging periods in 2025

AP to calculate RR for the corresponding reporting period	AP duration (days)	Memo item	
		Reporting period	RR regulation period
15.01.2025–11.02.2025	28	December 2024	24.01.2025–28.01.2025
12.02.2025–11.03.2025	28	January 2025	18.02.2025–20.02.2025
12.03.2025–08.04.2025	28	February 2025	18.03.2025–20.03.2025 (as recalculated)
09.04.2025–06.05.2025	28	March 2025	16.04.2025–18.04.2025
07.05.2025–03.06.2025	28	April 2025	22.05.2025–26.05.2025
04.06.2025–08.07.2025	35	May 2025	19.06.2025–23.06.2025
09.07.2025–12.08.2025	35	June 2025	16.07.2025–18.07.2025
13.08.2025–09.09.2025	28	July 2025	18.08.2025–20.08.2025
10.09.2025–07.10.2025	28	August 2025	16.09.2025–18.09.2025
08.10.2025–11.11.2025	35	September 2025	16.10.2025–20.10.2025
12.11.2025–09.12.2025	28	October 2025	19.11.2025–21.11.2025
10.12.2025–13.01.2026	35	November 2025	16.12.2025–18.12.2025

Required reserve averaging period with recalculation in 2025

The RR averaging period in 2025 for the annual recalculation of the RR deposited in the RR account: 18–20 March 2025.

Statistical tables

MACROECONOMIC INDICATORS IN 2004–2023
(% GROWTH YOY, UNLESS INDICATED OTHERWISE)

Table 1

Indicators	2004–2008 average	2009–2013 average	2015	2016	2017	2018	2019	2020	2021	2022	2023
Internal conditions											
Inflation, as of year-end											
CPI, all goods and services	11.4	7.3	12.9	5.4	2.5	4.3	3.0	4.9	8.4	11.9	7.4
of which: excluding fruit and vegetables, petroleum products, and housing and utility services	10.4	6.8	13.3	6.1	2.1	4.0	3.2	4.6	8.6	13.5	6.9
– food products	12.5	7.5	14.0	4.6	1.1	4.7	2.6	6.7	10.6	10.3	8.2
of which: fruit and vegetables	11.4	5.5	17.4	-6.8	1.2	4.9	-2.1	17.4	14.0	-2.0	24.2
food products excluding fruit and vegetables	12.6	7.6	13.6	6.0	1.0	4.6	3.1	5.4	10.2	12.0	6.1
– non-food goods	6.9	6.2	13.7	6.5	2.8	4.1	3.0	4.8	8.6	12.7	6.0
of which: non-food goods excluding petroleum products	6.5	6.0	14.5	6.8	2.3	3.3	3.1	5.1	8.5	14.5	5.7
– services	16.3	8.7	10.2	4.9	4.4	3.9	3.8	2.7	5.0	13.2	8.3
of which: services excluding housing and utility services	13.7	6.8	10.2	4.7	4.2	4.1	3.4	2.2	5.6	14.7	10.4
Core inflation	10.2	6.6	13.7	6.0	2.1	3.7	3.1	4.2	8.9	14.3	6.8
GDP											
GDP	7.1	1.3	-2.0	0.2	1.8	2.8	2.2	-2.7	5.9	-1.2	3.6
Final consumption expenditure	9.5	3.0	-8.0	-1.5	3.4	3.5	3.4	-3.9	7.9	-0.1	6.6
– households	12.4	4.0	-9.5	-2.6	3.7	4.3	3.8	-5.9	9.9	-1.1	6.5
– general government	2.4	0.3	-3.6	1.4	2.5	1.3	2.4	1.9	2.9	3.0	7.0
Gross capital formation	15.1	1.1	-11.7	-0.6	6.4	-1.6	2.3	-4.3	14.4	1.7	15.8
– gross fixed capital formation	14.5	1.8	-10.6	1.3	4.7	0.6	1.0	-4.0	9.3	6.7	8.8
Exports	6.5	1.7	3.7	3.2	5.0	5.6	0.7	-4.2	3.2	–	–
Imports	20.6	5.5	-25.0	-3.7	17.3	2.7	3.1	-11.9	19.1	–	–
Consumer activity											
Retail turnover	14.0	3.7	-10.0	-4.8	1.3	2.8	1.9	-3.2	7.8	-6.5	8.0
– food products	11.4	2.6	-9.0	-5.2	1.1	2.1	1.8	-1.6	2.7	-1.7	4.4
– non-food goods	16.3	4.8	-10.9	-4.5	1.5	3.5	2.0	-4.6	12.7	-10.6	11.5
Turnover in public catering	13.2	1.5	-5.0	-2.9	3.2	14.9	4.9	-22.4	26.8	7.6	13.9
Turnover in commercial services	7.1	1.2	-2.0	-0.3	0.2	3.2	1.7	-14.6	17.2	5.0	6.9
Labour market											
Unemployment, %, yearly average	6.8	6.6	5.6	5.5	5.2	4.8	4.6	5.8	4.8	4.0	3.2
Real wages, % YoY, yearly average	13.0	3.5	-9.0	0.7	2.9	8.5	4.8	3.8	4.5	0.3	8.2
Nominal wages, % YoY, yearly average	25.7	11.5	5.1	7.9	6.7	11.6	9.5	7.3	11.5	14.1	14.6
Monetary indicators, as of year-end											
Money supply in the national definition (M2)	33.5	19.5	11.3	9.2	10.5	11.0	9.7	13.5	13.0	24.4	19.4
Broad money (M2X)*	33.1	17.7	11.8	4.0	8.6	7.9	7.6	12.6	11.1	14.0	15.4
Claims on the economy*	43.3	15.6	3.1	3.4	9.1	8.7	10.1	10.9	13.9	12.0	22.7
including on households*	72.8	21.0	-6.4	1.4	12.1	21.8	19.0	12.9	22.0	9.4	23.0
on organisations*	38.4	14.0	6.4	4.0	8.3	4.8	7.1	10.2	10.7	13.2	22.6

* *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.

MACROECONOMIC INDICATORS IN 2022–2024, BY QUARTER
(% GROWTH YOY)

Table 2

Indicators	2022				2023				2024						
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	June	July	August	September
Internal conditions															
Inflation															
CPI, all goods and services	16.7	15.9	13.7	11.9	3.5	3.3	6.0	7.4	7.7	8.6	8.6	8.6	9.1	9.1	8.6
of which: excluding fruit and vegetables, petroleum products, and housing and utility services	17.7	18.2	16.2	13.5	3.7	2.6	4.5	6.9	7.8	8.6	8.1	8.6	8.5	8.3	8.1
– food products	18.0	18.0	14.2	10.3	2.6	0.2	4.9	8.2	8.1	9.8	9.2	9.8	9.7	9.7	9.2
of which: fruit and vegetables	34.8	11.6	-3.9	-2.0	-9.4	-1.9	25.9	24.2	13.0	19.1	14.0	19.1	16.8	19.3	14.0
food products excluding fruit and vegetables	15.7	19.0	16.5	12.0	4.4	0.4	2.7	6.1	7.4	8.5	8.5	8.5	8.7	8.4	8.5
– non-food goods	20.3	17.9	14.9	12.7	0.1	1.0	4.6	6.0	6.7	7.0	5.6	7.0	6.7	6.1	5.6
of which: non-food goods excluding petroleum products	22.4	19.9	16.8	14.5	0.1	0.6	3.6	5.7	6.5	6.9	5.6	6.9	6.4	6.0	5.6
– services	9.9	10.2	11.0	13.2	9.7	11.0	9.7	8.3	8.3	8.8	11.6	8.8	11.4	11.7	11.6
of which: services excluding housing and utility services	12.9	13.4	14.5	14.7	9.2	10.9	10.0	10.4	10.7	11.2	11.7	11.2	11.4	11.8	11.7
Core inflation	18.7	19.2	17.1	14.3	3.7	2.4	4.6	6.8	7.8	8.7	8.3	8.7	8.6	8.4	8.3
GDP															
GDP	3.7	-3.5	-2.8	-1.8	-1.6	5.1	5.7	4.9	5.4	4.1	–	–	–	–	–
Final consumption expenditure	4.9	-2.0	-2.2	-0.7	1.5	9.1	9.0	6.9	4.6	4.4	–	–	–	–	–
– households	6.2	-3.9	-4.1	-2.2	-0.7	10.0	9.7	7.3	6.7	6.1	–	–	–	–	–
– general government	1.4	3.2	3.4	4.0	7.8	7.2	7.1	5.9	-0.3	-0.1	–	–	–	–	–
Gross capital formation	0.1	-15.9	15.2	4.1	19.1	23.2	5.9	18.6	9.7	4.5	–	–	–	–	–
– gross fixed capital formation	12.5	6.0	8.2	3.8	6.8	12.9	7.7	8.1	12.9	7.2	–	–	–	–	–
Exports	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Imports	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Consumer activity															
Retail turnover	4.8	-9.6	-9.8	-9.6	-5.5	11.2	14	11.7	10.4	7.5	–	6.4	6.2	5.1	–
– food products	3.3	-2.2	-3.1	-3.9	-2.3	6.0	7.2	6.2	7.5	6.0	–	5.5	6.2	5.7	–
– non-food goods	6.1	-15.9	-15.3	-14.5	-8.1	16.5	20.7	17.2	13.2	8.9	–	7.3	6.3	4.7	–
Turnover in public catering	12.7	2.1	5.3	10.6	13.9	19.9	12.4	10.5	5.3	9.3	–	10.8	10.8	13.0	–
Turnover in commercial services	11.5	3.3	3.9	3.0	5.2	7.6	7.9	6.7	3.6	4.2	–	3.4	3.6	2.0	–
Labour market															
Unemployment, SA	4.1	4.0	3.9	3.7	3.5	3.2	3.0	2.9	2.7	2.6	–	2.5	2.5	2.5	–
Real wages	3.1	-5.4	-1.9	0.5	1.9	11.4	8.7	8.5	11.0	7.8	–	6.2	8.1	–	–
Nominal wages	15.0	10.6	12.2	12.7	10.7	14.4	14.3	16.3	19.5	16.7	–	15.3	18.0	–	–
Monetary indicators															
Money supply in the national definition (M2)	17.1	16.8	23.9	24.4	24.4	25.4	20.6	19.4	17.4	18.7	–	18.7	18.2	17.9	–
Broad money (M2X)*	11.0	12.5	14.3	14.0	15.9	16.6	15.1	15.4	14.2	15.9	–	15.9	15.6	14.5	–
Claims on the economy*	15.7	11.5	10.7	12.0	10.9	17.1	21.5	22.7	23.2	22.8	–	22.8	21.5	20.6	–
including on households*	20.2	12.2	10.2	9.4	10.0	17.2	22.3	23.0	23.0	23.3	–	23.3	22.1	19.7	–
on organisations*	14.0	11.1	10.9	13.2	11.3	17.1	21.2	22.6	23.3	22.6	–	22.6	21.3	20.9	–

* *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 2004–2023 *Table 3*
($ BN, UNLESS INDICATED OTHERWISE)

Indicators	2004–2008 average	2009–2013 average	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Current account	**82.3**	**64.0**	**57.5**	**67.8**	**24.5**	**32.2**	**115.7**	**65.7**	**35.4**	**125.0**	**237.7**	**50.1**
Balance of trade	127.0	165.9	188.9	148.4	90.2	114.6	195.1	165.8	93.4	193.1	315.6	121.6
Exports	305.6	450.9	496.8	341.4	281.7	352.9	443.9	419.7	333.5	494.2	592.1	424.5
Imports	178.6	285.0	307.9	193.0	191.5	238.4	248.9	253.9	240.1	301.0	276.5	302.9
Balance of services	-14.1	-36.4	-55.3	-37.2	-24.0	-31.3	-30.1	-36.5	-16.8	-20.3	-22.1	-35.3
Exports	37.7	57.1	65.7	51.6	50.6	57.5	64.6	62.0	48.0	55.6	48.8	41.2
Imports	51.8	93.5	121.0	88.8	74.6	88.9	94.7	98.5	64.7	75.9	70.9	76.4
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	-55.8	-36.2
Capital account	**-4.8**	**-3.6**	**-42.0**	**-0.3**	**-0.8**	**-0.2**	**-1.1**	**-0.3**	**-0.1**	**0.1**	**-4.6**	**-1.4**
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**	**125.1**	**233.2**	**48.7**
Financial account balance, net of reserves	**10.3**	**39.5**	**131.0**	**68.6**	**10.1**	**11.9**	**78.5**	**-3.1**	**52.8**	**60.5**	**234.3**	**51.6**
Net incurrence of liabilities	96.0	67.2	-49.7	-72.2	-5.4	2.9	-36.5	28.7	-39.5	43.9	-123.9	-7.5
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	104.4	110.4	44.0
Net errors and omissions	**-2.4**	**-8.7**	**7.9**	**2.9**	**-5.4**	**2.6**	**2.1**	**-2.0**	**3.8**	**-1.0**	**-6.1**	**-7.2**
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**	**-10.0**
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	16.6	-27.3
Goods and services imports, % YoY	29.5	7.8	-8.7	-34.3	-5.6	23.0	5.0	2.6	-13.5	23.6	-7.8	9.2
Memo item												
Brent crude price, $ per barrel, yearly average	66	95	99	52	44	54	71	64	42	71	99	82
Nominal exchange rate, RUB/USD, yearly average	26.9	30.8	38.0	60.7	66.9	58.3	62.5	64.7	71.9	73.6	67.5	84.7

Sources: Bank of Russia, World Bank, Argus.

EXTERNAL CONDITIONS IN 2004–2023 *Table 4*

Indicators	2004–2008 average	2009–2013 average	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
GDP, % YoY, average for the period												
USA	2.5	1.2	2.5	2.9	1.8	2.5	3.0	2.5	-2.2	5.8	1.9	2.5
Euro area	2.1	-0.4	1.4	2.0	1.9	2.6	1.8	1.6	-6.1	5.9	3.4	0.6
China	11.6	9.1	7.4	7.0	6.9	6.9	6.8	6.0	2.2	8.5	3.0	5.2
Inflation, % YoY, as of year-end												
USA (core PCE)	2.2	1.5	1.4	1.2	1.8	1.6	2.0	1.5	1.6	5.2	4.9	2.9
Euro area (core HICP)	1.7	1.3	0.8	1.1	0.9	0.9	0.9	1.3	0.2	2.7	5.2	3.4
China (core CPI)	–	1.1	0.8	1.5	2.0	2.1	1.7	1.4	0.4	1.0	0.5	0.6
Budget deficit, % of GDP, average for the period												
USA	3.8	9.3	-2.9	-2.5	-2.9	-3.5	-3.9	-4.5	-12.3	-13.4	-5.6	-7.0
Euro area	2.0	4.7	-2.8	-2.3	-1.7	-1.2	-0.5	-0.6	-4.5	-6.7	-3.6	-3.8
China	0.8	0.7	-3.0	-3.6	-3.7	-3.0	-3.6	-4.8	-5.6	-4.3	-4.8	-4.4
Policy rate, % p.a., yearly average												
USA (upper bound)	3.30	0.25	0.25	0.26	0.51	1.10	1.91	2.28	0.54	0.25	1.87	5.20
Euro area (deposit facility rate)	1.90	0.26	-0.09	-0.21	-0.38	-0.40	-0.40	-0.43	-0.50	-0.50	0.12	3.34
China	–	–	5.73	4.91	4.30	4.30	4.31	4.27	3.92	3.85	3.69	3.56

Sources: national statistical agencies, US Fed, ECB, IMF, Investing.com, Bank of Russia calculations.

BALANCE OF PAYMENTS INDICATORS IN 2021–2024, BY QUARTER

Table 5

($ BN, UNLESS INDICATED OTHERWISE)

Indicators	2021				2022				2023				2024		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3*
Current account	**24.1**	**17.6**	**35.7**	**47.5**	**71.0**	**77.2**	**48.1**	**41.5**	**15.6**	**7.7**	**15.5**	**11.3**	**24.1**	**17.4**	**9.1**
Balance of trade	30.4	39.2	54.5	69.1	84.8	95.1	72.8	62.8	30.5	26.3	33.4	31.4	34.9	35.8	32.0
Exports	93.3	114.6	132.1	154.1	154.6	151.8	141.7	144.0	105.1	103.4	109.1	106.9	101.4	105.7	108.0
Imports	62.9	75.5	77.6	85.1	69.8	56.7	68.8	81.2	74.6	77.1	75.7	75.5	66.5	69.9	76.0
Balance of services	-3.0	-4.1	-6.9	-6.3	-3.5	-3.5	-6.8	-8.3	-7.6	-8.9	-10.3	-8.4	-7.3	-9.4	-13.4
Exports	11.5	13.0	14.1	17.0	13.9	11.1	11.4	12.4	9.9	10.4	9.7	11.3	10.2	9.9	10.3
Imports	14.5	17.1	21.0	23.3	17.4	14.6	18.2	20.7	17.5	19.3	20.0	19.7	17.5	19.3	23.6
Balance of primary and secondary income	-3.3	-17.5	-11.9	-15.2	-10.3	-14.4	-18.0	-13.0	-7.3	-9.6	-7.6	-11.7	-3.5	-9.1	-9.5
Capital account	**0.2**	**0.0**	**0.0**	**0.0**	**0.0**	**-1.1**	**-1.9**	**-1.5**	**-0.1**	**0.0**	**0.0**	**-1.3**	**0.0**	**-0.1**	**-0.1**
Current account balance and capital account balance	**24.3**	**17.6**	**35.7**	**47.5**	**71.0**	**76.1**	**46.1**	**40.0**	**15.5**	**7.7**	**15.5**	**10.1**	**24.1**	**17.3**	**9.0**
Financial account balance, net of reserves	**20.2**	**9.9**	**3.9**	**26.5**	**79.0**	**73.8**	**42.7**	**38.9**	**18.2**	**6.1**	**14.3**	**12.9**	**31.9**	**18.5**	**15.0**
Net incurrence of liabilities	-1.9	5.5	38.0	2.3	-31.8	-51.4	-15.2	-25.5	-11.7	4.7	8.2	-8.7	-7.1	-5.4	-2.6
Net acquisition of financial assets, net of reserves	18.3	15.4	41.9	28.8	47.1	22.4	27.4	13.4	6.4	10.9	22.5	4.2	24.8	13.1	12.5
Net errors and omissions	**-0.4**	**0.8**	**-2.1**	**0.7**	**-2.6**	**-1.1**	**-1.7**	**-0.7**	**-2.5**	**-3.0**	**-3.4**	**1.7**	**0.9**	**-0.1**	**2.8**
Change in reserves	**3.7**	**8.5**	**29.6**	**21.7**	**-10.6**	**1.2**	**1.8**	**0.4**	**-5.1**	**-1.4**	**-2.3**	**-1.2**	**-6.9**	**-1.3**	**-3.2**
Goods and services exports, % YoY	1.6	58.1	63.0	58.6	60.8	27.7	4.7	-8.6	-31.8	-30.2	-22.4	-24.4	-2.9	1.7	-0.4
Goods and services imports, % YoY	2.3	40.0	32.1	22.5	12.6	-22.9	-11.8	-6.0	5.6	35.1	10.0	-6.5	-8.8	-7.5	4.1
Memo item															
Brent crude price, $ per barrel, quarterly average	61	69	73	80	98	112	98	89	82	76	86	83	82	85	79
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	92.7	90.8	90.6	89.2

* *Estimate.*

Sources: Bank of Russia, Argus.

EXTERNAL CONDITIONS IN 2021–2024, BY QUARTER

Table 6

Indicators	2021				2022				2023				2024		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
GDP, % YoY, average for the period															
USA	1.6	12.0	4.7	5.4	3.6	1.9	1.7	0.7	1.7	2.4	2.9	3.1	2.9	3.1	–
Euro area	-0.2	14.9	5.0	5.4	5.6	4.1	2.5	1.9	1.3	0.5	0.1	0.2	0.5	0.6	–
China	18.9	8.2	5.3	4.4	4.3	0.7	4.1	3.0	4.5	7.6	5.0	5.4	5.1	5.0	4.6
Inflation, % YoY, as of year-end															
USA (core PCE)	2.3	3.9	4.1	5.2	5.5	5.2	5.5	4.9	4.8	4.3	3.6	2.9	2.8	2.6	–
Euro area (core HICP)	0.9	1.0	2.0	2.7	3.0	3.7	4.8	5.2	5.7	5.5	4.4	3.4	2.9	2.8	2.7
China (core CPI)	0.5	0.9	1.1	1.0	0.9	0.8	0.4	0.5	0.6	0.3	0.8	0.6	0.6	0.5	0.0
Budget deficit, % of GDP, average for the period															
USA	-19.0	-11.7	-12.1	-10.9	-7.2	-4.2	-5.4	-5.5	-6.9	-8.5	-6.3	-6.5	-6.0	-5.6	–
Euro area	-8.2	-6.9	-6.2	-5.3	-4.2	-3.2	-3.2	-3.7	-3.8	-4.0	-3.9	-3.6	-3.5	–	–
China	-5.2	-4.3	-3.9	-3.8	-3.7	-5.3	-5.5	-4.7	-5.0	-3.9	-4.1	-4.6	-4.8	-4.9	–
Policy rate, % p.a., average for the period															
USA (upper bound)	0.25	0.25	0.25	0.25	0.29	0.95	2.37	3.84	4.69	5.16	5.43	5.50	5.5	5.5	5.4
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	4.0	4.0	4.0	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	3.5	3.5	3.5	3.4

Sources: national statistical agencies, US Fed, ECB, IMF, Investing.com, Bank of Russia calculations..

REQUIRED RESERVE RATIOS IN 2023–2024 *Table 7*
(%)

Period	Ruble liabilities of banks with a universal licence and NCIs	Ruble liabilities of banks with a basic licence	Foreign currency liabilities (other than in unfriendly countries' currencies) of banks and NCIs	Foreign currency liabilities (in unfriendly countries' currencies) of banks and NCIs
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	
01.01.2023–28.02.2023	3.00	1.00	5.00	

Note. Liabilities to non-resident legal entities, liabilities to individuals, and other liabilities.
For details, refer to the required reserve ratios.
Source: Bank of Russia.

REQUIRED RESERVE AVERAGING RATIOS IN 2023–2024 *Table 8*

Period	Banks	NCIs
From 01.01.2023	0.9	1.0

Source: Bank of Russia.

INTEREST RATES OF THE BANK OF RUSSIA'S MONETARY POLICY[1] AND RUONIA IN 2023–2024 *Table 9*
(% P.A.)

Period	Key rate	Key rate change, pp	RUONIA (average)	Standing overnight deposit facilities – the lower bound of the interest rate corridor	Open market operations: main auctions and fine-tuning auctions[2]	Standing liquidity providing operations[3]		Open market operations: long-term auctions[4]		
						Operations within the PM[5] – the upper bound of the interest rate corridor	Operations within the SM[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: key rate spread, pp			-1.00	0.00	+1.00	+1.75	+0.10	+0.25	+0.25	
From 28.10.2024	21.00	↑ 2.00		20.00	21.00	22.00	22.75	21.10	21.25	21.25
16.09.2024–27.10.2024	19.00	↑ 1.00	18.54	18.00	19.00	20.00	20.75	19.10	19.25	19.25
29.07.2024–15.09.2024	18.00	↑ 2.00	17.85	17.00	18.00	19.00	19.75	18.10	18.25	18.25
18.12.2023–28.07.2024	16.00	↑ 1.00	15.74	15.00	16.00	17.00	17.75	16.10	16.25	16.25
30.10.2023–17.12.2023	15.00	↑ 2.00	14.83	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	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	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	7.50	8.50	9.50	10.25	8.60	8.75	8.75
01.01.2023–23.07.2023	7.50	↓ -0.50	7.25	6.50	7.50	8.50	9.25	7.60	7.75	7.75

[1] *Including also interest rates within the SM for liquidity provision established 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 variable 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 variable interest rate linked to the Bank of Russia key rate. For one-month repos, a variable interest rate is applied beginning from 9 January 2023 (earlier, a fixed rate was set). Repo auctions have not been held in 2024. Loan auctions have not been held since April 2016.*
[5] *Before the introduction of the PM/SM – the interest rate on loans, repos and FX swaps for one day; from 1 March 2022 – on loans secured by non-marketable assets for 2 to 90 days; and from 25 March 2022 – on Lombard loans for 2 to 90 days.*
[6] *Before the introduction of the PM/SM – 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 2 to 90 days as well.*
[7] *Repos for one day and loans for 1 to 30 days, as well as the interest rate on FX swaps for one day that were suspended from April 2022.*
[8] *Repos for 1 to 180 days and loans secured by non-marketable assets for 1 to 180 days.*

Note. From 1 January 2016, the value of the Bank of Russia refinancing rate equals its key rate as of the corresponding date.
Source: Bank of Russia.

USE OF MONETARY POLICY INSTRUMENTS[1] IN 2023–2024 *Table 10*

(₽ BN)

Start of business	Standing overnight deposit facilities	Open market operations				Standing liquidity providing operations			
		Main and fine-tuning deposit auctions	Main and fine-tuning repo auctions	Long-term repo auctions		Overnight loans	Repos[2]	Lombard loans[2]	Loans secured by non-marketable assets[2]
	1 day	1 week and from 1 to 6 days	1 week and from 1 to 6 days	1 month	1 year	1 day	From 1 to 180 days	From 1 to 30 days	From 1 to 180 days
01.10.2024	1,511.9	3,368.3	0.0	0.0	0.0	0.0	392.3	11.2	5,118.2
01.07.2024	1,245.5	2,303.7	0.0	0.0	113.6	0.0	30.0	11.2	1,584.8
01.04.2024	1,081.3	2,123.4	0.0	0.0	451.3	0.0	56.8	29.3	2,198.0
01.01.2024	1,038.4	2,341.3	0.0	101.5	783.0	0.1	11.2	34.3	2,229.4
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

[1] *The Bank of Russia's claims on liquidity providing instruments and liabilities on liquidity absorbing instruments.*

[2] *Including liquidity providing operations of both the PM and SM. Until 16 October 2023 – repos for one day, Lombard loans for 1 to 90 days, and loans secured by non-marketable assets for 1 to 549 days.*

Source: Bank of Russia.

INTEREST RATES ON THE BANK OF RUSSIA'S SPECIALISED FACILITIES[1] IN 2023–2024 *Table 11*

(% P.A.)

Period	Support for large investment projects	Support for economic activities (loans secured by insurance contracts of JSC Russian Agency for Export Credit and Investment Insurance[2]	Support for SMEs against sureties from JSC Russian Small and Medium Business Corporation or backed by OFZs[3]
	Up to three years	Up to three years	Up to three years
Rule	The lower of the two interest rates: 9.00% p.a. or the key rate reduced by 1.00 pp	Key rate reduced by 1.50 pp[4]	Key rate reduced by 1.50 pp
From 28.10.2024	9.00	19.50	19.50
16.09.2024–27.10.2024	9.00	17.50	17.50
29.07.2024–15.09.2024	9.00	16.50	16.50
13.05.2024–28.07.2024	9.00	14.50	14.50
18.12.2023–12.05.2024	9.00	–	14.50
30.10.2023–17.12.2023	9.00	–	13.50
18.09.2023–29.10.2023	9.00	–	11.50
17.08.2023–17.09.2023	9.00	–	10.50
15.08.2023–16.08.2023	9.00	6.50	10.50
24.07.2023–14.08.2023	7.50	6.50	7.00
01.01.2023–23.07.2023	6.50	6.50	6.00

[1] *Liquidity providing facilities aimed at encouraging bank lending to certain industries the development of which is limited by structural factors. Within the framework of these facilities, the Bank of Russia provides funds to credit institutions at lower interest rates and for longer periods, compared to the PM and SM operations. Interest rates on new loans issued over the specified period that were approved by the Bank of Russia Board of Directors.*

[2] *No new loans were issued from 17 August 2023 to 12 May 2024.*

[3] *Loans issued from 20 June 2023 and secured by OFZs.*

[4] *The rule for determining the interest rate changed from 1 March 2023; previously, the lower of the two interest rates was applied: 6.50% p.a. or the key rate.*

Source: Bank of Russia.

USE OF THE BANK OF RUSSIA'S SPECIALISED FACILITIES[1] IN 2023–2024 *Table 12*
(₽ BN)

Start of business	Bank of Russia claims on credit institutions, total	Support for large investment projects	Support for economic activities (loans secured by insurance contracts of JSC Russian Agency for Export Credit and Investment Insurance[2]	Support for SMEs through JSC SME Bank[3]	Support for SMEs against sureties from JSC Russian Small and Medium Business Corporation or backed by OFZs[4]	Support for SMEs in the industries hardest hit by the spread of the novel coronavirus infection[5]	Support for SME in 2022[6]
		Up to three years	Up to three years	Up to three years	Up to three years	Up to 18 months	Up to one year
Limit as of 1 October 2024		150.0	75.0		320.0		–
01.10.2024	267.8	18.2	52.9	–	196.7	–	–
01.07.2024	296.2	19.1	58.4	0.02	218.7	–	–
01.04.2024	292.3	21.0	34.5	0.02	236.8	–	–
01.01.2024	323.4	23.9	47.5	0.02	252.0	–	–
01.10.2023	332.2	26.2	66.7	0.2	236.7	2.4	–
01.07.2023	329.7	29.6	52.4	0.4	230.0	14.9	2.4
01.04.2023	354.5	32.7	47.1	0.7	202.4	32.0	39.6
01.01.2023	329.5	37.3	45.4	0.9	139.0	39.8	67.1

[1] *Liquidity providing facilities aimed at encouraging bank lending to certain industries the development of which is limited by structural factors. Within the framework of these facilities, the Bank of Russia provides funds to credit institutions at lower interest rates and for longer periods, compared to the PM and SM operations.*
[2] *No new loans were issued from 17 August 2023 to 12 May 2024.*
[3] *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.*
[4] *Loans issued from 20 June 2023 and secured by OFZs.*
[5] *Loans issued from 1 November 2021 to 30 December 2021 and from 24 January 2022 to 1 May 2022.*
[6] *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.

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 main 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 framework of 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. The BCI is built similarly to the method of Germany's ifo economic institute and shows both actual and expected changes in output and demand.

CLAIMS OF THE BANKING SYSTEM ON THE ECONOMY
The banking system's claims on the economy mean all claims of the banking system on non-financial and financial organisations and households in rubles, foreign currency 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 participation in non-financial and financial organisations' equity, and other receivables on settlements with non-financial and financial organisations and households.

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. The CPI 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 measure of inflation characterising its underlying component. Core inflation is quantified based on the core CPI. The difference between the core CPI and the CPI is that the former is calculated excluding changes in prices for certain products and services that are influenced by administrative and seasonal factors (certain categories of fruit and vegetables, passenger transport services, communications, 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
Domestic government securities issued by the Ministry of Finance of the Russian Federation as part of 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. The Bank of Russia may conduct foreign exchange transactions in the domestic market in connection with fiscal rule-based operations, carried out by the Ministry of Finance, to mirror foreign exchange transactions with the NWF's resources and in case of a threat 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 and non-food products 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 their economic decisions and 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 main 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; and the central bank seeks to provide clear guidance to households and businesses, including through enhancing communication transparency.

INTEREST RATE SWAP (IRS)
A financial contract between two parties who agree to regularly pay interest in a certain currency at specified periods on the notional principal amount being the subject of the swap. One of the parties pays interest at a fixed rate set when the transaction is concluded, and the other party pays interest at a variable rate (a market rate which can be either LIBOR or a variable coupon bond rate).

LIQUIDITY ABSORBING OPERATIONS
Operations conducted by the Bank of Russia to absorb liquidity from credit institutions on a repayable basis. These are operations to either raise deposits or offer 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. When the key rate is neutral, monetary policy neither accelerates nor decelerates inflation.

OUTPUT
The total value of goods and services generated by residents of the economy over a period under review. GDP is one of the measures of output. GDP characterises the total value of goods and services

produced in an economy by all industries and intended for final consumption, accumulation, and exports (excluding imports).

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 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, and 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 surplus of liquidity and the Bank of Russia needs to conduct 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 maintaining 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 rate, credit, foreign exchange, balance sheet, inflation expectations channels, etc.).

ABBREVIATIONS

AP – averaging period

API – application programming interface ensuring communication between information systems

B2B – business-to-business

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 – customer-to-business

C2C – customer-to-customer

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 Fixed Interest Rate

DSTI – debt service-to-income ratio

EAEU – Eurasian Economic Union

ECB – European Central Bank

ECI – expected cash inflow

ECO – expected cash outflow

EGSA – electricity, gas, steam and air conditioning supply

ELB – effective lower bound

EME – emerging market economy

FG – forward guidance (a central bank's signal regarding its monetary policy)

FT – Federal Treasury

FX – foreign exchange

GDP – gross domestic product

GFC – global financial crisis of 2007–2008

HLA – highly liquid asset

IBL – interbank lending

ICL – irrevocable credit line

IIA – individual investment account

IMF – International Monetary Fund

InFOM – Institute of the Public Opinion Foundation

IPO – initial public offering

IRS – interest rate swap

JSC – joint-stock company

LCR – liquidity coverage ratio

LLC – limited liability company

Ministry of Economic Development – the Ministry of Economic Development of the Russian Federation

Ministry of Finance – the Ministry of Finance of the Russian Federation

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

NCI – non-bank credit institution

NECO – net expected cash outflow

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

p.a. – per annum

PCE – personal consumption expenditure price index

PIT – personal income tax

PM – primary mechanism for providing liquidity

pp – percentage point

PPP – purchasing power parity

QE – quantitative easing

QPM – quarterly projection model

Rosstat – Federal State Statistics Service

RR – required reserves

RUONIA – Ruble Overnight Index Average (weighted average interest rate on overnight interbank ruble loans (deposits))

SA – seasonally adjusted

SAAR – seasonally adjusted annualised rate

SICI – systemically important credit institution

SM – supplementary mechanism for providing liquidity

SME – small and medium-sized enterprise

TSA – Treasury Single Account

UBS – Unified Biometric System

US Fed – US Federal Reserve System

VAT – value added tax

YCC – yield curve control

ZLB – zero lower bound