Bank of Russia

Q2–Q3 2023

FINANCIAL STABILITY REVIEW

Information and analytical review

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SUMMARY

In Q2–Q3 2023, the Russian economy witnessed a rapid rebound in domestic demand, supported by strong increase in both retail and corporate lending. The boom in consumer and mortgage lending was accompanied by a significant deterioration in the lending standards. Hence, to mitigate the related risks, the Bank of Russia tightened its macroprudential policy. The ruble weakened and volatility in the foreign exchange market increased as exporters' foreign currency earnings declined and demand for imports grew. At the same time, significant pro-inflationary risks materialised: the growth of domestic demand outpacing the possibilities of output expansion as well as the depreciation of the ruble in the summer. In order to limit the scale of pro-inflationary processes and bring inflation back to the target of close to 4% in 2024, the Bank of Russia has raised the key rate from 7.5% to 15% per annum since July 2023.

Global markets also witnessed higher borrowing costs, which provokes concerns about potential risks to financial stability of vulnerable sectors. Higher interest rates in Russia have already started to gradually cool down lending activity. The Bank of Russia expects that in the medium term both the real and financial sectors will remain resilient in the face of increased interest rates.

As opposed to the cases of 2014 and 2022 when the Bank of Russia tightened its monetary policy in crisis conditions to mitigate financial stability risks, in 2023 the key rate was raised amid the rapid economic recovery in order to temper inflation. Therefore, demand of households and companies for loan restructuring does not increase significantly, while banks and non-bank financial institutions (NBFIs) do not need regulatory easing (on the contrary, the Bank of Russia continues to gradually roll back the previously implemented support measures). In the long term, a decrease in inflation and inflation expectations will contribute to macroeconomic stability and a gradual key rate reduction.

Nevertheless, the vulnerabilities identified by the Bank of Russia in the previous reviews, namely a high percentage of households with high debt burden and imbalances in the mortgage market, are still relevant. To limit these vulnerabilities, the Bank of Russia is implementing macroprudential measures.

The real sector remains resilient owing to its relatively low debt (as of 1 July 2023 the debt of non-financial companies in the Russian Federation amounted to 50.6% of GDP, the debt of households – 20.4% of GDP, public debt – 16.1% of GDP[1], compared to 98.5%, 62.6% and 92.2% of GDP[2], respectively, in the G20 countries). A high level of interest margin (4.8% over Q3 2023)[3] and a significant capital buffer in the banking sector ensure its resilience to materialisation of interest rate risk and potential external shocks.

Global risks

The persistently high interest rates of major central banks amid still elevated inflation increase the risks to the global economy and financial stability. In this regard, expectations are growing among market participants that interest rates will remain higher for longer. High interest rates, coupled with structural shifts in the energy market, hinder economic activity, with the most considerable slowdown observed in Europe (Germany, Italy and the UK).

[1] The calculations are based on the Bank of Russia's data on the extended indicator of the non-financial sector's and households' debt, the statistics of the Russia's Ministry of Finance on external and internal government debt as of 1 July 2023, and Rosstat's information on annual GDP as of 1 July 2023.

[2] The total figures for the G20 countries calculated by the Bank for International Settlements as of 1 April 2023.

[3] Quarterly net interest margin (NIM) for all banks, except the Bank of Non-core Assets.

Similarly to the previous episodes of global monetary policy tightening, higher cost of borrowing involves risks to the economic agents with accumulated vulnerabilities, primarily high debt burden. The world is already facing a growing number of corporate defaults, price correction in housing markets amid record-high mortgage rates, and challenges in the commercial real estate market. As to financial institutions, higher interest rates might cause materialisation of interest rate and credit risks. Vulnerabilities of NBFIs are associated with the implementation of investment strategies based on the use of leverage and derivatives. Countries with high public debt are facing increasing fiscal and debt risks, which entails a rise in long-term sovereign bond yields to the highest levels over the last 10–15 years. Budget deficits have expanded over the past few years due to increased government expenditures during the pandemic in 2020–2021 and the energy crisis in 2022. Consequently, public debt in many countries persistently exceeds the pre-pandemic levels. Moreover, debt service costs are rising, which might pose risks to fiscal and debt sustainability.

The situation in emerging market economies (EMEs) is more favourable. However, amid interest rate hikes in advanced economies, EMEs are facing capital outflows and rising volatility in domestic financial markets. Considering sanctions and foreign exchange restrictions, the dynamics of foreign capital flows is much less important for the Russian market, and changes in demand and prices for exports remain the key channel of influence. Amid increased linkages with friendly countries materialisation of risks in their financial systems could also affect Russia.

The geopolitical situation in the Middle East is an additional factor of global instability. In such conditions, volatility in the global stock and commodity markets might notably increase, and inflation might remain elevated.

Vulnerabilities and resilience of the Russian non-financial sector

Companies' exposure to sanctions

Amid persistent sanction pressure, higher import prices, and more complicated logistics chains, the Russian corporate sector is looking for opportunities to better adjust to the new environment. Output and exports in the oil and gas industry contracted. Over the period under review[4], unfriendly countries did not change the oil embargo terms, but imposed secondary sanctions. Companies continue to switch from US dollars and other 'toxic' currencies in international settlements. However, due to these alterations in the payment infrastructure, it takes more time to receive revenues for supplied energy resources.

Some signs of improvement in operating performance of the industries most affected by the sanctions and the exit of foreign companies (commercial real estate, automotive industry, and aviation sector) have been seen. Nevertheless, the financial position of certain industries still depends significantly on government support and on the success in finding new sales markets. The intensifying sanction pressure (including the implementation of secondary sanctions) complicates parallel imports and the supply of components, which hinders the recovery in the industries.

Assessment of the Russian non-financial companies' resilience

The majority of large Russian export-oriented companies reported lower profitability and deterioration of debt burden indicators as of the end of H1 2023. The main reasons were the unfavourable price environment in the commodity market, incomplete substitution of exports to Europe by supplies to Asia, and revaluation of the debt nominated in foreign currencies due to the ruble weakening.

Non-financial companies' demand for ruble loans remains high, whereas the share of the foreign currency portfolio is shrinking. The increase of the key rate didn't lead to extensive restructuring in July–September 2023. However, if the key rate remains high, clients already experiencing financial difficulties (declining demand for goods coupled with high debt burden) may require restructuring.

[4] Hereinafter the reporting period is Q2–Q3 2023.

Large investment projects might become less profitable, but, given their long-term nature, the impact of a temporary rate hike will be limited. The calculations show that the corporate sector will remain resilient in 2023–2024 even if the key rate is maintained at the upper bound of the Bank of Russia's forecast range.[5]

Vulnerabilities of the Russian financial sector

Volatility in the foreign exchange market and limited access to payment infrastructure in 'toxic' currencies

In January-September 2023, Russia's current account surplus of the balance of payment significantly reduced year-on-year (from USD 196 billion to USD 43 billion), which adversely affected the ruble exchange rate in Q2–Q3 2023. The depreciation of the ruble this time in contrast to the episodes in 2014–2015 and 2022, was not accompanied by any signs of financial instability. Firstly, households' confidence in ruble savings did not decrease, and the demand for foreign currency did not expand. Secondly, banks reported profits, rather than losses associated with foreign exchange risk. Besides, they managed to significantly reduce their exposure to foreign exchange risk: the ratio of open foreign exchange position to capital declined from 10% as of the beginning of 2023 to 7% as of 1 October 2023.

At the same time, higher foreign exchange risks caused elevated volatility and reduced the liquidity in the foreign exchange market. Although the overall trading amount remained high, exporters' net sales in the summer months decreased, just as the market depth: smaller amounts of foreign currency purchases (e.g., by importers) started to impact the exchange rate more strongly. Due to uneven foreign trade flows, certain market segments have been facing short-term periods of foreign currency liquidity shortage.[6] In view of this, the Bank of Russia adjusted several times the schedule of its fiscal rule-based operations in FX market.[7]

The transformation of external economic activity caused the shift in the structure of exchange FX trading towards friendly countries' currencies, primarily the Chinese yuan (CNY, yuan). The situation with correspondent accounts in 'toxic' currencies has been worsening, but increasingly more accounts are being opened in friendly countries' currencies. The role of the offshore ruble market has been strengthening, while still remains limited: the amount of foreign banks' funds in correspondent accounts and deposits with Russian credit institutions in rubles has been sufficiently stable over the past year, approximating RUB 0.5 trillion as of 1 October 2023. The use of the ruble in foreign trade settlements, in particular payments for imports, is accompanied by elevated demand from non-resident banks from friendly countries for foreign currencies in the Russian market. Similarly, buyers of Russian exports generally exchange foreign currencies for rubles directly in the Russian market.

Owing to the rebound in oil prices which started in July, the Russian market recorded a rise in exporters' net sales of foreign currency in September–October. The increase of the key rate by the Bank of Russia is contributing to the adjustment of imports and making the ruble more attractive as a store of value. The requirement obliging major exporters to sell foreign currency earnings introduced in October is also contributing to higher foreign currency sales and to decreasing short-term volatility in the market.

Individuals' investments in foreign instruments

Investments in foreign instruments involve elevated risks (credit, infrastructure and sanction risks) for the households. In the reporting period, these risks materialised: the U.S. Department

[5] According to the Bank of Russia's medium-term forecast presented following the Board of Directors' key rate meeting on 27 October 2023.

[6] The cost of borrowings in US dollars and euros temporarily increased in August.

[7] http://www.cbr.ru/eng/press/event/?id=16997 http://www.cbr.ru/eng/press/event/?id=17047

of the Treasury enacted sanctions against PJSC SPB Exchange that had to suspend trading in all foreign securities (US shares accounted for the largest proportion in trading). The Bank of Russia had restricted the sales of foreign shares to non-qualified investors from 1 October 2022 and banned them completely starting from 1 January 2023.

In Q2–Q3 2023, individuals reduced the amount of cross-border transfers by 46.7% compared to the previous six months (to RUB 1.54 trillion) and were actively expanding investments in Russian instruments. Adjusted for foreign currency revaluation, the share of individuals' savings in foreign financial instruments shrank by 1.6 pp to 20.2% from 1 April 2023 to 1 October 2023. The decline is associated with the surge in households' ruble-denominated deposits and growth in the amount of ruble cash. In addition, individuals increased purchases of Russian shares and bonds. Individuals' interest in the Russian stock market enables companies to expand long-term financing and raise capital. To bolster this trend, it is critical to maintain retail investors' confidence.

Households' debt burden

Unsecured consumer lending was increasing faster (+16% YoY as of 1 November 2023) than household incomes[8], which can lead to higher household debt burden in the future. As of the end of Q3 2023, loans to borrowers with debt service-to-income ratio (DSTI) exceeding 50% accounted for 63% of the unsecured consumer loan portfolio, and loans to borrowers with DSTI above 80% – for 31% of the portfolio. In view of this, the Bank of Russia implemented macroprudential measures aimed at both improving the lending structure and enabling banks to form a capital buffer for risky loans: from 1 September 2023, the regulator significantly raised the risk-weight add-ons for consumer loans, and from 1 October 2023 and 1 January 2024, it tightened macroprudential limits (MPLs). These measures will help limit the risks of households' over-indebtedness.

Imbalances in the residential real estate market and risks of project financing

At the end of Q3 2023, there was still a number of imbalances in the residential real estate market. First of all, overheated demand for new homes due to the long-lasting subsidised mortgage lending programme and the spread of risky practices in mortgage lending continued to affect the housing market: as of 1 October 2023, the price gap between the primary and secondary housing markets reached 42%. Secondly, the surge in mortgage lending (+34% YoY as of 1 November 2023) was largely associated with the expansion of mortgages on riskier groups of clients. Thus, the percentage of borrowers whose DSTI exceeded 80% hit an all-time high in Q3 2023 (47% of all issued mortgages), while loans with a down payment of less than 20% accounted for over 50% of all issued loans. Given these circumstances, the Bank of Russia decided to set the macroprudential add-ons for the riskiest loans at, in fact, prohibitive level taking effect from 1 October 2023.

Against the backdrop of the key rate hikes, mortgage lending in the secondary housing market is slowing down, that will contribute to the decrease in demand in the primary market as well (where the subsidised mortgage programmes are still supporting sales at a high level). Amid declining sales and decreased loan coverage with funds on escrow accounts, the cost of construction financing will increase. Meanwhile, interest rates for developers are lower than for corporate borrowers in general owing to the accumulation of funds on escrow accounts, and most projects are sufficiently stable.

Interest rate risk

Tighter monetary policy has created conditions for the materialisation of interest rate risk. The interest rate risk of the trading book is materialising fast: the rise in interest rates in the economy (yields on federal government bonds (OFZ) in July-October 2023 went up by 310 bp on average along the curve) is driving down bond prices. Investment in ruble-denominated bonds in the banking sector's portfolio totals RUB 18.1 trillion at face value, but a large proportion of bonds are carried at amortised cost (the securities are not subject to revaluation and are held to maturity). Furthermore,

[8] Average per capita money income rose by 10.7% in Q3 2023 year-on-year.

a considerable part of them are variable coupon bonds. The negative revaluation of the portfolio recognised at market value amounts to RUB 299.6 billion from the beginning of the summer (1.6% of its face value or 2.0% of banking sector capital).

In the medium term, interest rate risk might be expected to materialise in the banking book, which might squeeze banks' net interest margin (NIM). Banks are still exposed to the banking book interest rate risk, given a traditionally significant share of short-term liabilities. The basic assessment of this risk associated with interest rate increase from 7.5% to 15% is nearly RUB 0.6 trillion of lost net interest income (NII) over a one-year horizon, equivalent to 0.5 pp of NIM. However, given the high level of NIM (4.8% in Q3 2023), this will not have a notable effect on banks' financial resilience.

Assessment of the financial sector resilience

Banking sector

In 2023, the financial position of credit institutions has been stable amid growing NII and gains from foreign currency revaluation. As a result, the banking sector's profitability notably increased[9]: from 1 April 2023 to 1 October 2023, annual return on assets rose from 1.1% to 2.6% and return on capital – from 10.7% to 26.5%. Banks' capital adequacy slightly declined amid the expansion of the loan portfolio, but stays close to 12%.

The situation with banks' liquidity has remained acceptable recently, including due to the fact that banks have enough liquid assets for refinancing at the Bank of Russia. However, the supply of liquid assets has considerably contracted due to the accelerated growth of the loan portfolio. To enhance banks' resilience, the Bank of Russia decided to cancel the regulatory easing related to liquidity risk. The Bank of Russia decided to withdraw the easing related to the liquidity coverage ratio (LCR) from 1 March 2024 and the net stable funding ratio (NSFR) from 1 January 2024. This will help improve the situation with the management of short-term liquidity by systemically important banks (SIBs) as well as create a level-playing field for banks. SIBs will be temporarily allowed to use irrevocable credit lines to ensure compliance with the LCR. In addition, in 2025–2026, the Bank of Russia plans to implement a new domestic liquidity coverage ratio.[10]

Non-bank financial institutions

High capital adequacy and positive financial results in H1 2023 allowed non-bank financial institutions (NBFIs) to absorb negative effects of Q3 2023 interest rates hikes. Insurers have also managed to cope with another stage of the regulatory tightening, showing only a slight decline in the required ratio of equity and liabilities (-5.8 pp to 202.9% as of 30 September 2023). Non-governmental pension funds (NPFs) significantly increased their capital (+39.4% YoY) and are preparing to launch the long-term savings programme. Brokers' foreign exchange risks declined as a result of the reduction in investment in foreign assets. Only a number of leasing companies are at risk, mostly operating in the industries hardest hit by the sanctions.

[9] For all credit institutions, except the Bank of Non-core Assets.

[10] Bank of Russia press release, dated 23 November 2023.

1. GLOBAL RISKS

Exposure of Russian economy and financial sector to global risks is limited due to sanctions and capital controls. The main channel for transmission of global risks are foreign trade flows. If the problems in the world economy become more acute, a decline in the demand and/or prices for Russian exports might have a negative effect.

The growth of the global economy is decelerating as the implications of high policy rates are becoming more apparent. Besides, in contrast to the USA where the economic situation is steadier, Europe is facing a decrease in economic activity. Currently, the main threat to the global economy is the risk of persistently high inflation, which might force major central banks to pursue tight monetary policies for longer. In this context, volatility in financial markets is increasing, expectations of higher interest rates for an extended period are rising, and global financial stability risks are growing. The escalation of the situation in the Middle East is an additional factor of instability.

Global growth is slowing down as the effects of the monetary policy tightening materialise and the period of the post-pandemic recovery is completing.

GDP GROWTH, IMF FORECAST AS OF OCTOBER 2023 *Table 1*
(%)

	2021	2022	Forecast as of October 2023		Difference vs forecast as of July 2023 (pp)	
			2023	2024	2023	2024
Global GDP growth	**6.2**	**3.5**	**3.0**	**2.9**	**0.0**	**-0.1**
Advanced economies	**5.4**	**2.6**	**1.5**	**1.4**	**0.0**	**0.0**
USA	5.9	2.1	2.1	1.5	0.3	0.5
UK	7.6	4.1	0.5	0.6	0.1	-0.4
Euro area	5.3	3.3	0.7	1.2	-0.2	-0.3
Germany	2.6	1.8	-0.5	0.9	-0.2	-0.4
France	6.8	2.5	1.0	1.3	0.2	0.0
Italy	6.7	3.7	0.7	0.7	-0.4	-0.2
Spain	5.5	5.8	2.5	1.7	0.0	-0.3
Japan	2.1	1.0	2.0	1.0	0.6	0.0
EMEs and developing economies	**6.7**	**4.1**	**4.0**	**4.0**	**0.0**	**-0.1**
China	8.4	3.0	5.0	4.2	-0.2	-0.3
India	8.7	7.2	6.3	6.3	0.2	0.0
Russia	4.7	-2.1	2.2	1.1	0.7	-0.2
Brazil	5.0	2.9	3.1	1.5	1.0	0.3
South Africa	4.9	1.9	0.9	1.8	0.6	0.1
Mexico	4.7	3.9	3.2	2.1	0.6	0.6

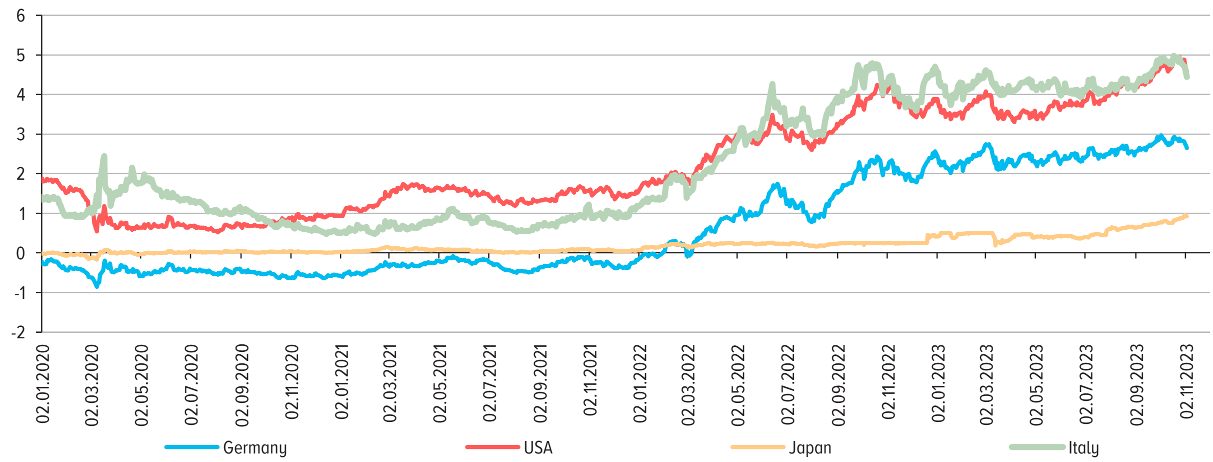
Source: IMF.

According to the IMF, the growth of global GDP will decelerate from 3.5% in 2022 to 3% in 2023 and 2.9% in 2024 (Table 1). Besides, the most expected scenario in the USA is soft landing, which means that the country will be able to avoid a recession. The outlook is now more favourable because the US regulators have managed to mitigate the banking sector's problems (although they have not been eliminated), among other reasons. As regards Europe and China, the growth forecasts in these countries are worse than expected before. A lower number of new orders and higher costs in European countries are causing a contraction in output. In August–October, the euro area was experiencing a more considerable decline in business activity in manufacturing compared to early 2023, while the rise in services reversed to a decrease (PMI indices in manufacturing and services equalled 43.1 and 47.8 points, respectively, in October). The IMF expects Germany's GDP to drop by 0.5% in 2023. China is experiencing a decline in demand and persistent problems in the real estate market (see Box 1).

Despite the deceleration of economic growth, inflation in advanced economies stays high. Moreover, inflation might not only remain elevated over a short-term horizon, but also speed up abruptly, as in 2021 and 2022. A new surge of inflation might be provoked by higher prices for energy commodities, among other factors. Oil prices started to go up in summer 2023. By the end of September 2023, the Brent crude price reached USD 97 per barrel. The increase in oil prices was fuelled by an expected deficit in the global oil market, including due to additional oil production and export cuts introduced by Russia and Saudi Arabia until the end of 2023. Further on, expectations of a more significant slowdown of global growth started to limit the rise in oil prices (on 22 November 2023, the Brent price dropped to USD 81.7 per barrel). Nevertheless, it is still possible that the aggravation of the conflict in the Middle East and rising geopolitical tensions might entail an increase in oil and gas prices and, at a new stage, exacerbate the energy crisis. In addition, there might be new disruptions in logistics chains, which will induce a surge in freight costs and insurance premiums as the Middle East is an important logistics route.

As inflation risks persist, major central banks' signal remains sufficiently tough. In September 2023, the US Fed raised the forecast of the federal funds rate for 2024 from 4.6% to 5.1% per annum (the current range is 5.25–5.50% per annum). The ECB states that it is ready to maintain high policy rates for long enough to reduce inflation. Market participants expect that interest rates will remain higher for longer. Thus, on 19 October 2023, the key global benchmark of 10-year US Treasury yields (UST) rose to 5% (Chart 1), which is the highest level since 2007 (as of 22 November 2023, it dropped to 4.4%). European countries are also demonstrating a notable increase in government

TEN-YEAR GOVERNMENT BOND YIELDS IN LEADING ECONOMIES *Chart 1*
(%)



Source: Cbonds.

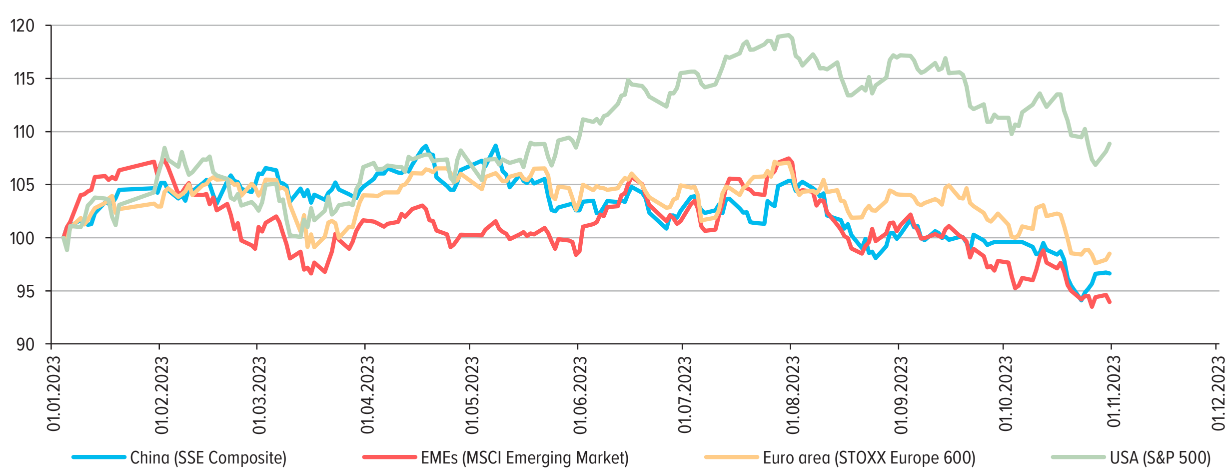
bond yields. Specifically, 10-year bond yields in Italy peaked at the 2012 levels, while this country has the second largest government debt in the EU after Greece. From the end of October, government bond yields edged down, but risks persist nonetheless. High interest rates amplify interest rate risk on the countries' balance sheets and their exposure to refinancing risks (considering the already large government debts and significant budget deficits). The rise in sovereign risks might affect financial stability in general if risks in the banking sector spiral out of control, as during the European debt crisis in 2010–2012.

Uncertainty about global growth prospects is also causing a negative revaluation of share prices and higher volatility in foreign exchange markets. Stock indices declined over August–October 2023 in both advanced economies and emerging market economies (EMEs) (Chart 2). Over the specified period, the US S&P 500 stock index dropped by 8.6%, the European STOXX Europe 600 – by 8.0%, and MSCI Emerging Markets (the index capturing share prices in EMEs) – by 12.6%. The US dollar in foreign exchange markets was strengthening against the key global currencies (the US Dollar Index (DXY) was up to 107 points as of 31 October, which is the highest level since November 2022) and many EMEs' currencies (on average, the currencies of 14 major countries weakened by 4.6% over August–October 2023; Table 2).

The depreciation of national currencies against the US dollar might potentially hinder the countries' efforts to temper inflation, reduce the opportunities for boosting economic growth, and involve financial stability risks. In these conditions, regulators are employing various instruments to mitigate the adverse implications depending on internal imbalances in particular countries (dependence on imports and foreign investors, large foreign currency debts). Japan still pursues accommodative monetary policy, although increasing verbal interventions to support the yen. China is simultaneously implementing expansionary measures to support the economy and measures to limit the weakening of the yuan (see Box 1). Central banks in some EMEs (Turkey, Thailand, and Russia) have been raising their policy rates in order to mitigate inflationary risks. A number of EMEs (Brazil, Peru, Chile, and Poland) switched to decreasing their policy rates amid decelerating inflation, but might need to adjust their policies if inflation speeds up. In the case of the negative scenario, massive UST sales due to foreign exchange interventions might provoke an additional rise in UST yields.

Thus, there is increasing uncertainty about the prospects of the world economy and future market trends. Furthermore, higher interest rates amplify financial stability risks.

GLOBAL STOCK INDICES (04.01.2023 = 100) *Chart 2*



Source: Cbonds.

CHANGES IN EMES' KEY FINANCIAL MARKET INDICATORS *Table 2*

Country	Changes in EMEs' indicators over 1 August – 31 October 2023			
	Exchange rates against USD	Stock index	10-year government bond yields	General ranking (1 – the worst, 15 – the best)
	%	%	bp	
Turkey	-4.9	4.1	920	1
Chile	-6.2	-15.7	135	2
Mexico	-7.3	-10.5	146	3
Colombia	-4.9	-7.4	153	4
Thailand	-5.3	-11.3	70	5
Brazil	-6.2	-7.2	102	6
South Africa	-4.2	-11.8	46	7
Philippines	-3.7	-9.4	60	8
Indonesia	-5.2	-2.6	83	9
China	-2.4	-8.3	1	10
Malaysia	-4.9	-1.2	25	11
Poland	-5.0	-0.9	24	12
Russia	-2.3	4.1	133	13
India	-1.3	-4.0	18	14
Hungary	-2.7	5.0	22	15
14 EMEs excluding Russia	**-4.6**	**-5.8**	**129**	–

Thresholds	Changes in indicators		
	Exchange rates against USD (%)	Stock index (%)	Yields on 10-year government bonds (bp)
Min.	-10.0	-10.0	-150
	0.0	0.0	0
Max.	10.0	10.0	150

Source: Cbonds.

Corporate debt risks. Higher interest rates increase the cost of servicing of accumulated debts and the cost of new borrowings. In this context, the number of corporate debt defaults worldwide continues to increase. According to S&P, in August, their number reached the highest monthly tally since 2009. The situation worsened in both advanced economies (the USA and Europe) and EMEs. As estimated by the IMF, global corporate refinancing needs in 2024 will total more than USD 5 trillion, with approximately half accounted for by US companies.

Commercial real estate (CRE) market. Considering the CRE market's size and interrelations with the financial system and the real economy, the implications of stress in this sector might notably affect financial stability. According to the IMF, CRE-related debt equates to nearly 12% of GDP in Europe and 18% of GDP in the USA. The prospect of interest rates remaining higher for longer, combined with declining property valuations, will keep refinancing conditions strained in the CRE sector.

Risks of weakening of the banking sector's resilience. Extensive problems associated with negative revaluations of debt securities and the need to fix the losses in the case of a deposit outflow might become a source of instability. Although the US regulators managed to tackle such issues in spring 2023, they have not been eliminated completely considering that regional banks have significant volumes of held-to-maturity long-term securities on their balance sheets (unrealised losses). Banks in many countries are exposed to escalation of credit risks.

Higher vulnerability of NBFIs. Asset prices decline in the case of fire sales might entail potential contagion across various market segments, including insurers and pension and investment funds that have invested in respective financial instruments. NBFIs implementing leveraged investment strategies based on expectations of fast disinflation are the most vulnerable. If inflation stays persistently elevated, NBFIs might be forced to unwind their positions. Besides, the Financial Stability Board (FSB) warns that some hedge funds have very high levels of synthetic leverage, which involves raising debt using complex derivatives that frequently does not show up on balance sheets. As opposed to banks, NBFIs do not have access to regulators' liquidity support mechanisms, which might increase market participants' distrust.

Rising fiscal and debt risks. In recent years, countries increased their budget expenditures, which was associated with the need to boost economic growth (first, amid the pandemic, and then in the conditions of rising inflation and energy commodity prices) and the geopolitical tensions. However, many countries have limited opportunities to increase their government debt as its level already exceeds pre-pandemic figures, while the government debt-to-GDP ratio is growing. In such a situation, countries might find it difficult to comply with their plans for ensuring their budget systems' debt sustainability. Moreover, implications for financial stability might be more extensive in the case of sovereign-bank nexus.

In the negative scenario, materialisation of financial stability risks might entail a global recession. Besides, more severe geoeconomic fragmentation and geopolitical upheaval might aggravate the situation even more as they hinder cross-border capital and labour flows, reduce welfare, and alter logistics chains. Analysts estimate that losses from deglobalisation might reach 12% of global GDP.

Box 1. Estimates of macroeconomic stability of some Russian trading partners

Potential risks to EMEs' macroeconomic stability have risen amid higher uncertainty about the prospects of the world economy and growing volatility in global financial markets.

Turkey is experiencing persistent structural imbalances in the economy, including the current account deficit and the budget deficit. Since a new team to manage the economy was formed after the presidential election in May 2023, the goal has been to stabilise the economic situation in the country by cooling off domestic demand with higher interest rates and restrictions on gold imports (gold remains a popular savings instrument amid the depreciation of the national currency). The government announced a more realistic macroeconomic programme that committed to reducing inflation and building back reserves and projects the current-account deficit narrowing from 4% of GDP in 2023 to 3.1% in 2024. The central bank switched to monetary policy tightening, having raised its key interest rate from 8.5% to 40% per annum beginning from June 2023. One of the new economic team's priorities is to curb credit expansion. Nevertheless, annual inflation in Turkey remains high, having reached 61.4% in October. The Turkish lira continues to depreciate against the US dollar, having lost 18.2% of its value during the period since the start of the policy rate increase on 22 June until 22 November 2023.

In May–September 2023, the annual growth rates of exports and imports in **China** were negative and annual inflation stayed close to zero. Besides, the index of producer prices continued to fall. However, in October, the situation improved, with the annual growth rate of imports turning positive and the annual expansion in retail and industrial production accelerating.

To support the economy, the government is implementing expansionary measures, in particular the People's Bank of China (PBC) has begun decreasing interest rates. In August 2023, the PBC cut interest rates on standing refinancing facilities, the one-year medium-term lending facility (MLF) rate, and the one-year loan prime rate (LPR). However, problems in the real estate sector persist: Chinese developers are facing a slump in housing sales, and a number of large developers are on the brink of defaults.

A slight weakening of the yuan against the US dollar (by 4% from early April to 22 November 2023) is accompanied by a capital outflow from the Chinese market (USD 75 billion in September 2023). To maintain confidence in Chinese assets, the government implemented a whole range of measures: namely, yuan purchases for US dollars in the offshore and onshore markets by state banks; establishment of the daily fixing rate, around which the yuan can trade within the 2% band, at a lower level than forecast by the market; a reduction in the reserve requirement ratio in foreign currency for banks; and introduction of control over large US dollar purchases (USD 50 million and more) by local companies.

As forecast by the IMF, **India**'s GDP will grow by 6.3% in 2023 and 2024. However, annual inflation in the country accelerated to 7.4% in July 2023 (from 4.3% in May 2023), but then edged down to 6.8% in August 2023 and 5% in September 2023. In summer, the government imposed restrictions on rice exports in order to limit the growth of domestic prices. High oil prices and steady domestic demand might entail an increase in spending on imports and the current account deficit.

Kazakhstan's economy is returning to a stable growth path, supported by favourable prices for exports, among other factors. Nevertheless, annual inflation stays high, although continuing to decelerate, specifically to 10.8% in October 2023. In these conditions, the National Bank of the Republic of Kazakhstan started to cut the base rate (reducing it by a total of 1 pp to 15.75% in November).

2. VULNERABILITIES AND RESILIENCE OF THE RUSSIAN NON-FINANCIAL SECTOR

2.1. Further pressure of unfriendly countries' sanctions on the Russian economy

The Russian corporate sector continues its adjustment to the sanctions. However, there are still risks of secondary sanctions, as well as new sanctions on Russian exports. The Russian oil and gas sector is experiencing a reduction in hydrocarbon output and exports. The redirection of oil and gas exports to Asian countries requires significant investment, whereas alterations in the payment infrastructure result in longer payment receipt periods. The process of switching from US dollars and other 'toxic' currencies in international settlements is progressing.

The recovery of affected industries is hindered by more expensive imports, difficulties with substitution of imported components, and more complicated logistics chains. Airlines are restoring operating performance, but their financial position remains unsteady. Following the exit of Western manufacturers from the Russian automotive market, Chinese companies have been actively expanding their market share.

The commercial real estate market (primarily, the retail segment) is bouncing back owing to the substitution of foreign companies that exited the Russian market for friendly states' brands.

Slump in natural gas production and exports

The Russian gas industry has notably changed beginning from mid-2022. According to Rosstat, the output of natural gas in Russia over the first nine months of 2023 totalled 380 billion cubic metres, which is 11.4% less year-on-year. This decline was caused by the EU's decision to consistently reduce Russian gas imports. Lower gas prices amid the warm spring in Europe and a generally worse situation in global markets due to expectations of weaker global economic growth were an additional negative factor for the industry.

The EU market is gradually losing the status of the main export destination for Russian gas producers. According to the International Energy Agency, over the first nine months of 2023, the export of Russian pipeline gas to the EU plummeted by 70% year-on-year to 17 billion cubic metres. Nevertheless, gas supplied to Hungary, Bulgaria and Slovakia still accounts for a considerable share in the overall structure of Russian gas exports.[1] However, there is a risk of export suspension after the contract for Russian natural gas transit expires.

The key risks of a decline in natural gas exports are associated with the fact that, as opposed to oil and petroleum products, the gas industry is unable to quickly redirect the trade flows due to the limited export capacity of the pipelines and weak infrastructure needed to supply gas to new destinations (including to produce liquefied natural gas (LNG)), as well as subdued demand for gas from friendly countries. In the medium term, China will become the key destination for Russian gas exports: if the Power of Siberia pipeline reaches its full design capacity (38 billion cubic metres) and the Power of Siberia-2 pipeline (50 billion cubic metres) is launched, pipeline gas exports to China can offset the contraction of supplies to the EU during the next five to ten years.[2] According to the forecast presented by the Ministry of Economic Development of the Russian Federation in September 2023, the baseline scenario assumes that natural gas exports will reach 126 billion cubic metres by 2026, which is 30% more compared to the preliminary estimate of exports made in 2023.

[1] According to the Centre for Research on Energy and Clean Air (CREA), the value of Russian pipeline gas exported to the EU in August 2023 approximated 42% of the total amount.

[2] According to Gazprom.

However, the redirection of gas exports to Asia will require significant investment. Ultimately, the gas industry's financial performance will depend on the efficiency of this investment and the price level.

Amid companies' structural adaptation to the sanctions and the contraction of pipeline gas exports, LNG producers are taking efforts to expand sales to external markets and implementing new projects. However, after the expansion of LNG output in Russia by 7.9% in 2022, output over the first nine months of 2023 totalled 23.6 million tonnes, which is 4.4% less year-on-year.[3] In summer, large-capacity LNG plants had to suspend production due to extensive preventive maintenance. According to estimates, Russian LNG exports over this period shrank by more than 5% year-on-year. Nevertheless, LNG output and exports are generally expected to expand to 33 million tonnes in 2023 (or by 1.5% year-on-year) and to 47.3 million tonnes in 2024 and 2025[4] as a result of the commissioning of new LNG facilities.[5] In the future, the EU might restrict Russian LNG purchases. As estimated by the European Network of Transmission System Operators for Gas (ENTSOG), LNG accounts for nearly 40% of all gas supplies to the EU's gas transmission system.

Transformation of oil companies' exports

Over the first nine months of 2023, export earnings of the largest oil exporters declined year-on-year, which was associated with unfavourable price environment and the contraction of oil exports amid the tightening of the sanctions and rearrangement of logistics chains and financial flows. As a result, compared to the same period last year, oil exports via Transneft's system contracted by 8% over the first nine months of 2023, and the average Urals price plummeted by 26%[6] over January–September 2023.

The introduction of the price cap on Russian crude and petroleum products accelerated the redirection of exports to Asia and Africa, which entailed a rise in logistics and transaction costs. Besides, there are still risks of secondary sanctions that might affect the operation of the oil industry.[7]

Alterations in geographical destinations, trade flows and the payment infrastructure extended the payments receipt period for oil and petroleum products supplies. Concurrently, countries continue switching from US dollars and other 'toxic' currencies in international settlements. Specifically, in September 2023, foreign currency earnings denominated in 'toxic' currencies accounted for 24% of all payments for goods and services exported under foreign trade contracts, which is 25 pp lower year-on-year.[8]

Situation in the most affected industries

Aviation. Despite the sanctions, the industry has managed to partially adjust to the current situation restoring its operating performance. According to the Ministry of Transport of the Russian Federation, passenger transportation over the first nine months of 2023 totalled 81 million people, which is 11.5% more year-on-year. Russian airlines are searching for ways to reduce the sanction pressure on their operations and arranging logistics chains to supply spare parts for foreign-made

[3] According to Rosstat.

[4] Passport of the State Programme of the Russian Federation 'Energy Sector Development' (as amended on 22 April 2022).

[5] As reported by Novatek, the first LNG train of the Arctic LNG 2 plant will be commissioned at the end of 2023.

[6] According to the Russian Ministry of Finance, the Urals crude price averaged USD 59.54 per barrel in January–September 2023 compared to USD 80.58 per barrel in January–September 2022.

[7] In June 2023, the EU agreed the 11th sanction package, including the procedure for introducing restrictions on third countries helping Russia circumvent the trade embargoes. In September 2023, the European Commission published the guidance addressed to European operators on how to identify sanctions circumvention schemes.

[8] According to the Bank of Russia (the foreign currency composition of payments for goods and services exported under foreign trade contracts across geographical zones and national currencies pursuant to Directive of the Government of the Russian Federation No. 430-p, dated 5 March 2022).

aircraft. In addition, Russian air carriers were able to settle the relations with certain foreign leasing companies (e.g., in September 2023, Aeroflot settled the disputes with the lessor AerCap regarding 18 aircraft and five engines, in October – with SMBC Aviation Capital on 17 aircraft, and in November – with BOC Aviation on nine aircraft).[9]

Considering the current situation, the Russian Government revised upwards the targets of the comprehensive programme for the development of the Russian aviation industry until 2030. According to the updated plan, the number of passengers in 2023 will total 103 million (up from 101.2 million), including 20.6 million international travellers (previously, 10.1 million) and 82.4 million domestic travellers (previously, 91.1 million). Thus, if the targets are met, the growth rate of passenger transportation over 2023 will reach 8.3% year-on-year.

The amount of government aid to support the aviation industry contracted more than three times compared to the previous year. According to the Ministry of Transport of the Russian Federation, subsidies to the industry totalled RUB 57 billion, including RUB 25.3 billion already paid for passenger transportation during the 2022–2023 winter season. The subsidies allocated to air navigation companies servicing airlines in the Russian Federation totalled RUB 5 billion over the first nine months of 2023 (vs RUB 18 billion in 2022). The subsidies to 11 airports in the Southern and Central macro-regions were reduced three times in 2023 compared to the previous year (the allocations to support the airports in 2022 approximated RUB 7.5 billion).

Despite the improvement in operating performance, airlines' financial position remains rather unstable. Their high debt burden and rising operating costs are hindering the recovery process.

Automotive manufacturers. After foreign companies exited the Russian market and unfriendly states imposed the ban on motor vehicle exports to Russia, the share and quantities of sold Chinese cars have been increasing: Chinese automotive manufacturers have been placing orders for automotive assemblies at Russian factories and are currently not seeking to acquire the plants from companies exiting the market or to construct new facilities. As Chinese companies are not facing tight competition or any problems with components, they are able to quickly expand their share in the Russian market. Over the first nine months of 2023, Chinese cars accounted for 43.7% in total sales, which is 18.2 pp more year-on-year.[10] Industry experts consider that, by the end of 2023, the share of Chinese manufacturers in the Russian market will reach nearly 60%.

The quantity of cars sold over the first three quarters of 2023 increased to 607,000 (+41% year-on-year), including 249,600 Chinese cars and 190,600 Russian cars. As of the end of the first nine months of 2023, Russian cars accounted for 31.4% in total sales, which is +8.3 pp more year-on-year.[11]

Truck sales rose as well. As of the end of the first three quarters of 2023, sales reached 105,800 trucks, which is 80.6% more year-on-year.[12] The domestic manufacturer Kamaz remains the leader in the segment (with its market share exceeding 20%) that sold 23,560 vehicles over the period under review (+2.9% year-on-year). Concurrently, the total share of Chinese manufacturers in the truck segment already exceeds 50% (compared to 15% as of mid-2022), which is associated with the substitution of Western manufacturers that exited the Russian market.

The industry is restoring amid pent-up demand for motor vehicles. However, in contrast to Chinese manufacturers, Russian companies are facing problems with investment and components, as well as with the processing of mutual settlements with counterparties. Thus, after some automotive manufacturers were put on the SDN List, the situation with the processing of payments worsened for these companies. In view of the existing problems, government measures to support

[9] As reported by Aeroflot: https://www.aeroflot.ru/ru-ru/news/62836, https://www.aeroflot.ru/ru-ru/news/62874, https://www.aeroflot.ru/ru-ru/news/62921.

[10] According to Autostat.

[11] According to Autostat.

[12] According to Autostat.

the domestic manufacturers[13] are especially important (the subsidised lending programme for households, government purchases, etc.).

Commercial real estate (CRE). Foreign companies' exit from the Russian market had a notable adverse effect on the commercial real estate market, especially the retail and office real estate sector of Moscow where foreign companies' penetration was higher than in other regions. As of the end of the first nine months of 2023, the CRE segment bounced back to a certain extent[14] by substituting unfriendly countries' brands that had exited the market for new lessees from Russia and friendly states. However, the office real estate sector was still stagnating. Nevertheless, for the first time since 2021, the vacancy rate of office premises declined from 13.0% to 12.5% in the A class and from 7.4% to 7.1%[15] in the B class as of the end of the first three quarters of 2023.

Box 2. Exit of foreign investors from Russian asstes

In the previous issue of the Financial Stability Review, non-residents' active exit from Russian businesses was described as a separate vulnerability. Foreign investors feeling pressured by their national governments continue to withdraw from Russian assets, although the value of the related transactions is relatively small within the scale of the Russian economy. Besides, the risks associated with foreign divestment from Russian assets are fading owing to the joint efforts of the Bank of Russia and the Government of the Russian Federation.

Firstly, the potential negative effect of these transactions on the foreign exchange market has been mitigated. Payments on large transactions approved by the Subcommittee of the Government Commission on Monitoring Foreign Investment in the Russian Federation (hereinafter, the Subcommittee) are made in equal instalments, while the foreign currency needed for settlements is purchased uniformly (the approximate schedule is stipulated in the relevant decision). This makes it possible to smooth out potential negative effects on the domestic foreign exchange market and reduce its volatility.

Secondly, the approaches to examining the transactions connected with non-residents' sales of their assets by the Subcommittee are being enhanced. A particular focus is put on the plans for business development by new owners committing to achieve key performance indicators for acquired businesses. This promotes long-term development of purchased companies, helps preserve jobs, and supports businesses' technology and production potential.

Thirdly, the risks associated with an increase in new owners' and acquired companies' debt burden due to the financing of asset acquisitions from foreign investors using loans from Russian banks are currently assessed as moderate. Banks mostly include these loans in quality categories I and II. However, because of uncertainty about business development prospects after the change of the owner, related risks might rise over time. In view of this, the Bank of Russia will continue to monitor them.

Besides, the authorities have implemented additional measures aimed at developing the capital market amid the external sanction pressure and foreign investors' exit from Russian assets. According to the Subcommittee's decision, in some cases when a resident acquires shares being part of a Russian public joint-stock company's equity from a foreign investor, the buyer undertakes to offer 20% of the purchased securities on the exchange.

[13] In 2023, the Government launched the programme to support the demand for domestically-produced cars. The allocations from the federal budget within this programme totalled RUB 27.7 billion in 2023 and will amount to RUB 30.4 billion in 2024. To promote households' demand, the Government introduced the subsidised lending programme for borrowers purchasing domestically-produced cars, with the subsidises totalling RUB 11.8 billion. The allocations within this programme in 2024, 2025 and 2026 will amount to RUB 12.3 billion, RUB 18 billion and RUB 20 billion, respectively. Another support measure implemented in the industry is government purchases of domestically-produced cars. The allocations will total RUB 10.1 billion in 2023 and RUB 13.1 billion in 2024.

[14] The vacancy rate in Moscow shopping malls declined from 15.6% to 12.2% in H1 2023, but has not reached yet the pre-pandemic levels (13.7% in 2021 and 6.1% in 2019).

[15] According to NF Group (previously, Knight Frank).

2.2. Assessment of Russian non-financial companies' resilience

As of the middle of 2023, most Russian export-oriented companies experienced a decline in profitability and a rise in debt burden. The main reasons were decreasing export earnings and incomplete substitution of supplies to Europe for exports to Asia. Moreover, some large companies faced an increase in debt due to the revaluation of its part nominated in foreign currency. Nevertheless, aggregate indicators in the largest industries prove that they are financially resilient.

In 2023, the corporate sector has been financed primarily from ruble loans. High demand for lending in the domestic market was partially associated with the substitution of external borrowings.

Amid tightened monetary conditions, lower exports, and the new duties, the largest non-financial companies' debt indicators are worsening. Nonetheless, they will generally remain financially resilient over 2023–2024, and only some borrowers might need debt restructuring.

Staff shortages are becoming an additional risk factor for companies. The transformation of the Russian economy and the localisation of production increased the demand for highly qualified specialists. Unemployment dropped to 3% as of 1 September 2023, which is a record low since 1991.

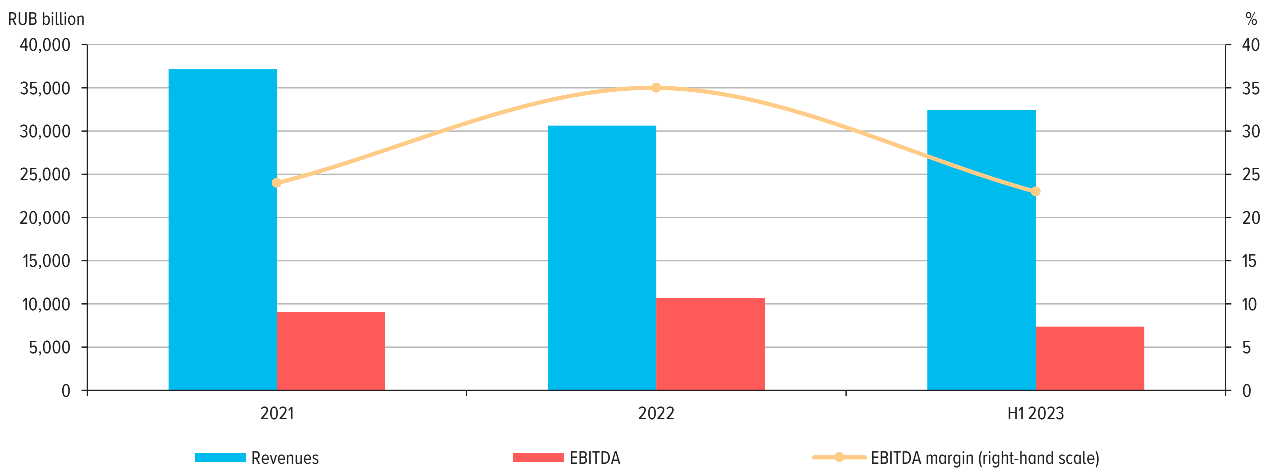
Largest companies' financial position[16]

In H1 2023 , most Russian oil and gas companies' profitability declined compared to the figures of the previous year. Over the period under review, oil and gas producers' aggregate EBITDA margin dropped by 12 pp to 23%. This reduction was caused by the contraction of oil and gas exports to Europe, as well as higher transportation costs due to the redirection of supplies to Asia.

Profitability in metallurgy and the mining and quarrying sector also decreased by 4 pp to 31%, which was associated with lower export earnings and logistics barriers resulting from the sanctions. Fertiliser manufacturers' earnings in absolute terms and EBITDA dropped as well in H1 2023, with the industry's profitability declining by 3 pp to 41% (Chart 5).

Companies' debt burden is expected to increase in H2 2023 due to the revaluation of the foreign currency-denominated part of their debt. Some companies might be forced to reduce their investment programmes.

AGGREGATE FINANCIAL INDICATORS IN THE OIL AND GAS INDUSTRY *Chart 3*

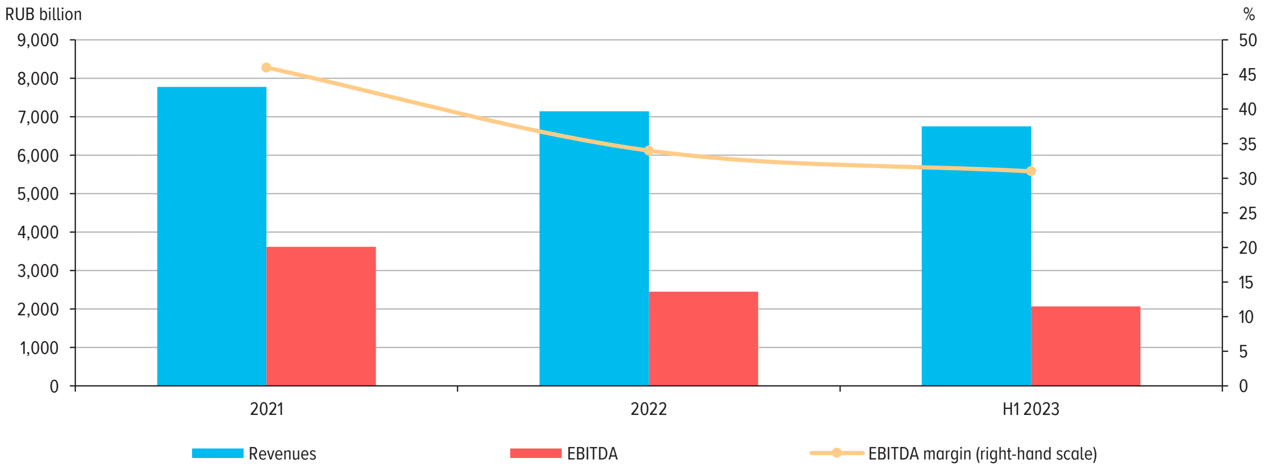


Sources: IFSR financial statements of companies, Bank of Russia calculation.

[16] Aggregate financial indicators of profitability and debt burden within the analysis of the largest Russian export-oriented companies' financial position were calculated for the largest public companies representing the industries under review.

AGGREGATE FINANCIAL INDICATORS IN THE METALLURGY AND MINING SECTOR

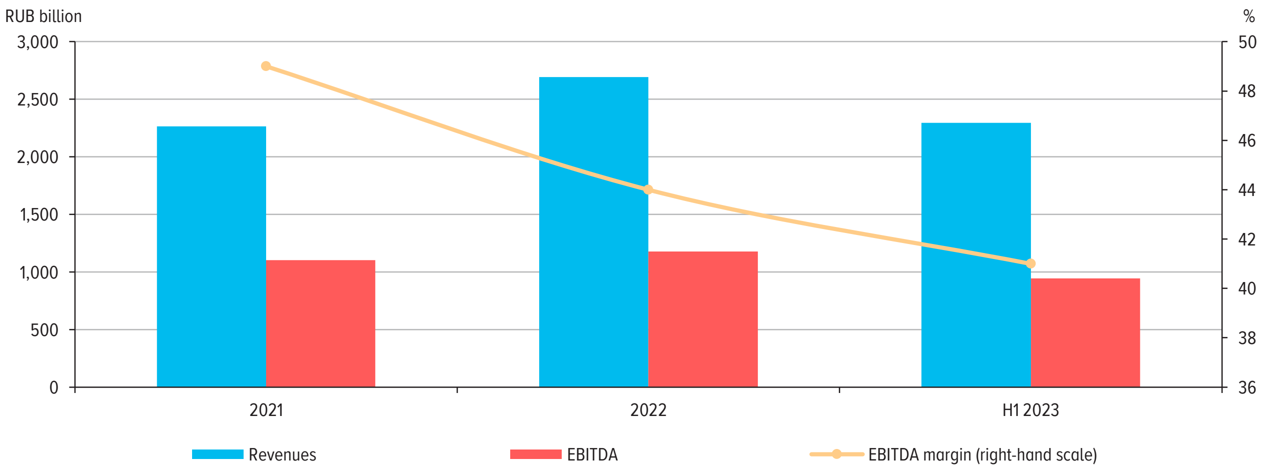
Chart 4



Sources: IFSR financial statements of companies, Bank of Russia calculation.

AGGREGATE FINANCIAL INDICATORS IN FERTILISER MANUFACTURING

Chart 5



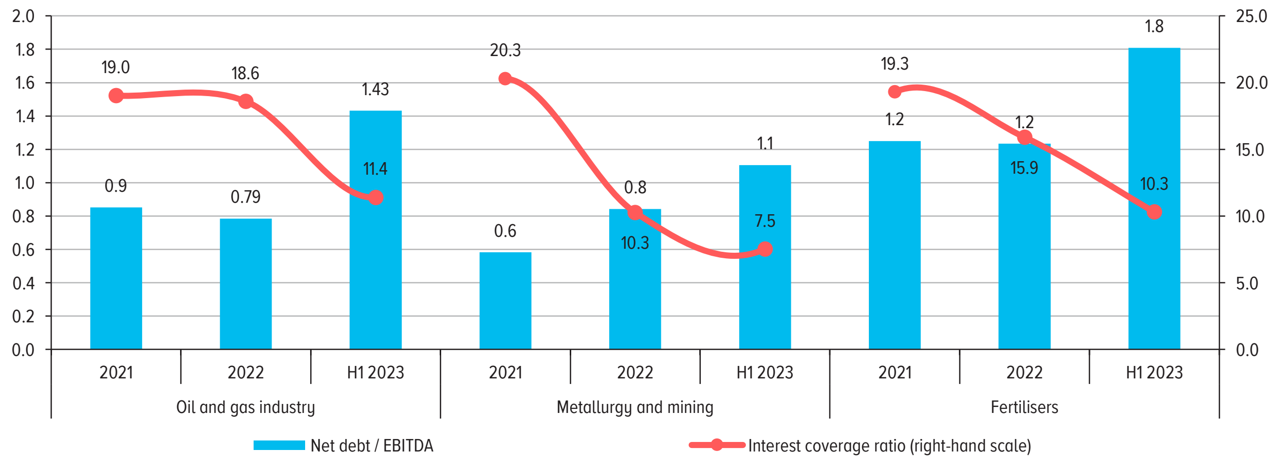
Sources: IFSR financial statements of companies, Bank of Russia calculation.

Analysis of the largest non-financial companies' debt burden

In H1 2023, the largest non-financial companies' debt indicators changed differently across industries (Chart 6). The net debt-to-EBITDA ratio in oil and gas production edged up by 0.65 to 1.43, while the interest coverage ratio dropped by 7.2 to 11.4. As to metallurgy and mining industry, companies' net debt-to-EBITDA ratio was up by 0.3 to 1.1, while their interest coverage ratio declined by 2.7 to 7.5, although staying sufficiently high. Fertiliser manufacturers' debt indicators worsened as well. Their net debt-to-EBITDA ratio rose by 0.6 to 1.8, while the interest coverage ratio dropped by 5.6 to 10.3.

The largest non-financial companies are implementing investment projects to redirect their supplies to the East. Coupled with the ruble depreciation, this refocusing caused an increase in debt burden across all export-oriented industries. Nevertheless, despite the worsening of their financial metrics, companies generally maintain an adequate level of financial resilience.

AGGREGATE DEBT BURDEN INDICATORS FOR THE OIL AND GAS INDUSTRY, METALLURGY AND MINING AND FERTILISER PRODUCTION OVER 2021 – H1 2023 *Chart 6*



Sources: IFSR financial statements of companies, Bank of Russia calculation.

Assessment of Russian companies' resilience in 2023–2024

In H2 2023–2024, Russian non-financial companies will be affected by a number of negative factors. The most important of them are described below.

1. Tightening of monetary conditions

Beginning from July 2023, the Bank of Russia raised the key rate from 7.5% per annum to 15% per annum as of 27 October. Currently, this does not have a material impact on borrowers' financial position. The demand for changes in corporate loan agreements is still low. A decrease or a change in the interest rate calculation algorithm[17] accounted for less than 20%[18] of restructured loans. There were some restructured loans in oil and gas production, mining and metallurgy,[19] as well as construction.[20] At the moment, the volume and number of restructured loans are comparable with the figures of March and June.[21] However, the number of loans issued to borrowers with high debt burden might increase in the future.

When the key rate was significantly raised in 2014 and 2022, the situation was the opposite: the demand for restructuring soared. The absence of such a response today is associated with the fact that the current key rate increase resulted from high demand for loans, rather than financial stability risks due to external shocks.

Besides, having the experience of surging interest rates, banks are rather cautious in lending to companies at variable interest rates: such loans are mostly issued to large corporates that are able to better manage their financial risks. Specifically, loans at variable interest rates account for 60% in lending to the oil and gas industry, metallurgy, and chemical production and 35% in SMEs' portfolio. Accordingly, the quality of corporate loans at variable interest rates is higher on average, compared to loans at fixed interest rates (as of 1 October 2023, bad loans accounted for 3% and 8%, respectively).

[17] From 1 July 2023 to 1 October 2023, the weighted average variable interest rate on loans for up to one year and more than one year edged up by 5.0 pp and 4.7 pp, respectively. Fixed interest rates on short- and long-term loans rose by 1.9 pp and 1.3 pp, respectively, as a result of the portfolio renewal.

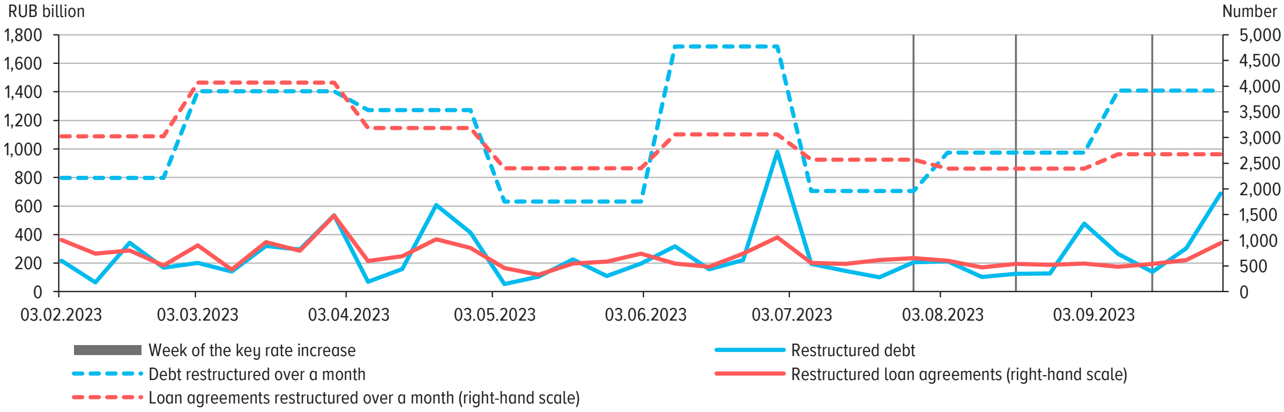
[18] Of the volume of all loans restructured in August and September 2023, in the ruble equivalent.

[19] Restructured loans with an increase in the principal and extension of the principal repayment period.

[20] Restructured loans with an increase in the principal and changes in the interest payment schedule.

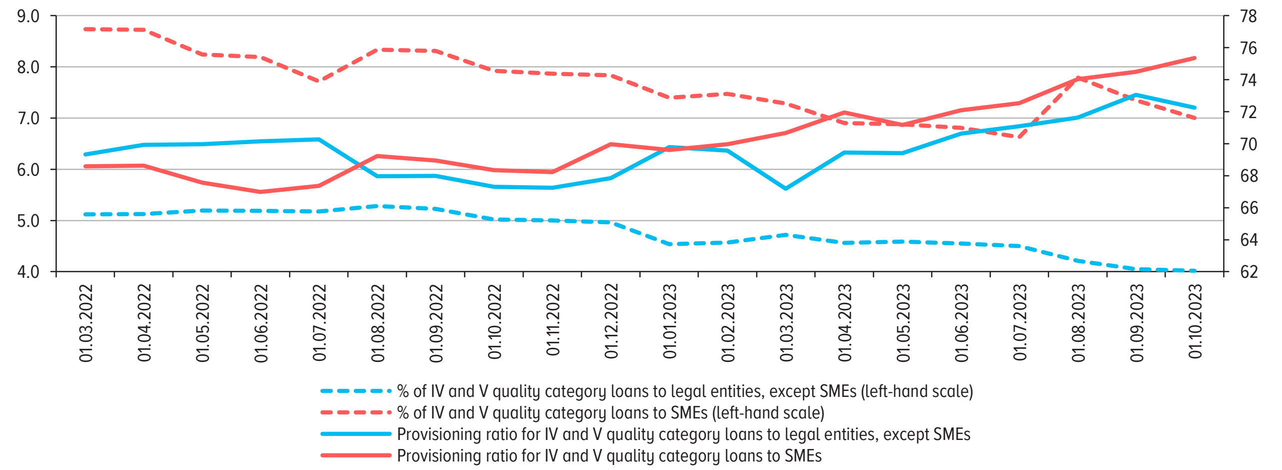
[21] A minor portion of the loans restructured in September had also been restructured in August 2023.

NUMBER AND VOLUME OF NON-FINANCIAL COMPANIES' RESTRUCTURED LOANS, BREAKDOWN BY WEEK* *Chart 7*



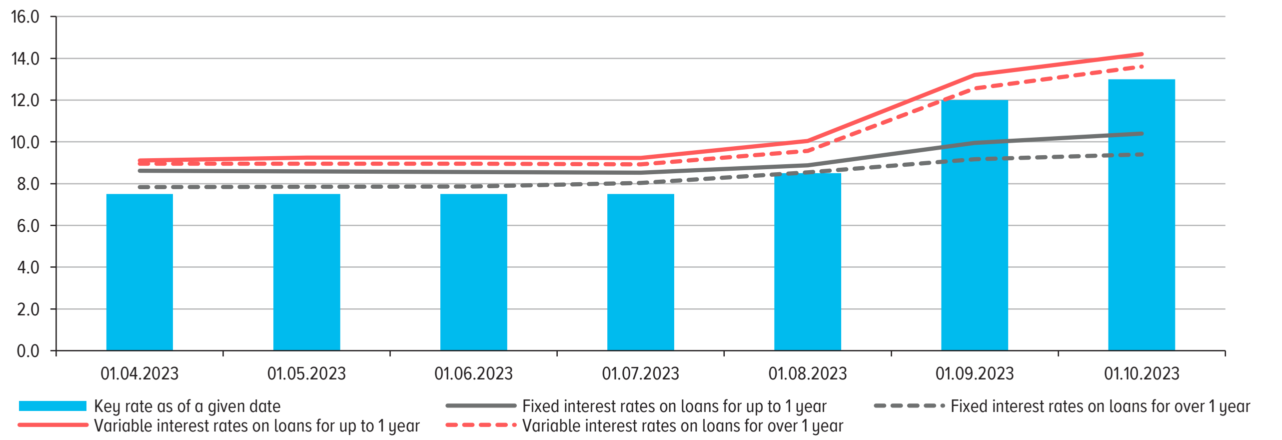
** Restructured loans were calculated for a week from Friday through Friday without exclusion of foreign currency revaluation, based on the amount of debt as of the reporting date during the period when a loan was restructured; loans restructured repeatedly were not excluded – the latest date of restructuring during a given month was taken into account for each reporting month.*
Source: Bank reporting form 0409303.

PERCENTAGE OF LOANS OF QUALITY CATEGORIES IV AND V AND THE PROVISIONING RATIO ACROSS BANKS, EXCEPT THE BANK OF NON-CORE ASSETS *Chart 8*
(%)



Source: Bank reporting form 0409115.

WEIGHTED AVERAGE INTEREST RATE ON EXISTING LOAN PORTFOLIOS AT FIXED AND VARIABLE INTEREST RATES, BY MATURITY *Chart 9*
(%)



Note. Interest rates on ruble loans weighted by the outstanding balance as of the reporting date, excluding subsidies, with the elimination of interest rates below the minimum or above the maximum values similarly to the procedure described in the methodological notes.
Source: Bank reporting form 0409303.

Overall, the percentage of bad loans[22] issued to large corporates remains low, namely 4.0% as of 1 October 2023. As before, banks form sufficient loss provisions for the corporate loan portfolio. The quality indicators of the portfolio are affected by new loans that currently have no signs of impairment yet.

As assessed by the Bank of Russia, overall, the increase in the key rate and holding it at a relatively high level will not have a material effect on the largest companies' resilience in 2023–2024 (see Box 3).

Box 3. Influence of monetary policy tightening on the corporate sector

The Bank of Russia assessed the corporate sector's sensitivity to holding the key rate at the upper bound of its forecast range until the end of 2024.[1] The assessment perimeter includes approximately 70 largest non-financial companies (from 13 industries) with consolidated revenues over the last 12 months totalled RUB 57.4 trillion as of 30 June 2023 (36.4% of GDP over the said period) and consolidated debt – RUB 28.6 trillion (36.3% of the non-financial sector debt).[2]

To assess the corporate sector's sensitivity to the key rate change, the Bank of Russia used the interest coverage ratio calculated by dividing operating earnings by interest expenses. This ratio is used to measure how well a company can pay the interest due on outstanding debt.[3]

When forecasting interest expenses, the Bank of Russia divided the outstanding debt to Russian banks into short- and long-term parts, with the latter divided then into debt at fixed and variable interest rates.[4] The analysis of borrowers' sensitivity assumed a rise in interest rates on loans at variable interest rates and refinancing of the short-term part of outstanding debt raised at fixed interest rates according the new level of the key rate.

The calculations assumed that the key rate is held at the upper bound of the Bank of Russia's forecast range, pursuant to which the average key rate will be in the range of 15.0–15.2% per annum over the remainder of 2023 and in the range of 12.5–14.5% per annum in 2024.[5]

As a result of the key rate increase, the interest coverage ratio was declining, but stayed high for the most part. Thus, in 2024, the interest coverage ratio of oil and gas companies will edge down by 4.3 points, although staying at an adequate level of 7.6, while that of fertiliser manufacturers will drop by 4.4 points to 5.9.

However, as of 30 June 2023, the interest coverage ratio of 11 out of the 70 largest firms (10% of consolidated debt of the companies in the sample) was already below 1.0 considering their operating earnings over the last 12 months.[6] Some of them were receiving aid from the government, while others restructured their outstanding bank loans. As a result of the key rate increase, the number of distressed companies that might need debt restructuring rises to 14. As of 30 June 2023, these additional companies' consolidated debt totalled RUB 0.65 trillion (2.3% of outstanding debt of the companies in the sample).

Thus, most borrowers have sufficient operating earnings to pay interest on loans, and the key rate increase is generally not expected to materially affect the largest companies' resilience in 2023–2024.[7]

[1] The Bank of Russia's forecast presented following the Board of Directors' key rate meeting on 27 October 2023.

[2] According to data on the aggregate measure of the non-financial sector's debt as of 1 July 2023.

[3] The ratio above 1.0 is considered to be allowable.

[4] According to Bank reporting form 0409303 'Loans issued by legal entities' as of 1 July 2023.

[5] The Bank of Russia's forecast presented following the Board of Directors' key rate meeting on 27 October 2023.

[6] These are mostly mining and quarrying, metallurgical and machine building enterprises, as well as individual oil and gas producers and transport companies. As of 30 June 2023, eight of 11 such companies had negative operating earnings over the last 12 months. The remaining companies' operating earnings do not cover their financial expenses.

[7] The Bank of Russia's forecast presented following the Board of Directors' key rate meeting on 27 October 2023.

[22] Loans of quality categories IV and V pursuant to Bank of Russia Regulation No. 590-P, dated 28 June 2017, 'On the Procedure for Credit Institutions to Make Loss Provisions for Loans, Loan and Similar Debts' across all banks, except National Bank TRUST (Bank of Non-core assets).

2. Introduction of temporary export restrictions and duties

The temporary flexible export duties to be applied from 1 October 2023 to a broad range of goods tied to the ruble exchange rate will contribute to a decline in export earnings in 2023–2024 compared to 2022.[23]

Besides, in order to stabilise the demand and supply ratio in the domestic market amid high volatility of prices for light petroleum products, the Government imposed the temporary ban on petrol and diesel fuel exports that was effective from 21 September to 17 November 2023.

3. Staff shortages in Russia, coupled with maximum capacity utilisation in industrial production, as well as a deficit of IT specialists

Staff shortages are a serious vulnerability on the way to the transformation of the Russian economy. According to Rosstat, unemployment dropped to 3% as of 1 September 2023, which is the lowest level since 1991. The labour market is recording a rise in the number of vacant jobs related to the localisation of production in Russia, rearrangement of logistics routes, and development of the defence industrial complex.[24] Employers' competition for labour resources is pushing wages higher, whereas labour productivity does not rise proportionately, which will exert pressure on businesses' profitability.

Corporate borrowers' consolidated debt

Corporate borrowers' demand for loans remains high, but systemic risks associated with the corporate segment's debt burden are limited as the corporate debt-to-GDP ratio is 51%, which is less than in countries comparable with Russia. Corporate lending growth rates have been elevated from H2 2022 , but are expected to become more moderate further on, considering rising interest rates. Risk-sensitive regulation will promote lending to more financially stable and responsible borrowers. As monetary policy is eased, borrowers will be able to refinance the loans raised at high interest rates. The corporate lending market is not expected to become overheated and involve elevated credit risks in the medium term, but certain companies' debt burden might increase.

As of 1 October 2023, non-financial companies' debt obligations included ruble loans totalling RUB 50.5 trillion and foreign currency loans amounting to RUB 11.1 trillion (USD 114.0 billion) extended by Russian banks, issued debt securities[25] worth RUB 9.8 trillion, and external debt totalling RUB 14.2 trillion as of 1 July 2023.[26]

As before, non-financial companies mostly raised ruble loans to finance their operations (as of 1 October 2023, the ruble loan portfolio expanded by nearly 28% in annualised terms). Besides, companies raised ruble loans to substitute external borrowings, as well as foreign currency loans raised earlier from Russian banks. Most borrowers have already converted their outstanding debt from 'toxic' currencies into rubles and yuan. Accordingly, this process is decelerating gradually. From the beginning of the year, the proportion of foreign currency loans dropped by 4 pp[27] to 18% as of 1 October 2023.

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[23] Resolution of the Government of the Russian Federation No. 1538, dated 21 September 2023, 'On the Rates of the Customs Duties on Goods Exported from the Russian Federation Beyond the Customs Territory of the Eurasian Economic Union and on Amending the Rates of the Customs Duties on Goods Exported from the Russian Federation Beyond the Customs Territory of the Eurasian Economic Union'.

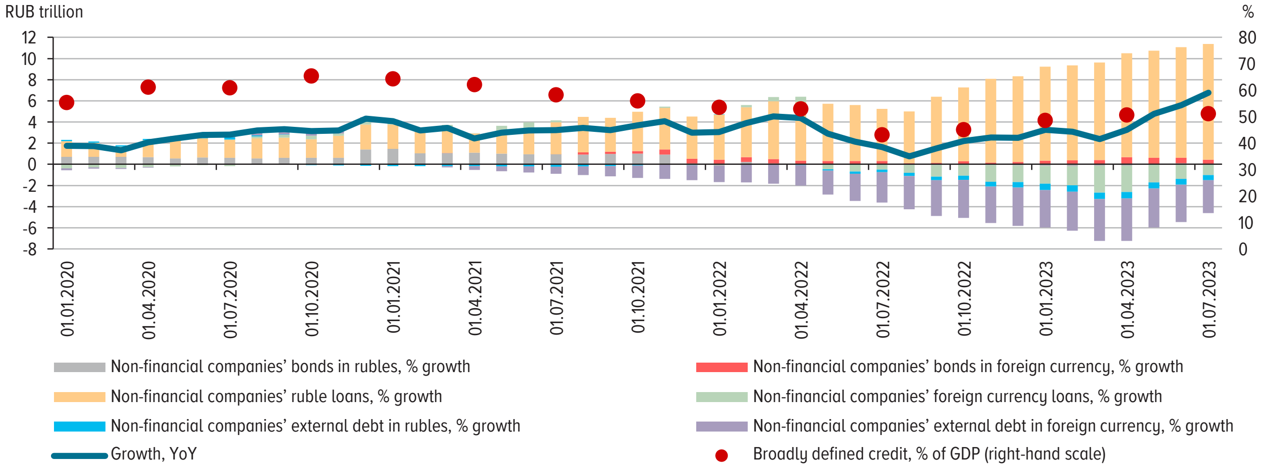
[24] Employers demonstrate the highest demand for workers directly engaged in production, engineers and IT specialists. Their deficit is associated with high demand for Russian specialists abroad and high mobility of such personnel because of the popularity of telecommuting.

[25] As of 1 October 2023, the amount of outstanding substitute bonds totalled USD 17 billion (USD 16 billion taking into account redeemed bonds). This enabled the non-financial sector to reduce external debt formed within intragroup lending by USD 11.6 billion, as assessed by the Bank of Russia. Over Q2–Q3 2023 , this amount increased by USD 2.2 billion.

[26] RUB 2.4 trillion – borrowings in rubles, RUB 11.8 trillion (or USD 135.1 billion) – borrowings in foreign currency; data as of 1 October 2023 are currently unavailable.

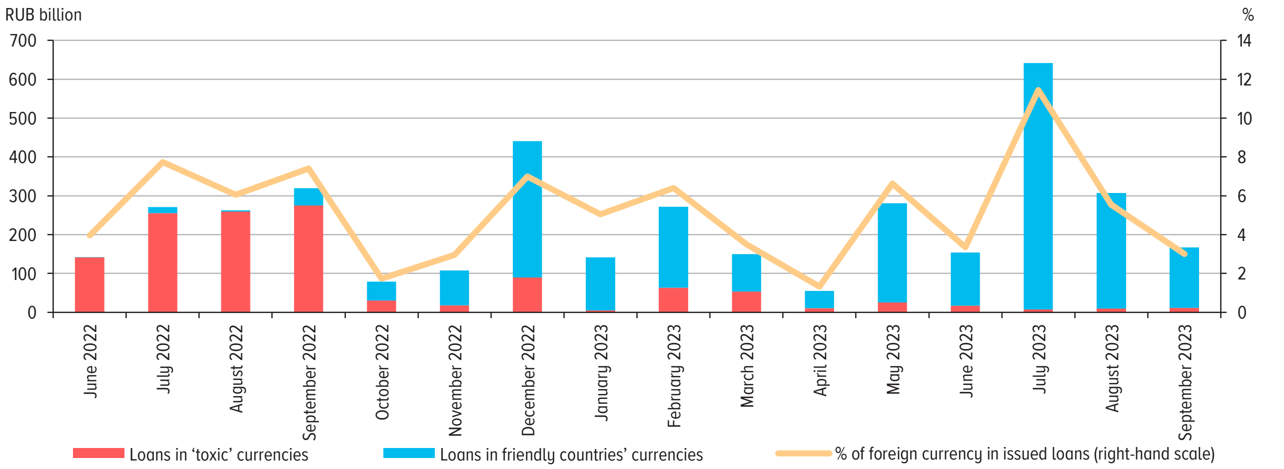
[27] Excluding foreign currency revaluation as of 1 October 2023.

CONTRIBUTION OF INDIVIDUAL FACTORS TO THE ANNUAL DYNAMICS OF NON-FINANCIAL COMPANIES' DEBT OBLIGATIONS (EXCLUDING FOREIGN CURRENCY REVALUATION) *Chart 10*



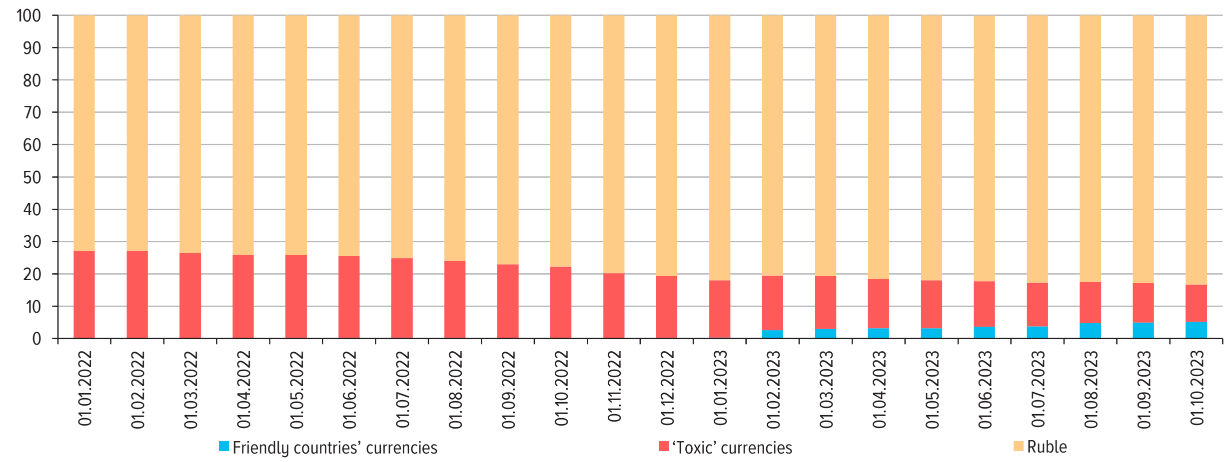
Sources: loans and acquired claims – Bank reporting form 0409101; bonds – the Bank of Russia data (securities at par value issued in the domestic market); external debt – the Bank of Russia statistics (the aggregate measure of the non-financial sector's and households' debt).

FOREIGN CURRENCY LOANS WITH MATURITY OVER 1 MONTH ISSUED TO NON-FINANCIAL COMPANIES (WITHOUT EXCLUSION OF FOREIGN CURRENCY REVALUATION) *Chart 11*



Source: Bank reporting form 0409303.

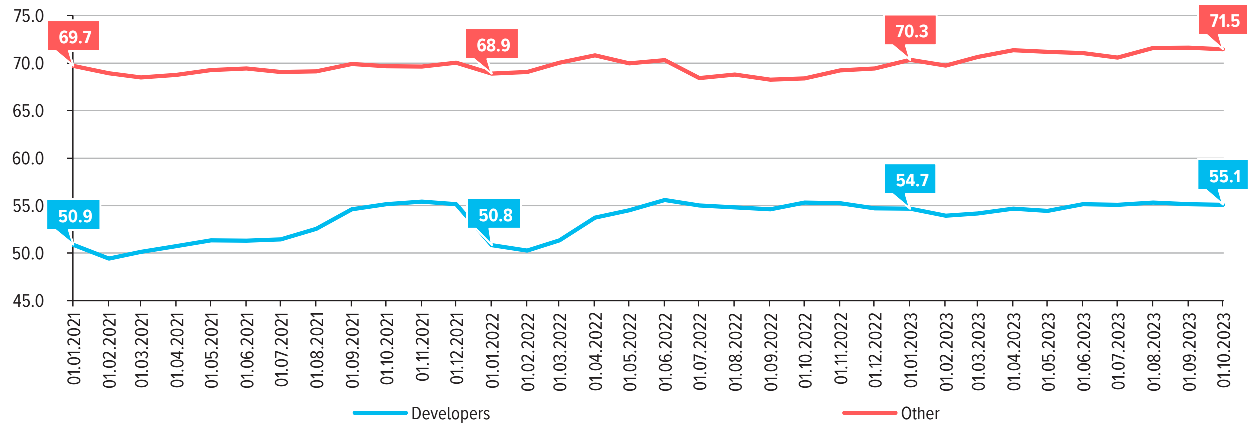
CURRENCY COMPOSITION OF NON-FINANCIAL COMPANIES' DEBT (EXCLUDING FOREIGN CURRENCY REVALUATION AS OF 1 OCTOBER 2023) *Chart 12*
(%)



Source: Bank reporting form 0409303.

UTILISATION RATE OF LIMITS OPENED TO DEVELOPERS AND OTHER NON-FINANCIAL COMPANIES* *Chart 13*

(%)



** List of developers according to the UHCIS; the overall amount of available limits equals the total of outstanding debt and the amount of unused credit lines and unused limits specified in Item 1 of Section 3 in reporting form 0409303.*
Source: Bank reporting form 0409303.

Since last year, the yuan has been displacing other foreign currencies in the structure of newly issued loans. Foreign currency loans[28] for over one month issued in Q2–Q3 2023 accounted for nearly 5%, and almost all of these loans are in CNY. As of 1 October 2023, outstanding yuan loans also accounted for approximately 5% of the corporate loan portfolio.

Companies are able to raise funds from banks within the already opened credit lines, where needed. The utilisation rates of credit lines[29] has stayed at the level of about 70%[30] for a long time. Companies can additionally raise over RUB 16 trillion.[31]

In the future, projects promoting Russia's technological sovereignty and the structural adaptation of the Russian economy can become a driver of lending growth. The Bank of Russia introduced risk-sensitive incentive-based regulation to support lending for such projects. Now, banks can issue loans for top-priority investment projects complying with the eligibility criteria approved by the Russian Government with lower burden on capital, which makes such loans more advantageous. Further on, when the limits within the programme are fully drawn down, the new regulation can expand the potential of lending for top-priority investment projects by up to RUB 10 trillion.

[28] Excluding foreign currency conversions, including within debt transfer to third parties.

[29] According to reporting form 0409303, loans of types 1.3, 1.4 and 1.5 recognised in Item 1 of Section 3.

[30] Excluding credit lines opened to developers.

[31] At the exchange rate as of 1 October 2023.

3. VULNERABILITIES OF THE RUSSIAN FINANCIAL SECTOR

3.1. Volatility in the foreign exchange market and limited access to payment infrastructure in 'toxic' currencies

In January–September 2023, Russia's current account surplus of the balance of payments notably contracted year-on-year due to the reduction in oil and gas companies' export earnings and the rebound in imports. In this environment, the ruble depreciated against major foreign currencies in Q2–Q3 2023. The transformation of external economic activity caused the shift in the structure of exchange FX trading and increased the importance of the Chinese yuan.

Volatility in the foreign exchange market most often has a short-term effect. Hence, it does not create conditions that might involve financial stability risks.

Demand and supply in the foreign exchange market

The reduction in the current account surplus became the major reason for volatility of the ruble in Q2–Q3 2023. According to preliminary estimates, Russia's current account surplus notably shrank to USD 43 billion over January–September 2023, compared to USD 196.0 billion over the same period in 2022. The predominant factor behind that change was a decline in Russian oil and gas producers' export earnings amid deteriorating price environment and external restrictions, on the one hand, and the rebound in imports as a result of reorienting on suppliers from friendly countries,[1] on the other hand. However, the current account surplus started to expand in September 2023, reaching USD 11.4 billion, whereas it amounted to USD 5.6 billion in August and USD 1.3 billion in July.

Over the first nine months of 2023, export earnings of the largest oil and gas exporters[2] declined by 41% year-on-year, whereas the share of companies' ruble earnings continued to go up. In this context, net sales[3] of foreign currency by the largest oil and gas exporters plummeted by 58% over the period under review, compared to the same period last year. This slump affected the balance of foreign currency demand and supply in the domestic market.

Besides, there was a surge in the proportion of the yuan in payments for exports over the first nine months of the year, specifically from 13% in January to 35% in September. The share of ruble exports remains considerable as well (39% in September 2023).

The recovery of imports was the major driver of demand in the foreign exchange market. In September 2023, the value of import transactions settled in rubles and foreign currency reached RUB 768 billion and RUB 1,689 billion in the ruble equivalent, respectively, which is 45% and 25% higher year-on-year (Charts 16 and 17).

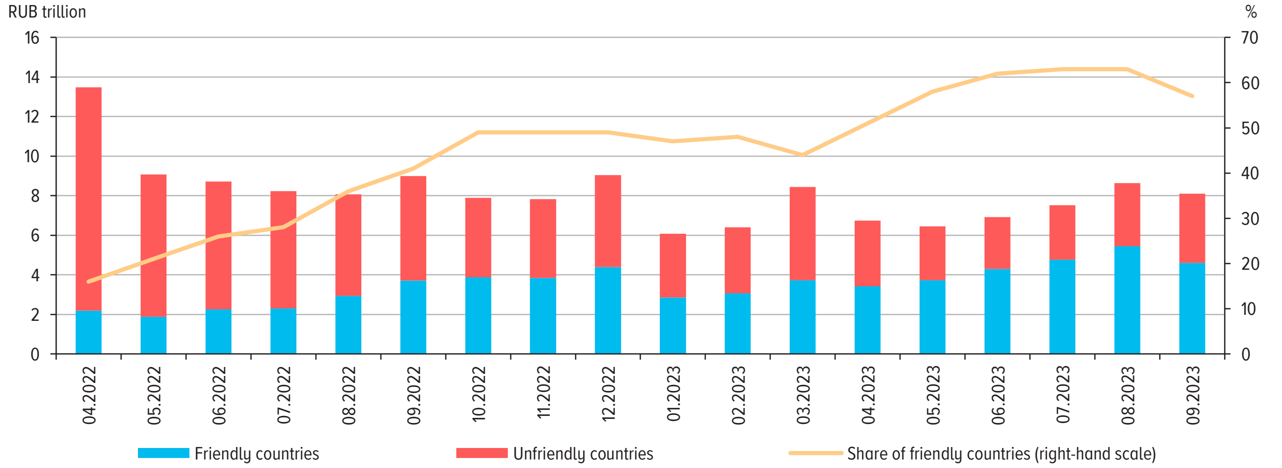
The role of the offshore ruble market remains limited so far. Overall turnover in foreign banks' ruble correspondent accounts stays at the level of approximately RUB 8 trillion, while the proportion of turnover in accounts of friendly countries' banks is growing and exceeds 50% over the period

[1] Countries not put on the list of foreign countries and territories commiting unfriendly acts against the Russian Federation, Russian legal entities and individuals (approved by Directive of the Government of the Russian Federation No. 430-r, dated 5 March 2022).

[2] Calculated for ten oil companies and two gas producers from among the largest Russian exporters.

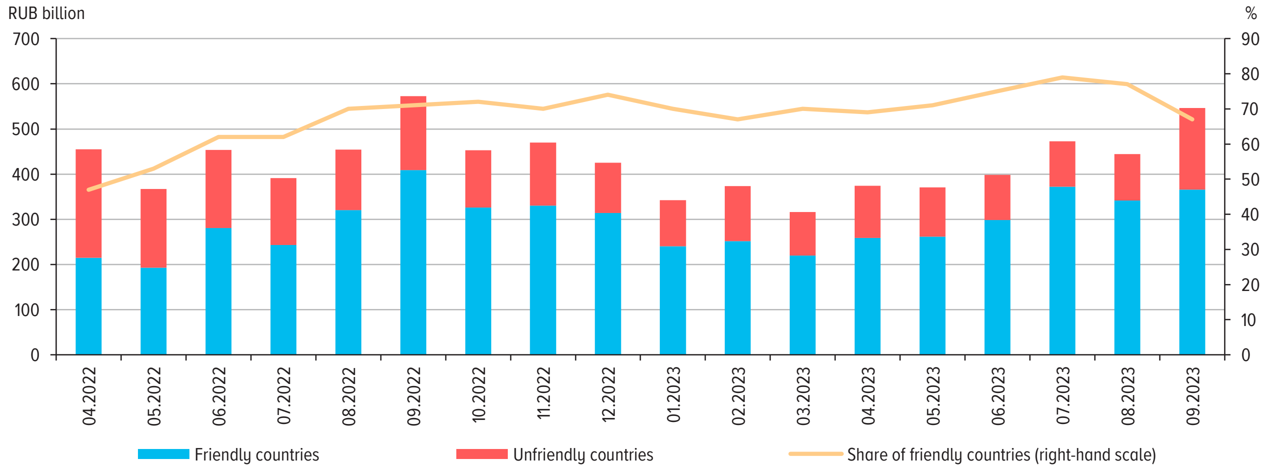
[3] Sales net of purchases.

CREDIT TURNOVER ON RUBLE ACCOUNTS OF FOREIGN BANKS *Chart 14*



Source: reporting form 0409603.

FOREIGN BANKS' FUNDS IN RUBLE ACCOUNTS WITH RUSSIAN CREDIT INSTITUTIONS *Chart 15*

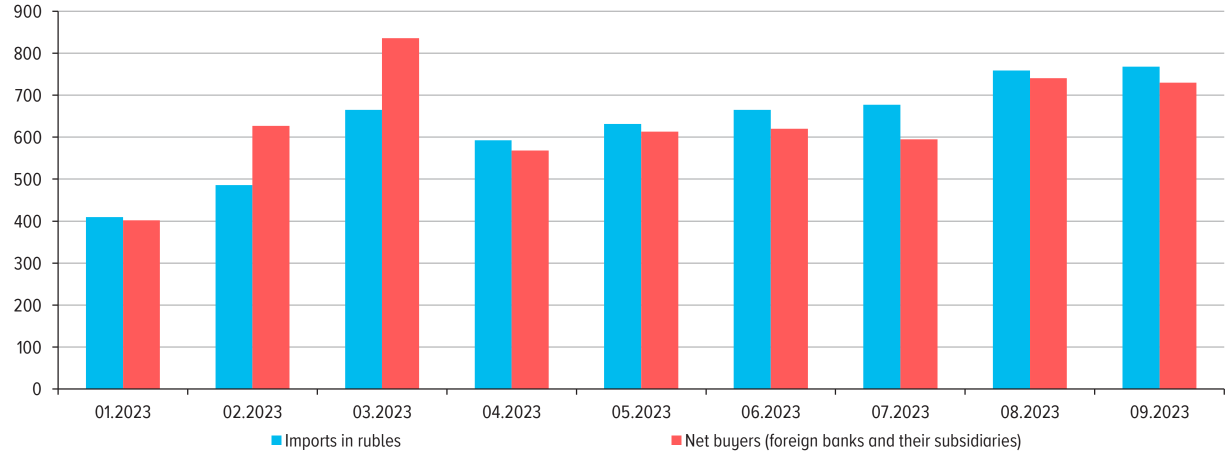


Sources: reporting forms 0409501 and 0409603.

under review (Chart 14). The amount of foreign banks' ruble funds in correspondent accounts and deposits with Russian credit institutions was increasing over the reporting period, yet remained almost the same compared to the figure as of 1 October 2022, totalling RUB 546 billion as of 1 October 2023 (Chart 15). The rise in net purchases of foreign currency in the Russian market by non-resident banks from friendly countries reflects the demand for foreign currency from foreign companies receiving payments for imports to Russia in rubles.

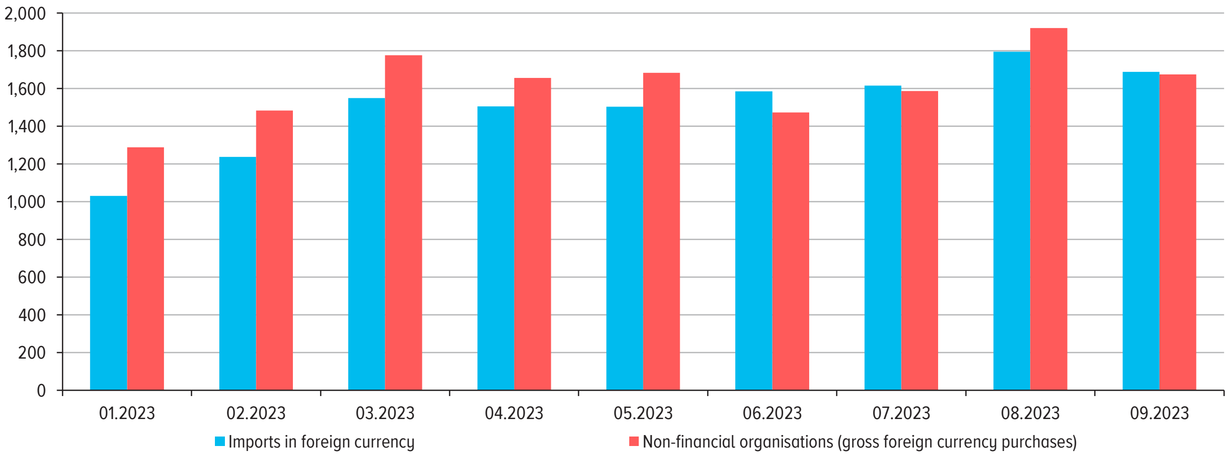
Foreign currency demand and supply in the Russian market are mostly determined by foreign trade transactions. The demand for foreign currency associated with external debt repayments and business acquisitions from foreign owners, as well as individuals' demand is less significant (individuals' net purchases totalled RUB 182 billion in Q2–Q3 2023).

IMPORTS IN RUBLES AND NET FOREIGN CURRENCY PURCHASES (SPOT) BY NON-RESIDENT BANKS AND FOREIGN BANKS' SUBSIDIARIES *Chart 16*
(RUB BILLION)



Sources: MOEX, reporting form 0409701, Bank of Russia calculations.

IMPORTS IN FOREIGN CURRENCY AND FOREIGN CURRENCY PURCHASES (SPOT) BY RUSSIAN NON-FINANCIAL COMPANIES *Chart 17*
(RUB BILLION)



Sources: MOEX, reporting form 0409701, Bank of Russia calculations.

Decline in the Russian organised FX market liquidity

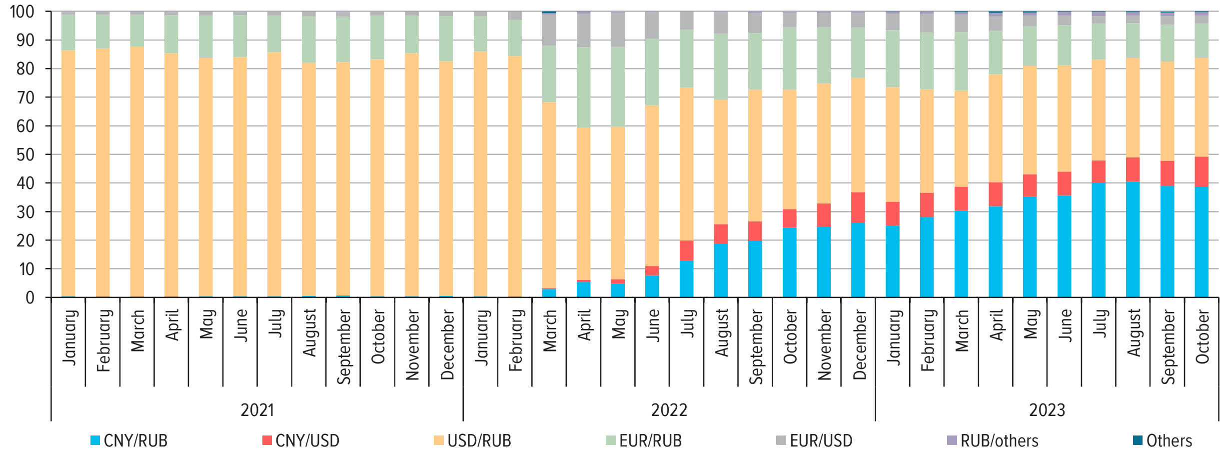
The organised foreign exchange market is characterised by a high amount of trading. In 2023, it might even exceed the pre-crisis volume of 2021: the monthly average of trading in 2021 was RUB 7.8 trillion, and it reached RUB 8.3 trillion over the first ten months of 2023. The contraction of the amount of US dollar trading (the share of the USD/RUB pair shrank to 35% in October 2023) was offset by growing turnover of currency pairs with the yuan (the CNY/RUB pair became the most traded one, reaching 39% of the trading amount) (Chart 18).

However, although overall turnover in foreign exchange trading did not contract, the Russian market's liquidity decreased in terms of the ratio of large purchases and sales and, accordingly, the exchange rate became less resilient to the value of transactions.

The balance in the domestic foreign exchange market is reflected in the ratio of the largest foreign currency buyers/sellers on the exchange (overall, across the three major currencies – CNY, USD, and EUR). In August–September 2023, when the depreciation of the ruble accelerated, the difference between the largest seller's average daily net sale and the largest buyer's average daily net purchase dropped to the minimum of 2023 (Chart 19).

STRUCTURE OF ORGANISED FX MARKET TRADING BY CURRENCY PAIRS
(%)

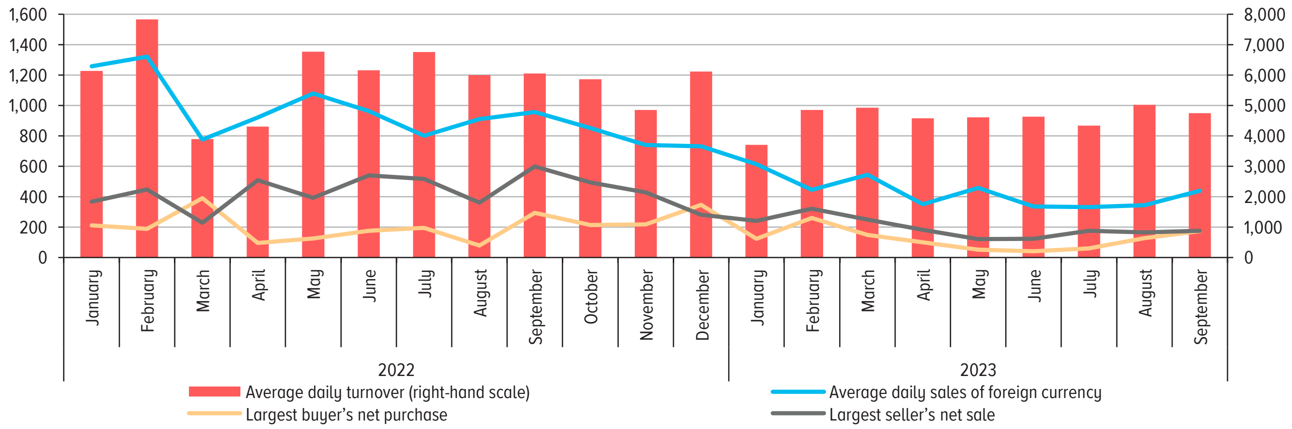
Chart 18



Source: MOEX.

EXCHANGE TRADING VOLUMES, NET SALES OF FOREIGN CURRENCY EARNINGS BY THE LARGEST EXPORTERS AND VOLUMES OF THE LARGEST SELLERS/BUYERS OF FOREIGN CURRENCY*
(USD MILLION)

Chart 19



** The largest buyer/seller of foreign currency was identified by the end of each month. Net purchase/sale was calculated as the average daily value within each month.*
Sources: MOEX, Bank of Russia calculations.

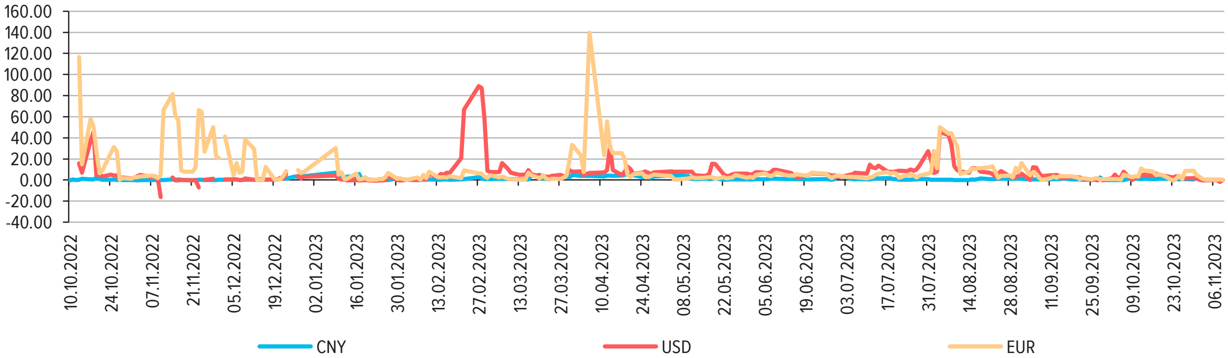
The reduction in sales by large sellers was caused by the contraction of exporters' foreign currency earnings, while the growth of purchases resulted from the rebound in imports. Besides, on certain days, there was also additional demand from Russian financial institutions as part of their management of open currency position (OCP) amid uneven dedollarisation, e.g., when they needed to redeem Eurobonds or convert loans from foreign currency into rubles (when a bank purchased foreign currency in the market in order to limit its OCP).

Moreover, the low liquidity of the foreign exchange market sometimes manifests itself in rising costs of raising foreign currency liquidity. The most significant growth in the cost of foreign currency liquidity (US dollars and euros) was recorded in August amid the weakening of the ruble (Chart 20). Nevertheless, the surge in volatility was short-term.

Overall, the correlation between the ratio of the largest purchases/sales and the movements of the foreign exchange rate shows that the foreign exchange market became thinner in Q3 2023 (a shift in exchange rates can be caused by a smaller transaction amount). Nevertheless, situations where there are almost no foreign currency sellers or there are very large buyers are very rare. There is a calendar effect during the tax period, which is characterised by larger foreign currency sales by

IMPLIED INTEREST RATES ON FX SWAPS
(%)

Chart 20



*Source: Bank of Russia calculations based on indicative figures.**
** Indicative rate on swaps.*

exporters. The liquidity situation in the market may be expected to improve as the current account balance restores. The key rate increase by the Bank of Russia will also encourage exporters to more quickly sell foreign currency earnings as it is getting less profitable to accumulate foreign currency and raise ruble loans to pay taxes and cover expenses.

Executive Order of the Russian President No. 771 'On the Mandatory Sale of Foreign Currency Earnings Received by Certain Russian Exporters Under Foreign Trade Contracts' (hereinafter, Executive Order No. 771) is also intended to ensure faster sales of foreign currency earnings by exporters (Table 3). Generally, the package of the implemented measures helps decrease short-term volatility in the foreign exchange market.

NET SALES TO EXPORTERS' FOREIGN CURRENCY EARNINGS AND GROSS SALES TO EXPORTERS' FOREIGN CURRENCY EARNINGS RATIOS

Table 3

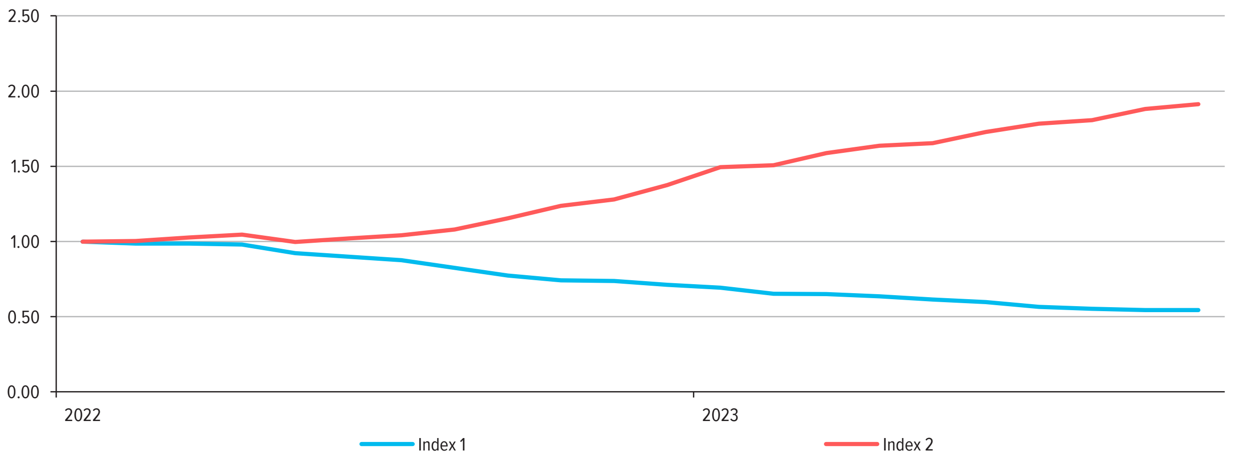
	29 largest Russian exporters									Companies subject to Executive Order No. 771
Indicator	**January 2023**	**February 2023**	**March 2023**	**April 2023**	**May 2023**	**June 2023**	**July 2023**	**August 2023**	**September 2023**	**September 2023**
Net sales to exporters' foreign currency earnings, %	101	81	118	80	85	79	66	59	77	74
Gross sales to exporters' foreign currency earnings, %	131	122	146	108	94	98	77	83	104	101

Sources: results of credit institutions' survey and data from contracts registered by authorised banks in accordance with Bank of Russia Instruction No. 181-I, dated 16 August 2017, 'On the Procedure for Residents and Non-residents to Submit Documents and Information Confirming Foreign Exchange Transactions to Authorised Banks, on Single Accounting and Reporting Forms Related to Foreign Exchange Transactions, and the Procedure and Timeframes for Their Submission'.

Dynamics of correspondent relationships

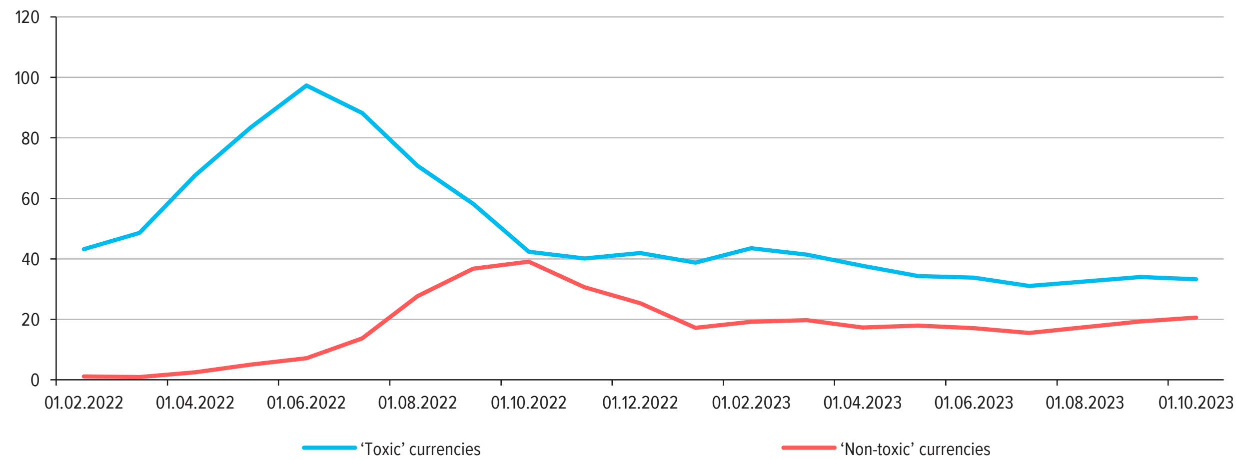
As the proportion of 'toxic' currencies in external economic activity is contracting, 'toxic' currencies in interbank settlements are being substituted for friendly countries' currencies. The decline in Russian banks' correspondent relationships in 'toxic' currencies with non-resident banks continued during the period under review. As of 1 October 2023, the index of the network of correspondent relationships in 'toxic' currencies decreased by 15% and 46% compared to 1 April 2023 and early 2022, respectively (Chart 21). Contrastingly, the network of correspondent relationships in friendly countries' currencies was expanding, with the index growing by 17% over April–September 2023 and by 91% since early 2022. Concurrently, over April–September 2023, claims on non-resident banks in friendly states' currencies increased by 19%, whereas those in 'toxic' currencies declined by 12% (Chart 22).

CORRESPONDENT BANKING RELATIONSHIP INDICES* (CORRESPONDENT ACCOUNTS AND DEPOSITS) THAT INDICATE THE NUMBER OF CORRESPONDENT BANKING RELATIONSHIPS IN FOREIGN CURRENCIES (1 JANUARY 2022 = 1) *Chart 21*



** Index 1 is a geometric mean of the number of unique correspondent banking relationships in 'toxic' currencies in unfriendly countries, the number of Russian banks with correspondent banking relationships in 'toxic' currencies in unfriendly countries, and the number of counterparties (non-resident banks) from unfriendly countries (as of 1 January 2022 = 1). Index 2 is a geometric mean of the number of unique correspondent banking relationships in 'non-toxic' currencies in friendly countries, the number of Russian banks with correspondent banking relationships in 'non-toxic' currencies in friendly countries, and the number of counterparties (non-resident banks) from friendly countries (as of 1 January 2022 = 1).*
Sources: reporting forms 0409501 and 0409603.

STRUCTURE OF CREDIT INSTITUTIONS' CLAIMS (CORRESPONDENT ACCOUNTS AND DEPOSITS) ON NON-RESIDENT BANKS *Chart 22*
(EQUIVALENT IN RUB BILLION)



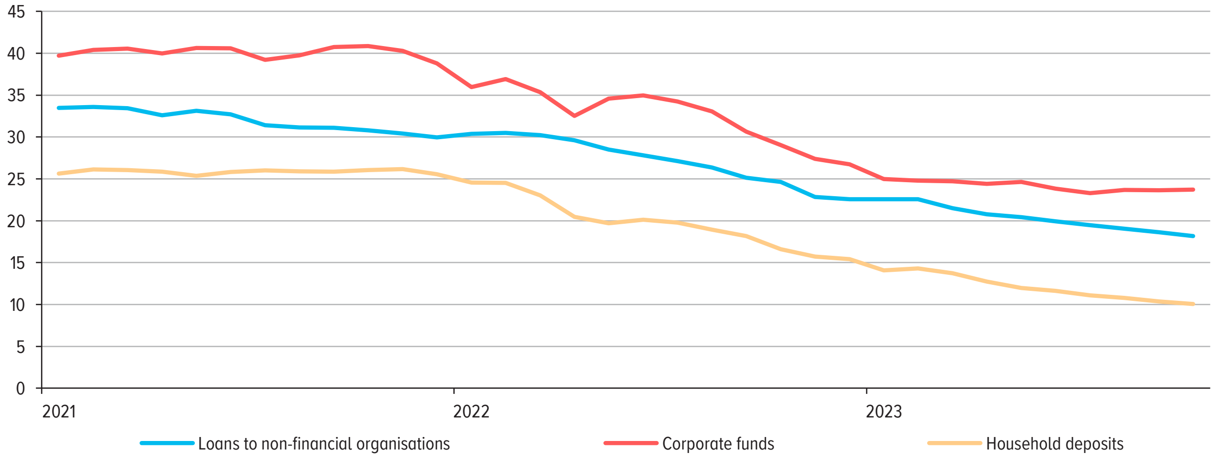
Sources: reporting forms 0409501 and 0409603.

Progress of dedollarisation in the banking sector

Dedollarisation of assets and liabilities (reduction in foreign currency assets and liabilities) in the banking sector continued during the period under review (Chart 23). The decrease was most significant in corporate debt and household deposits denominated in foreign currency. Contrastingly, the share of friendly states' currencies in clients' foreign currency funds rose over the period from 1 April 2023 to 1 October 2023, specifically from 32% to 49% in legal entities' foreign currency deposits and account balances and from 11% to 16% in households' foreign currency deposits. Besides, corporate borrowers are actively shifting towards 'non-toxic' currencies, mostly the yuan, the proportion of which reached 29% of the foreign currency loan portfolio as of 1 October 2023.

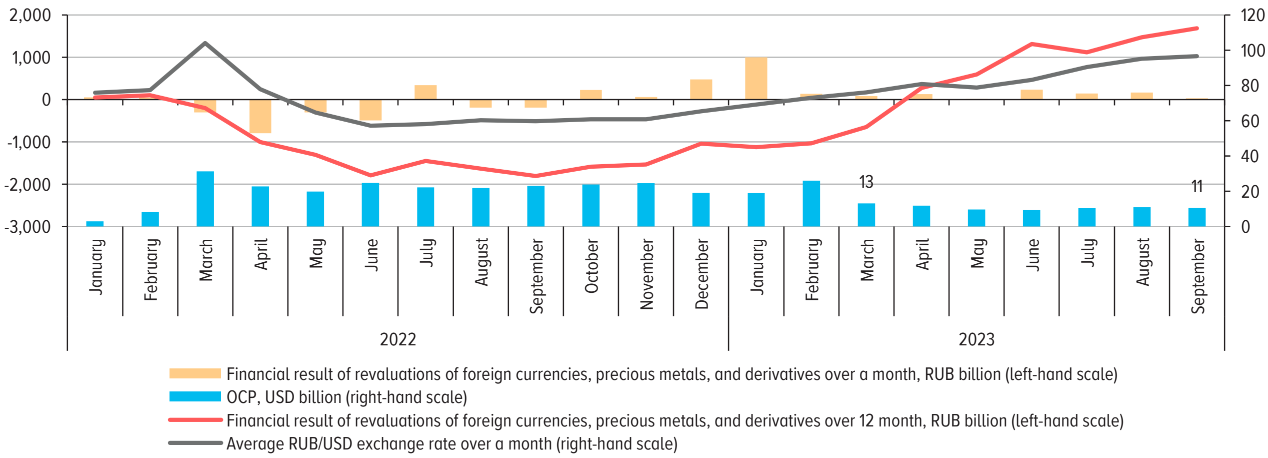
Banks continued to reduce their long OCP during the period under review: from USD 13 billion to USD 11 billion as of 1 October 2023 (Chart 24). Over the reporting period, the ratio of the OCP and capital dropped from 7.5% to 7.1% as of 1 October 2023 (by 3 pp since the beginning of the year). This contributes to a decrease in the banking sector's potential losses from exchange rate fluctuations.

DOLLARISATION AT THE EXCHANGE RATE AS OF 1 OCTOBER 2023 *Chart 23*
(%)



Source: reporting form 0409101.

OCP AND FINANCIAL RESULT OF REVALUATIONS OF FOREIGN CURRENCIES, PRECIOUS METALS, AND DERIVATIVES* *Chart 24*



** Excluding foreign currency revaluation of provisions.*
Sources: reporting forms 0409101 and 0409634.

3.2. Individuals' investment in foreign instruments

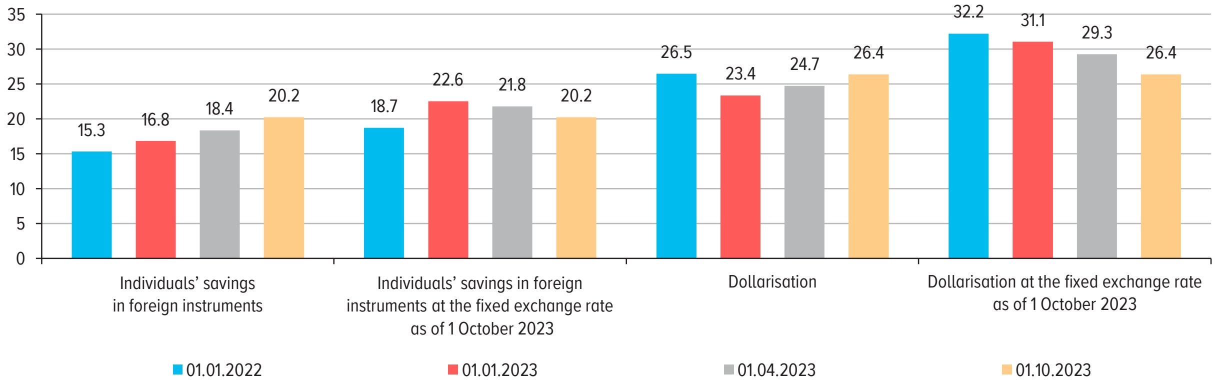
Cross-border money transfers and investment in foreign instruments

Over the period under review, individuals' cross-border money transfers totalled RUB 1.54 trillion, which is 46.7% less than over the previous two quarters. During 2023, transfer amounts were consistently declining (after peaking at the end of 2022).

In January–September 2023, inflows into foreign instruments accounted for 11.2% (RUB 741 billion), which is considerably less than in 2022 (35.2%, or RUB 2,995 billion). Adjusted for foreign currency revaluation, the share of households' savings in foreign financial instruments has decreased by 1.6 pp to 20.2% over the period under review.

One of the reasons for the decline in households' savings in foreign financial instruments was higher attractiveness of ruble savings. Overall, amid the tightening of the Bank of Russia's monetary policy, ruble deposits became much more attractive, while the risk of an outflow of individuals' funds to foreign instruments lowered.

INDIVIDUALS' SAVINGS IN FOREIGN INSTRUMENTS AND DOLLARISATION OF INDIVIDUALS' SAVINGS *Chart 25*
(%)



** Calculated as the ratio of the overall amount of individuals' money transfers to non-resident banks and non-resident brokers, foreign currency cash and foreign securities to individuals' total investment in financial instruments. The ratio is adjusted for foreign currency revaluation.*
*** Foreign currency savings include foreign securities, Russian issuers' foreign currency-denominated securities, foreign currency deposits, money transfers to non-resident brokers and banks, and foreign currency cash.*
Sources: reporting forms 0409711, 0420415 and 0409405, and information on households savings.

Individuals also increased their purchases of Russian shares and bonds: over Q2–Q3 2023, investment in Russian shares and bonds totalled RUB 162 billion and RUB 228 billion, respectively. Maintaining private investors' confidence in the Russian securities market is essential for its development.

In recent years, the Bank of Russia has considered the growth of individuals' investment in foreign instruments as a vulnerability: in 2020–2021, those were foreign shares, and from 2022 – deposits with foreign banks. Individuals' money transfers to foreign jurisdictions amplify risks (associated with both unfriendly states' potential restrictions and additional credit risks).

These risks materialised at the beginning of November 2023 when the U.S. Department of the Treasury enacted restrictions against PJSC SPB Exchange (put on the SDN List) banning any transactions with the exchange. Consequently, the exchange had to suspend trading of all foreign securities (US shares accounted for the largest proportion in trading) in order to make a decision on its further actions in such conditions. Amid the news about the sanctions, SPB Exchange's shares plummeted by over 40% as of the end of November. It should be noted that the largest part of the foreign securities purchased by investors on this exchange and recognised on accounts of the SPB Exchange group's depository are held by qualified investors.

In order to protect investors against infrastructure risks, the Bank of Russia proactively introduced a number of restrictions for investors. In particular, it restricted organised trading of the foreign securities blocked by international settlement and clearing organisations. Besides, from 1 October 2022, the Bank of Russia introduced the restrictions on selling unfriendly states' securities and securities that are serviced through unfriendly states' infrastructure to non-qualified investors.[4]

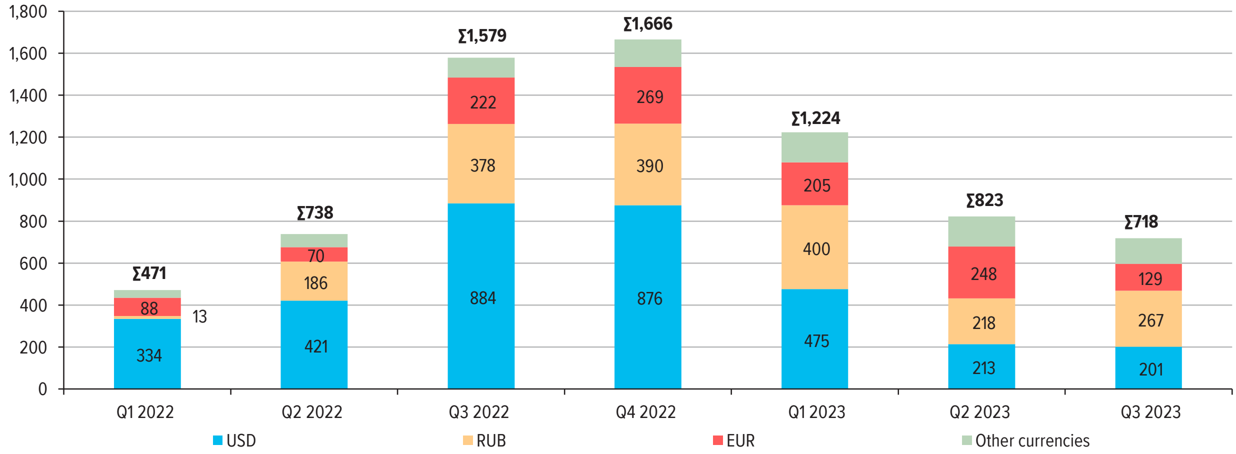
It is still possible to invest in foreign securities through foreign brokers, which involves additional risks, including the lack of legal protection of Russian investors. Investment in Russian securities through domestic brokers does not involve such risk or infrastructure risk.

Overall, the vulnerability associated with individuals' offshore investment decreased slightly during the year: adjusted for foreign currency revaluation, households' savings in foreign financial instruments declined by 1.6 pp to 20.2% over the period under review (Chart 25).

[4] From 1 January 2023, any sales to non-qualified investors are prohibited.

INDIVIDUALS' CROSS-BORDER NET TRANSFERS OF FUNDS BY CURRENCY
(RUB BILLION)

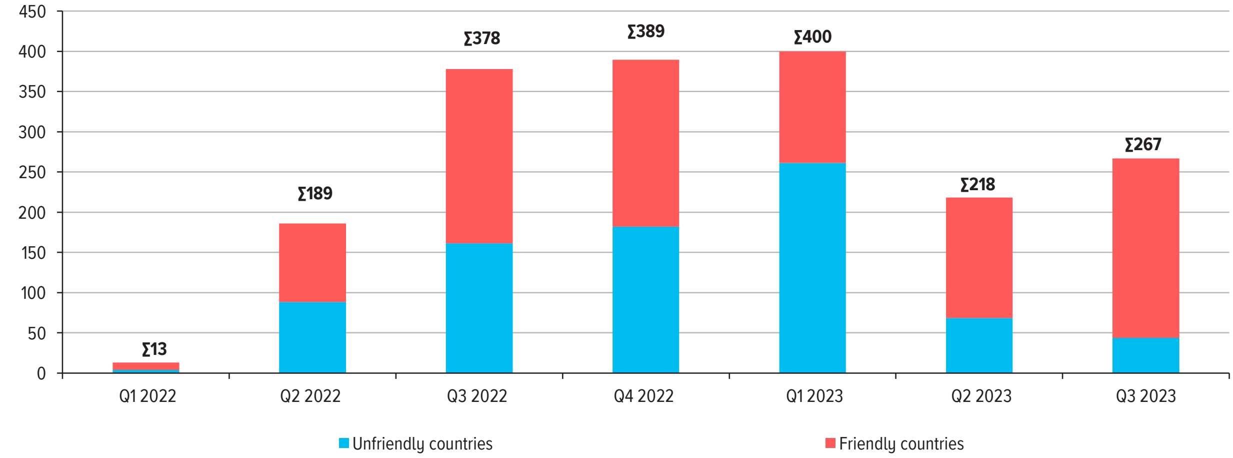
Chart 26



Source: Section 2.1 of reporting form 0409407 'Cross-border transfers of individuals'.

INDIVIDUALS' CROSS-BORDER NET TRANSFERS IN RUBLES BY GROUP OF COUNTRIES
(RUB BILLION)

Chart 27



Source: Section 2.1 of reporting form 0409407 'Cross-border transfers of individuals'.

Individuals' net cross-border transfers totalled RUB 1.54 trillion (Chart 26) over the period under review, which is 46.7% less than RUB 2.89 trillion[5] in Q4 2022 – Q1 2023. The amount of ruble transfers decreased as well over the period under review, namely from RUB 789 billion to RUB 485 billion, but rose from RUB 218 billion in Q2 2023 to RUB 267 billion in Q3 2023 (Chart 27).

It is necessary to take into account that cross-border money transfers are made not only as individuals' investment in foreign financial instruments, but also for repatriation of labour migrants' incomes, payments for imports, and money transfers to payment cards. Amid the reduction in the total amount of cross-border money transfers, the inflow of funds into Russian households' deposits

[5] Individuals' cross-border money transfers are analysed based on the amount of net transfers given in Section 2.1 'Resident individuals' money transfers' of reporting form 0409407 'Individuals' cross-border money transfers' as it shows the outflow trend most accurately.

with non-resident banks contracted as well.[6] Over the period under review, these deposits increased by RUB 439 billion, which is 63% below the figure for the previous two quarters. The accumulation of funds in deposits with foreign banks is accompanied by the reduction in foreign currency deposits with Russian banks.

Over Q2–Q3 2023, individuals' net money transfers to foreign brokers totalled RUB 52.8 billion and the balance of funds in foreign brokers' accounts increased by 18.4% from RUB 287.0 billion to RUB 339.8 billion. These dynamics are associated with individuals' net sales of foreign securities through the Russian infrastructure. Overall, the risks of the transfer of individuals' investment to the foreign infrastructure remain limited.

Individuals were actively expanding their investment in Russian market instruments. In Q2–Q3 2023, ruble deposits surged by RUB 4.05 trillion to RUB 38.92 trillion (Table 4). As of 1 October 2023, ruble deposits accounted for 41.6% in the total amount of individuals' investment. In addition, individuals increased their purchases of Russian shares and bonds: over Q2–Q3 2023, their investment in Russian shares and bonds totalled RUB 162 billion and RUB 228 billion, respectively.

TOTAL INDIVIDUALS' INVESTMENT AND INFLOWS, BY INSTRUMENT *Table 4*
(RUB BILLION)

Type	Instrument	01.10.2023	Inflows in January–September 2023	Inflows in 2022	Inflows in 2021
Residents' instruments	Ruble deposits	38,917	4,464.8	5,243	2,005
	Foreign currency deposits	4,116	-1,025.1	-2,637	180
	Residents' shares	7,888	307.9	1,076	418
	Residents' bonds	3,508	303.5	178	436
	Residents' units of unit investment funds: residents' assets	1,176	-44.0	94	205
	Cash in rubles	16,449	1,774.8	1,965	676
	Funds on brokerage accounts	623	-45.8	-415	92
	Insurance reserves	2,284	123.0	16	270
	Amount of transactions	**74,960**	**5,859**	**5,519**	**4,282**
Non-residents' instruments	Cash in foreign currencies	9,294	-161.2	1,234	184
	Funds with foreign brokers*	340	101.0	183	30
	Foreign currency deposits with non-resident banks	7,321	883.9	2,144	398
	Non-residents' shares	723	-28.0	-208	523
	Non-residents' bonds	758	-71.0	-189	249
	Non-residents' units	260	-2.0	-74	109
	Residents' units of unit investment funds: non-residents' assets	329	-18.0	-95	148
	Amount of transactions	**19,023**	**741**	**2,995**	**1,640**
	Total	93,643	6 600	8,514	5,922
	% of non-residents' instruments	20.2%	11.2%	35.2%	27.7%

Note. Investment amounts are calculated based on prices and exchange rates as of the calculation date, and inflows – based on average amounts and exchange rates over a month.
Sources: reporting forms 0409711, 0420415 and 0409405, and information on households savings.

Thus, over January–September 2023, inflows into foreign instruments accounted for 11.2% (RUB 741 billion), which is considerably less than over 2022 in general (35.2%, or RUB 2,995 billion). The key rate hike by the Bank of Russia will help maintain individuals' demand for ruble savings at a high level.

Russians' investment in cryptocurrencies

Russian users' activity in the cryptoasset market decreased over the period under review. In particular, there was a decline in the number of visits to websites of the largest cryptocurrency trading platforms and in Bitcoin flows on crypto exchanges that is accounted for (according to estimates) by Russian users.

[6] To calculate the indicator 'Deposits with non-resident banks', data on individuals' money transfers to their own accounts abroad are adjusted for the amount of expenses for real estate purchases abroad and durables subsequently bought by the owners of foreign real estate for their own needs in the relevant country without transporting them to the Russian Federation, costs recognised in the 'Travels' item on the balance of payments, and payments for imports not subject to registration.

P2P transactions are the main channel for purchasing cryptoassets. As credit institutions enhanced their approaches to identifying P2P transfers associated with cryptoasset turnover, the average monthly amount of such transactions increased by 53.9% year-on-year.

There may be a build-up of risks associated with Russians' investment in cryptoassets due to the launch of alternative exchange platforms focused on Russians, among others.

Over Q2–Q3 2023, Russian users visited websites of the largest cryptocurrency trading platforms (crypto exchanges, P2P platforms, cryptocurrency exchange offices) 89.6 million times, which is 1.6% less year-on-year. Russian users' activity declined more notably in Q3 2023, which correlates with the global decrease in investors' interest in the cryptoasset market following the tightening of monetary policies in major economies. During the said period, Russians' online visits at cryptocurrency trading platforms has dropped by 27.8% compared to Q3 2022 totalling 28.9 million. Besides, Russians' share in the total number of visits dropped from 5.8% to 4.9%.[7]

According to estimates, Russians accounted for approximately 700,100 Bitcoins[8] (RUB 1.68 trillion)[9] in overall Bitcoin inflows and outflows on the largest crypto exchanges[10] over Q2–Q3 2023, which reflects a 22.4% decrease year-on-year. This indicates a potentially considerable amount of Russian users' transactions. However, it is necessary to take into account that this amount implies the turnover of transactions (that is, flows of users' funds across accounts)[11] and, accordingly, cannot be interpreted as the amount of investment, for instance. By the end of Q3 2023, the Bitcoin balances in crypto exchange wallets that can be attributed to Russian users (according to estimates) declined by 3.1% year-on-year totalling 96,900 Bitcoins[12] (RUB 255 billion).[13] [14]

Russians' active participation in the cryptoasset market may create risks of a decline in households' income in the event of shocks in this market (especially taking into account that this market is exposed to the risk of misconduct). Among recent cases of manipulation in the cryptoasset market was fake news about the Bitcoin ETF approval by the US Securities and Exchange Commission (SEC), which entailed a surge in the Bitcoin price on 16 October 2023 and its subsequent correction, causing the liquidation of traders' short positions worth over USD 100 million. Furthermore, the U.S. Department of the Treasury accused Binance of violations of the AML/CFT laws: until mid-2021, the exchange had been failing to perform the required Know Your Customer (KYC) procedures , which enabled the processing of over 100,000 unlawful transactions on Binance (including with the participation of sanctioned jurisdiction persons) that the exchange had failed to report. As a result, on 21 November 2023, the U.S. Department of the Justice imposed one of the largest corporate penalties in the US history – USD 4.3 billion – on Binance. After the announcement of this decision, investors pulled about USD 956 million from Binance over the next 24 hours.

The key factors influencing Russian crypto investors' activity[15] are events in the global cryptoasset market (consequences of the depegging of USDC and DAI from the US dollar as a result of the US bank crisis in March 2023) and the demand for alternative instruments of money holding, especially

[7] The data are provided by the blockchain analytics service Transparent Blockchain.

[8] Bitcoin flows were calculated for the exchanges Binance, Huobi, Bybit, OKX, Gate, MEXC, KuCoin, Poloniex, Bittrex, Bitfinex, as well as Bing, Bitmart, Bitrue, Bkex, Btcex, Coinw, Coinbase, Phemex, Probit, Whitebit, Exmo, and Garantex.

[9] Inflows and outflows in rubles were calculated based on the average Bitcoin price and the USD exchange rate over each month of the period under review.

[10] Calculated by multiplying the amount of bitcoins transferred to/from crypto exchanges' tagged addresses over a certain period by the share of Russian users in web traffic of crypto exchanges' websites.

[11] Inflows and outflows can be related to payments for goods and services, cryptocurrency transfers to centralised exchanges for sale, transfers between users, as well as withdrawals of cryptocurrency to a decentralised wallet after its purchase in the P2P market, and other purposes.

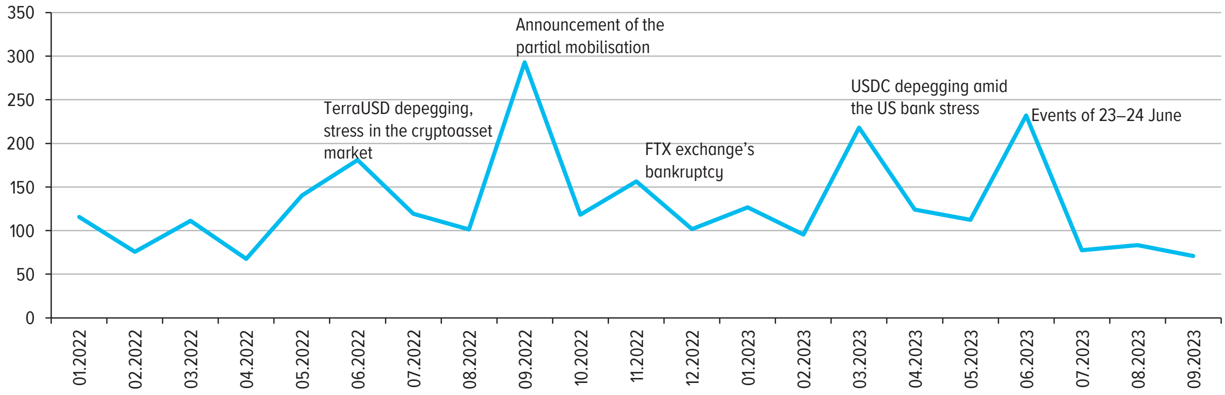
[12] Bitcoin balances in crypto exchange wallets were calculated for the exchanges Binance, Huobi, Bybit, OKX, Gate, MEXC, KuCoin, Poloniex, Bittrex, and Bitfinex.

[13] Investment amounts were calculated at the Bitcoin price and the USD exchange rate as of 30 September 2023.

[14] According to data from the Transparent Blockchain service.

[15] Activity in terms of both purchases and sales of cryptoassets.

BITCOIN INFLOWS AND OUTFLOWS ON THE LARGEST CRYPTO EXCHANGES ACCOUNTED FOR BY RUSSIAN USERS (THOUSAND BTC) *Chart 28*



Source: Transparent Blockchain service.

in the conditions of the sanctions, e.g., stablecoins (cryptoassets may be used as a means of payment in some jurisdictions). Thus, over the period from early 2022 to Q3 2023, the amount of Tether (USDT)/RUB trading exceeded that of Bitcoin/RUB trading 2.3 times, approximating USD 2 billion.[16]

The P2P segment is becoming increasingly important as a channel for purchasing cryptoassets. According to the 2023 Global Crypto Adoption Index prepared by Chainalysis, Russia's position in terms of the amount of P2P transactions with cryptoassets became notably higher in the ranking. Besides, over the period under review, there was a 53.9% increase in the amount of transactions meeting the criteria of Methodological Recommendations No. 16-MR, dated 6 September 2021, 'On Increasing Credit Institutions' Focus on Certain Customer Transactions' that were revealed by credit institutions (which were associated with, among other things, cryptoasset purchases and conducted using bank drops) compared to the same period last year. The Bank of Russia considers that this growth was associated with the results of the supervision and improvements in banks' approaches to detecting such transactions. In addition, cryptoassets can be purchased through friendly states' financial institutions, among other things, where Russians preliminarily transfer the funds.

As a result of the exit of the largest international payment systems from the Russian market and foreign regulators' reaction to crypto intermediaries' services provided to Russian clients, in Q3 2023, Russians stopped purchasing cryptoassets using Russian bank cards, with the amount of such transactions declining nearly to zero.[17] Meanwhile, there are currently new alternative platforms being created where Russians are allowed to directly increase the balances of their accounts on the crypto exchange using bank cards issued by Russian banks and to conduct P2P transactions. The Bank of Russia will monitor related risks for the financial system and Russian households and take measures, where needed.

[16] Data provided by The Block.

[17] Quarterly Reporting Form 0409263 'Data on cross-border transactions using electronic means of payment and e-money transfers conducted by non-residents–holders of corporate e-money'.

3.3. Households' debt burden

The introduced macroprudential limits (MPLs) helped improve the unsecured consumer lending standards to a certain extent: the share of loans issued to borrowers with DSTI ratios exceeding 80% declined from 36% in Q4 2022 to 25% in Q3 2023 and that of loans with a maturity of over five years – from 18% to 2%, respectively. However, the annual growth rate of the unsecured consumer loan portfolio reached 15% as of 1 October 2023 (+16% as of 1 November 2023), which was driven by households' elevated demand for loans amid the rise in per capita income by 10.7% year-on-year as of 1 October 2023.

In September 2023, the expansion of consumer lending started to slow down because of several factors. The key rate increase by the Bank of Russia and the lifting of restrictions on the effective interest rate (EIR) caused a rise in credit rates. The increase in the macroprudential buffers from 1 September 2023 reduced banks' profits from the riskiest loans, which decreased their issuance.

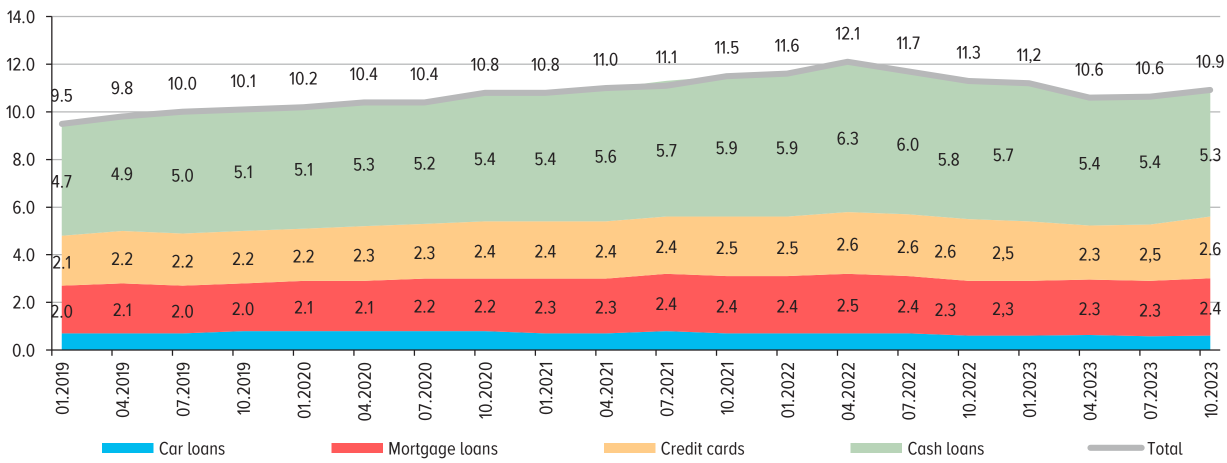
Borrowers with DSTI above 50% still account for a considerable proportion in total debt, namely 63%. In order to accelerate the transition to a better-balanced structure of issuances in Q4 2023, the Bank of Russia has introduced a 30% cap on the share of loans issued to borrowers with DSTI ratios of 50–80% (and a 20% cap on loans with a limit) and a 5% cap on loans to borrowers with DSTI above 80%. For Q1 2024, the Bank of Russia additionally tightened the MPLs for loans to borrowers with DSTI of 50–80%: the limit on credit cards was reduced from 20% to 10% and the limit on other loans was also decreased, although less considerably, namely from 30% to 25%. The tightening of the MPLs and higher interest rates in the economy will slow down the expansion of the unsecured consumer loan portfolio and reduce borrowers' debt burden.

Households' debt burden at the macrolevel

In Q2–Q3 2023, individuals' debt burden at the macrolevel (Chart 29) edged up by 0.3 pp to 10.9%, which was associated with the surge in credit card debt (+20% over the two quarters). In other segments, despite growing debt, the debt burden did not change significantly due to an increase in the average loan maturity.

DEBT SERVICE RATIO IN RETAIL LENDING
(%)

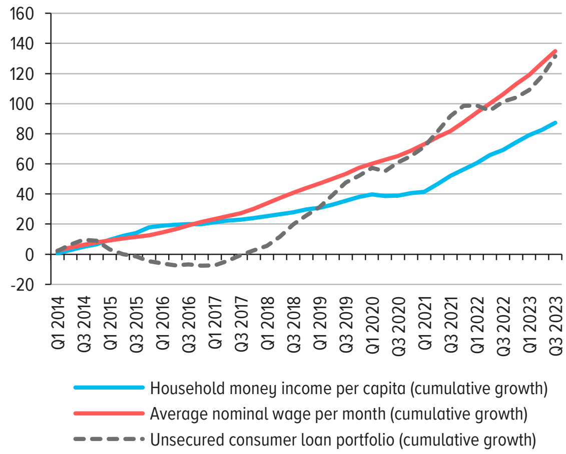
Chart 29



Note. During Q1 2023 banks were transitioning to the use of a new field (in accordance with the amendments to Bank of Russia Regulation No. 758-P, dated 11 May 2021, 'On the Procedure for Compiling a Credit History' introduced on 24 October 2022) to determine the principal amount when forming credit reports. As a result, the debt service ratio in cash lending decreased as of 1 April 2023.

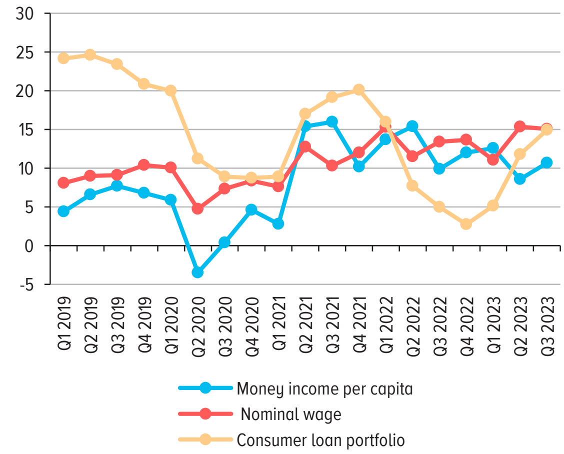
Sources: CHB's data, reporting forms 0409316, 0409126, 0409128 and 0409102, Rosstat.

CUMULATIVE GROWTH OF HOUSEHOLD MONEY INCOME PER CAPITA, AVERAGE NOMINAL WAGE PER MONTH, AND THE UNSECURED CONSUMER LOAN PORTFOLIO *Chart 30*
(%)



Sources: Rosstat, reporting form 0409115.

HOUSEHOLD MONEY INCOME PER CAPITA, AVERAGE NOMINAL WAGE PER MONTH, AND THE UNSECURED CONSUMER LOAN PORTFOLIO *Chart 31*
(% GROWTH YOY)



Sources: Rosstat, reporting form 0409115.

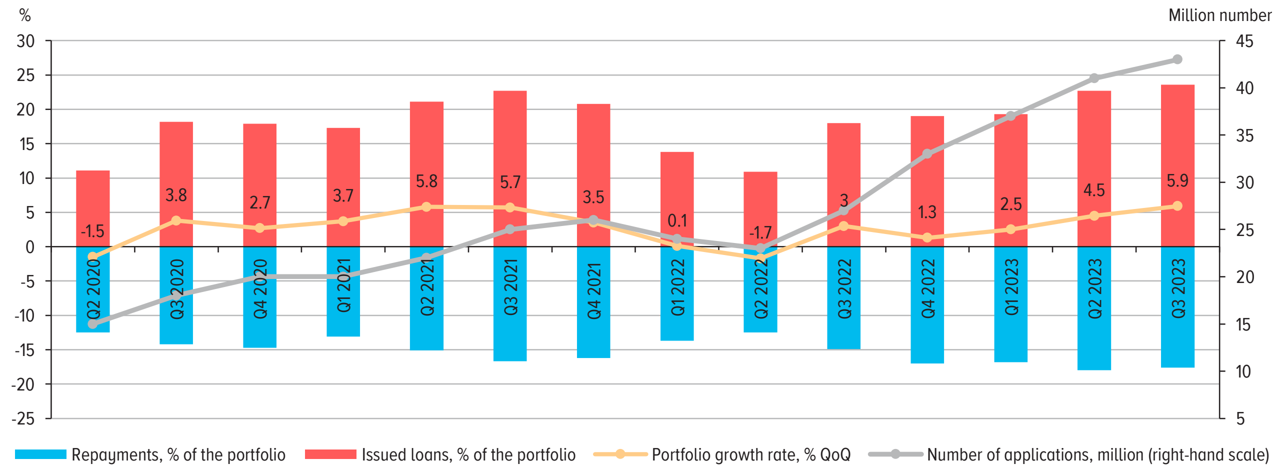
Compliance with the macroprudential limits for unsecured consumer loans and their effect on debt burden at the macrolevel

Dynamics of the loan portfolio and new loans

In Q2–Q3 2023, banks were actively expanding unsecured consumer lending. The portfolio increased by 4.5% over Q2 2023 compared to 2.5% in the previous quarter and by 5.9% in Q3 (Chart 32). In August 2023, the outstanding debt was up by 2.4%, which is equivalent to the annual growth of 32.9%.[18] The proportion of credit card funds stabilised from the beginning of the year at a level of about 40% in total issuances (Chart 33).

The expansion of lending was mostly driven by households' elevated demand for loans. Over Q3 2023, the number of cash loan applications soared by 60% year-on-year from 27 million to 43 million (Chart 32). The increase in the demand for loans was accompanied by the rise in households'

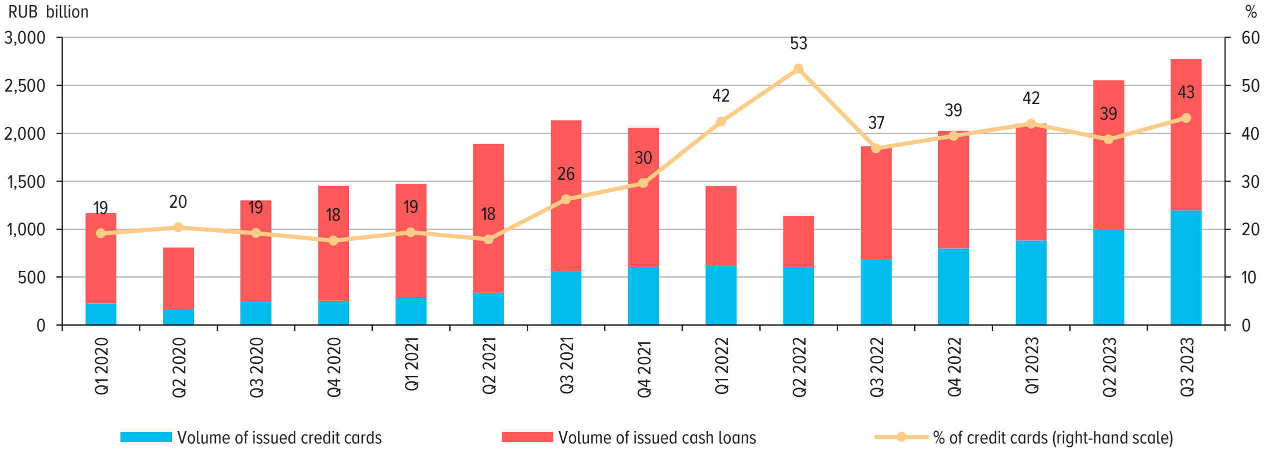
ISSUED LOANS, PORTFOLIO AMORTISATION, AND PORTFOLIO GROWTH (%) IN THE PREVIOUS REPORTING PERIOD, NUMBER OF LOAN APPLICATIONS *Chart 32*



Sources: reporting forms 0409115 and 0409704, survey of outstanding loans across the 10 largest banks.

[18] Annualised monthly growth.

VOLUME OF ISSUED UNSECURED CONSUMER LOANS *Chart 33*



Note. Outstanding debt on loans issued over the period is given as of the end of the reporting quarter.
Source: reporting form 0409704.

income and wages (as of 1 October 2023, by 10.7% and 15.8% year-on-year, respectively). However, during this period, debt started to grow faster than incomes (Chart 31). In September 2023, the expansion of lending began to decelerate, and the growth rate of debt equalled 1.5%, whereas the increase in October 2023 reached 1.1%. These dynamics were associated with the following factors:

1. Monetary policy tightening and simultaneous suspension of the limit on EIR, which enabled banks to factor the key rate hike in their interest rates.
2. Tightening of the risk-weight add-ons for unsecured consumer loans issued after 1 September 2023.

Lending standards and compliance with the MPLs in Q2–Q3 2023

The unsecured consumer lending standards slightly improved in Q2–Q3 2023: the share of loans issued[19] to borrowers with DSTI above 80% declined to 24.9% in Q3 2023.[20] Credit card funds provided to borrowers whose DSTI exceeded 80% accounted for 31.3% in Q3 2023 (Chart 35) as part of these funds were on credit cards issued before the introduction of the MPLs. The proportion of cash loans (Chart 34) issued to borrowers with DSTI above 80% declined to 20.5% as a result of the reduction in the caps on the MPLs depending on DSTI ratios (Table 6).

Furthermore, the share of long-term bank loans was also declining. Cash loans with a maturity of over five years accounted for 2.4% of the total amount of loans issued in Q3 2023 compared to 18.2% as of the beginning of the year (Chart 36).

The absolute majority of banks were compliant with the MPLs, whereas the number of non-compliant banks was gradually decreasing. Total debt on loans breaching the MPLs was negligent, accounting for 0.1% of all cash loans issued in Q2 2023 and less than 0.1% in Q3 2023. In the course of the supervision, the Bank of Russia will pay particular attention to the accuracy of DSTI calculations and banks' compliance with the MPLs.

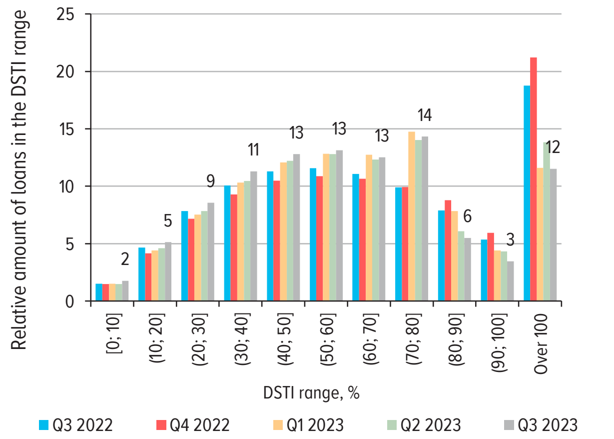
To ensure compliance with the MPLs, banks started to issue smaller loans to borrowers. The average loan amount decreased from RUB 209,000 in Q4 2022 (before the introduction of the MPLs) to RUB 189,000 in Q3 2023.[21] Furthermore, banks tend to issue the largest possible amount of loans subject to the effective restrictions during the first month of a quarter and then considerably reduce the share of loans issued to borrowers with DSTI above 80% in the subsequent periods.

[19] Outstanding debt as of the reporting date on loans issued over the reporting quarter.

[20] Information for the previous periods was updated as some banks resubmitted Reporting Form 0409704 and certain 'categories' (Column 7 in Section 1) were included in unsecured consumer loans.

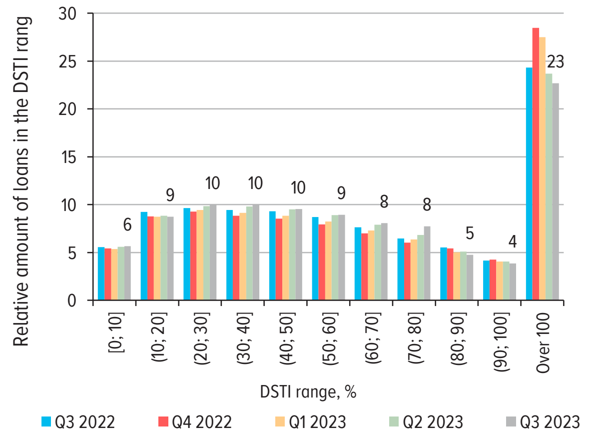
[21] According to the survey of outstanding loans across the largest retail banks.

ISSUED CASH LOANS, BREAKDOWN BY DSTI *Chart 34*
(%)



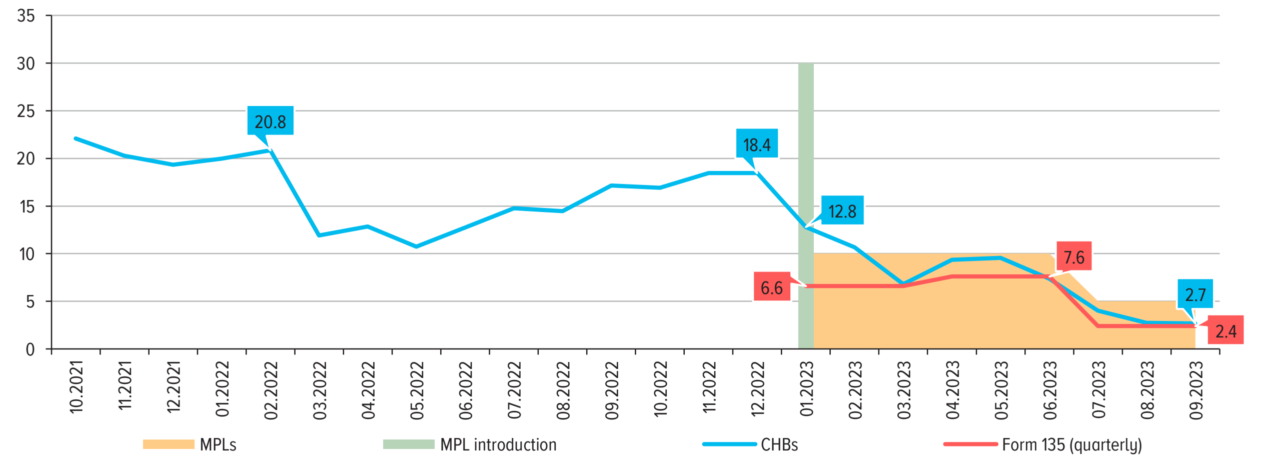
Source: reporting form 0409704.

ISSUED CREDIT CARDS WITH ACTUAL DISBURSEMENTS, BREAKDOWN BY DSTI *Chart 35*
(%)



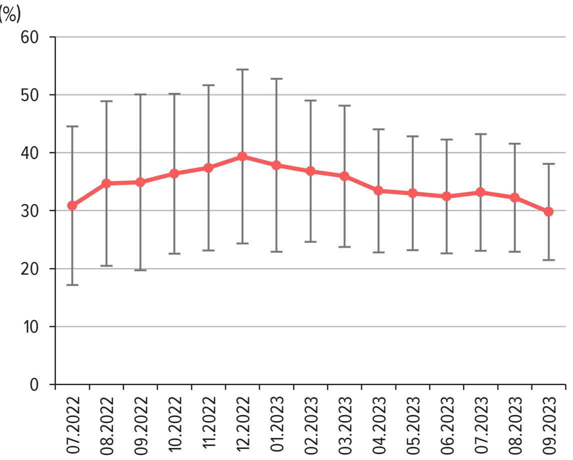
Source: reporting form 0409704.

SHARE OF CASH LOANS WITH MATURITY OVER 5 YEARS *Chart 36*
(%)



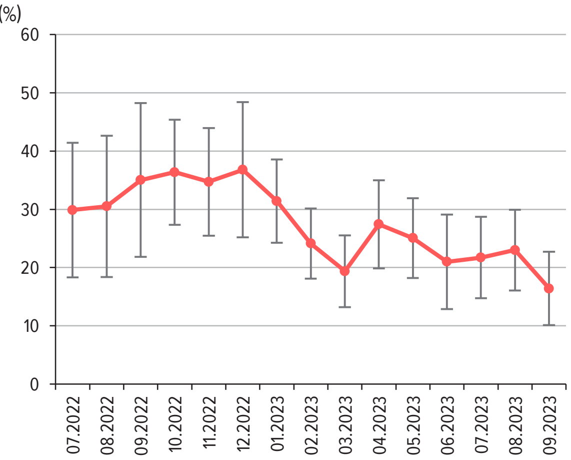
Sources: CHBs' data, reporting form 0409135.*
** Data for 2023 was updated as some banks resubmitted Section 11 of reporting form 0409135.*

WEIGHTED AVERAGE SHARE OF LOANS ISSUED TO BORROWERS WITH DSTI ABOVE 80%, WEIGHTED AVERAGE STANDARD DEVIATION BY THE AMOUNT OF DISBURSEMENTS. CREDIT CARDS *Chart 37*
(%)



Source: reporting form 0409704.

WEIGHTED AVERAGE SHARE OF LOANS ISSUED TO BORROWERS WITH DSTI ABOVE 80%, WEIGHTED AVERAGE STANDARD DEVIATION BY THE AMOUNT OF DISBURSEMENTS. CASH LOANS *Chart 38*
(%)



Source: reporting form 0409704.

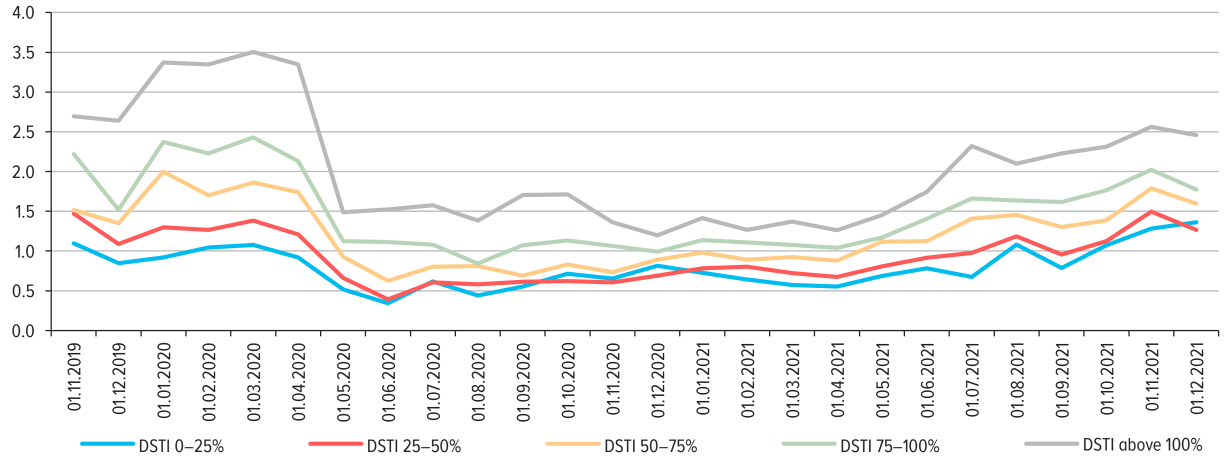
Such dynamics are evident in cash lending (Chart 38), but are much less obvious in the segment of credit cards (Chart 37).[22] Thus, over Q2–Q3 2023, the MPLs introduced to restrict high-risk lending have improved the lending standards across the banking sector in general.

Besides, the quality of the unsecured consumer loan portfolio remained stable. Despite the increase in the total amount of NPL 90+ in Q2–Q3 2023 (+2.2%, or RUB 24 billion) due to the fast expansion of the portfolio, the share of NPL 90+ contracted by 0.7 pp to 8.1% as of 1 October 2023. Higher households' income is one of the factors propping up the quality of debt servicing. If its growth slows down, the credit quality might worsen, primarily among over-indebted borrowers.

MPL tightening in Q4 2023 and Q1 2024

The establishment of the MPLs on loans to borrowers with high DSTI ratios was accompanied by the redistribution of issued loans from the DSTI range exceeding 80% to the DSTI range of 50–80%. Consequently, the outstanding debt of borrowers with high DSTI ratios has remained considerable. Specifically, as of 1 October 2023, borrowers whose DSTI ratios exceeded 50% accounted for 63% of the portfolio of unsecured consumer loans, and borrowers with DSTI above 80% – for 31% of the portfolio. In the case of shocks, such debt distribution might pose risks for the banking system and borrowers because the average default ratio and, accordingly, banks' credit losses rise as borrowers' debt burden increases (Chart 39).

DYNAMICS OF DEFAULTS OVER THE 12-MONTHS HORIZON ON UNSECURED CONSUMER LOANS PORTFOLIO *Chart 39*
(%)



Note. The default rate is the percentage of outstanding loans that are not in default as of the reporting date, but recognised as defaulted or restructured within 12 months after the reporting date.
Source: data for banks' macroprudential stress testing carried out by the Bank of Russia.

BREAKDOWN OF ISSUED CASH LOANS (DISBURSEMENTS) BY DSTI *Table 5*
(%)

Segment	DSTI range	Q4 2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	Q3 2023	Change in Q3 2023 vs Q4 2022
Cash loans	(50; 80]	30	31	33	33	31	40	39	40	9 pp
	[80+)	36	35	25	32	36	24	24	20	-16 pp

Sources: reporting form 0409704, MPL survey.

[22] The dynamics in the credit card segment take into account disbursements on all credit cards, including those issued during periods preceding the reporting one (that is, on the entire credit card portfolio), and the dynamics in the cash loan segment reflect actually disbursed funds.

Therefore, the Bank of Russia has made the decision to accelerate the transition to a better-balanced structure of lending by tightening the MPLs for Q4 2023 and Q1 2024 (Table 6). In Q4 2023, to limit the expansion of new loans to borrowers with DSTI of 50–80%, the Bank of Russia introduced a 30% cap (25% in Q1 2023) on cash loans and a 20% cap (10% in Q1 2023) on credit cards in the total amount of issuances (limits). Besides, the MPLs for loans to borrowers with DSTI above 80% were tightened further: the maximum allowable share of such loans may not exceed 5% (unchanged in Q1 2023) in the total amount of issuances.

MPLS ON UNSECURED CONSUMER LOANS *Table 6*
(%)

MPL		Q1 2023	Q2 2023	2023 Q3	Q4 2023*	Q1 2024***
Banks (except banks with a basic licence)	DSTI 50–80%	-	-	-	30 ↓ (20% for credit cards**) ↓	25 ↓ (10% for credir cards*) ↓
	DSTI above 80%	25	25	20 ↓	5 ↓	5
	For over five years	10	10	5 ↓	5	5
MFOs	DSTI 50–80%	-	-	-	30 ↓ (20% on credit cards) ↓	25 ↓ (15% on credit cards) ↓
	DSTI above 80%	35	35	30 ↓	15% ↓	15
	For over five years	-	-	-	-	-

* *The Bank of Russia Board of Directors' Decision, dated 31 August 2023, 'On Establishing the Macroprudential Limits on Certain Types of Consumer Loans (Microloans) and Values of the Characteristics of Loans (Microloans) Used to Differentiate the Macroprudential Limits'.*
** *Consumer loans (microloans) with a credit limit.*
*** *The Bank of Russia Board of Directors' Decision, dated 24 November 2023, 'On Establishing the Macroprudential Limits on Certain Types of Consumer Loans (Microloans) and Values of the Characteristics of Loans (Microloans) Used to Differentiate the Macroprudential Limits'.*

The tightening of the MPLs will help decelerate the growth of borrowers' debt burden. Higher market credit rates will also slow down the expansion of lending. Considering the tightening of the MPLs, the Bank of Russia expects that the proportion of loans to borrowers whose DSTI exceeds 80% in the consumer loan portfolio will contract to 20% by the end of 2024.

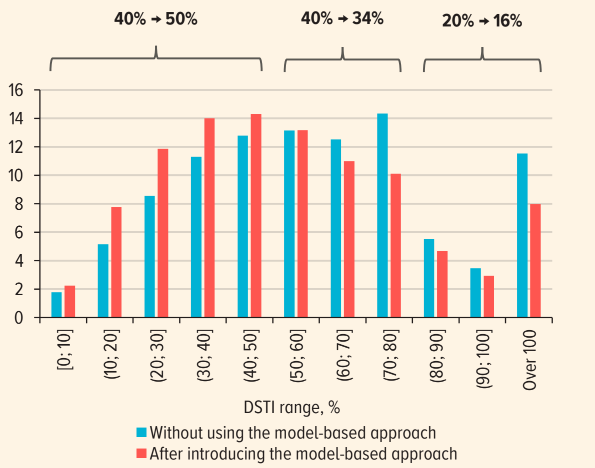
Box 4. Credit institutions' transition to the model-based approach to income assessment

In November 2023, Sberbank, AO ALFA-BANK, and VTB Bank (PJSC) were entitled to apply the model-based approach to assessing borrowers' income in order to calculate their DSTI ratios for the purpose of issuing unsecured consumer loans in certain segments in the amount of up to RUB 1 million. The models will be applied only to particular groups of borrowers, for instance, those having bank accounts or giving their consent to banks to request information from credit history bureaus (CHBs).

All the bank models considered can be roughly divided into two groups: models applied by a bank to borrowers who are the bank's customers and models applied to borrowers who are not the bank's customers. Modelling for the bank's customers mostly relies on transaction data, whereas modelling for potential borrowers who are not the bank's customers is based on social and demographic factors and data from the application-questionnaire and from CHBs. Banks extensively use the gradient boosting method in the course of income modelling.

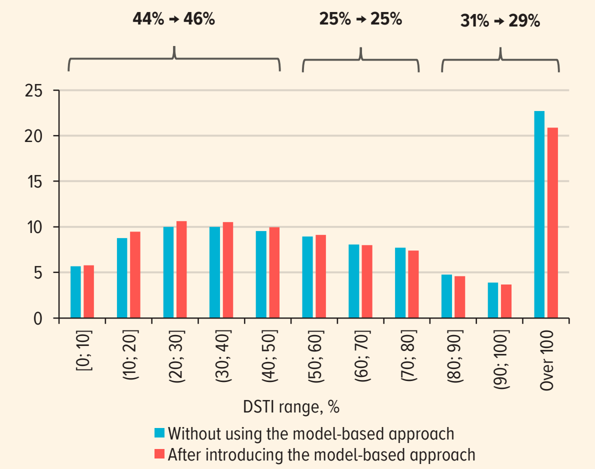
The model-based approach enables banks to align their business processes with the regulatory requirements, as well as shortens the customer journey and reduces transaction costs associated with the collection of information about a potential borrower's income, while the impact on the N1.0 ratio over the one-year horizon, as estimated by banks, does not exceed 0.02 pp. The new income assessment shifts the distribution of issued loans, broken down by DSTI, to the range of lower values, which will help banks comply with the MPLs. The model-based approach could reduce the proportion of funds disbursed in Q3 2023 to borrowers with DSTI above 80% by 4 pp on cash loans and 2 pp on credit cards. The effect on the distribution of credit card issuances will be less significant because not all banks switch to the model-based approach in this segment.

EFFECT OF THE MODEL-BASED APPROACH ON THE DISTRIBUTION OF ISSUED CASH LOANS BY DSTI (EVIDENCE FROM Q2 2023) *Chart 40*



Source: Bank of Russia data.

EFFECT OF THE MODEL-BASED APPROACH ON THE DISTRIBUTION OF ISSUED CREDIT CARDS BY DSTI (EVIDENCE FROM Q2 2023) *Chart 41*



Source: Bank of Russia data.

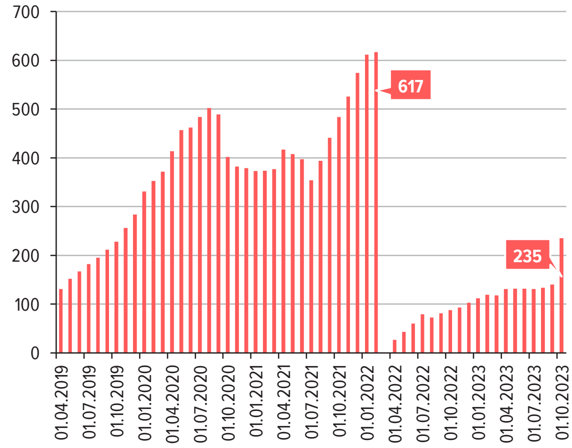
On average, banks are going to apply the model-based approach to assessing borrowers' income in relation to approximately 50% of all issuances. The remaining 50% of issuances are mostly loans exceeding RUB 1 million and loans issued to borrowers with officially confirmed income not requiring the modelling.

Resumption of the accumulation of the macroprudential capital buffer for unsecured consumer loans

In February 2022, in order to support banks, the Bank of Russia released the accumulated macroprudential capital buffer of RUB 890 billion (including RUB 617 billion for unsecured loans accounting for 5.8% of the consumer loan portfolio net of loan loss provisions). Simultaneously with the release of the buffer, the Bank of Russia zeroed the risk-weight add-ons in almost all unsecured consumer lending segments (except for the riskiest loans with the EIR over 35% and DSTI above 80%). By 1 October 2023, banks have accumulated the buffer totalling RUB 235 billion (2.6 times less than as of the beginning of 2022; Chart 42), or 2.4% of the consumer loan portfolio net of loan loss provisions (Chart 43).

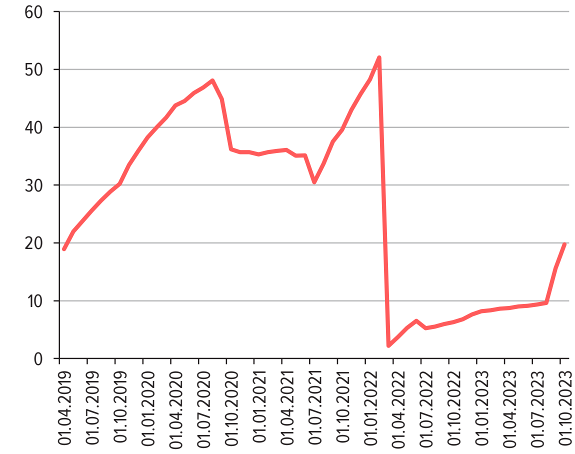
Against the backdrop of the acceleration of lending and banks' high profitability, in order to increase banks' capital cushion, the Bank of Russia Board of Directors made the decision to raise the macroprudential capital requirements for unsecured consumer loans from 1 September 2023 (in September, credit cards and cash loans subject to the add-ons accounted for 80% and 70%, respectively). The risk-weight add-ons are only applied to new loans and, therefore, the capital buffer will be growing gradually. The projected amount of the macroprudential capital buffer to be formed by banks in one and two years will total RUB 436 billion and RUB 583 billion, respectively.

MACROPRUDENTIAL CAPITAL BUFFER FOR UNSECURED LOANS *Chart 42*
(RUB BILLION)



Source: reporting form 0409135, Section 8.

RISK-WEIGHT ADD-ONS FOR THE UNSECURED LOAN PORTFOLIO *Chart 43*
(%)



Source: reporting form 0409135, Section 8.

Microfinance organisations

Despite the tightening of the regulation from 1 July 2023,[23] the growth rate of the consumer microloan portfolio edged up to 6.8% in Q3 2023 (+1.2 pp over the quarter), with outstanding debt reaching RUB 345.6 billion. Amid the fast expansion of the portfolio, the cost of risk[24] declined from 27.8% to 25.3% over Q3 2023.

After the introduction of the MPLs in Q1 2023, the structure of microloans issued by MFOs has changed. Specifically, microloans issued to borrowers with DSTI above 80% accounted for 24.6% as of 30 September 2023, compared to 41.1% in Q4 2022, which was mainly the result of tighter scoring procedures.[25] Owing to the tightening of the MPLs, the expansion of the microfinance market is expected to slow down in Q4 2023.

3.4. Imbalances in the residential real estate market and risks of project financing

The banking sector is exposed to risks in the housing construction market through several channels simultaneously: construction companies' credit risk, mortgage borrowers' credit risk, and mortgage collateral revaluations. These channels are interconnected and, accordingly, the risks might spread across them.

Over Q2–Q3 2023, risks associated with loans issued to construction companies were limited. Owing to a high demand for housing, the growth of funds on escrow accounts ensured a steady loan coverage ratio (86%).

After the stagnation in H1 2023, prices in the primary housing market soared in Q3 2023 underpinned by surging demand amid expectations of higher mortgage rates. As a result, the gap between prices for housing under construction and finished homes has widened to 42% posing risks for borrowers and banks if there is a need to sell an apartment purchased from a developer in the secondary market.

[23] From 1 July 2023, in accordance with Clauses 23–24 of Article 5 of Federal Law No. 353-FZ, dated 21 December 2013, 'On Consumer Loans', the interest rate equals 0.8% per day and overpayment for a microloan may not exceed 130% of the issued consumer microloan.

[24] The ratio of a change in the amount of created provisions, principal assignments and write-offs over a year to the average portfolio over a year.

[25] DSTI ratios were calculated based on the sample of 57 MFOs (82.6% of the microfinance market).

Mortgage lending was expanding fast, with the growth rate reaching 34% as of 1 November 2023 year-on-year, which was largely due to deteriorating lending standards. Loans with a down payment of less than 20% accounted for about 50% in the overall amount of issued loans in Q3 2023, while the share of borrowers with DSTI exceeding 80% equalled 47%. Currently, the mortgage servicing quality stays at a high level owing to the fast increase in households' income. However, if their growth slows down, banks might face an increase in overdue payments, especially on the riskiest loans. From 1 October 2023, the Bank of Russia raised the macroprudential capital requirements for such loans in order to limit banks' risks. Besides, the tightened requirements take into account the persistent price gap between the primary and secondary housing markets.

In Q4 2023 and 2024, growth rates in mortgage lending are expected to become better-balanced, which will be promoted by the tightening of monetary policy and the macroprudential requirements for the riskiest mortgages.

Housing market and risks on loans to developers

In Q2–Q3 2023, new housing sales increased compared to 2021 (Chart 44). After the long period of relatively low demand (in May 2022 – April 2023, new housing sales averaged about 1.5 million sq. m.), sales rebounded to 2.5 million sq. m. per month by the middle of 2023.

Developers maintained the pace of commissioning new projects at a level of 3.7–3.8 million sq. m. per month and, to ensure a better balance between demand and current prices, temporarily reduced the area of new supply from 3.5 to 3 million sq. m. per month,[26] but then increased it to 3.7 million sq. m. per month in July–September 2023. Over the past year, the share of unsold new housing stayed at about 70%.

In August and September 2023, buyers realised pent-up demand for housing as they were seeking to purchase housing before the key rate increase by the Bank of Russia and the tightening of the requirements for the down payment under government subsidised programmes. As long as approximately 80% of new homes are purchased using mortgages, the realisation of pent-up demand increased the area of sold housing in August and September 2023. Further on, the expansion of the demand for mortgages is expected to slow down due to the tightening of monetary policy and the macroprudential requirements.

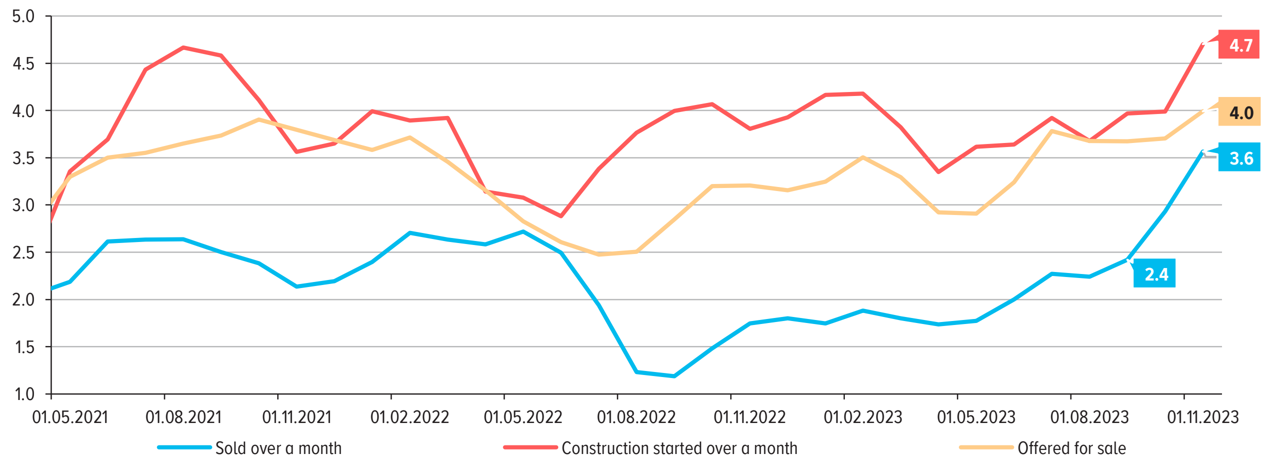
Amid the rebound in sales of apartment buildings, the space commissioned in the individual housing segment remained nearly the same, namely 48.0 million sq. m. (-2% year-on-year) over the first nine months of 2023, after the 16% growth in 2022 compared to 2021. Record-high figures in individual housing construction were associated with the promotion of living in the countryside, rising popularity of telecommuting, and the process of 'country house amnesty'.

As a result of high demand in the real estate market in Q2–Q3 2023, inflows into escrow accounts have increased to a record high (+31% between the beginning of the year and 1 October 2023). Besides, in Q2 2023, the coverage ratio changed only slightly compared to the previous values, staying at 81% owing to the proportionate expansion of debt caused by the launch of new projects. Nonetheless, already in Q3 2023, the growth of funds in escrow accounts surpassed the increase in debt leading to the coverage ratio exceeding 86%.

Given tighter monetary and macroprudential policies and the expected deceleration of mortgage lending expansion, developers will experience a decline in inflows into escrow accounts. Lower loan coverage with the funds in escrow accounts will drive up the cost of borrowings to finance construction projects. The majority of projects under construction are resilient to rising interest rates. However, if developers maintain the current level of new apartment building projects, they might face risks.

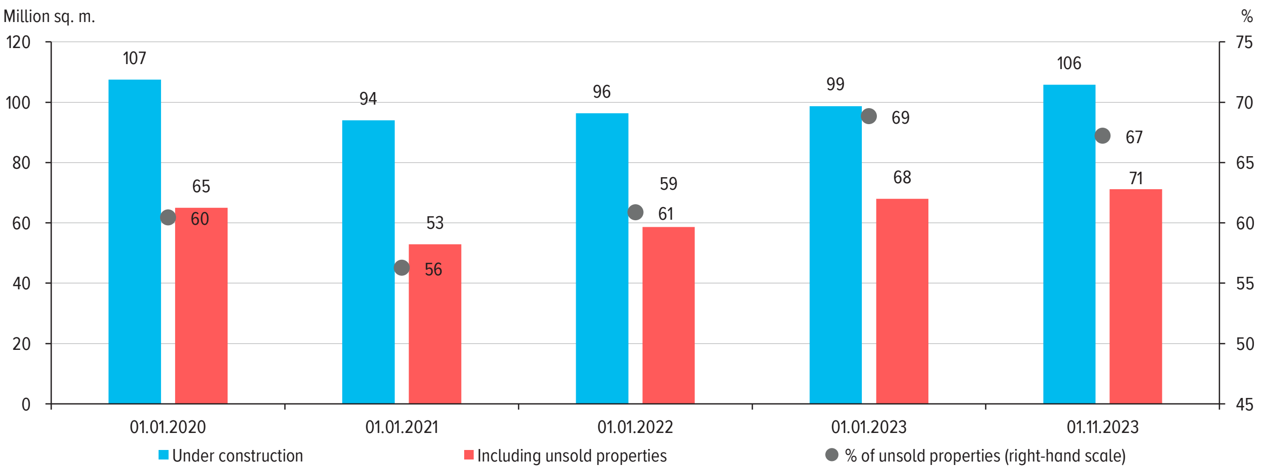
[26] According to the classification of JSC DOM.RF, a construction project is deemed to be available for sale (new supply) after the developer has signed the first two shared construction participation (SCP) agreements.

DYNAMICS OF THE NEW HOUSING AREA, NEW PROJECTS FOR SALE, AND ACTUAL SALES OF NEW HOUSING IN RUSSIA, MILLION SQ. M. (THREE-MONTH MOVING AVERAGE) *Chart 44*



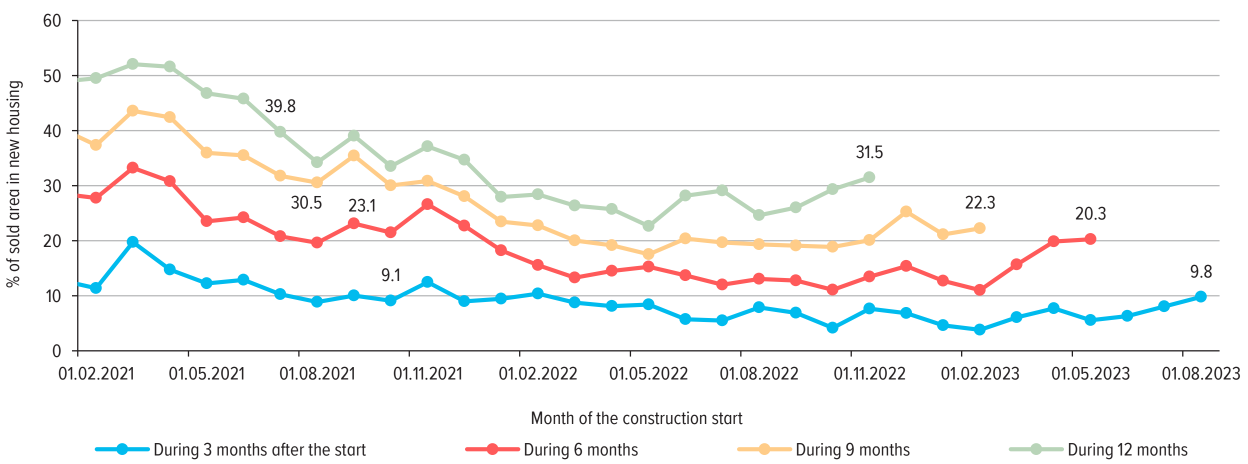
Sources: Unified Information System for Housing Construction (EISGS), Bank of Russia calculations.

DYNAMICS OF THE TOTAL AREA OF PROJECTS UNDER CONSTRUCTION AND UNSOLD PROPERTIES IN RUSSIA *Chart 45*



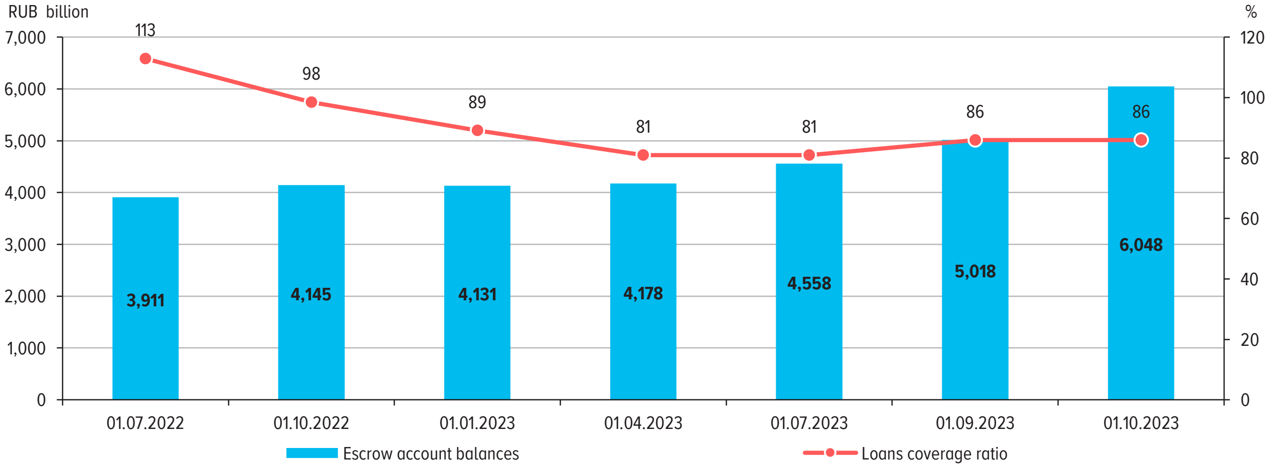
Sources: Unified Information System for Housing Construction (EISGS), Bank of Russia calculations.

DYNAMICS OF NEW HOUSING SALES, BY THE PERIOD AFTER THE START OF CONSTRUCTION (%) *Chart 46*



Sources: Unified Information System for Housing Construction (EISGS), Bank of Russia calculations.

LOANS COVERAGE RATIO OF HOUSING DEVELOPERS WITH FUNDS ON ESCROW ACCOUNTS AND ESCROW ACCOUNT BALANCES *Chart 47*



Sources: reporting form 0409115, Bank of Russia survey.

Housing prices

The surge in demand for real estate in Q3 2023 has pushed up prices with highest growth observed in the primary housing market of Russia, namely +4.1% quarter-on-quarter. The price rise in the primary market in the Moscow metropolitan area was even more significant, specifically +7.3% quarter-on-quarter. Due to the large-scale subsidised mortgage lending programmes (and the marketing campaigns carried out by developers and banks in 2022), the price gap between the primary and secondary residential real estate markets in Russia has expanded from 9% in 2019 to 42% in Q3 2023 (Chart 48). Furthermore, this trend was mostly (24 pp of 33%) associated with a faster rise in the price index calculated for comparable projects (Chart 49), while 9 pp were due to the shift in the structure of the primary housing market towards more expensive housing segments.

The price gap in some regions has expanded even more, reaching 63% in the Penza Region, 59% in the Astrakhan Region, and 48% in the Moscow Region. In the first place, this difference in prices creates risks for mortgage borrowers and banks. If a borrower needs to sell a commissioned apartment, he/she will be unable to do so at the price he paid for housing under construction. If a borrower is unable to repay a mortgage loan and is therefore forced to sell the apartment, its market value can be lower than the outstanding mortgage loan.

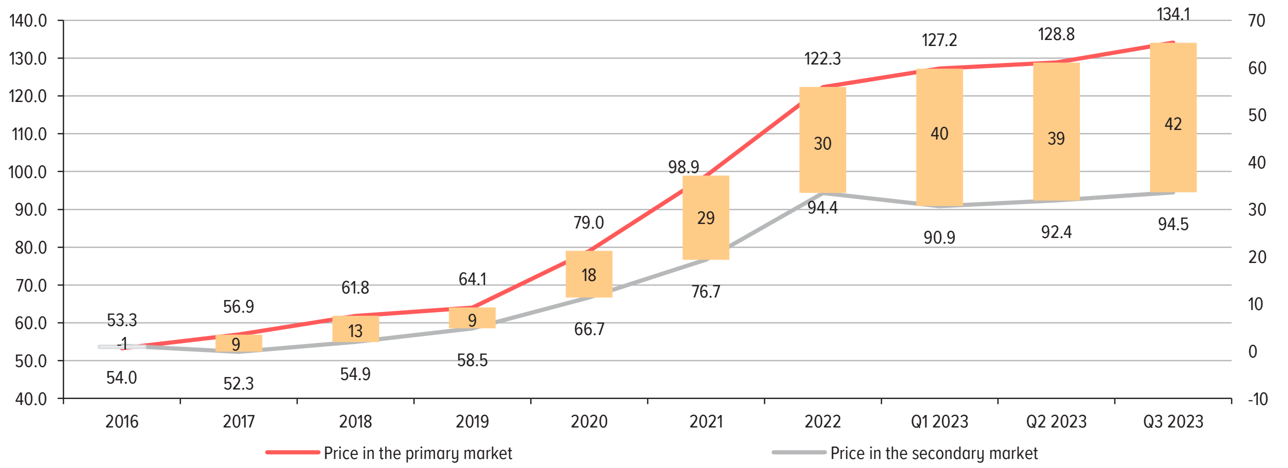
RESIDENTIAL REAL ESTATE PRICE INDEX, QoQ *Table 7*

	Residential real estate	Q3 2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022	Q1 2022	Q2 2022	Q3 2023
Russia	Primary	105.1	105.7	108.0	106.5	104.3	100.9	99.4	101.3	104.1
	Secondary	103.4	104.7	106.5	102.0	101.4	101.6	101.2	101.6	102.3
Moscow	Primary	104.2	103.4	105.3	105.2	102.5	102.1	97.8	103.4	107.3
	Secondary	104.5	103.5	101.7	102.2	102.0	101.1	97.9	101.5	103.0

Source: Rosstat.

NOMINAL PRICES IN THE PRIMARY AND SECONDARY HOUSING MARKETS IN RUSSIA
(RUB THOUSAND PERSQ M)

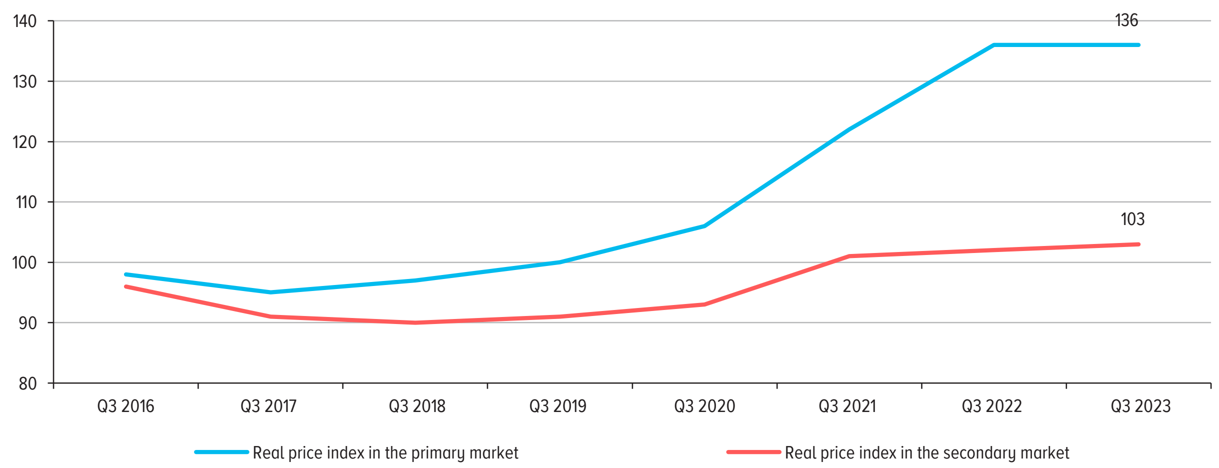
Chart 48



Sources: Rosstat, Bank of Russia calculations.

REAL PRICE INDEX IN THE PRIMARY AND SECONDARY HOUSING MARKETS (Q1 2016 = 100%)

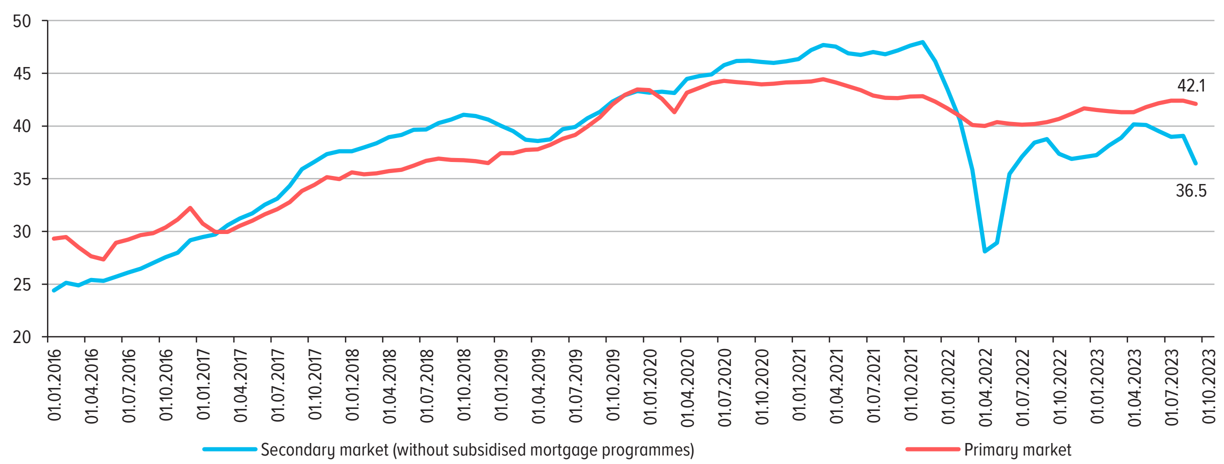
Chart 49



Sources: Rosstat, Bank of Russia calculations.

HOUSING AFFORDABILITY INDEX FOR MORTGAGE
(SQ. M.)

Chart 50



Sources: reporting form 0409316, Rosstat.

The price gap emerged because the construction sector was not ready to promptly ramp up housing supply in response to the launch of extensive subsidised mortgage lending programmes. Amid insufficient supply, the price gap started to reflect the difference in mortgage rates offered to purchase new housing (sold under subsidised programmes) and existing housing. In September 2023, amid the rise in the market-based mortgage rate (to nearly 12% on actually issued loans, while the interest rate offered to new borrowers was 14.5%), the affordability of housing[27] declined to 36.5 sq. m. in the secondary market and remained at the level of 42 sq. m. in the primary market.

To reduce the price gap between the primary and secondary housing markets, it is necessary to gradually raise interest rates under subsidised mortgage lending programmes to the market levels and replace large-scale programmes with targeted ones. Nevertheless, subsidised mortgage lending programmes prove to be efficient and might be implemented during crisis periods to support the demand for housing for a short time.

Box 5. Real estate bubble index

During various periods, many countries were facing the so-called price bubbles in the real estate market that emerged, developed and subsequently burst. Thus, according to the ECB's study,[1] signs of booms and busts in real estate prices during 1970–2007 were recorded in nine of the 18 OECD member states, including those that had an advanced financial sector and a well-developed construction industry (in the US during 2006–2011, in the UK during 1973–1977, in Spain during 2007–2014, and in the Netherlands during 1978–1985).

However, despite the consensus that there are boom and bust cycles in the market when housing prices deviate from a fair level, there is no single definition of a price bubble. A widespread approach to assessing a price bubble is to apply statistical filters to the time series of prices. This approach is based on the use of specific characteristics of prices for housing that differ this asset from exchange-traded financial instruments (shares, bonds, commodities, etc.). Prices for exchange-traded assets (in a developed market) move independently, while non-conformity of price dynamics to the random walk model is considered[2] to be a sign of a price deviation from a fair level (Chart 51). Nevertheless, real housing price dynamics are highly dependent on price changes over time (Chart 52), which suggests that they may be analysed using autocorrelation in time series models.

The autocorrelation function (ACF) for time series of real housing price changes declines gradually and reaches the period of relaxation (steady close-to-zero values) only over a very long period (up to 25 quarters) (Chart 52). The key feature is that the ACF has two clear stages:

1. Positive values of the ACF that are higher in absolute terms (20–60%) during the first 12 quarters, which shows that the process tends towards self-amplification over a two to three year horizon.
2. The period of steadily negative values of the ACF from the 12th to the 24th quarter.

The above features of the ACF are typical of the time series that include a cyclical component, the existence of which creates the effect of return to the mean and the alteration of periods of long-lasting declines and rises in the indicator.

Therefore, the predictability of changes in housing prices creates opportunities for identifying price bubbles and anti-bubbles based on various statistical filters. Within this approach, the Hodrick – Prescott filter (HP filter) became widely used.[3] This filter decomposes the time series Y_t into the trend component G_t and the cyclical component C_t that get the following economic interpretation:

1. The trend component G_t reflects the evolution of an equilibrium price adjusted for temporary effects of market overheating / cooling-down.

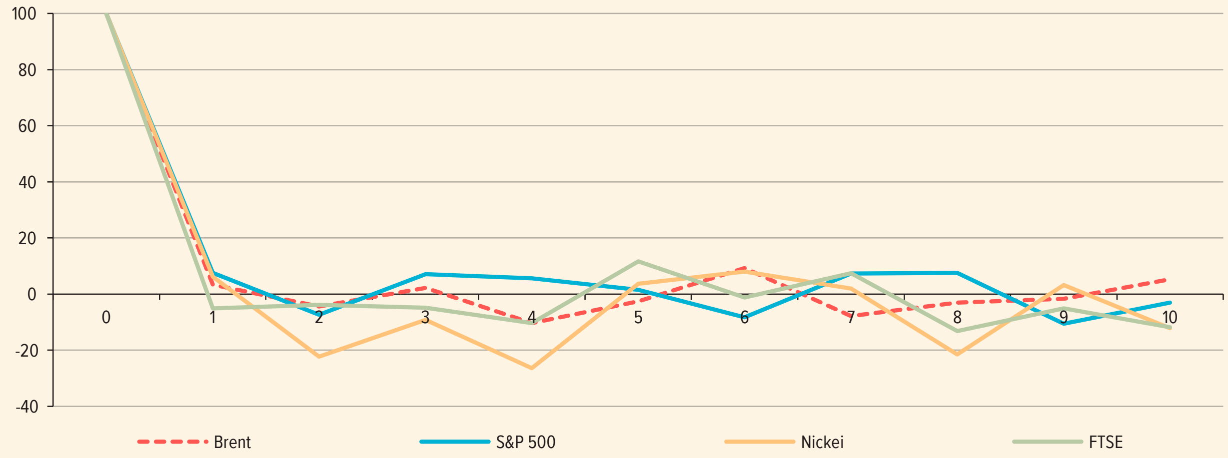
[1] Agnello, L. and Schuknecht, L. (2009). Booms and busts in housing markets: determinants and implications. ECB Working Paper. No. 1071.

[2] Fama, E. F. Efficient Capital Markets: A Review of Theory and Empirical Work. The Journal of Finance. Vol. 25, No. 2.

[3] Hodrick, R. J. and Prescott, E. C. Postwar U. S. Business Cycles: An Empirical Investigation. Journal of Money, Credit, and Banking. Vol. 29, No. 1, February 1997. Pp. 1–16.

[27] The housing affordability index measures the area of housing that an individual is able to purchase using a mortgage loan with a monthly payment of 0.5 of the average wage.

AUTOCORRELATION FUNCTION (ACF) OF MONTHLY PRICE GROWTH IN 2000–2023 *Chart 51*



Sources: BIS, Bank of Russia calculations.

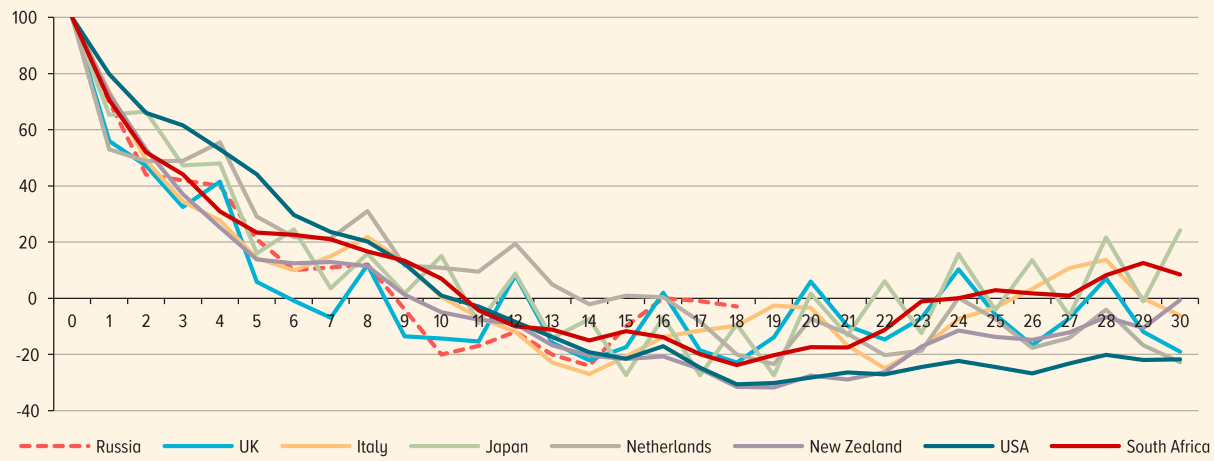
2. The cyclical component C_t reflects the amplitude of the deviation of the actual transaction price from an equilibrium level associated with the stage of the price cycle. The value of the cyclical component averages zero.

By applying the two-sided HP filter to the time series of the logarithm of the real price index in the Russian housing market in 2000–2023, we get the following dynamics of relative (as % of the model-based equilibrium price) price overheating in the primary and secondary markets (Chart 53).

The amplitude of the deviation of housing prices from equilibrium (model-based) values during 2010–2023 was less than 20% (Chart 53). The recent price cycle in the primary market peaked in Q3 2022 when the indicator of overheating equalled 15%.

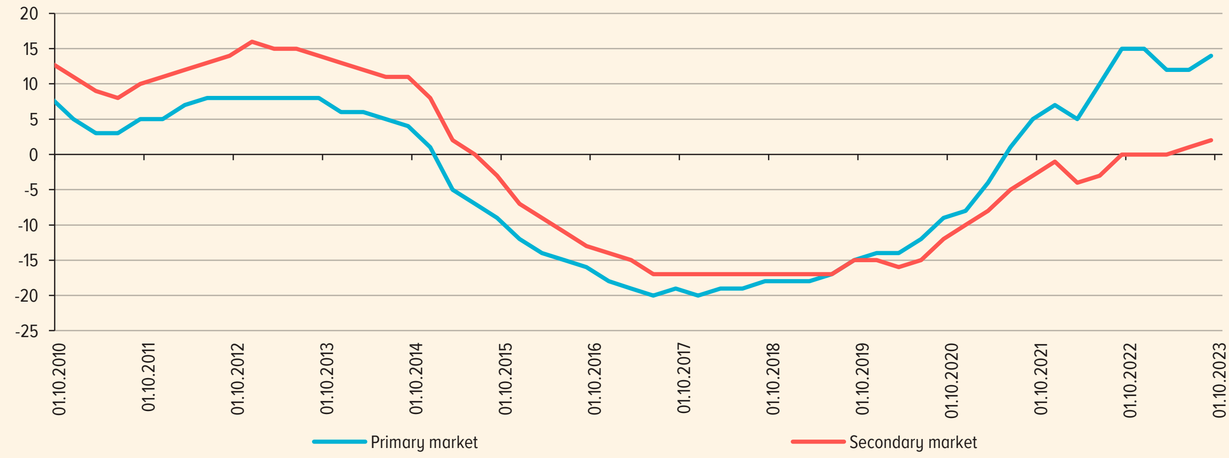
It is worth noting the existence of a long-term downward trend in real prices in the secondary market, the start of which is detected by the HP filter (=400,000) in 2013. However, according to the HP decomposition, the primary market demonstrates a slow increase in the trend component. During the period from June 2016 to June 2023, the divergence of the trends in the new and existing housing markets accounted for approximately 15 pp of the 33 pp surge in new housing prices.

AUTOCORRELATION FUNCTION (ACF) OF QUARTERLY REAL HOUSING PRICE GROWTH IN 1970–2023 *Chart 52*



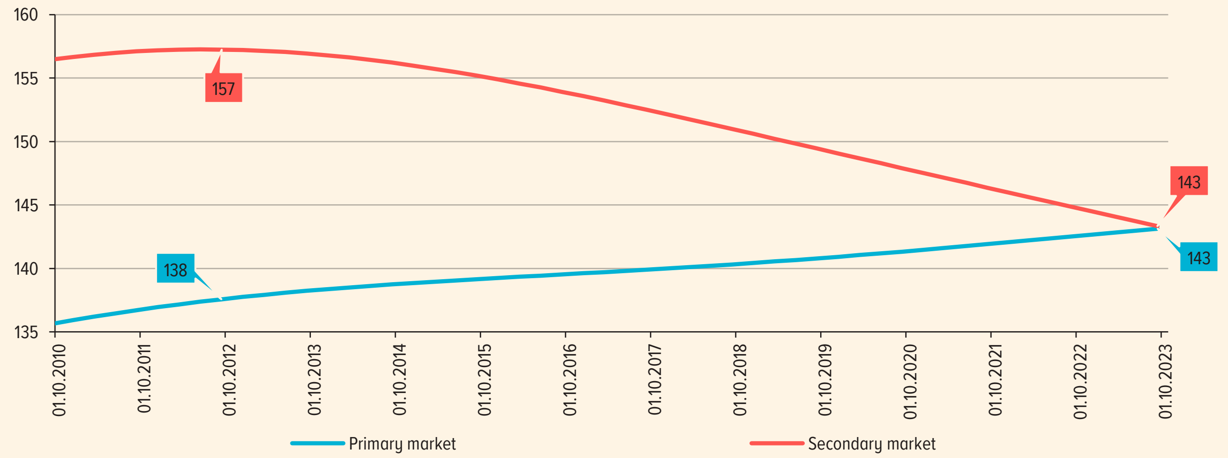
Sources: BIS, Bank of Russia calculations.

CYCLICAL COMPONENT OF THE REAL HOUSING PRICE INDEX BASED ON THE HP FILTER (=400,000) *Chart 53*



Sources: Rosstat, Bank of Russia calculations.

TREND COMPONENT OF THE REAL HOUSING PRICE INDEX (2000 = 100%) BASED ON THE HP (400,000) FILTER *Chart 54*



Sources: Rosstat, Bank of Russia calculations.

Mortgage lending risks

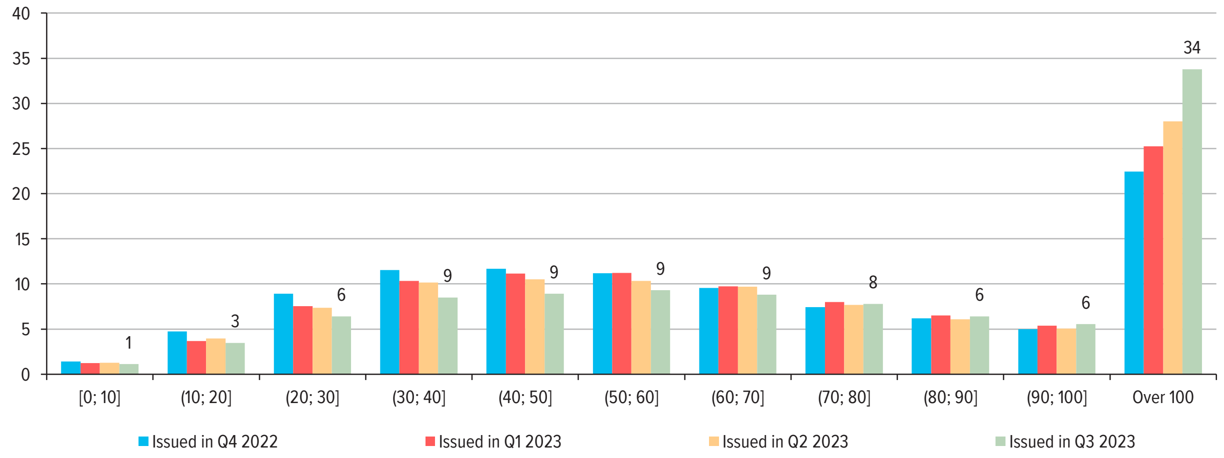
The mortgage portfolio has been surging at a record pace from early 2023. As of 1 November 2023, it expanded to RUB 17.6 trillion (+27.1% since the beginning of the year). The growth in mortgage lending was largely driven by subsidised programmes. In Q3 2023, they accounted for 63% of the overall amount of issued mortgages (+11 pp year-on-year). The increase in mortgage lending is accompanied by the worsening of the lending standards. In Q3 2023, the share of loans issued to borrowers whose DSTI exceeded 80% reached 46% in the equity participation agreement (EPA) segment and 47% in the segment of existing housing.

In Q2–Q3 2023, the demand for housing loans with a small down payment (less than 20%) remained high, with the share of such loans reaching 50% in the total amount of issued mortgages. In Q3 2023, the share of such risky loans in the segment of property under construction was higher than in the segment of finished housing, namely 59% vs 44%, respectively. This difference was associated with the concentration of subsidised mortgages with a minimum down payment of 10–

15%[28] in the EPA segment (over 95% of all mortgages issued in Q3 2023). Borrowers raising loans with a low down payment are characterised by a high level of credit risk.

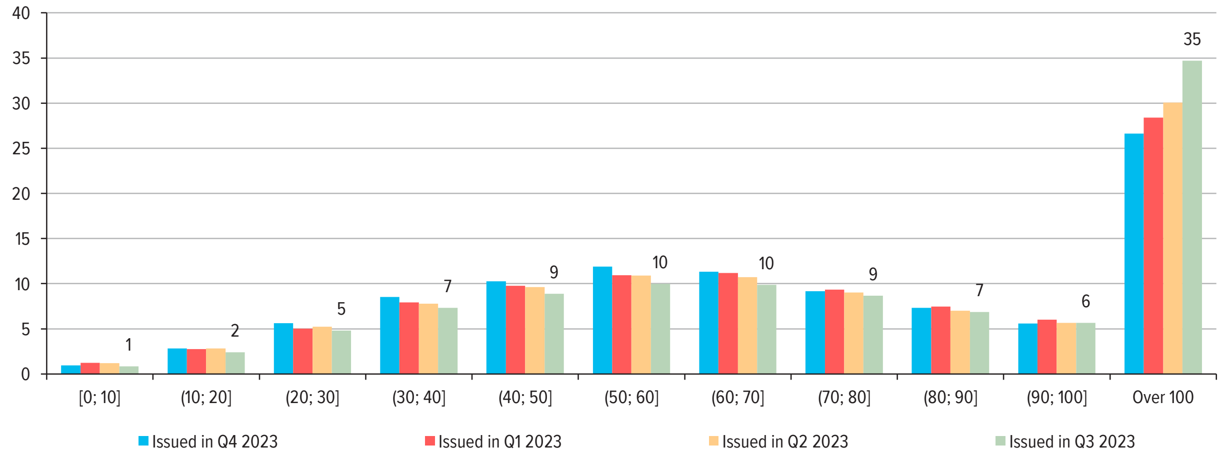
Despite the worsening lending standards, the quality of servicing of the mortgage portfolio remains stable: the amount of mortgages overdue for more than 90 days accounts for 0.6% of the portfolio. The share of overdue loans is declining due to the accelerating expansion of the mortgage portfolio. High quality of the loan portfolio is also supported by the rise in households' incomes. However, as the effect of this factor diminishes, the quality of the mortgage portfolio might deteriorate. This is why the Bank of Russia has been tightening the macroprudential requirements for the riskiest mortgages. As long as the Bank of Russia is not entitled to establish macroprudential limits on mortgages and thus directly limit the proportion of the riskiest loans, it raised the macroprudential buffers for them beginning from 1 October 2023. The highest values were set for new housing loans in order to take into account the price gap between the primary and secondary housing markets. The tightening of macroprudential policy in mortgage lending will help

BREAKDOWN OF LOANS BY DSTI (EQUITY PARTICIPATION AGREEMENTS) *Chart 55*
(%)



Source: reporting form 0409704.

BREAKDOWN OF ISSUED LOANS BY DSTI (NON-EQUITY PARTICIPATION AGREEMENTS) *Chart 56*
(%)

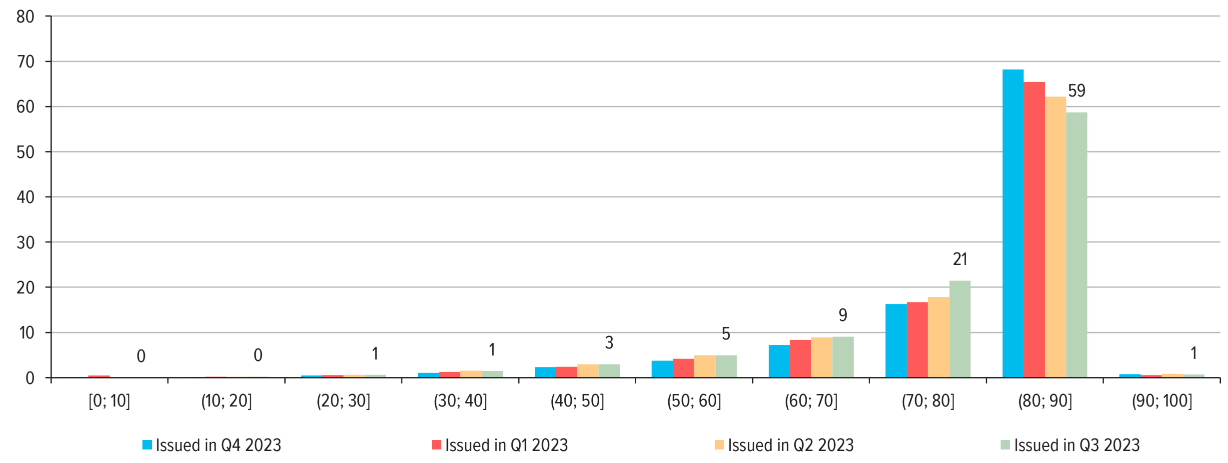


Source: reporting form 0409704.

[28] From 20 September 2023, the minimum down payment was raised from 10% and 15% to 20% (Resolution of the Government of the Russian Federation No. 1473, dated 9 September 2023).

BREAKDOWN OF LOANS BY LTV (EQUITY PARTICIPATION AGREEMENTS)
(%)

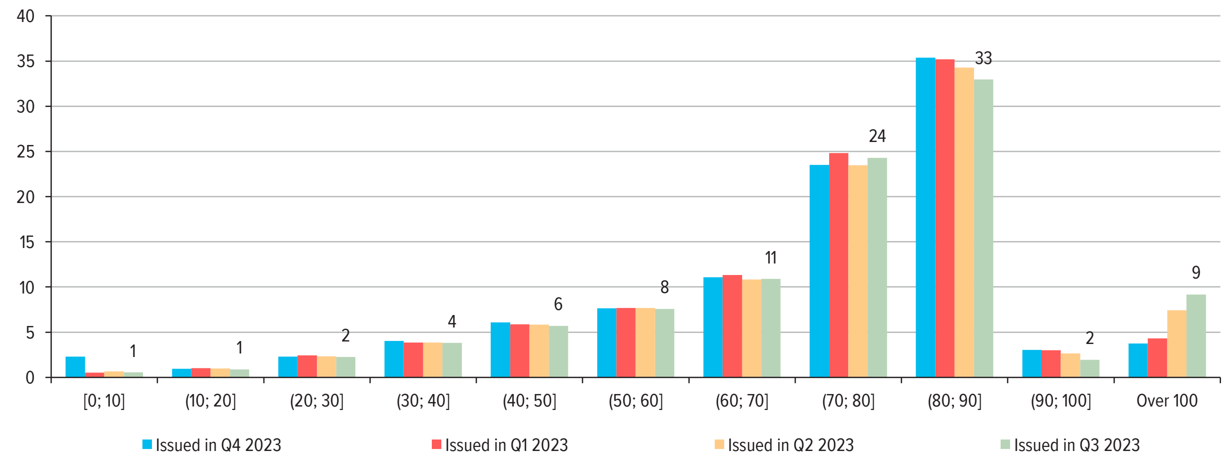
Chart 57



Source: reporting form 0409704.

BREAKDOWN OF ISSUED LOANS BY LTV (NON-EQUITY PARTICIPATION AGREEMENTS)
(%)

Chart 58



Source: reporting form 0409704.

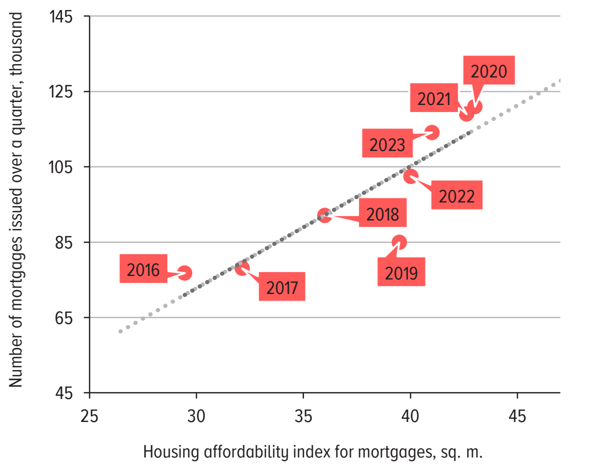
form an additional capital buffer for banks to cover possible risks. In order to more efficiently limit systemic risks in mortgage lending, the Bank of Russia is going to develop proposals for granting the powers to establish the MPLs in mortgage lending. Such a mechanism will help limit mortgage lending to over-indebted borrowers and lending with a low down payment.

At the beginning of 2024, the expansion of mortgage lending is expected to slow down as a result tighter monetary policy and macroprudential measures. Their influence will be most notable in the secondary housing market. Higher mortgage rates might cause a decrease in the number of issued mortgages. Considering that nearly 50% of purchases in the secondary market are made using mortgages, this might reduce the demand for existing housing and the potential for price growth. This trend will be less obvious in the segment of new housing because mortgages in the primary market are mostly issued under subsidised programmes. However, those planning to purchase housing under construction by selling the available apartment in the secondary market might face difficulties.

CORRELATION BETWEEN THE NUMBER OF ISSUED LOANS AND THE HOUSING AFFORDABILITY INDEX IN THE SECONDARY MARKET, BY YEAR *Chart 59*

Sources: reporting form 0409316, Rosstat.

CORRELATION BETWEEN THE NUMBER OF ISSUED LOANS AND THE HOUSING AFFORDABILITY INDEX IN THE PRIMARY MARKET, BY YEAR *Chart 60*



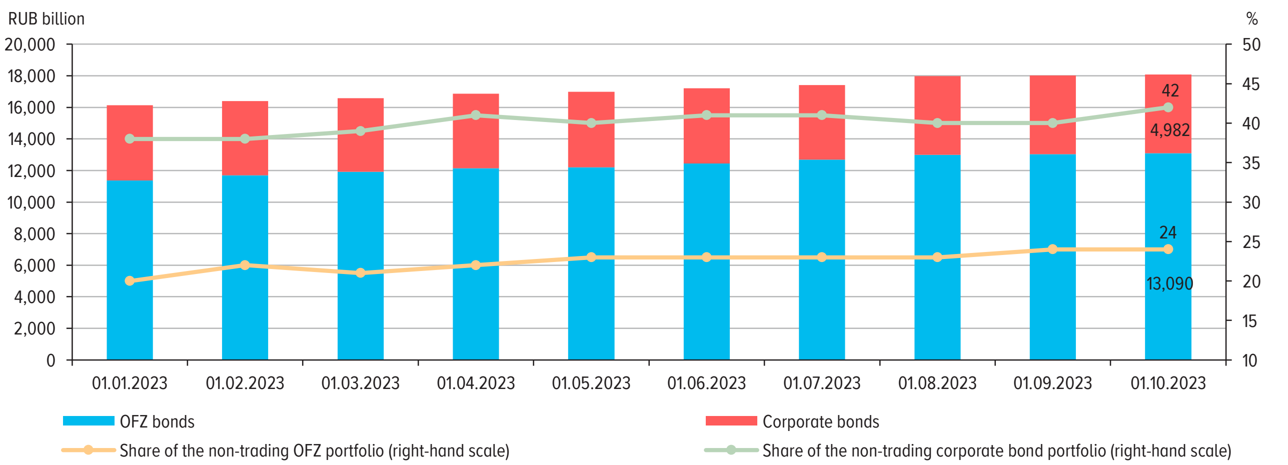
Sources: reporting form 0409316, Rosstat.

3.5. Interest rate risk

The key rate increase by 7.5 pp in July–October 2023 formed the conditions for materialisation of interest rate risk. This risk has already materialised to a certain extent: higher interest rates in the economy caused a decrease in bond prices. However, the negative revaluation of the trading portfolio of ruble-denominated bonds (considering the key rate increase by the Bank of Russia to 15% per annum) totalled as little as RUB 299.6 billion (1.6% of face value, or 2% of the banking sector's capital). The revaluation of banks' bond portfolio was minor due to a high proportion of government securities and variable coupon securities, as well as because the largest percentage of bonds are recognised at amortised cost (held to maturity and not subject to revaluation).

In the medium term, interest rate risk is expected to materialise in the banking book amid growing interest rates and a high share of short-term liabilities, which might squeeze banks' net interest margin (NIM). The basic assessment of the risk associated with interest rate increase from 7.5% to 15% is nearly RUB 0.6 trillion of lost NII (net interest income) over the one-year horizon. Given a high level of NIM (4.8%), this will not have a significant impact on banks' financial

BOND PORTFOLIO (AT FACE VALUE) HELD BY THE BANKING SECTOR (RUB BILLION) AND THE SHARE OF THE NON-TRADING* PORTFOLIO *Chart 61*



** The non-trading portfolio is securities recognised at amortised cost and held to maturity.*
Source: reporting form 0409711.

position, but the actual influence might be more serious considering behavioural effects (transfer of funds from current accounts to deposits).

In the conditions of a forecast budget deficit in 2024, the market of government domestic borrowings will continue to expand.

Vulnerability to interest rate risk has been one of the most relevant issues for banks recently. In July–October 2023, the Bank of Russia raised the key rate in order to mitigate financial stability risks:[29] overall, the key rate increased by 7.5 pp over July–October 2023 from 7.5% to 15% per annum. Over the said period, OFZ yields went up by 310 bp on average along the curve (one-year OFZ yields – by 497 pp), interest rates on non-financial organisations' new deposits[30] rose by 4.9 pp in July–September 2023, on individuals' deposits – by 3.8 pp, on corporate loans – by 3.4 pp, whereas those on retail loans declined by 0.2 pp. This created the conditions for materialisation of interest rate risk.

By the moment, interest rate risk has already materialised to a certain extent (in the trading book): higher interest rates entailed an overall reduction in bond prices and might exert some pressure (within the banking book) on banks' NIM in the medium term considering faster revaluation of liabilities compared to that of assets.

Revaluation of credit institutions' bond portfolio amid the yield curve shift

As of early October 2023, investment in ruble-denominated bonds in the banking sector's portfolio totalled RUB 18.1 trillion at face value (11.4% of the assets). Despite the considerable rise in interest rates, the negative revaluation of the bond portfolio from the beginning of the summer amounted to as little as RUB 299.6 billion (1.6% of face value, or 2.0% of the banking sector's capital).[31] Such a small revaluation was due to a high share of government securities (72.4%, or RUB 13.1 trillion at face value) in banks' investment, including OFZ-PK bonds,[32] and the highest proportion of bonds were recognised at amortised cost (not subject to revaluation and normally held to maturity). Overall, 24% of all investment in OFZ bonds and 42% of investment in corporate bonds are carried in accounts at amortised cost (Chart 61).

Variable coupon securities performing the protection function during periods of rising interest rates in the market account for a considerable proportion in banks' portfolio. Thus, OFZ-PK bonds account for 54.2% of the total amount of OFZ bonds held as of 1 October 2023 (39.3% of banks' entire bond portfolio), which significantly reduces banks' exposure to interest rate risk. Amid the increase in interest rates from June 2023, the banking sector switched towards expanding the OFZ portfolio primarily by investing in OFZ-PK bonds (the growth from June through October 2023 totalled RUB 620 billion). The amount of purchased fixed coupon securities is minor, with banks' investment in them over the said period totalling as little as RUB 44 billion (Chart 62).

Hence, the banking sector's overall bond portfolio generally remained resilient to interest rate changes in the economy.

As regards **interest rate risk in the banking book (IRRBB)**, its basic[33] assessment over the 12-month horizon across the banking sector in general as a result of the rate increase from 7.5% to 15% approximates RUB 0.6 trillion (a possible decline in banks' NII over the one-year horizon),

[29] Refer to the information and analytical commentaries Monetary Conditions and Monetary Policy Transmission Mechanism.

[30] Data from the Bank of Russia website.

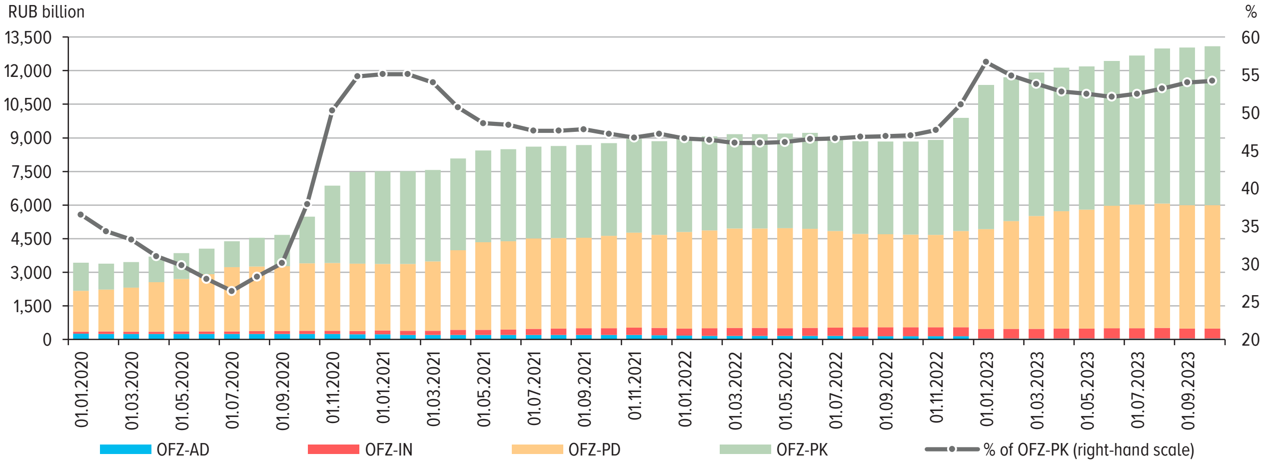
[31] The actual amount of the revaluation of the banking sector's ruble bond portfolio was calculated including balance sheet subaccounts (securities recognised at amortised cost were not revaluated). The revaluation was assessed based on the recent data on the securities portfolio (as of 1 November 2023) in order to take into account all the changes in the key rate, including the 2 pp increase in the key rate in October 2023.

[32] Variable coupon securities.

[33] The basic assessment ignores the factor of banking business growth and changes in the interest rate position and is made across the banking sector in general using data from reporting form 0409127 on ruble transactions as of 1 July 2023.

OFZ BONDS (FACE VALUE) HELD BY THE BANKING SECTOR (RUB BILLION) AND BREAKDOWN OF THE OFZ PORTFOLIO BY SECURITIES TYPE

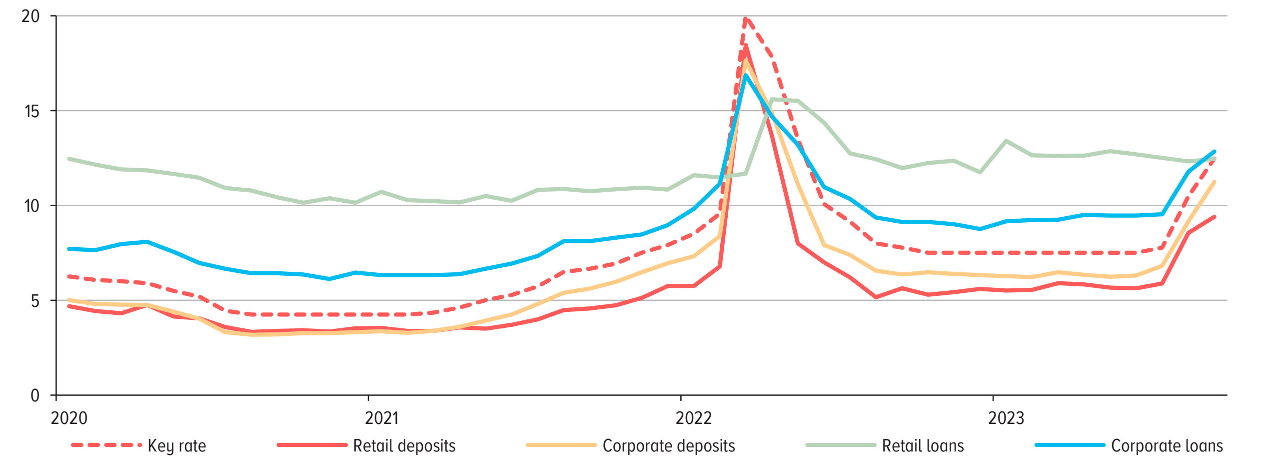
Chart 62



Source: reporting form 0409711.

DYNAMICS OF CREDIT AND DEPOSIT RATES
(%)

Chart 63



Source: Bank of Russia website.

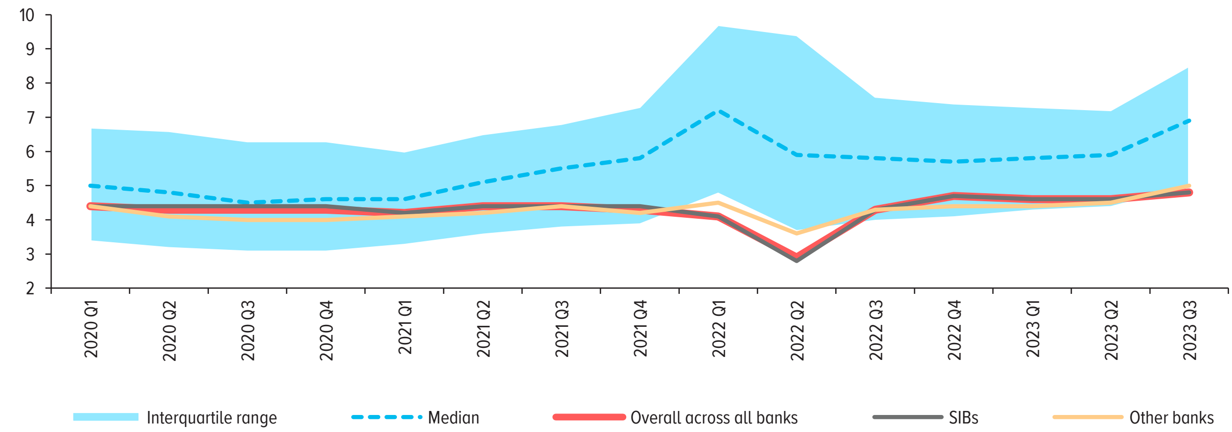
which is equivalent to 0.5 pp of NIM. However, considering sufficiently high NIM, this will not have a notable effect on banks' financial resilience. Therefore, systemic risk is limited.

In Q3 2023, the materialisation of interest rate risk did not entail a decline in NIM. Despite the fast rise in interest rates on new deposits (Chart 63), quarterly NIM increased from 4.6% to 4.8% (Chart 64) owing to quickly growing interest rate incomes. This was associated with a significant proportion of floating-rate loans and a high share of clients' funds in current accounts where interest rates rose less significantly than deposit rates. As a result, actual returns on the loan portfolio (the ratio of interest rate income over a quarter to the amount of loans) increased slightly more than the cost of funding (the ratio of expenditures on clients' funds to the amount of related liabilities).[34]

Nevertheless, banks' exposure to interest rate risk remains high considering a potential further transfer of funds from current accounts and long-term deposits to deposits at higher interest rates amid the expectations of a long period of tight monetary conditions. In Q3 2023, household deposits placed in the banking sector for less than six months accounted for nearly 65% monthly, compared to about 33% in 2021 (Chart 65). The increase in short-term liabilities to households

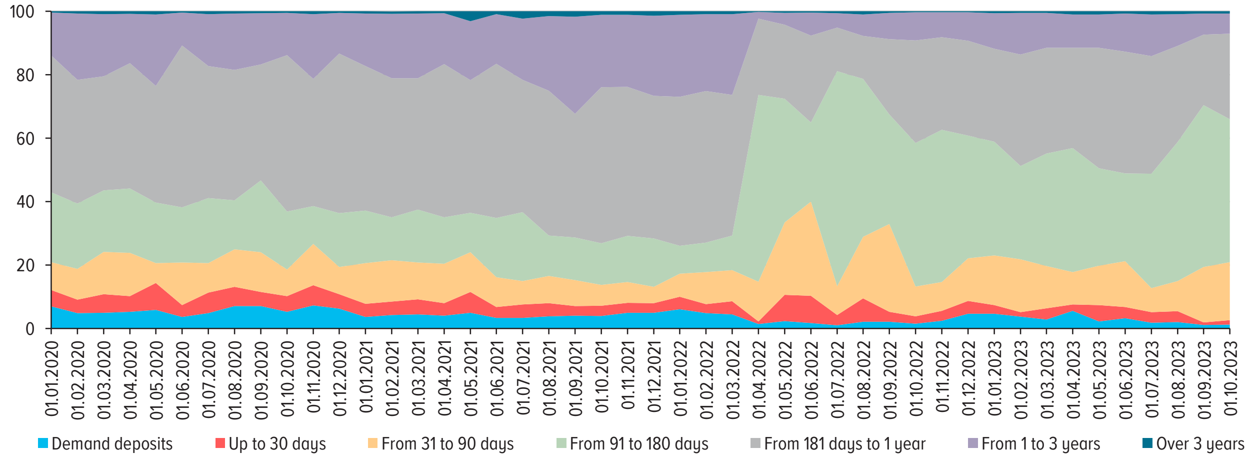
[34] According to reporting forms 0409102 and 0409101.

QUARTERLY NET INTEREST MARGIN BY GROUPS OF BANKS* Chart 64
(%)



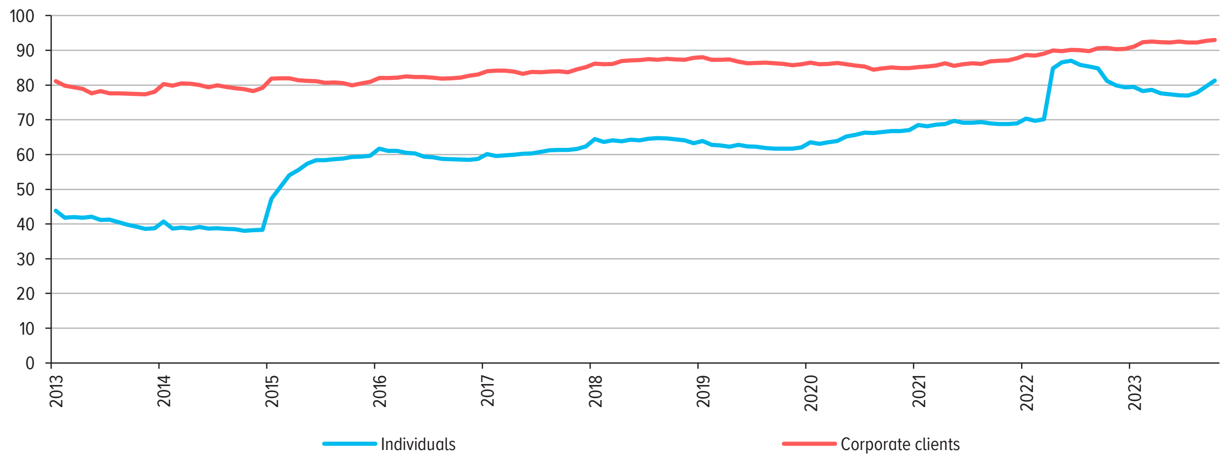
* For all banks, except the Bank of Non-core Assets.
Sources: reporting forms 0409102 and 0409101.

MATURITY STRUCTURE OF INDIVIDUALS' RUBLE FUNDS ATTRACTED OVER A MONTH Chart 65
(%)



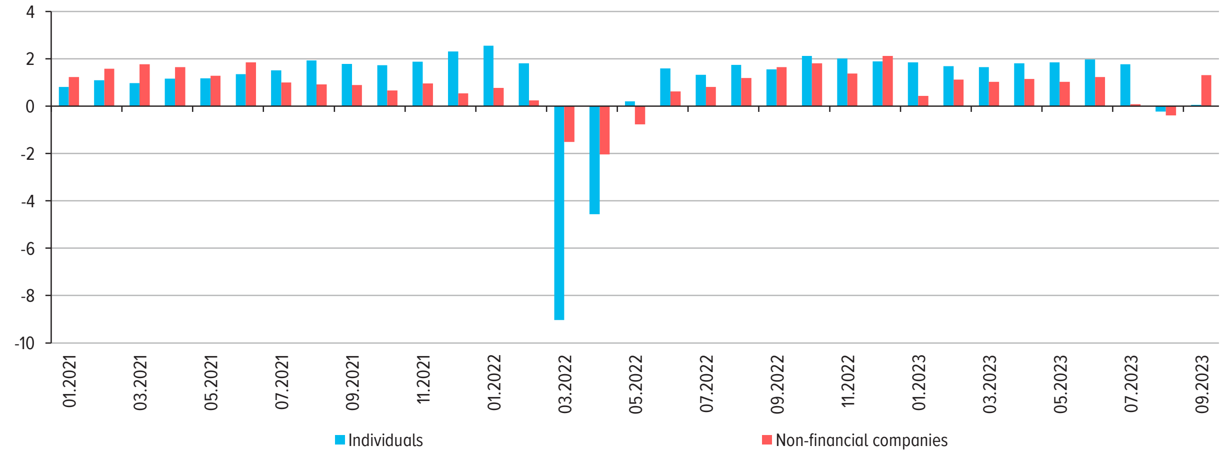
Source: Bank of Russia website.

SHARE OF SHORT-TERM RUBLE LIABILITIES (UP TO 1 YEAR, INCLUDING FUNDS ON ACCOUNTS) TO INDIVIDUALS AND CORPORATE CLIENTS Chart 66
(%)



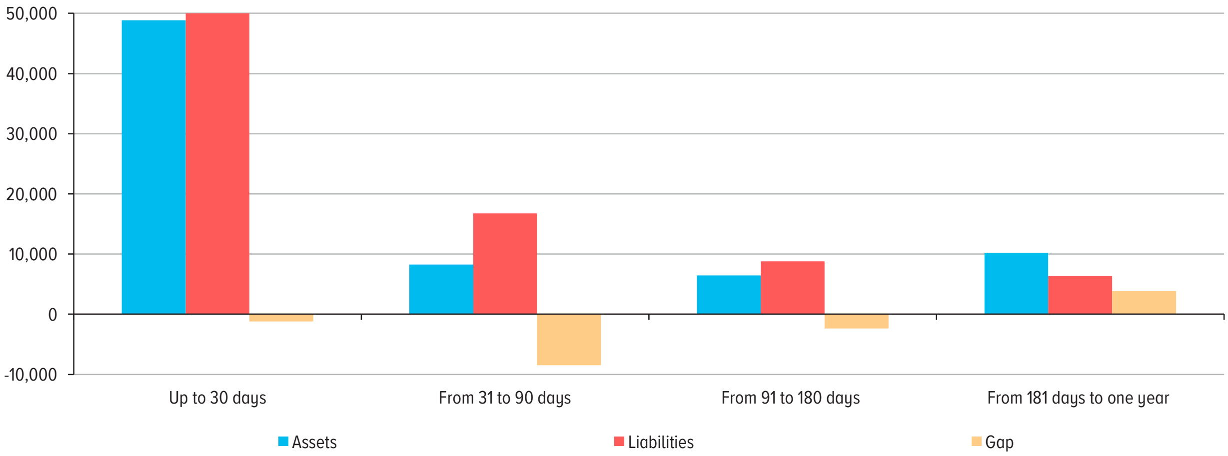
Source: reporting form 0409101.

DIFFERENCE BETWEEN RATES ON NEWLY ATTRACTED LONG- AND SHORT-TERM RUBLE DEPOSITS *Chart 67*
(PP)



Source: Bank of Russia website.

INTEREST RATE GAP OF THE BANKING SECTOR'S PORTFOLIO ON RUBLE TRANSACTIONS OVER A HORIZON OF UP TO 1 YEAR (BASIC ASSESSMENT AS OF 1 OCTOBER 2023) *Chart 68*
(RUB BILLION)



Source: reporting form 0409127.

was associated with higher interest rates on such deposits and a relatively small term premium (in August–September 2023, the difference between the weighted average interest rate on deposits for over and up to one year decreased to nearly zero, compared to about 1.5–2.0 pp in the past) (Chart 67).

Consequently, the proportion of banks' ruble liabilities to individuals and corporate clients with maturities of up to one year rose from 78% (as of 1 April 2023) to 81% (as of 1 October 2023) and from 92% to 93%, respectively (Chart 66). This increases not only the basic assessment of interest rate risk, but also its assessment considering behavioural effects because funds in current accounts and short-term deposits are more likely to be transferred to new deposits at higher interest rates if they go up.

As of 1 October 2023, given the structure of the interest rate gap (Chart 68), the assessment of IRRBB across the banking sector in general over the one-year horizon in the case of an additional 1 pp rise in interest rates equals 1.6–3.6%[35] of the banking sector's annual NII (excluding and

[35] The estimated amount of IRRBB of the banking sector in rubles over the one-year horizon if, hypothetically, interest rates rise by 1 pp, according to reporting form 0409127 as of 1 October 2023.

including behavioural assumptions, respectively). Banks need to improve the quality of interest rate risk management (see Box 6).

Budget deficit and increasing OFZ borrowings amid higher interest rates

As of the end of January–September 2023, the budget deficit totalled RUB 1.7 trillion (Table 8), which was predominantly associated with rising budget expenditures (+9.7% vs 2022). Revenues remained at the level of 2022, while non-oil and gas revenues increased (+26% YoY) and oil and gas revenues contracted (-34.5% YoY).

According to the Ministry of Finance of the Russian Federation, the budget deficit as of the end of 2023 will not exceed the amount envisaged in the federal budget for this year. This will help limit gross borrowings in 2023 in the OFZ market and avoid offering additional OFZ bonds worth RUB 1 trillion.[36] However, considering the budget deficit forecast of RUB 1.6 trillion in 2024, RUB 0.8 trillion in 2025, and RUB 1.5 trillion in 2026, the market of government domestic borrowings will continue to expand notably during the said period. Net borrowings will total RUB 2.6 trillion in 2024, RUB 2.9 trillion in 2025, and RUB 3.5 trillion in 2026.[37]

Taking into account the planned amount of borrowings in the domestic market, the OFZ market (RUB 19.82 trillion as of 22 November 2023) will expand to RUB 22.5 trillion in 2024 and RUB 29.0 trillion as of the end of 2026 (1.5 times compared to its current size) (Chart 69).

Credit institutions still account for the largest proportion of OFZ bonds held (67.1% of the OFZ market as of early October 2023). The percentage of OFZ bonds in the banking sector's assets has edged down by 0.4 pp since May to 7.9%. Amid higher yields, credit institutions decreased their demand primarily for fixed coupon OFZ bonds. Nonetheless, the potential for further purchases of OFZ bonds, especially OFZ-PK bonds, as a highly liquid asset remains, including taking into account

BUDGET REVENUES / EXPENDITURES AND SURPLUS / DEFICIT *Table 8*
(RUB BILLION)

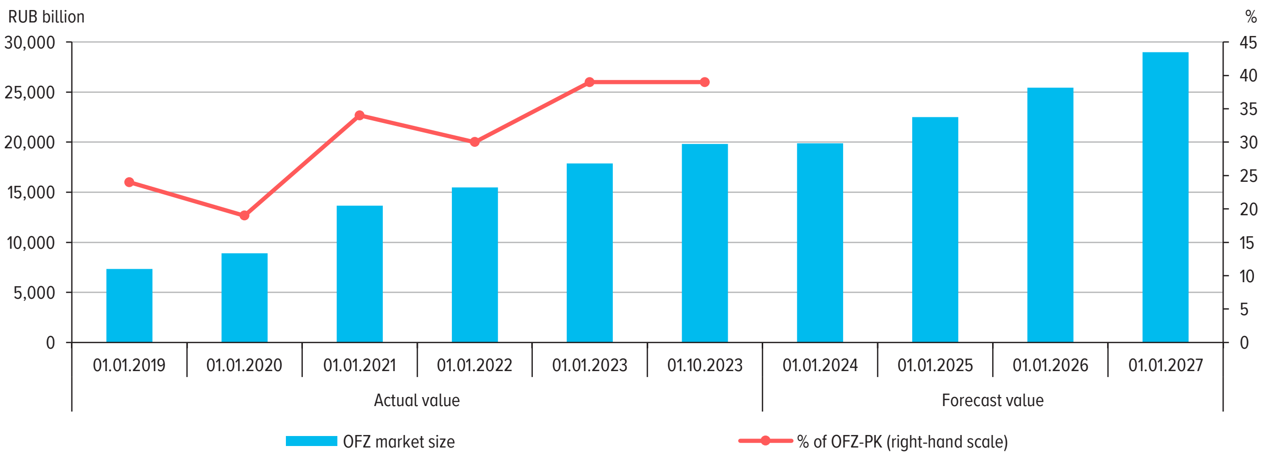
	Jan–Sep 2023	Jan–Sep 2022	YoY	Approved according to Federal Law No. 466-FZ, dated 5 December 2022
Revenues				
Oil and gas revenues, including	5,575	8,507	-34.50%	8,939
Basic oil and gas revenues	5,933	4,139	43.40%	8,000
Non-oil and gas revenues, including	14,158	11,233	26.00%	17,191
VAT (production and imports)	8,525	6,903	23.50%	10,417
Income tax	1,387	1,253	10.70%	1,633
Expenditures, including	**21,432**	**19,537**	**9.70%**	**29,056**
Public procurement	4,713	4,015	698	4,982
Deficit	**-1,699**	**203**	**-1,902**	**-2,925**
% of GDP	-1.00%	0.20%		-2.00%

Source: Ministry of Finance of the Russian Federation.

[36] The right to increase borrowings was stipulated in the law on the federal budget for 2023 and the 2024–2025 planning period.

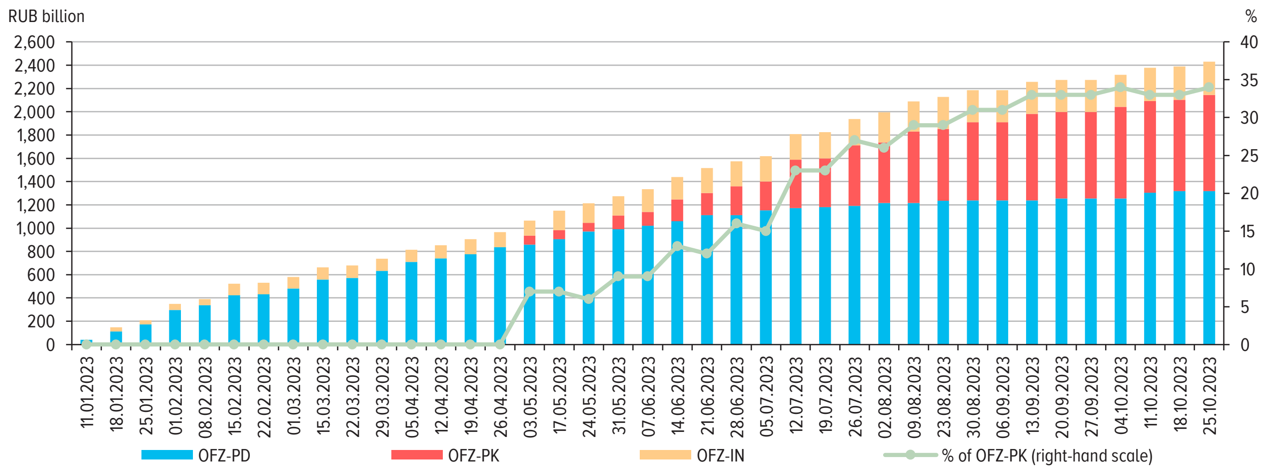
[37] Draft Federal Law No. 448554-FZ 'On the Federal Budget for 2024 and the 2025–2024 Planning Period'.

DYNAMICS OF THE OFZ MARKET IN 2019–2023 AND FORECAST FOR 2024–2026 *Chart 69*



Sources: Ministry of Finance of the Russian Federation, Bank of Russia calculations.

DYNAMICS OF OFZ AUCTIONS, CUMULATIVE *Chart 70*



Source: Ministry of Finance of the Russian Federation.

the reintroduction of the requirements for SIBs' liquidity coverage ratio planned by the Bank of Russia in 2024 (see Subsection 4.1).

The demand for OFZ-PK bonds is driven by rising interest rates in the economy and banks' efforts to mitigate interest rate risk. From June to October 2023, OFZ-PK bonds accounted for 61% in the total amount of OFZ offerings (from the beginning of the year – for 34%) (Chart 70). Credit institutions demonstrate high demand for OFZ-PK bonds.

Box 6. SIBs' interest rate risk management practice (based on survey findings)1

IRRBB is classified as material by all SIBs,[2] considering both the level of accepted risk on transactions and the probability of risk materialisation with potential losses. Given that IRRBB is material, SIBs restrict risk appetite and set limits on IRRBB. Risk appetite is the amount of risk a bank is ready to accept. The limits set the maximum level of risks within approved risk appetites across individual subsidiaries, structural units, business areas, and ranges of individual banking products. The limits, just as the risk appetite levels, shall be regularly monitored (on a daily / quarterly basis, etc.).

The main methods used to measure SIBs' IRRBB is the assessment based on NII and the assessment based on the economic value of capital (EVC). Most SIBs choose the NII-based assessment characterising variations of expected income depending on changes in interest rates over a horizon of up to one year (short-term indicator). SIBs set the tolerance limits of such sensitivity of NII in both absolute (RUB, risk-caused losses) and relative (% of regulatory capital, deviation from forecast financial performance) terms. Some SIBs also apply the EVC-based method characterising changes in the net present value of a bank's assets and liabilities in the case of certain scenario changes in interest rates (long-term indicator) and measure concentration risk when calculating IRRBB.

Due to the specifics of the regulatory statements on interest rate risk, the gap analysis method is widely used. In contrast to the two above-mentioned indicators, this method is more frequently applied to set limits rather than to specify risk appetite levels.

SIBs establish the limits on IRRBB and risk appetite levels linked to various indicators: allocated **capital** for risk coverage; the limit on a bank's **interest rate risk amount** calculated using any preferred method; the limit on the cumulative interest rate gap over a horizon of up to one year – the **difference between the opposite cash flows**; the limit on a NII change for the purposes of sensitivity analysis; risk concentration, the percentage of products with options (relative to liabilities sensitive to interest rate changes) – the percentage of certain products (e.g., mortgages, unsecured consumer loans). The limits on IRRBB are set both on all transactions and across particular currencies.

Some SIBs also establish sublimits for certain products. For example, these can be limits on the sensitivity of the balance sheet value of future cash flows on banking book securities to interest rate changes; limits on risk concentration per proportion of products with options (mortgages and retail deposits).

The assessment of IRRBB also takes into account behavioural options reflecting possible behaviour of a bank's counterparties depending on scenario changes in external factors, as well as changes in the bank's policy. In addition to the basic assessment of interest rate risk, this enables modelling of the most probable behaviour of clients in the situations considered. The models used include:

- the model of premature termination and withdrawal of retail and corporate deposits upon an increase in the interest rate;
- the model of premature termination of minimum required balances;
- the model for determining the stability of funds in demand accounts;
- the model of early repayment of retail loans; and
- the model of early repayment of corporate loans.

Some SIBs also take into account the dependence of behavioural effects on macro scenarios (including baseline and stress ones). The majority of SIBs consider that a rise in interest rates is the most adverse scenario for IRRBB.

According to the findings of the survey, internal methods for calculating IRRBB appetite levels developed by SIBs using the NII- and EVC-based methods and the assessment of the value of internal (economic) capital to cover this risk significantly vary in terms of the key parameters: rigidity and granularity of stress parameters, forecast horizons, assumptions applied, including behavioural options, and maximum allowable and acceptable risk levels. Currently, SIBs do not apply the method according to 8-MR[3] to the full extent for the purposes of IRRBB management. Nevertheless, some SIBs use this method as an additional instrument.

[1] The survey of the practices of IRRBB management was carried out in summer 2023.

[2] Banks identify, assess, manage and limit IRRBB in accordance with Bank of Russia Ordinance No. 3624-U, dated 15 April 2015, 'On the Requirements for the Risk and Capital Management System of a Credit Institution or a Banking Group'.

[3] Bank of Russia Methodological Recommendations No. 8-MR, dated 9 July 2020, 'On Calculating Interest Rate Risk on Assets (Claims) and Liabilities of a Credit Institution (Banking Group)'.

4. ASSESSMENT OF THE FINANCIAL SECTOR RESILIENCE

4.1. Banking sector

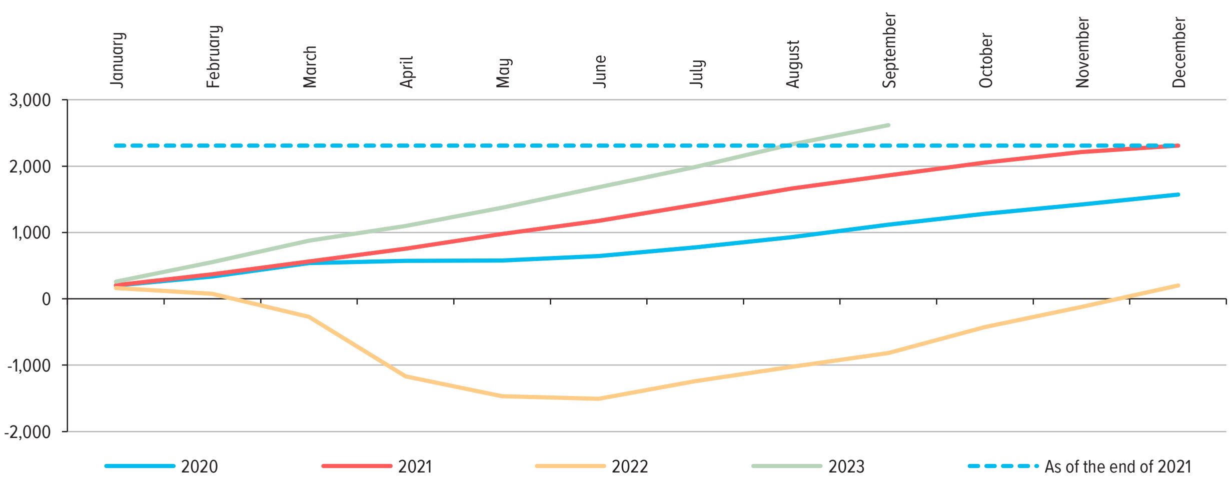
Credit institutions' financial position remained stable amid growing NII and gains from foreign currency revaluation. As a result, the banking sector's profitability has notably increased:[1] over the period from 1 April 2023 to 1 October 2023, returns on assets rose from 1.1% to 2.6% and returns on capital – from 10.7% to 26.5%. Banks' capital adequacy slightly declined amid the expansion of the loan portfolio, but stays close to 12%. The situation with banks' liquidity has remained acceptable recently, including taking into account banks' sufficient assets for refinancing with the Bank of Russia. However, the amount of liquid assets considerably contracted amid the accelerated growth of the loan portfolio. To enhance banks' resilience, the Bank of Russia will advance the regulation of liquidity risk in the next few years. From 1 March 2024, the regulatory easing for the LCR will be cancelled. This will help improve the situation with the management of short-term liquidity by SIBs as well as create a level-playing field for banks. SIBs will be allowed to roll back the LCR easing gradually. In addition, in 2025–2026, the Bank of Russia plans to implement a new domestic liquidity coverage ratio.

The banking sector's profitability increased. Over the first nine months of 2023, the banking sector's net profit[2] approximated RUB 2.6 trillion (13% more than the maximum of 2021) owing to higher NII and gains from foreign currency revaluation amid the ruble weakening and the banking sector's long OCP (Charts 71 and 72).

As a result of the significant increase in profit, banks' returns surged nearly 2.5 times over Q2–Q3 2023: annual returns on assets went up from 1.1% to 2.6% and returns on capital – from 10.7% to 26.5% over the period from 1 April 2023 to 1 October 2023 (Chart 73). Income from transactions with foreign currency contributed to the rise in annual returns on assets by 1.6 pp from 1 April 2023 to 1 October 2023 (Chart 74). The contribution of NII and net fee and commission income (NFCI) to

DYNAMICS OF THE BANKING SECTOR'S PROFIT (CUMULATIVE, YEAR-TO-DATE)
(RUB BILLION)

Chart 71

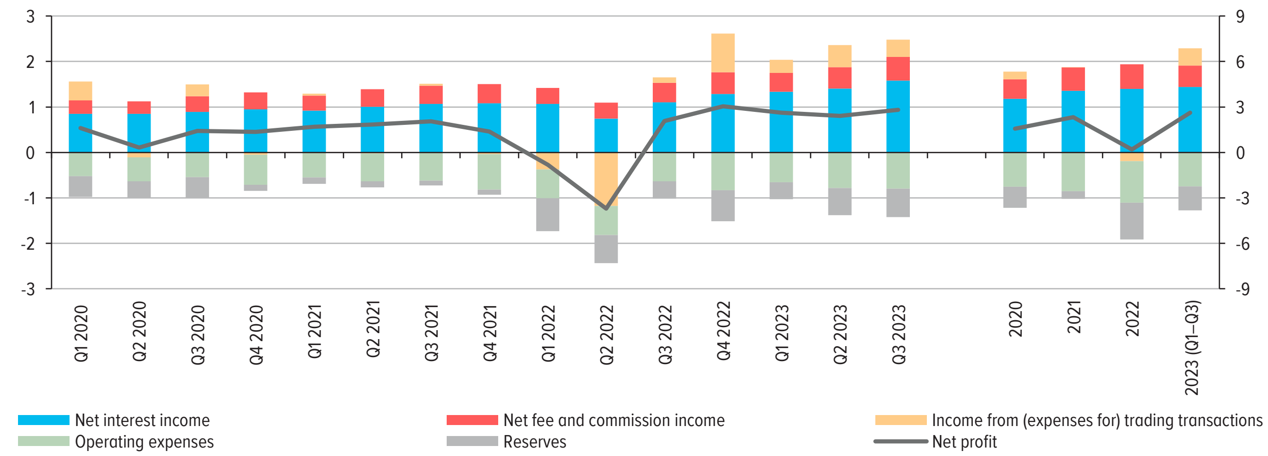


Source: reporting form 0409101.

[1] For all credit institutions, except the BNA.

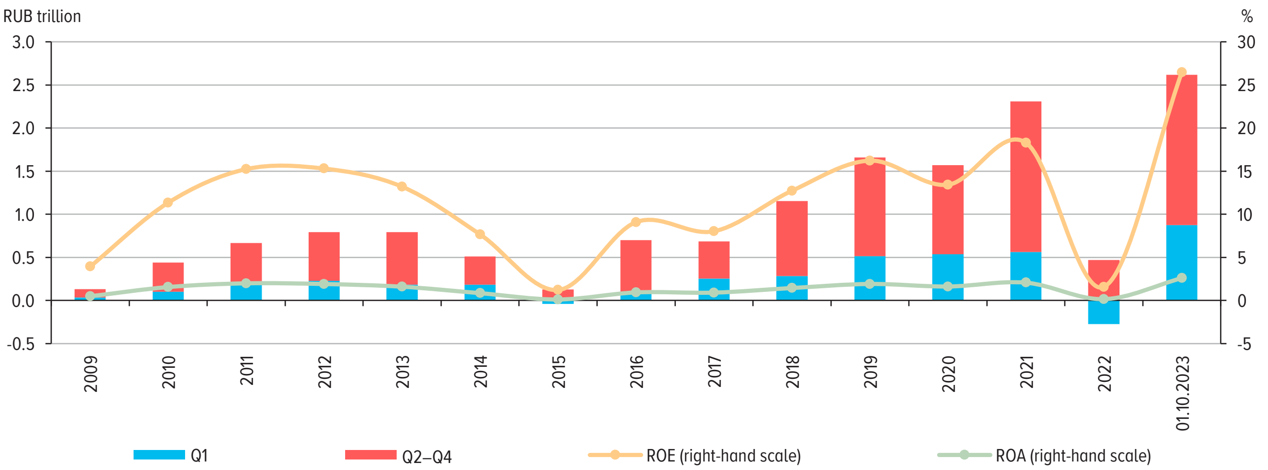
[2] For all credit institutions, except the BNA. The banking sector's profit totalled RUB 2.7 trillion as of 1 October 2023.

STRUCTURE OF THE BANKING SECTOR'S PROFIT* Chart 72
(RUB TRILLION)



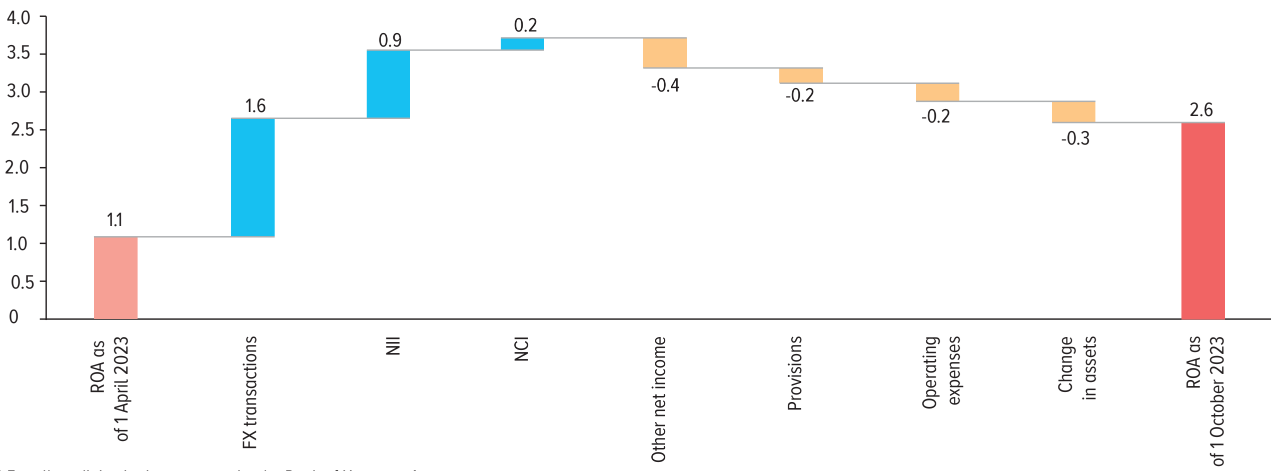
For all credit institutions, except the Bank of Non-core Assets. Excluding foreign currency revaluation of reserves.
Source: reporting form 0409102.

NET PROFIT AND PROFITABILITY OF THE BANKING SECTOR* Chart 73



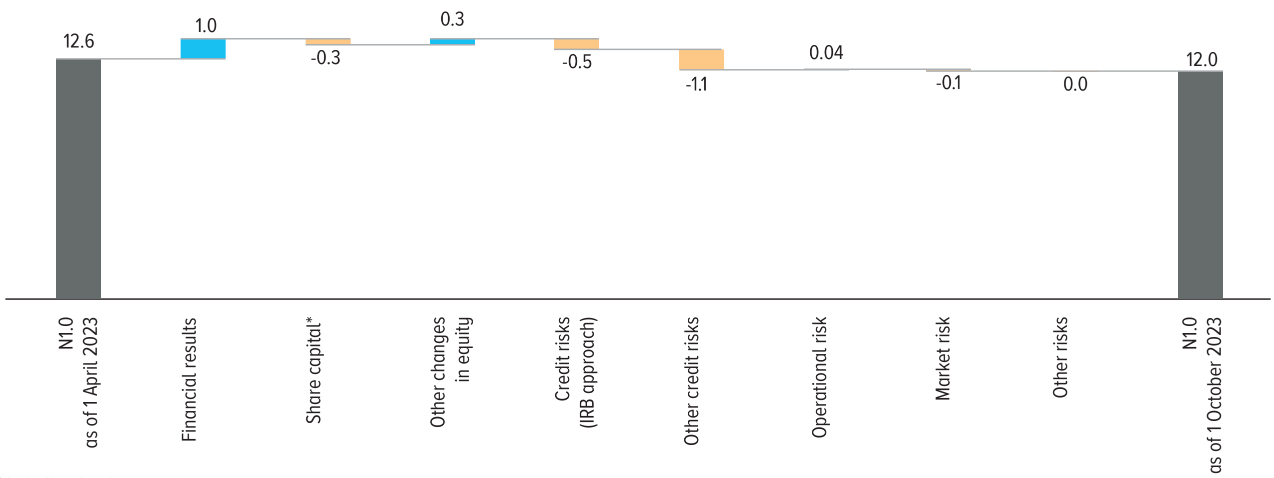
For all credit institutions, except the the Bank of Non-core Assets.
Source: reporting form 0409101.

CHANGE IN RETURNS ON THE BANKING SECTOR'S ASSETS FROM 1 APRIL 2023 TO 1 OCTOBER 2023* Chart 74
(PP)



For all credit institutions, except the the Bank of Non-core Assets.
Sources: reporting forms 0409101 and 0409102.

CHANGE IN BANKS' CAPITAL ADEQUACY FROM 1 APRIL 2023 TO 1 OCTOBER 2023* Chart 75
(PP)



** Including the share premium.*
Sources: reporting forms 0409135 and 0409123.

the growth of ROA over the period under review equalled 0.9 pp and 0.2 pp, respectively, while the effect of an additional increase in reserves is estimated at -0.2 pp.

Banks' capital adequacy edged down somewhat over April–September (from 12.6% to 12.0%) amid the rapid growth of risk-weighted assets (RWAs), predominantly due to credit risk, **but stays at an acceptable level** (Chart 75). The increase in financial performance in the capital sources in the amount of RUB 1.1 trillion (+1.0 pp in the terms of N1.0) supported the expansion of lending. The banking sector's capital cushion, excluding the effect of the temporary support measures, approximated RUB 7 trillion as of 1 October 2023.[3]

The amount of liquid assets in the sector declined amid the fast expansion of the loan portfolio, while liquidity risk remains moderate. The small liquidity buffer relative to the required ratios is associated with, among other things, the effective easing and does not involve risks in the short term because banks have sufficient collateral for refinancing with the Bank of Russia. Nevertheless, it is essential to gradually encourage banks to restore their liquidity buffers.

Banks' N2 and N3 liquidity ratios remain above the required threshold. However, considering the assumptions used in the calculations of the ratios, they might not reflect exposure to liquidity risk to the fullest extent. Banks' liquid assets to liabilities ratio declined to 21% as of 1 October 2023 (-1 pp over Q2–Q3 2023; Chart 76), while many banks' highly liquid assets do not exceed 10% of their liabilities to clients.[4]

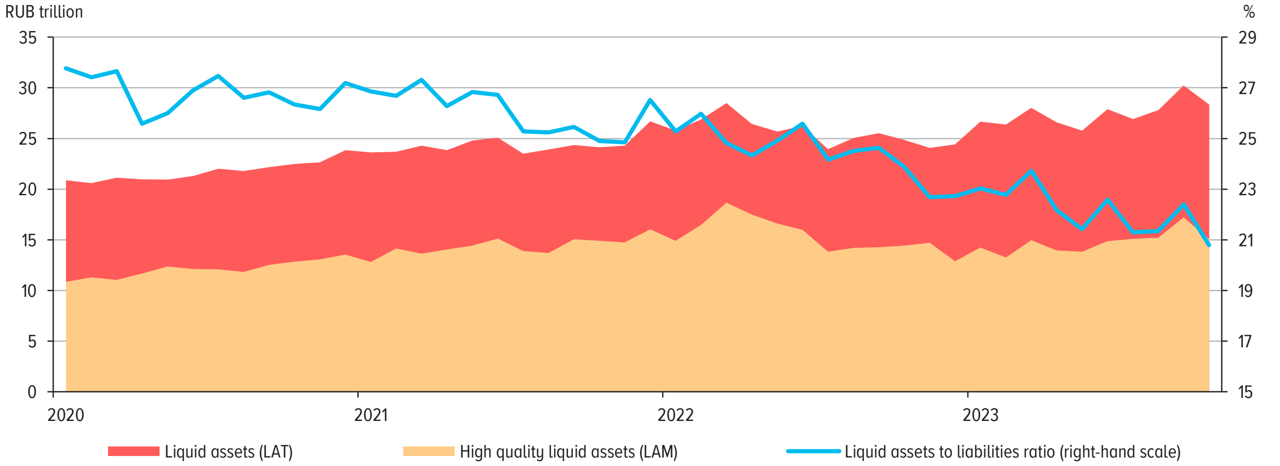
The liquidity coverage ratio across the banking sector in general remains considerably below 100% (Chart 77) and, moreover, continues to decline. In 2022, amid high volatility, the Bank of Russia granted regulatory easing to SIBs in relation to compliance with the LCR, which supported banks' financial position during the acute phase of the crisis. However, further on, despite the improvement of the situation and the inflow of clients' funds, banks were not restoring their liquidity buffers. As of 1 October 2023, the deficit of highly liquid assets included in the LCR calculation increased to RUB 11 trillion for SIBs, while the LCR for SIBs in general dropped to 48%.

Despite the reduction in the ratios, liquidity risk remains moderate considering that banks have sufficient collateral for refinancing with the Bank of Russia. However, it is important for banks to form the liquidity buffers themselves and reduce their dependence on operations with the central

[3] The assessment is based on reporting forms 0409135 and 0409123, taking into account the results of banks' surveys as of 1 October 2023. The effective easing measures do not have a notable impact on the banking sector's capital cushion.

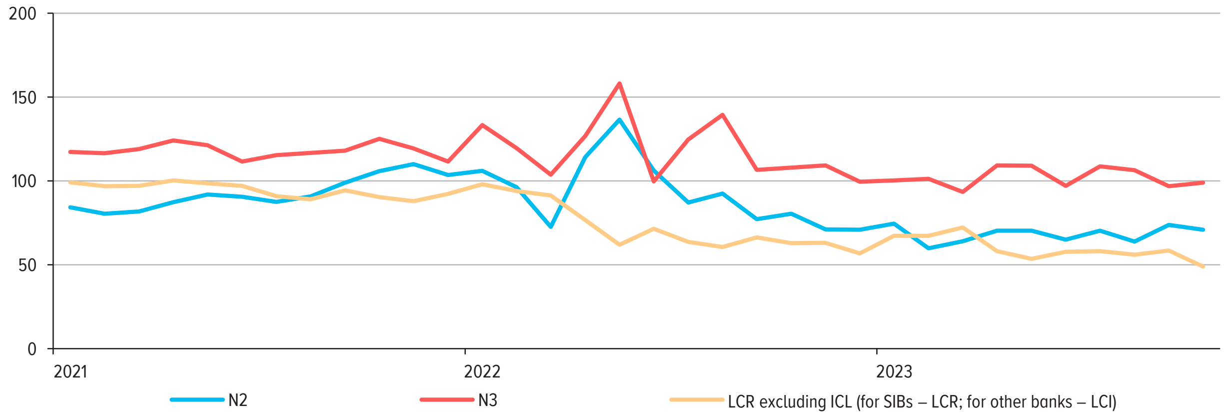
[4] The ratio of the amount of claims on the Bank of Russia and foreign cash to the amount of funds of clients – individuals and legal entities (including government organisations).

ASSETS INCLUDED IN N2 AND N3 LIQUIDITY RATIOS CALCULATIONS *Chart 76*



Sources: reporting forms 0409135 and 0409101.

DYNAMICS OF LIQUIDITY RATIOS *Chart 77*
(%)



Sources: reporting forms 0409135, 0409805 and 0409122.

bank. To enhance banks' resilience, the Bank of Russia decided to cancel the regulatory easing related to liquidity risk.[5] The regulatory easing for the LCR and NSFR will be cancelled from 1 March 2024 and 1 January 2024, respectively. This will help improve the situation with the management of short-term liquidity by SIBs and even out the conditions for competition among banks. SIBs will be allowed to include the limit on the irrevocable credit line (ICL) in the calculation of the LCR numerator. However, the maximum possible limit will be gradually decreasing. The fee for the right to use the ICL will depend on the LCR calculated excluding the ICL. Thus, the fee for increasing the LCR to 80% will be higher than that for increasing the LCR from 80% to 100%. This will help promote the transformation of the balance sheet structure and reduce exposure to liquidity risk. In 2025–2026, the Bank of Russia plans to implement a new domestic liquidity coverage ratio.[6]

[5] Press release of the Bank of Russia, dated 15 November 2023.

[6] Press release of the Bank of Russia, dated 23 November 2023.

4.2. Non-bank financial institutions

As of the end of H1 2023, NBFIs had high capital adequacy and positive financial performance. These results enabled them to absorb negative effects of the rise in interest rates in Q3 2023. Brokers' foreign exchange risks are declining as a result of the reduction in investment in foreign assets. Only leasing companies working in the corporate sector remain at risk.

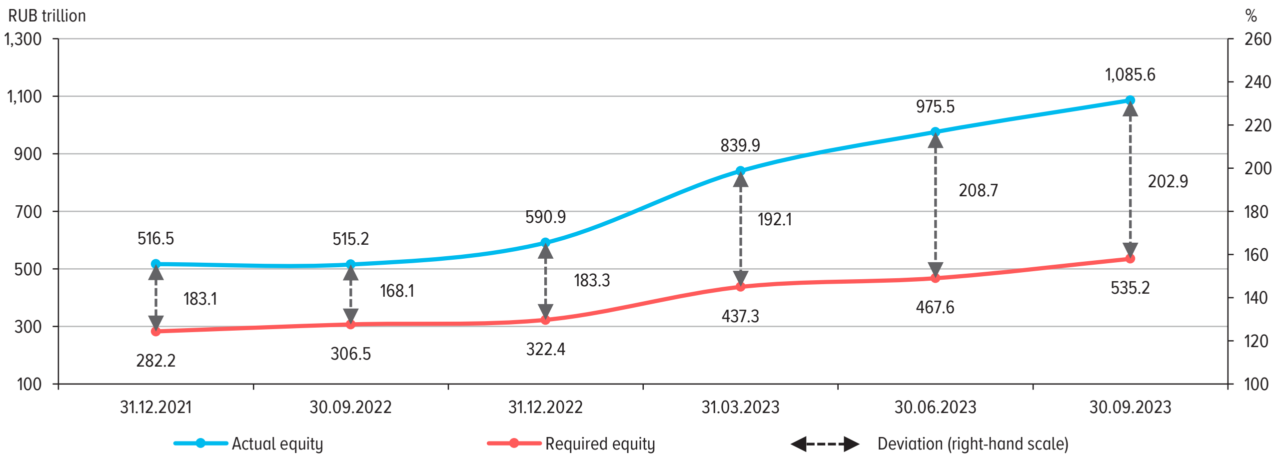
The **insurance sector**'s net profit over the first nine months of 2023 totalled RUB 382.2 billion (3.3 times more year-on-year). The main contributors were interest income and gains from foreign currency revaluation (RUB 186.8 billion and RUB 157.7 billion, respectively) that significantly exceeded losses from changes in the fair value of assets available for sale (RUB 26.5 billion).

In accordance with Bank of Russia Regulation No. 781-P,[7] the risk weights for calculating the required ratio of equity and liabilities were tightened from 1 July 2023. As a result,[8] the overall assessment of the impact of risks on insurers' equity increased by 85.4% to RUB 259.8 billion over Q3 2023, while the required ratio of equity and liabilities declined by 5.8 pp to 202.9%. Thus, even considering the tightening of the requirements, the insurance sector maintains a large capital cushion.

In addition, the regulation was amended to encourage the financing of the structural transformation of the economy (specifically, investment in bonds issued according to the taxonomy of projects promoting technological sovereignty and the modernisation of the economy), make it possible to take into account the value of non-tradable shares (for the largest issuers characterised by high credit quality), and ensure the stability of the compulsory motor third-party liability insurance (OSAGO) segment (companies accounting for over 15% in the OSAGO market are to comply with increased capital requirements). Besides, insurers not paying dividends are allowed to gradually write off the value of blocked assets until 30 November 2032.

Joint Stock Company Russian National Reinsurance Company (JSC RNRC) remains the leader in the reinsurance market. However, as for the compulsory types of third party liability insurance, there are reinsurance pools created by members of the professional associations of insurers. The period of Q2–Q3 2023 was favourable as there were no major insured events and the market's combined loss ratio generally stayed at a comfortable level.

STATUTORY EQUITY CAPITAL RATIO TO ASSUMED LIABILITIES *Chart 78*

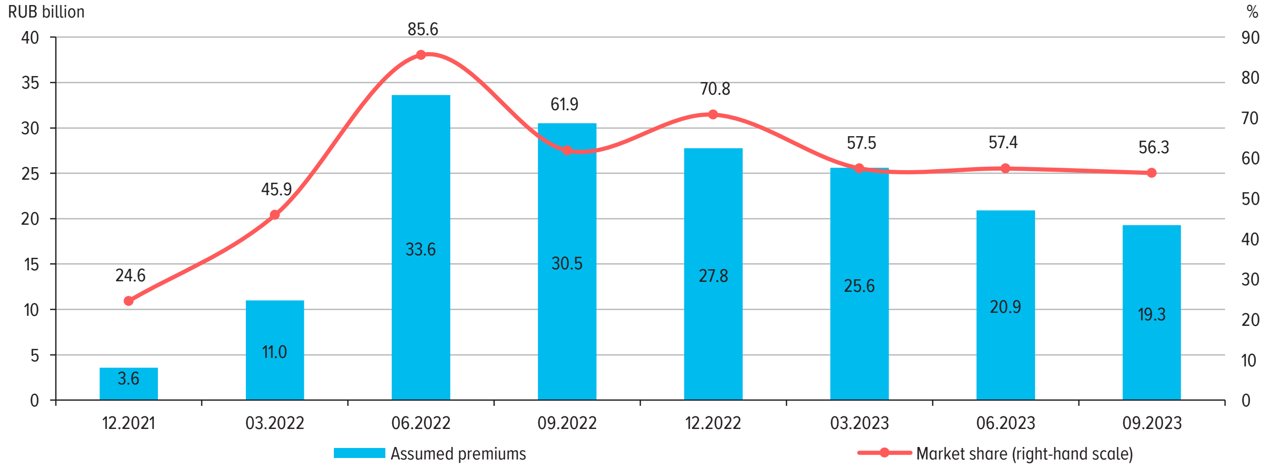


Source: reporting form 0420156.

[7] Bank of Russia Regulation No. 781-P, dated 16 November 2021, 'On the Requirements for Financial Stability and Solvency of Insurers'.

[8] Taking into account the use of support measures associated with the blocking of assets.

QUARTERLY PREMIUMS OF JSC RNRC *Chart 79*



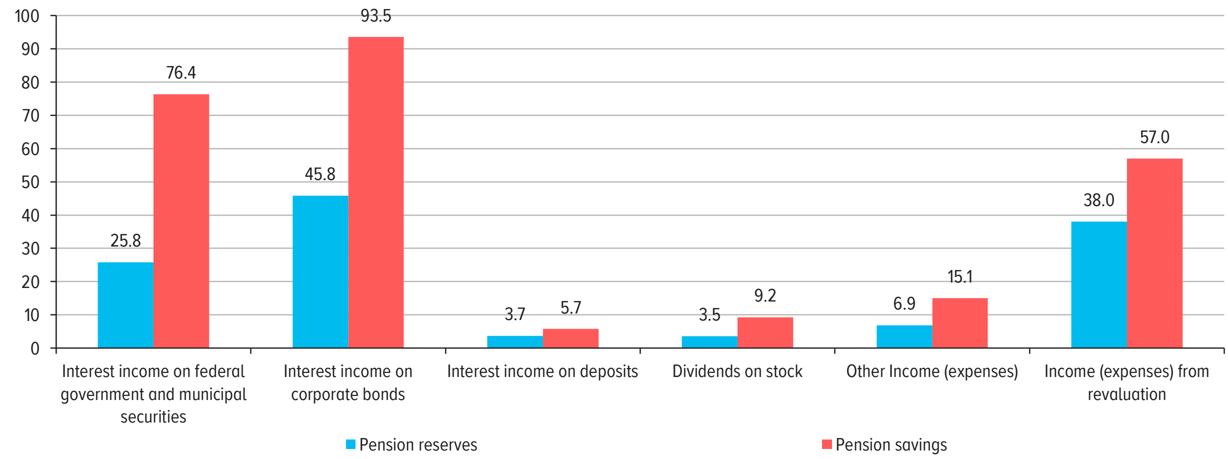
Source: reporting form 0420157.

Non-governmental pension funds are preparing for the launch of the long-term savings programme developed by the Russian Ministry of Finance and the Bank of Russia from 1 January 2024. The programme enables individuals to make pension savings from their personal contributions and co-financing, as well as to transfer their earlier accumulated pension savings to this programme. All the contributions will be insured for RUB 2.8 million.

All NPFs had positive returns on both PR and PS over the first nine months of 2023. Returns of 19 of the 27 funds engaged in MPI and 19 of the 35 funds providing NPS exceeded the inflation rate recorded over the said period. Thus, as of the end of the first nine months of 2023, NPFs' returns on both pension savings (PS) and pension reserves (PR) significantly increased, namely by 6.3 pp to 10.9% and by 6.4 pp to 10.1%, respectively, year-on-year. The main contributors to NPFs' financial performance were interest income from bonds totalling RUB 169.9 billion in PS and RUB 71.7 billion in PR and gains from revaluations amounting to RUB 57.0 billion in PS and RUB 38.0 billion in PR, primarily driven by a rise in the value of equity securities.

All NPFs have been successfully passing stress tests, which proves their high financial resilience, including high quality of assets in their investment portfolios. NPFs' net profit as of the end of the

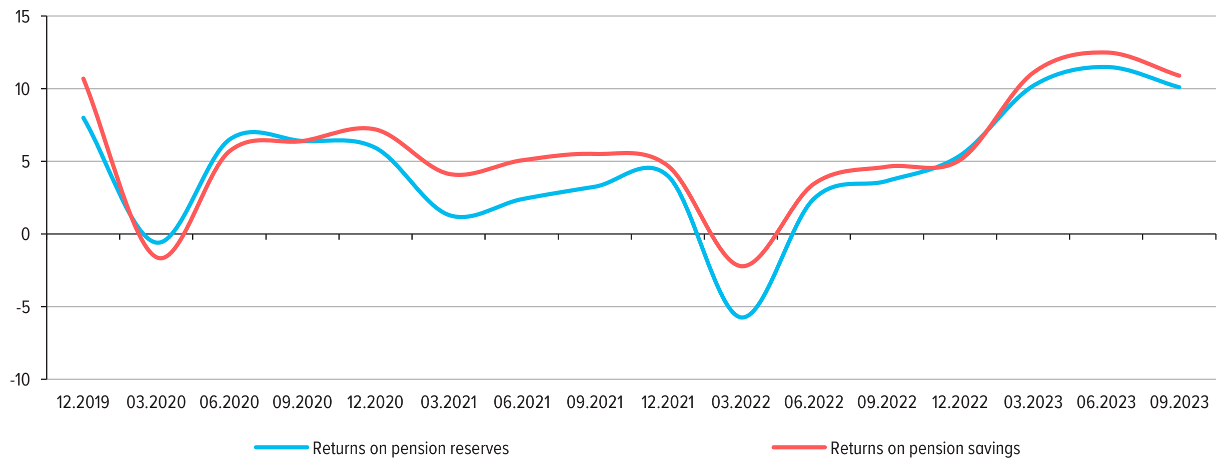
STRUCTURE OF NPFS' INCOMES OVER Q1–Q3 2023
(RUB BILLION) *Chart 80*



Sources: reporting forms 0420254 and 0420255.

NPFS' WEIGHTED AVERAGE RETURNS
(% PER ANNUM)

Chart 81



Sources: reporting forms 0420254 and 0420255.

first nine months of 2023 totalled RUB 378.2 billion, which is nearly 2.6 times more year-on-year. NPFs' equity increased by 39.4% over the year, reaching RUB 917.4 billion. NPFs did not report any actuarial deficit. From 2023, the PR guarantee system was launched in addition to the existing PS guarantee system.

Brokerage companies have continued to comply with the capital adequacy ratio (CAR) and LCR in Q2–Q3 2023. The aggregate CAR and LCR remained unchanged over the said period, staying at 25%[9] and 206%,[10] respectively. However, over the period under review, there was an increase in the amount of securities to be redelivered under loan agreements and the outflows associated with repayments under repurchase agreements. Besides, brokers increased the amounts of highly liquid assets for liquidity risk coverage.

Currently, the situation with the blocked assets has almost no impact on brokers' financial resilience. Pursuant to the amendments to Ordinance No. 5873-U,[11] beginning from 2024, brokerage companies will be obliged to calculate their CAR excluding the assets that are encumbered or subject to any other restrictions preventing from using them, including in connection with the unfriendly actions of the US in league with other foreign states.[12] These amendments are not expected to have a material effect on brokers' CAR. From the beginning of 2023, the amount of unfriendly countries' securities in brokers' securities portfolio declined approximately five times and, as of the end of Q2 2023, did not exceed 1%.[13]

Brokers' foreign exchange risks and risks associated with interaction with non-residents are decreasing. The amount of assets, in relation to which the counterparties are non-residents, has nearly halved from 17% as of the beginning of the year to 9% of the overall amount of assets[14] (Chart 82). Specifically, there was a considerable reduction (by 32%) in funds provided to foreign brokers under brokerage agreements.[15] In addition, foreign currency-denominated assets are also

[9] Brokers' capital increased by 1%, credit risk – by 10%, and market risk remained at the same level.

[10] Highly liquid assets expanded by 30%, and expected net outflows of funds – by 31%.

[11] Bank of Russia Ordinance No. 5873-U, dated 2 August 2021, 'On Setting the Required Capital Adequacy Ratio for Professional Securities Market Participants Engaged in Dealer, Broker, Securities Management and Forex Dealer Activities'.

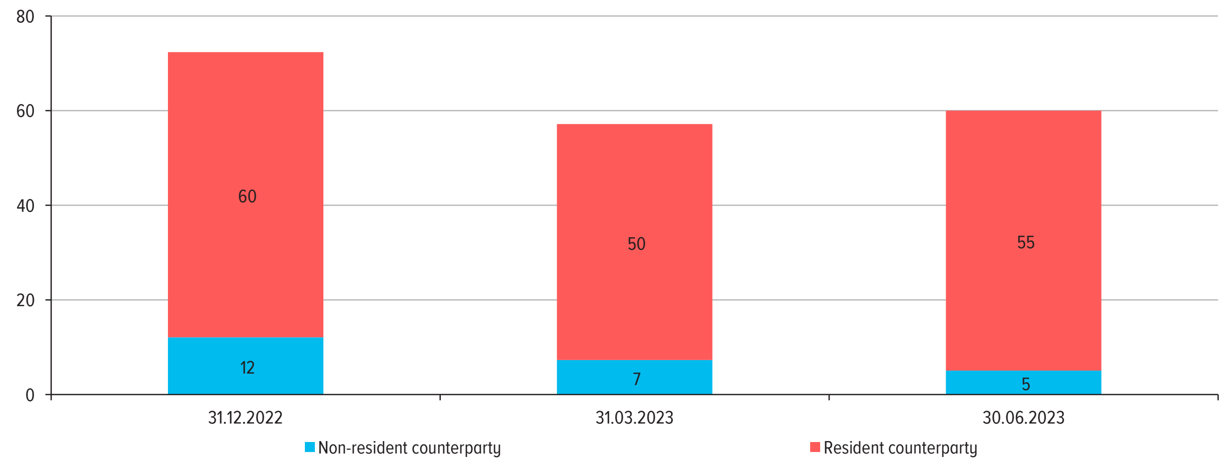
[12] Excluding Eurobonds of the Russian Federation and quasi-Russian companies.

[13] According to reporting form 0420455 (Subsection 4.2).

[14] According to reporting form 0420455 (Subsection 3.1).

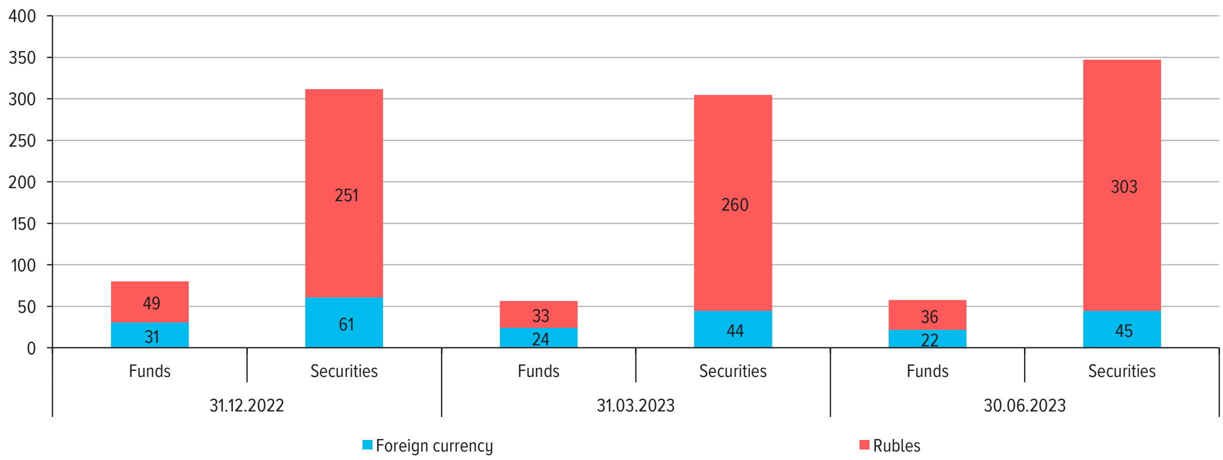
[15] According to reporting form 0420409 (Section 2).

DYNAMICS OF THE AMOUNT OF ASSETS EXPOSED TO CREDIT RISK *Chart 82*
(RUB BILLION)



Sources: reporting forms 0420409 and 0420455.

DYNAMICS OF THE AMOUNT OF SECURITIES AND FUNDS ON BANK ACCOUNTS NOMINATED IN FOREIGN CURRENCY *Chart 83*
(RUB BILLION)



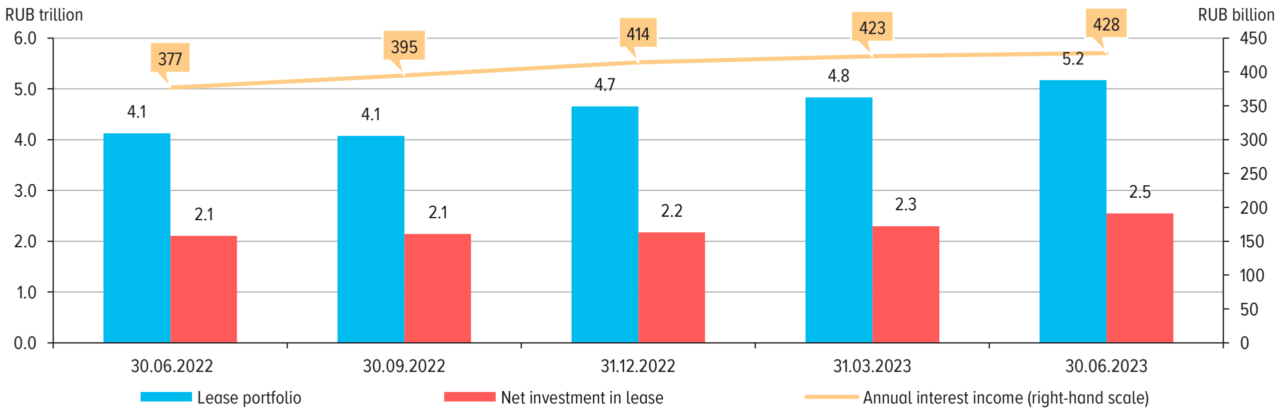
Sources: reporting forms 0420409 and 0420455.

decreasing. In particular, funds and deposits with banks have plummeted by 29% and the amount of securities – by 26% (Chart 83).

With regard to the assets blocked in 2022, the Bank of Russia implemented the approach aimed at resuming transactions with investment units of unit investment funds (UIFs). Following this approach, management companies (MCs) separated the blocked assets from the operating UIFs (where the blocked assets accounted for more than 10%) into special closed-end UIFs or changed the type of blocked UIFs for closed-end UIFs.[16] In the future, MCs shall pay to unit holders at least 90% of the revenues from the sale of the blocked assets over a settlement period where the payment due exceeds 10% of the net asset value (NAV) of a separated closed-end UIF.

[16] 25 MCs implemented the option provided for by Federal Law No. 319-FZ, dated 22 October 2014, in relation to 123 UIFs and made the decision to separate blocked UIFs' assets into additionally created closed-end UIFs or to change the type of the blocked UIF for a closed-end UIF.

LESSORS' KEY INDICATORS *Chart 84*



Source: surveys by the Bank of Russia.

According to the data as of 30 June 2023, the lease portfolio of the **leasing companies**[17] being analysed expanded by 25.4% over the year reaching RUB 5.17 trillion. This growth was mainly driven by retail segments (freight transport, construction and agricultural machinery).

It should be noted that the value of net investment in lease (NIL) taking into account the discounting and excluding non-performing contracts was two times lower (RUB 2.55 trillion, +21.1% over the year) in the same sample of lessors. Furthermore, lessors' interest income was increasing more slowly than their lease portfolio, which is evidence of lower margin in leasing business. Thus, interest income over the last 12 months rose by 13.5% to RUB 428 billion. Restructuring and early termination of lease contracts had a negative effect on the dynamics of interest income in H1 2023. The amount of distressed assets including the restructured lease portfolio, as well as outstanding debt under the cancelled contracts totalled RUB 634 billion as of 30 June 2023, or 12.4% of the lease portfolio (-4.5 pp over the year).

Leasing companies' net profit notably increased, reaching RUB 44.2 billion over H1 2023. Nevertheless, the profit earned still does not cover the loss incurred in 2022 (RUB 108.4 billion). Despite certain positive shifts, the situation associated with the blocking of assets (aircraft and sea craft located abroad) and the need to renegotiate a number of lease contracts between airlines and Russian lessors has not been settled yet.

Leasing companies' revenues may be expected to grow amid higher interest rates. Concurrently, the rise in interest rates will slow down the dynamics of the lease portfolio and NIL and increase the probability of restructuring of contracts due to a rise in lessees' debt burden.

[17] Overall, the Bank of Russia surveyed 47 lessors whose lease portfolio reached RUB 6.0 trillion, or 83.2% of the leasing market (RUB 7.2 trillion according to JSC Expert RA). The sample for the analysis comprised 18 companies that had submitted their IFRS statements over the last four quarters.

ANNEX

Recent trends in cryptoasset market regulation (including international recommendations)

Monitoring and regulation of risks associated with the cryptoasset market remain **in the focus of the leading international organisations and associations**, including the G20, the Financial Stability Board (FSB), the International Monetary Fund (IMF), the Bank for International Settlements (BIS), and the International Organization of Securities Commissions (IOSCO).

Specifically, in July 2023, the G20 leaders endorsed the FSB's recommendations on regulation, supervision and oversight of the cryptoasset activities and markets. Among other things, the FSB recommends that authorities should apply effective regulation, supervision, and oversight of cryptoasset market participants proportionate to the financial stability risk they pose and in line with the principle 'same activity, same risk, same regulation'. Regulation authorities should assess how well the existing approaches to regulation and supervision address financial stability risks, including potential ones, in the cryptoasset market and, where needed, review the perimeter of regulation. In October 2023, the G20 adopted the roadmap to implement the recommendations developed.

Important results of the work of other international organisations since the beginning of 2023:

1. In the joint paper presented in September, the FSB and the IMF stress that, to address the risks of cryptoassets to macroeconomic and financial stability, regulators may need to safeguard monetary sovereignty and strengthen monetary policy frameworks, guard against excessive capital flow volatility, adopt unambiguous tax treatment of cryptoassets, and develop additional requirements to ensure market participants' compliance with the AML/CFT standards.
2. The IOSCO's recommendations (report, November 2023) focus on investor protection, custody of client monies and assets, effective corporate governance of cryptoasset service providers, enforcement actions against abusive practices in the cryptoasset market, etc.
3. Decentralised finance (DeFi) is a special focus at the international level. In its report presented in February 2023, the FSB emphasises core vulnerabilities in the market that are associated with a high level of leverage, liquidity risks, increased interconnectedness, the lack of transparency in the market, and operational fragilities.
4. In its consultation paper published in September 2023, IOSCO stresses the importance of understanding the DeFi structure and mechanisms (including by identifying responsible persons exercising control or sufficient influence over the development of products and services), as well as mitigating conflicts of interest.[1]

The global trend towards tightening the requirements for the cryptoasset market remained **at the national level** as well in Q2–Q3 2023.

The EU and the US continued the development of comprehensive regulation of the cryptoasset market. Specifically, on 9 June 2023, the EU published the Regulation on Markets in Cryptoassets, or MiCA aimed at regulating various aspects of operation in the cryptoasset market, including stablecoin issuers, crypto platforms, and crypto traders.[2] All the MiCA provisions become effective on 30 December 2024, but a number of requirements for the market will come into force earlier. In this context, in July 2023, the European Banking Authority (EBA) published a statement explaining the

[1] In addition to the above reports, it is worth paying attention to multiple studies by the BIS in the area of cryptoasset market risks and their impact on financial stability, including in emerging market economies.

[2] More details on the MiCA are available in the Financial Stability Review for Q4 2022 – Q1 2023.

status of stablecoin issuers: in particular, such entities shall disclose full information to stablecoin acquires and holders, have well-defined business models, sound governance systems and robust reserve arrangements, and develop stablecoin redemption plans. The US continues the discussion of the draft bill on comprehensive regulation of stablecoins: on 27 July 2023, the new draft bill was submitted to the US House of Representatives stipulating tight requirements for the admission of stablecoin issuers to the market, as well as requirements for reserves, redemptions, disclosures, risk management, etc. In August 2023, Singapore accomplished the development of the regulatory framework in relation to stablecoin issuers establishing requirements for capital, liquidity, reserve assets, redemptions, and disclosures. The UK intends to start by early 2024 the regulation of fiat-backed stablecoins by implementing requirements for providing stablecoin payment services and the procedures for issuing and holding of stablecoins.

In 2023, jurisdictions continued to implement targeted requirements for the cryptoasset market. Hong Kong and Uzbekistan implemented requirements for mandatory licensing of cryptoasset trading activities. In September 2023, Thailand and the US published rules for cryptoasset issuance in the primary market for public consultation. Countries continue to enhance taxation of cryptoasset transactions: the UK reviewed approaches to tax treatment of DeFi lending and staking; and the US proposed requirements for crypto exchanges to report their clients' cryptoasset sale and exchange transactions to tax authorities. A number of countries continue tightening the AML/CFT requirements (the UK, the UAE, and the EU).

Furthermore, regulators are developing blockchain analytics tools to monitor cryptoasset transactions. Thus, in September 2023, India announced the development of an intelligence and analysis tool to monitor suspicious cryptoasset transactions in real time. The BIS, in collaboration with a number of national regulators, is working on the Atlas project aimed at analysing cross-border flows of cryptoassets based on data collected from public blockchains and crypto exchanges.

Rationale for the decision on the MPLs for Q4 2023 and Q1 2024

The decision to establish the MPLs for Q4 2023 was made by the Bank of Russia Board of Directors considering the growth of all the risk factors increasing individual borrowers' debt burden above the maximum levels[3] (Table 9). The decision to establish the MPLs for Q1 2024 was made by the Bank of Russia Board of Directors considering the growth of three out of the six risk factors increasing individual borrowers' debt burden above the maximum levels (Table 9).

RISK FACTORS INCREASING INDIVIDUAL BORROWERS' DEBT BURDEN *Table 9*
(%)

<table>
<tr><th rowspan="2"></th><th rowspan="2">Indicator</th><th colspan="2">Maximum level as of</th><th colspan="2">Level as of</th></tr>
<tr><th>1 July 2023</th><th>1 October 2023</th><th>1 July 2023</th><th>1 October 2023</th></tr>
<tr><td>1</td><td>Amount of claims that arose over two consecutive quarters on consumer loans issued by credit institutions to borrowers with DSTI above 80%</td><td colspan="2">10</td><td>28</td><td>26</td></tr>
<tr><td>2</td><td>The relative change over 12 months in total outstanding retail loans issued by credit institutions exceeds the relative change in households' money income over the said period</td><td>8</td><td>11</td><td rowspan="2">17</td><td rowspan="2">22</td></tr>
<tr><td>3</td><td>The relative change over 12 months in total outstanding retail loans issued by credit institutions is two times larger than the relative change in the number of borrowers over the said period</td><td>17</td><td>22</td></tr>
<tr><td>4</td><td>The change in total outstanding consumer loans over 12 months (including outstanding consumer loans written off from credit institutions' balance sheets and outstanding consumer loans, the claims on which were transferred to another person) issued by credit institutions and overdue for more than 90 days relative to the arithmetic mean of outstanding consumer loans over 12 months</td><td colspan="2">2</td><td>5</td><td>4</td></tr>
<tr><td>5</td><td>Amount of consumer loans, excluding loans with a limit, with maturities of over five years issued by credit institutions over two consecutive quarters</td><td colspan="2">5</td><td>7</td><td>5</td></tr>
<tr><td>6</td><td>Amount of claims that arose over two consecutive quarters on consumer microloans issued by MFOs where a borrower's DSTI exceeds 80%</td><td colspan="2">25</td><td>27</td><td>25</td></tr>
</table>

Sources: CHBs, reporting forms 0409135 and 0409704.

[3] According to Annex 8 to Bank of Russia Ordinance No. 6037-U, dated 24 December 2021, 'On the Types of Loans Subject to Macroprudential Limits, on the Parameters of the Said Loans, on the Procedure for Setting and Applying Macroprudential Limits in Relation to the Said Loans, on Risk Factors Increasing Individual Borrowers' Debt Burden, and on the Procedure for Applying Measures Provided for by Part Five of Article 45.6 of Federal Law No. 86-FZ, Dated 10 July 2002, 'On the Central Bank of the Russian Federation (Bank of Russia)'.

LIST OF ABBREVIATIONS

ACF – autocorrelation function

AML/CFT – anti-money laundering and combating the financing of terrorism

BIS – Bank for International Settlements

CAR – capital adequacy ratio

CHB – credit history bureau

CRE – commercial real estate

DSTI – debt service-to-income ratio

ECB – European Central Bank

EIR – effective interest rate

EMEs – emerging market economies

EPA – equity participation agreement

ETF – exchange-traded fund

EU – European Union

GDP – gross domestic product

ICL – irrevocable credit line

IFRS – International Financial Reporting Standards

IMF – International Monetary Fund

IRB approach – internal ratings-based approach

LCR – liquidity coverage ratio

LNG – liquefied natural gas

LTV – loan-to-value (the ratio of principal loan debt to the fair value of the collateral)

MFO – microfinance organisation

MPLs – macroprudential limits

MLF – medium-term lending facility

NBFI – non-bank financial institution

NSFR – net stable funding ratio

NFCI – net fee and commission income

NFCs – non-financial companies

NII – net interest income

NIL – net investment in lease

NIM – net interest margin

NPF – non-governmental pension fund

OCP – open currency position

OFZ – federal government bonds

OFZ-AD – federal government bond with debt amortisation

OFZ-IN – inflation-indexed federal government bond

OFZ-PD – fixed rate federal government bond

OFZ-PK – variable rate federal government bond

OSAGO – Compulsory Motor Third Party Liability Insurance

P2P – peer-to-peer (direct transactions between individuals without involving intermediaries)

PBC – People's Bank of China

PR – pension reserves

PS – pension savings

ROA – return on assets

ROE – return on equity

SDN – Specially Designated Nationals and Blocked Persons List

SEC – US Securities and Exchange Commission

SIB – systemically important bank

SME – small and medium-sized enterprise

UHCIS – Unified Housing Construction Information System

UIF – unit investment fund

US Fed – US Federal Reserve System

UST – US Treasuries

VAT – value added tax

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