Bank of Russia

Q4 2022 – Q1 2023

FINANCIAL STABILITY REVIEW

Information and analytical review

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SUMMARY

1. Global risks

In the spring of 2023, US banks came under stress for the first time since the global financial crisis of 2007-2009, the European market also experienced escalating challenges. This made central banks think about the regulatory efficiency and the need to develop new tools for maintaining financial stability. Over the years of ultra-low interest rates, financial institutions have accumulated hidden problems. Failed banks faced materialisation of interest rate risk due to deposit outflows and had to recognise losses from negative revaluation on debt securities. Depositors, especially uninsured, were able to withdraw their funds faster than during the previous crisis periods due to the development of online banking. The interest rate risk can materialise on a larger scale and be accompanied by the credit risk amid high interest rates not only at banks but also at non-bank financial institutions, which have significantly increased both their market share and leverage since the crisis of 2007-2009. The residential and commercial real estate may fall into difficulties in the countries where the market overheating was previously observed. During the COVID-19 pandemic in 2020, the resilience of the financial sector helped to curb the crisis trends in the economy; but the current financial sector turmoil, by contrast, may negatively affect lending, economic growth, and the ability of major central banks to reduce inflation.

Market expectations for the US Federal Reserve (Fed) key rate now have been substantially revised downwards with an expected decrease by 75 bps from the current peak of 5–5.25% by the end of 2023, whereas before the March volatility episode, the rate hike to 5.5–5.75% was forecast. This adjustment reflects the impact of materialisation of risks to financial stability on macro indicators (decline in economic activity), trends in monetary policy, and the rise in uncertainty as well. If inflation remains persistently high, coupled with stress in the financial sector, it can cause stagflation in the global economy for some time. Increasing geoeconomic fragmentation can become an additional aggravating factor, as it reduces cross-border capital and labour flows, erodes prosperity and slows global economic growth as a result.

The Russian economy and financial sector have largely adapted to the sanctions. The contagion effects associated with financial instability in leading countries are limited. Nevertheless, reduced demand and/or prices for Russian exports remains to be a sensitive channel for transmission of shocks in case of a global recession. Besides, the already imposed restrictive measures, as well as new sanctions, including secondary ones, can give rise to additional negative consequences. The economic and financial resilience of friendly countries with which Russia is strengthening economic and financial ties has become an increasingly significant factor in terms of contagion effects.

2. Vulnerabilities and resilience of the Russian non-financial sector

Vulnerability 1. Sanctions exposure of business

The ongoing sanctions pressure on the Russian corporate sector is having an adverse impact on the financial position of certain Russian companies and their prospects for development. Most companies, both domestic and export-oriented, face higher operating and capital costs due to the need to replace imported equipment and develop logistics corridors. The rapid reorientation of trade flows is hampered by the concerns of new trading partners about secondary sanctions.

Vulnerability 2. Exit of foreign investors from Russian asstes

Political pressure on foreign companies continues, leading in some cases to the suspension of their operations in Russia or even to their withdrawal from the Russian market. The relevant transactions are reviewed by a subcommittee of the Government Commission on Monitoring Foreign Investment in the Russian Federation, and they involve a significant discount to the market value and a tax paid to the budget. In some cases, a change of ownership is required to maintain the business continuity of socially important enterprises. However, such transactions can carry risks. Firstly, the large volume of foreign currency purchases, needed for transaction settlements, in the context of Russia's shrinking current account surplus of the balance of payments may adversely impact the FX market, so buyers are advised to evenly distribute the purchases of foreign currency over time. Secondly, the future prospects of companies tend to be increasingly uncertain: for example, when the company being sold by a non-resident is heavily dependent on funding, supplies of raw materials and components, equipment and technologies provided by the parent company. Thirdly, such transactions can increase the debt burden of the buyer and the acquired company, while the transactions are often funded by Russian banks loans.

Assessment of the resilience of Russian non-financial companies

At the end of 2022, most of the large Russian export-oriented companies had an acceptable level of the debt burden, demonstrating resilience to the changing market environment. The Russian oil and gas industry reported revenue growth amid high commodity prices. The metallurgy and mining companies showed some decline, which had no significant effect on their debt burden. However, at the end of Q1 2023, revenues of many export-oriented companies declined as the restrictions implemented by the Western countries in 2022 came into force.

Businesses are increasing funding by raising loans from Russian banks and issuing bonds. This funding partly offsets the reduction in external debt, however the credit crunch has generally been avoided. In the future, the loan demand will be driven, among other things, by the need to finance economic transformation projects.

In 2022, the adverse impact of sanctions on a number of industries required banks to restructure a significant amount of loans. Many banks have built up a large amount of loan loss provisions in advance. Certain loans are being restructured for the second time, but the rise in defaults is not observed. In general, the quality of corporate loan portfolios has remained stable.

3. Vulnerabilities of the Russian financial sector

Vulnerability 1. Further restriction of access to payment infrastructure in 'toxic' currencies

The situation with settlements and correspondent banking in 'toxic' currencies continues to deteriorate amid the expansion of sanctions and intensifying pressure on subsidiaries of foreign banks, operating in Russia. In this context, an increase in export and import transactions in the currencies of friendly countries and a similar transformation of the Russian FX market are being observed. The domestic FX market may suffer periodic imbalances, since the transition to the currencies of friendly countries is uneven (periodic mismatches of exports and imports volumes in Chinese yuan (CNY, yuan) occur; in certain periods deposits in 'toxic' currencies extensively convert into the yuan deposits, while the transformation of loan currency structure is lagging behind), and the Russian market does not fully interact with the global market. For example, December saw a temporary shortage of yuan liquidity, while late March–early April saw a shortage of euro liquidity, which was reflected in the increased cost of raising the respective currencies in swap transactions. At the same time, open position on FX swaps in the 'toxic' currency has significantly reduced (amid the exit of non-residents), and the yuan positions have gradually stepped up. To support FX liquidity, the Bank of Russia has launched yuan FX swaps (previously, such transactions were carried out in US dollars).

Vulnerability 2. Offshorisation of the citizens' savings

Until 2022, the outflow of private investors' funds into foreign (primarily US) equities was marked as a vulnerability of the Russian market. This was carried out via Russian stock exchanges where these securities were traded. Due to sanctions imposed against the Russian financial infrastructure, some of these investments have been frozen, and private investors have lost interest in such instruments. In addition, to protect investors from sanctions risks, the Bank of Russia has limited purchases of securities of issuers from unfriendly countries[1] for unqualified investors.

At the same time, the volume of citizens' transfers to their accounts with foreign banks and brokers increased significantly in 2022. These funds are largely used to finance overseas trip expenses and to purchase foreign goods and services, but the remainder reflect an offshoring trend for the citizens' savings. This carries risks for citizens, the banking sector (by reducing their liabilities), and the economy in general (due to higher borrowing costs). In theory, portfolio diversification (including across countries and industries) means higher returns on investments, but in case of unfriendly countries, its benefits may be offset by uncontrolled sanctions risks. A number of foreign financial institutions have already imposed restrictions on Russian customers, and these practices may expand in the future, including in relation to securities transactions.

Russian investors are still interested in cryptoassets, although there are no signs of a significant inflow of new users to the market. Due to the exit of foreign payment systems from the Russian market, P2P transactions and cash have dominated the channels of acquiring cryptoassets.

In general, the vulnerability associated with the offshorisation of savings is still limited (an increase by 4.1 pp to 19.2% from 1 January 2022 to 1 April 2023[2]), and citizens continue to invest mainly in RUB deposits (42.2% of household savings). Since the beginning of 2022, private investments in Russian equities grew by RUB 1.2 trillion[3], primarily in the OTC market. Maintaining public confidence in the stock market remains to be one of the key challenges, which depends on the prospects of Russian companies, their financial disclosures, and the stability of the regulatory and tax regime.

Vulnerability 3. Rising household debt

Q4 2022 saw increased banks' risk appetite in unsecured consumer lending. Before the introduction of macroprudential limits (MPLs), banks significantly loosened their lending standards: the share of loans with debt service-to-income ratio (DSTI) of 80% or more reached a record high of 36%. The introduction of MPLs from 1 January 2023 has resulted in banks tightening their lending standards and thus the structure of consumer lending has improved: in Q1 2023, the share of loans with DSTI of 80%+ dropped to 29%, and the share of loans with an over 5-year term was 7% (excluding loans with credit limit). Most consumer lending banks managed to reshape their lending processes and came in line with macroprudential limits in Q1 2023, including due to the reduction of the loan amount offered to borrowers. Macroprudential limits affect credit cards segment with a lag, as they do not limit disbursements on previously issued cards, but restrict the issuance of new cards and the limits increase for borrowers with excessively high debt burden.

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[1] Directive of the Government of the Russian Federation No. 430-r, dated 5 March 2022 (as amended on 29 October 2022), 'On Approving the List of Foreign Countries and Territories Committing Unfriendly Acts against the Russian Federation, Russian Legal Entities and Individuals'.

[2] This indicator is calculated as the ratio of accumulated volumes of fund transfers by individuals to foreign banks and brokers, foreign currency cash and foreign securities to the volume of deposits and brokers' funds, cash, investments in securities, funds in individual life insurance and endowment life insurance.

[3] To assess inflows from retail investors, this figure is cleared of changes related to corporate actions, changes in the ownership of large blocks of securities, etc.

In Q1 2023, the portfolio of unsecured consumer loans increased by 2.5%. Accelerated growth in consumer lending in March (+1.4% MoM) is associated with both seasonal fluctuations and increased demand for loans amid rising household incomes. The impact of macroprudential limits on lending was smoothed out by structural factors, in particular the redistribution of market shares among banks. In Q1 2023, the largest banks with a historically high share of loans to borrowers with excessively high debt burden saw their consumer loan portfolios reduced by 1%, while other banks' portfolios grew by more than 3%.

Since banks have successfully adapted to the new instrument and unsecured consumer lending continue to grow sustainably, the Bank of Russia has decided to reduce limits further in Q3. The share of loans with DSTI of 80%+ should not exceed 20% of all issued loans in Q3 (30% for MFO), whereas the share of loans with an over 5-year term should not exceed 5%. This decision will limit the debt burden of citizens and improve lending structure.

The quality of the unsecured consumer loan portfolio remains stable. The share of NPL90+ loans did not change over the quarter, and as of 1 April 2023, it amounted to 8.7%. The vast majority of restructured loans continue to be timely serviced by borrowers.

Vulnerability 4. Imbalances in the residential real estate market and risks of project financing

In 2022, a drop in the effective demand for housing led to an aggravation of previously accumulated problems in the residential real estate. Housing prices in the primary market grew due to the spread of risky mortgage lending practices implemented by banks along with developers. As a result, in Q1 2023, the price gap between the primary and secondary housing markets widened to 40%. In such environment, banks faced higher risks both in project financing of housing construction and in mortgage lending.

The growth in mortgage lending was accompanied by a noticeable decline in the quality of new loans. The share of DSTI 80%+ borrowers was higher than in consumer lending, reaching 40% in Q1 2023. The share of low-down payment mortgages (up to 20%) has exceeded half of all mortgage loans for the first time: in Q1 2023, it amounted to 51% versus 38% a year before. The widespread use of developers' preferential mortgage programmes has inflated the collateral value of housing, so that for low-down-payment mortgages the real loan-to-value ratio may exceed 100%. To limit the spread of high-risk trends in mortgage lending, the Bank of Russia has introduced increased provisioning for loans issued after 15 March 2023 at an effective interest rate significantly below the market and on 1 May 2023 established macroprudential add-ons for the low-down-payment mortgage. Announced measures before coming into force led to the reduction of the usage of schemes that inflate the housing prices by banks. However, in the end of 2022 banks' websites announced offers to reduce mortgage rate by means of one-off payments and not by means of higher housing prices. Such practices also bear risks for borrowers.

Amid declining sales in the primary housing market, banks increased lending to developers. At the same time, as of 1 April 2023, the loan coverage ratio for funds on escrow accounts dropped to 81% (the amount of outstanding loans not covered by escrow almost reached RUB 1 trillion). Given the extensive amount of new projects in the market, this level of coverage is acceptable, but the growth of housing construction lending increases the exposure of banks to correction in real estate prices.

Vulnerability 5. Interest rate risks of banks amid growing public debt

The recovery of the net interest margin supports the banking sector's resilience in case of materialisation of interest rate risk. However, the exposure of banks to interest rate risk exceeds the pre-crisis level: the share of short-term liabilities[4] remains higher than in early 2022. In the context of temporary regulatory easing of liquidity ratios, banks primarily try to increase lending rather than

[4] Cash in accounts and in deposits for up to 1 year.

restore the liquidity buffer. During the reporting period, banks showed low demand for investments in fixed-coupon government bonds, which helped maintain long-term yields high. The latest episode of the US crisis proves that banks need to improve the balance of maturity of assets and liabilities, and use up-to-date approaches to calculating interest rate risk and liquidity risk. The Bank of Russia plans to evaluate the practice of managing interest rate risk in large banks, and will also develop new approaches to managing liquidity risk.

4. Assessment of the financial sector resilience

Banking sector

The financial position of credit institutions is improving. The capital reserve remains at RUB 6 trillion excluding the effect of temporary support measures[5]. The current regulatory easing provides partial support to financial results, although a large part of the regulatory requirements has already gone back to pre-crisis standards in early 2023. In 2023 the capital reserve has also been supported by the refusal to pay dividends by many banks (in 2022 only RUB 139 billion was allocated for this purpose, almost five times lower than in 2021).

Non-bank financial institutions

The accumulated financial cushion, coupled with the measures taken by the Bank of Russia, allowed NBFIs to withstand the impact of the materialisation of geopolitical risks, general stagnation, and a number of major insurance events in the commercial real estate insurance segment. At the end of the year, all segments of NBFIs (except for leasing companies) mainly reported profits, and Q1 2023 saw a recovery growth in their key performance indicators. At the same time, we note that losses from the asset freeze have not yet been fully reflected in the balance sheets of NBFIs and will be written off over several years. Aircraft leasing companies have turned out to be in the most affected segment.

[5] Capital reserve – overall potential to absorb losses without breaching capital adequacy ratios. The assessment is based on Reporting forms 0409135, 0409123 and banks surveys as of 1 March 2023.

KEY INDICATORS OF FINANCIAL STABILITY

KEY INDICATORS OF FINANCIAL STABILITY *Table 1*

	Description	1 Feb 2022	1 Oct 2022	1 Apr 2023
Household savings in foreign currency denominated instruments (%)*	Ratio of accumulated volumes of fund transfers by individuals to non-resident banks and brokers, foreign currency cash and foreign securities to the total of deposits and funds with brokers, cash, investments in securities, funds in investment life insurance (ILI) and universal life insurance (ULI).	15.9	14.7	19.2
Correspondent relationship index	Indicative assessment of the number of unique correspondent relationships** with non-residents adjusted for the number of participants in the correspondent banking network (Russian banks and non-resident banks)			
Index 1 (unfriendly countries, 'toxic' currencies)	Index 1 is calculated from the geometric mean of three values: 1) the number of unique correspondent relationships in 'toxic' currencies in unfriendly countries, 2) the number of unique Russian banks with correspondent relationships in 'toxic' currencies in unfriendly countries, and 3) the number of unique counterparties (non-resident banks) from unfriendly countries. Index value as of 1 January 2022 is 1.	0.99	0.74	0.64
Index 2 (friendly countries, 'non-toxic' currencies)	Index 2 is calculated from the geometric mean of three values: 1) the number of unique correspondent relationships in 'non-toxic' currencies in friendly countries, 2) the number of unique Russian banks with correspondent relationships in 'non-toxic' currencies in friendly countries and 3) the number of unique counterparties (non-resident banks) from friendly countries. Index value as of 1 January 2022 is 1.	1.00	1.24	1.64
The interest rate risk ratio on a one-year horizon to 12-month net interest income (NII) (%)***	Ratio of the baseline estimate of the ruble interest rate risk over a one-year horizon (in a hypothetical scenario of an adverse change in rates by 200 bps) to NII of the banking sector over 12 months	2.7	4.4	3.5
Share of unsold housing in units under construction (multi-apartment buildings (MAB) (%)****	Calculated as the ratio of unsold volume of housing under construction to the total volume of housing under construction in the Russian Federation.	61.4	65.0	70.6
Share of unsecured consumer loans issued to individuals with DSTI 80+ (%)*****	Ratio of unsecured consumer loans issued to individuals with DSTI 80%+ to the total amount of unsecured consumer loans	34.3	32.5	28.9
Share of mortgage loans issued to individuals with DSTI 80+ (%)*****	Ratio of mortgage loans issued to individuals with DSTI 80%+ to the total amount of retail mortgage loans	33.2	31.9	40.1
Share of loans under Equity Participation Agreements (EPAs) with LTV 80+ (%)*****	Ratio of mortgage loans granted to individuals secured by EPAs with LTV 80%+ to the total of granted mortgages secured by EPAs	43.6	67.9	66.0

** Sources: Reporting forms 0409711, 0420415 and 0409405, savings rate of the Households sector.*
*** Unique correspondent relationships are traced by an identifier: registration number of the Russian CO, country code of the non-resident counterparty, SWIFT code (in its absence – the name) of the non-resident bank. Unique non-resident correspondents are traced by an identifier: non-resident counterparty country code, SWIFT code (in its absence – the name) of the non-resident bank. Sources: Interbank claims data (nostro accounts) according to Reporting forms 0409501, 0409603.*
**** The ratio of interest rate risk on a one-year horizon to 12-month NII is shown in the table as of 1 January 2022, 1 January 2023 and 1 April 2023. Sources: Reporting forms 0409127, 0409102.*
***** Source: EISGS (Unified Information System for Housing Construction).*
****** For the three months preceding the reporting date. Source: Reporting form 0409704.*

1. GLOBAL RISKS

The US banking sector went through a period of instability in the spring of 2023 for the first time since the global financial crisis of 2007–2009, the European market experienced escalating challenges as well. A surge in market volatility due to financial problems at some banks showed that financial institutions have accumulated hidden risks over the years of ultra-low interest rates. However, inflation risks remain elevated and the need to raise rates further to curb inflation could cause a number of adverse effects. The materialisation of interest rate risk on a larger scale, problems at non-bank financial institutions and increased credit risks due to the high debt burden of a wide range of borrowers cannot be ruled out. Persistently high inflation over a long period, coupled with stress in the financial sector, can cause stagflation in the global economy for a period of time.

The weakening of Russia's economic and financial sector ties with the West, amid sanctions and currency control regulatory response measures, has helped Russia reduce exposure to global risks. Nevertheless, a reduction in demand and/or prices for Russian exports remains to be a sensitive channel for transmission of global shocks in case of a global recession. The economic and financial resilience of friendly countries with which Russia has strengthened economic and financial ties has also become an increasingly significant factor in terms of contagion effects.

Global economic growth is slowing, recession risks are rising. According to the International Monetary Fund (IMF), world GDP growth has slowed to 3.4% in 2022 from 6.2% in 2021. A significant slowdown in growth has occurred in major economies, including the US, Europe and China, with secondary effects affecting many emerging market economies (EMEs) (Table 2). Economic growth slowed amid a record acceleration in inflation despite the tightening of monetary policy by many central banks, as well as due to geopolitical factors that aggravated pandemic-induced supply chain problems.

GDP GROWTH RATES, IMF FORECAST AS OF APRIL 2023 *Table 2*
(%)

	2021	2022	April 2023 forecast		Deviation from January 2023 forecast (pps)	
			2023	2024	2023	2024
World GDP growth rate	***6.2***	***3.4***	***2.8***	***3.0***	***–0.1***	***–0.1***
Advanced economies	***5.4***	***2.7***	***1.3***	***1.4***	***0.1***	***0.0***
United States	5.9	2.1	1.6	1.1	0.2	0.1
United Kingdom	7.6	4.0	–0.3	1.0	0.3	0.1
Euro area	5.3	3.5	0.8	1.4	0.1	–0.2
Germany	2.6	1.8	–0.1	1.1	–0.2	–0.3
France	6.8	2.6	0.7	1.3	0.0	–0.3
Italy	6.7	3.7	0.7	0.8	0.1	–0.1
Spain	5.5	5.5	1.5	2.0	0.4	–0.4
Japan	2.1	1.1	1.3	1.0	–0.5	0.1
EMEs and developing economies	***6.7***	***4.0***	***3.9***	***4.2***	***–0.1***	***0.0***
China	8.4	3.0	5.2	4.5	0.0	0.0
India	8.7	6.8	5.9	6.3	–0.2	–0.5
Russia	4.7	–2.1	0.7	1.3	0.4	–0.8
Brazil	5.0	2.9	0.9	1.5	–0.3	0.0
South Africa	4.9	2.0	0.1	1.8	–1.1	0.5
Mexico	4.7	3.1	1.8	1.6	0.1	0.0

Source: IMF.

In 2023, the IMF expects global economic growth to decline further to 2.8% with a slow recovery to 3% over five years, the lowest medium-term forecast in decades. Although there was a rising optimism at the beginning of the year as China lifted anti-covid restrictions and inflation slightly slowed in the major economies, expectations of a global recession have increased among market participants. This is due to continued inflationary pressure, with tighter financial conditions beginning to affect the resilience of financial systems in developed countries (some Western banks were seriously troubled). In April 2023, forward-looking indicators (PMI Markit) show that many euro area countries (including Germany), the UK, the US (ISM), and Australia face a more significant decline in business activity of the manufacturing sector. At the same time, the service sector retains a largely unchanged momentum for further growth.

The failure of a number of regional but large in terms of assets US banks (Silicon Valley Bank (SVB) and First Republic Bank (FRB)) caused turbulence in the markets (Tables 2 and 3), drawing attention to vulnerabilities in the global financial system that came as a surprise to regulators and investors. The US banks collapse was the result of a combination of factors. Over the past decade, financial market participants have become accustomed to very low rates and signals from leading central banks (Forward Guidance) that this level will hold for a long while. So, financial institutions ceased to pay due attention to hedging interest rate risks and accumulated significant amounts of long-term debt securities. Due to this, amid the US Fed rate hike, regional US banks generated hidden/unrealised losses on the balance sheets from the negative revaluation of these instruments, since, unlike major banks, regional banks did not recognise such losses in regulatory capital (according to the Federal Deposit Insurance Corporation (FDIC), more than USD 600 billion by the end of 2022). In this situation, SVB failed due to a liquidity crisis in March 2023, which resulted from a sharp deposit outflow and insufficient liquid assets due to a decline in their value. At the same time, the rate of outflows has increased significantly compared to previous episodes of depositor outflows, as online banking allows for large transfers in a short amount of time. This situation has called into question banking models based on attracting large amounts of funds on uninsured current deposits. Other US regional banks also faced deposit outflows amid negative information of financial distress. FRB was put into receivership by the FDIC in late April/early May, and later it merged with JPMorgan Chase & Co. Against this backdrop, shares in a number of regional US banks have fallen further, including Pacific Western, Bank Western Alliance, Valley National and others. The high exposure to concentration risk among customers exacerbated the situation (in the case of SVB, most of the deposits were held by start-ups, Silvergate and Signature Bank were crypto-focused, and FRB focused on mortgage financing). A lack of confidence in economy is an up-to-date issue, despite regulatory support measures[1].

In Europe fears grow about resilience of banks and possible risks of contagion effects. One of the world's biggest banks, Credit Suisse, has faced market mistrust and has been in trouble for the past two years, recording losses due to a string of failed projects. To prevent the global systemically important bank from a failure, the decision was made for Swiss bank UBS to take it over. The collapse of Credit Suisse led to plunging of other European banks stock prices, spreads on credit default swaps soared (in particular, Deutsche Bank). However, further concerns grew over the write-down of 17 billion Swiss francs of Credit Suisse subordinated debts. As a result, the entire USD 250 billion contingent convertible bond market has fallen under risk.

The recent stresses in the US and European banking sector slightly affected markets in EMEs. From 1 March to 17 March, the MSCI Emerging Markets Index fell by just 1.3%. The MSCI Intl Emerging market Currency Index did not show much change, growing over the same period by 0.6%. The less acute reaction of the EMEs compared to 2008 is due to the fact that the problems have so far only limitedly affected the large banks that are active in these countries. The process of

[1] The Federal Reserve (US Fed) has launched a new one-year asset-backed refinancing facility valued at par (Bank Term Funding Program, BTFP). The US Fed and other major central banks have decided to temporarily increase the regularity of swap lines to maintain dollar liquidity in global markets.

CHANGE IN STOCK PRICES
(%)

Table 3

		1–17 March 2023	26 April – 4 May 2023	1 March – 4 May 2023
USA	S&P 500 Index	–1.3	–0.3	2.3
	S&P 500 Regional Banks Index	–37.8	–13.5	–48.1
	Sillicon Valley Bank	–63.2	–28.4	–99.9
	Signature Bank	–39.2	–39.2	–99.9
	First Republic Bank	–81.3	–96.1	–99.7
	PacWest	–66.6	–69.3	–88.6
Europe	Euro Stoxx 600 Index	–5.4	–1.4	–0.2
	Euro Stoxx Banks Index	–18.0	–5.5	–16.2
	Credit Suisse	–34.5	–3.5	–73.0
	UBS	–16.4	–3.3	–12.9
	Deutsche Bank	–20.6	0.0	–17.5
	Societe Generale	–22.4	–2.7	–23.1
EMEs	MSCI Emerging Markets Index	–1.3	1.1	1.3

Sources: Finance.yahoo.com, MarketWatch.com, Cbonds.

CDS DYNAMICS
(BP)

Table 4

	Early March 2023	Peak in March 2023	3 May 2023
US CDS 1Y	75	83	152
Credit Suisse CDS 1Y	285	3,696	212
UBS Group CDS 1Y	36	120	69
Deutsche Bank CDS 1Y	47	225	175

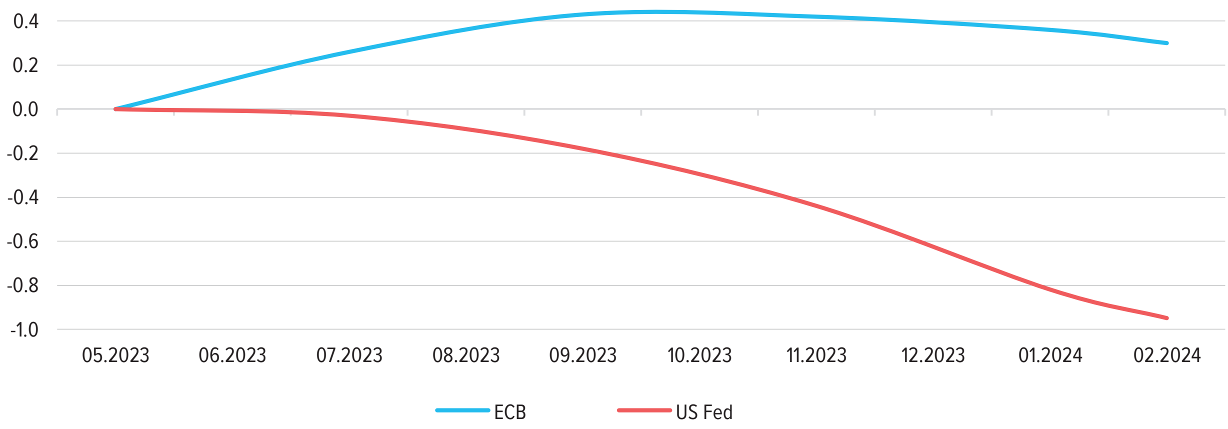
Source: Investing.com.

fragmentation observed since the 2008 crisis plays a role (e.g. global reforms have contributed to the segmentation of derivatives markets on a regional and country-by-country basis). In addition, the development and growth of domestic financial markets in the EMEs and the emergence of a domestic investor base have contributed to greater resilience in recent years. Nevertheless, the risks of greater volatility in EMEs remain, both because of global effects (tightening financial conditions, economic downturn) and if internal risks materialise due to accumulated imbalances (see Box 2). Many low-income countries dependent on external financing and imported goods are already experiencing higher debt risks amid rising interest rates. According to the IMF, 60% of such countries are at high risk of debt distress or already in debt distress. For Russia, the resilience of EMEs and developing economies is gaining importance, given its increasing economic and financial ties with these countries. At the same time, considerable uncertainty in the interaction is associated with the continued risk of secondary sanctions.

Growing risks to financial stability and heightened expectations of a global recession, usually paired with reduction in demand, have negatively affected the oil market. The Brent crude oil price fell by 15.9% to USD 72.6 per barrel between 6 and 17 March, but then rebounded fully thanks to an OPEC+ decision in early April 2023 to cut oil production by 1.66 million barrels per day in addition to current commitments. In the second half of April and the beginning of May oil prices started falling again, the Brent price fell by 17.5% between 13 April and 3 May to USD 71.9 per barrel.

MARKET EXPECTATIONS FOR THE US FED AND ECB RATES
(PP)

Chart 1



Source: The Financial Times.

Besides, volatility in the crypto market has increased. As a result of the SVB collapse, there was a temporary fall in the price of USD Coin (the USDC issuer had its cash deposited at SVB). By contrast, Bitcoin and other unsecured cryptocurrencies have risen substantially, diverging from the trend of recent years in which cryptocurrencies have become increasingly correlated with stock indices (see Box 1). Section 3.2 hereof looks at the issue of investment of Russians in cryptocurrencies.

In the context of stress, the financial stability goals have come into conflict with those of the monetary policy. The dilemma for regulators is that, on the one hand, further rate increases are required to rein in inflation in the US and Europe, but on the other hand, higher rates lead to higher interest rate risk as well as a whole range of other risks to financial stability. Inflation in the leading countries has now moved downwards, which may also be due to the impact of the materialisation of financial stability risks on the macro indicators (decline in lending). Market participants have adjusted market yield estimates in this situation, indicating expectations towards less restrictive policies by the leading central banks. By the end of 2023, the markets expect the Fed rate to decrease by 75 bps from its current peak (5–5.25%) (Chart 1), whereas before the March episode a rate hike to 5.5–5.75% was predicted. Nevertheless, the slowdown in inflation has not yet stabilised, so it cannot be ruled out that the leading central banks will have to tighten monetary policy. Overall, uncertainty about future policy and yield volatility is growing.

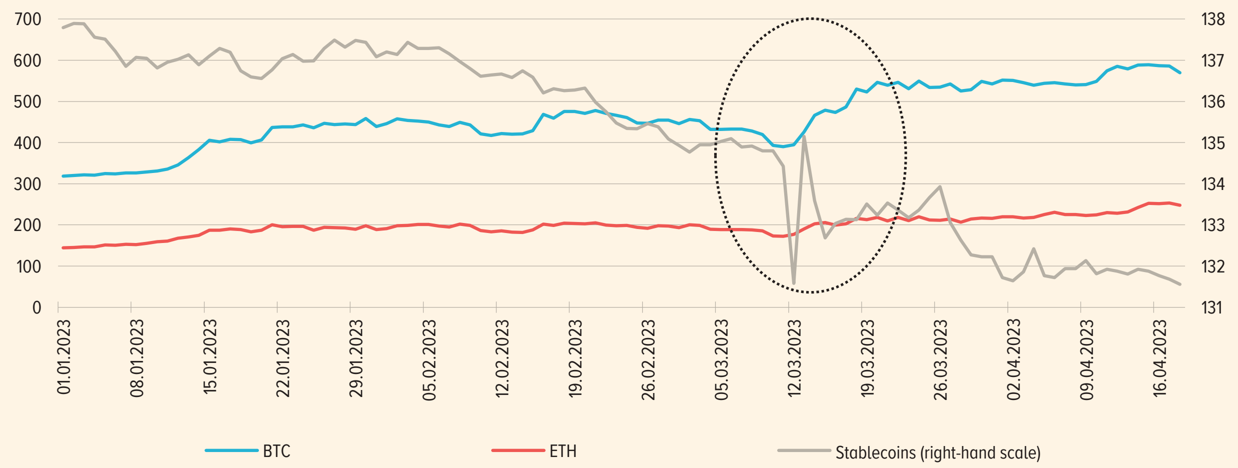
Box 1. Cryptomarket during stress and the trend for tighter regulation

Amid the US banking system stress in March 2023, the stablecoin market and the unbacked cryptocurrency market showed divergent dynamics. Following the collapse of Silicon Valley Bank (SVB), which held part of the reserves of the second largest stablecoin USDC, investors started massively withdrawing funds from the asset, with redemptions totalling USD 3 billion by 16 March. As a result, the USDC lost its US dollar peg and its value fell to USD 0.88. Following this, investors started moving out of other top stablecoins by capitalisation, including DAI, USDD, USDP, causing their price to downturn. A similar situation occurred with money market funds during the 2007–2009 financial crisis and in March 2020.

At the same time, the market for unbacked cryptoassets, primarily Bitcoin and Ethereum, showed a recovery (Chart 2). Amid stress in the US banking sector, some investors began to view Bitcoin as a defensive asset, causing the traditionally high correlation between Bitcoin value and the US stock index to drop significantly for about a month (until the stock market began to recover on expectations of a softer Fed rate hike in March).

Against the backdrop of a series of shocks to the crypto market in 2022–2023 (TerraUSD and Luna crash, FTX bankruptcy), there is a global trend towards regulation tightening. In the US, a draft bill to regulate

DYNAMICS OF SELECTED CRYPTOCURRENCIES CAPITALISATION *Chart 2*
(USD BILLION)



Sources: Coingecko, DeFiLlama.

the operation of the stablecoin market has been released. Credit institutions participating in the deposit insurance system and other institutions are planned to be able to conduct activities related to stablecoin issuance. These organisations will be required to obtain regulatory approval for the issuance of stablecoins and will be subject to rigorous regulatory scrutiny. According to the draft law, regulators are expected to develop requirements for issuers of stablecoin, including capital, liquidity, risk management and customer protection. A two-year moratorium on new issuance of algorithmic stablecoins will be imposed. During this time, the US Treasury is obliged to conduct a study of them and report back to the US Congress.

Additionally, there is a growing focus in the US on the regulation of decentralised finance (DeFi), including decentralised crypto-exchanges, whose share of crypto-asset trading increased to 13.95% in March 2023. The US Securities Commission continues to push for a redefinition of an 'exchange' to include decentralised crypto exchanges in the regulatory perimeter, re-launching in April 2023 discussions on an initiative proposed by the regulator back in January 2022. In April 2023, the US Treasury conducted an ML/TF risk assessment of the DeFi market and recommended closer AML/CFT supervision of DeFi.

US regulators have also brought charges against a number of crypto-asset market participants, including Binance: the US Securities and Exchange Commission has charged the exchange with violating securities rules; the US Commodity Futures Trading Commission has sued Binance and its founder Changpeng Zhao for non-compliance with derivatives trading rules and other violations. In February 2023, Paxos, which issues Binance Stablecoin (BUSD) and holds reserves, was forced to halt minting new BUSD tokens at the request of the New York State Department of Financial Services.

On 20 April, the European Union approved the Markets in Crypto Act (MiCA): in addition to disclosure, authorisation and transaction oversight requirements for crypto platforms and crypto traders, it introduces mandatory licensing requirements for issuers of stablecoins, sufficient reserves to cover mass redemptions, equity (at least 350,000 euros or 2% of average reserves for stablecoins). The new legislation also introduced a limit on the volume of daily transactions (200 million euro).

The global financial system is relatively stable at the moment, but there is no certainty that a new crisis will not arise in the global market:

- ***Interest rate risk can be materialised on a larger scale, not only for banks but also for non-bank financial institutions.*** However, non-bank financial institutions, unlike banks, are less regulated and do not always have access to liquidity support mechanisms from regulators. Massive sales of assets create the potential for contagion of insurance companies, pension funds and investment funds that have invested in relevant financial instruments. The US banks stress episode showed that stockholders and bondholders remain at risk (in the US it was decided to keep all depositors' funds of failed banks, including those uninsured, but bond and equity holders faced write-downs).

- ***Real estate markets may experience negative effects.*** The year-over-year growth in residential and commercial property prices began to slow in 2022 in a number of advanced economies (including the US, the UK and Australia). This is due to rising mortgage rates and a decrease in housing affordability. At the same time, the cost of financing for companies building new homes is rising against a backdrop of higher interest rates.
  - √ In this environment, firstly, there are growing concerns about the sustainability of commercial real estate markets. In the US, banks with less than USD 250 billion in assets account for around three-quarters of bank lending to commercial real estate sector, so a deterioration in asset quality would have serious implications for their profitability. In addition, non-bank financial institutions play an important role in the real estate investment trusts (REITs) and commercial mortgage-backed securities (CMBS) markets, so stress in the commercial real estate market may have wider implications for both financial stability and economic growth.
  - √ Secondly, the risks to the mortgage markets are rising. And while regulators have taken measures to improve the resilience of the mortgage sector since the 2007–2008 crisis (vast liquidation of bad mortgages, stricter requirements for borrowers), the growing share of non-performing loans in floating-rate mortgages as rates rise further could have negative implications for banks.
- **Credit risk increases because of growth of debt burden among a wide range of borrowers.** The debt ratio in both private and public sectors remain high, despite slowdown in 2021–2022. According to data from the Bank for International Settlements (BIS) for the G20 countries as of 1 October 2022, non-financial corporate debt stood at 93.3% of GDP, household debt at 59.7% of GDP, and public debt at 86% of GDP. Significant debts were accumulated during a period of low interest rates and will now be serviced at higher rates as a result of refinancing or automatic increases on floating rate loans. In such an environment, the systemic risk may be triggered in countries with an inherently high debt ratio (in the corporate sector above all). In addition, rising lending rates will inevitably lead to an accumulation of credit risk at financial institutions – increasing arrears, write-offs and portfolio provisioning. There has been some recent growth in CDS, including on US and European sovereign debt, but so far their levels do not pose much concern.
- **Countries with high public debt will face higher fiscal risks.** Budgetary pressures increased even during the pandemic, when considerable public support was required. Further rise in the cost of government borrowing involves limitation in ability to cover budget expenditure. As a result, the resilience to crisis of many countries may be reduced as there would be no fiscal space to support the economy if a negative scenario were to materialise.

Thus, the global economy is currently clouded by elevated uncertainty. If inflation remains elevated for a long time, this, coupled with the financial sector stress, could lead the global economy into stagflation. At the same time, the ongoing geo-economic fragmentation may pose additional challenges, as it reduces cross-border capital and labour flows, erodes prosperity and raises prices for a wide range of goods, which may increase financial stability risks.

Box 2. Assessment of macroeconomic resilience of selected countries – trading partners of Russia

EMEs remain fairly resilient to global risks, including rising inflation in major economies and periodic spikes in volatility in global financial markets. However, the contagion effects could be more significant if the global economic outlook deteriorates further (global recession or stagflation). Moreover, these countries have inherent vulnerabilities that can be exacerbated by domestic factors.

In **Turkey**, the main vulnerabilities relate to worsening structural economic problems amid the need to deal with the aftermath of a major earthquake, high inflation and widening current account deficits. GDP growth went down to 3.5% YoY in Q4 2022 (from 3.9% YoY in Q3 2022 and 7.7% YoY in Q2 2022). Dealing with the destruction caused by the earthquakes in Turkey will require substantial funding, increasing the risks of widening the budget deficit. Economists believe that public spending on reconstruction and aid efforts could raise the budget deficit-to-GDP ratio to 5% in 2023 (from 1% of GDP in 2022). Meanwhile, inflation in Turkey remains very high (50.5% YoY in March 2023). Inflationary pressures are intensifying against the background of the continuing weakening of the Turkish lira, which is being driven by the ongoing cycle of rate cuts by the central bank (in February 2023 by 50 bps, to 8.50%). Furthermore, the current account deficit continues to widen, with the current level of the current account deficit at USD 55.4 billion (over the last 12 months as of 1 March 2023), equivalent to 6.1% of GDP (relative to GDP for 2022). A larger current account deficit would increase the need for external financing at a time of further tightening of global financial conditions. The presidential and parliamentary elections coming in May 2023 pose additional factor of uncertainty.

China's economy has started to recover following the lifting of anti-covid restrictions at the beginning of 2023, but the data are not yet clear-cut. The real sector statistics point to a rebound in exports in March 2023, since the figure increased by 14.8% YoY after a 6.8% YoY decline in January-February 2023; but imports fell by 1.4% YoY after a 10.2% YoY decline in January-February 2023. The PMI Markit for March 2023 unexpectedly fell to 50 points in manufacturing (from 51.6 points in February), while business activity in the service sector continued to grow, rising to 57.8 points (from 55 points in February). Retail sales growth has resumed (3.5% YoY in January-February 2023), but industrial production growth is slower than expected (2.4% YoY in January-February 2023). Housing sales rose for the first time in 20 months, indicating a recovery in demand (the value of new home sales by the top 100 developers rose by 14.9% YoY in February). However, the debt burden on property developers remains high. Chinese developers face increasing pressure to repay debt: bonds totalling CNY 958 billion (USD 141 billion) are due to be repaid by the end of 2023. Of this amount, CNY 40 billion of domestic debt and CNY 70 billion of external debt are issued by developers, which are currently considered risky. In 2022, developers defaulted on CNY 149.6 billlion onshore bonds and USD 30 billion offshore bonds.

The macroeconomic situation in **India** is characterised by the most favourable trends compared to other EMEs. In February 2023 the growth rate of industrial production rose to 5.6% YoY (from 5.2% YoY in January 2023 and 4.3% YoY in December 2022). Inflation risks are becoming less pronounced: in March 2023, inflation dropped to 5.66% YoY (from 6.44% YoY in February and 6.52% YoY in January 2023). There is a structural improvement with the current account deficit going down to 2.2% of GDP in Q4 2022 from 4.4% of GDP in Q3 2022. Fiscal discipline continues to improve, with the Government projecting a reduction in the fiscal deficit to 5.9% of GDP in the next fiscal year from the current fiscal year's target of 6.4% of GDP (in fiscal year 2020/2021 the figure was 9.5% of GDP, in fiscal year 2021/2022 it was 6.9% of GDP).

Kazakhstan's recorded 3.2% GDP growth in 2022. The IMF expects the economy to grow to 4.3% in 2023 and to 4.9% in 2024. Growth will come primarily from hydrocarbons, as Kazakhstan's economy depends heavily on revenues associated with the oil and gas sector (over a third of GDP). However, the situation is complicated by persistently high inflation: consumer price growth reached a record high of 21.3% YoY in February 2022 and fell to 18.1% YoY in March. This triggered the central bank to raise the base rate by 7.75 pp to 16.75%, compared to June 2021.

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

2.1. Vulnerability 1. Exposure of business to sanctions of unfriendly countries

The Russian corporate sector continues to face ongoing sanctions pressure. Restrictions affect Russian companies both through lower revenues from sales (EU oil embargo, restrictions on imports of metallurgical products from Russia) and through higher operating and capital expenditures due to the need to replace foreign equipment, higher transportation costs and increased costs associated with entering new markets.

Increase in Urals oil price discount to Brent, with a negative effect on oil companies' revenues and profits

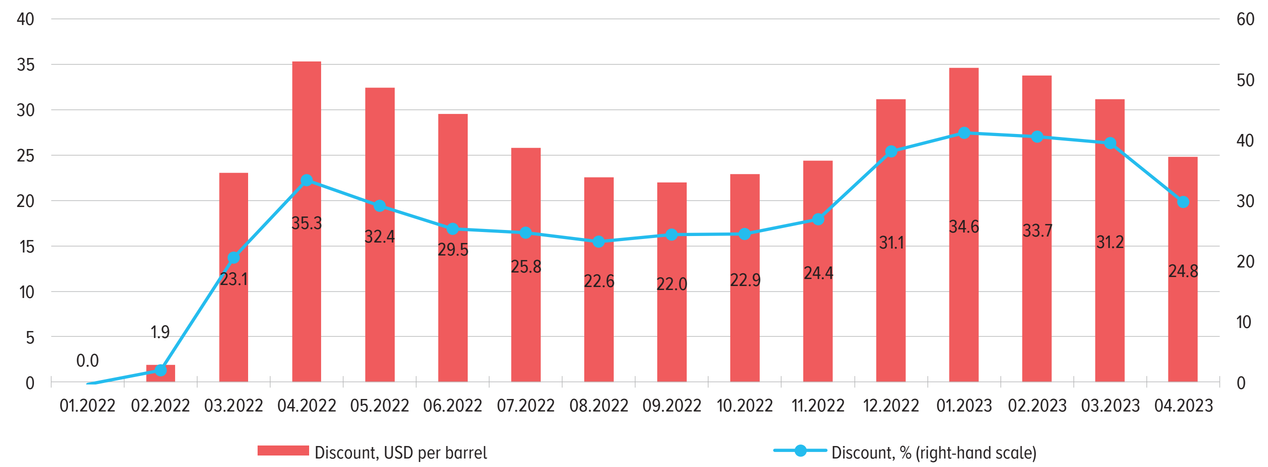
The direct and indirect sanctions pressure on the Russian oil sector has provoked significant changes not only in the geography of supply, but also in the selling price of Russian oil. According to the Ministry of Finance of Russia, since March 2022, the price of Urals crude has been traded at a substantial discount to Brent at around USD 28 per barrel on average over the past 12 months (Chart 3).

Lower selling prices for Russian oil (in Q1 2023, the discount was about 40%) formed in the context of logistical, trade-financial restrictions for Russian oil companies, create risks of lower revenues and have a negative impact on their general profit margins.

At the same time, starting from Q2 2023, the stabilisation of trade flows led to a reduction in the Urals discount to Brent. The Ministry of Finance of Russia has also set a maximum discount for tax purposes[1], to encourage oil companies to sell at higher prices, which will have an impact on the discount amount in the long run.

URALS DISCOUNT TO BRENT

Chart 3



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

[1] To stabilise tax revenues to the federal budget from the mineral extraction tax (MET) and excess-profits tax (EPT), a maximum Urals discount to Brent for tax calculation is set at USD 34 per barrel from 1 April 2023, further falling to USD 25 in July 2023. If the actual discount is lower than the set level, taxes are calculated on the basis of the actual price level.

Product transportation costs hike due to the extension of the logistics routes, caused by reorientation of exports to the East

On the back of unprecedented sanctions pressure, Russian companies have recorded a significant increase in the costs of transporting products. The extension of the logistics routes caused by the rearrangement of exports from the European Union markets, with which trade has become significantly complicated by sanctions, to the predominantly Asian markets is one of the key factors behind the growing transportation costs.

Rising transportation costs due to increased logistics routes in 2022 have had a significant impact on the profitability of companies in the metallurgy and mining sector. In particular, analysts estimate that the tariff distance would increase from 1,600 km to 7,900 km if ferrous metals exports are completely reoriented to the east, which corresponds to an 18% tariff increase. With the new rail tariffs and longer transport distances, the share of steelmakers' transportation costs in the final product cost has risen by around 30 pp to 40% in 2022[2].

High transportation costs, the saturation of the Chinese market with domestic steel products and relatively low prices in China are impelling Russian steel companies to look for other markets. At the beginning of 2023, for example, Russian steelmakers actively supplied Turkey and the domestic market as well. If the current conditions persist, this trend is highly likely to continue, which will partly hinder further acceleration in steel companies' logistics costs.

Agroindustrial enterprises also faced rising transportation costs. Market participants note that by late March 2023, compared to last year, transportation costs have increased both for domestic shipments (road transportation costs have gone up on average by 50%, rail transport costs have doubled) and for export shipments. In particular, the cost of transporting agricultural goods from the South of Russia and Volga Region to the Novorossiysk port, Russia's leader in grain exports, rose by an average of 37% YoY. Due to the record harvest, there has been an increased grain surplus. The current situation puts an additional strain on the logistics structure.

Russian logistics providers have also noted the transportation costs on the most popular routes to go up. Thus, in March 2023, the cost of shipping a twentyfoot equivalent unit (TEU) along the Trans-Caspian route of the International North-South Transport Corridor (INSTC) from Iran and India to Russia roughly doubled YoY to USD 7,000.

The exit of major logistics companies from the Russian market, the refusal of foreign insurance companies from unfriendly countries to insure Russian vessels, the shortage of shipping containers, and the lack of capacity of some southern and far-eastern ports to meet the surging demand lead to a significant increase in freight rates for maritime transport: e.g., freight charges for metallurgy rose 2–2.5 times in 2022[3].

As companies adapt to significantly changed economic conditions, exporters' transportation costs are expected to show less volatility and stabilise, including as a result of the replacement of departing foreign companies by Russian ones.

Capital expenditures rise as companies switch from European equipment suppliers to domestic and Asian ones

According to Rosstat, Russian companies' capital investment growth in 2022 was 4.6% YoY in comparable prices and 20% YoY in actual prices[4]. At the same time, at actual prices, investments increased significantly for companies both in mining (+23% YoY) and manufacturing sector (+9% YoY)[5].

[2] According to the Russian Steel Association.

[3] According to the Russian Steel Association.

[4] Taking into account the recalculations for investments not observed by direct statistical methods.

[5] Among manufacturing companies, the growth in investments in 2022 at actual prices was recorded in chemicals (+33% YoY), metallurgy (+26%) and other transportation vehicles (+18% YoY), which includes the production of vessels, aircraft, rail wagons and locomotives. The manufacture of motor vehicles, trailers and semi-trailers expectedly recorded a slump (-48% YoY), which was due to the serious impact of the sanctions imposed.

One of the key drivers of growth in capital expenditures is the change in companies' technological processes amid a lack of access to previously used foreign equipment. The survey of Russian companies of the real sector by the Bank of Russia[6] shows that 54% of exporters face difficulties importing foreign raw materials, materials and components, while 39% – importing the necessary equipment. Companies in the pharmaceutical, chemical, rubber and plastics sectors are experiencing particular difficulties with imports. Most Russian companies replace hard-to-find imported equipment with either other foreign (about 50–60% of respondents) or Russian equivalents (about 30–40% of respondents), assuming the additional cost of changing production processes. At the same time, companies may face component shortages when switching to domestic and Asian suppliers.

Increased construction and renovation of infrastructure, particularly in regions that have become top export priorities (e.g. development of new gas production centres and construction of the Power of Siberia gas trunkline) will further contribute to capital expenditure growth in the coming years.

Increased costs of finding new markets, payment arrangements, etc.

Due to changes in the geography of exports against the backdrop of sanctions, Russian companies incur unplanned costs associated with entering new markets. Such costs include, among others, marketing and advertising costs, costs of finding new suppliers and partners, setting up new supply chains.

Sanctions on the Russian financial sector, for example on the largest banks (including the disconnection of some credit institutions from the international interbank financial messaging system SWIFT) will create additional obstacles to the normalisation of Russian exports and, consequently, lead to additional cost increases for companies.

The current state of the sectors of the Russian economy most affected by sanctions

Aviation sector. Sanctions on Russian airlines imposed by unfriendly countries continue to have a significant negative impact on the industry. At the end of 2022, Russian airlines' passenger traffic was 95.1 million, down 14.3% from 2021. The closure of airspace by a number of unfriendly countries, as well as the temporary closure of 11 airports in southern Russia, impacted the decline in passenger traffic.

In 2022, the aviation industry received a record RUB 172 billion of subsidies from the federal budget[7]. Of these, RUB 100 billion was allocated to subsidising domestic traffic (distributed among 32 airlines based on passenger turnover); RUB 27 billion – to subsidy regional air transportation programs in place; RUB 19.5 billion – for ticket refunds for cancelled external flights; RUB 15 billion – to support the State Air Traffic Management Corporation (the sole provider of air navigation services in Russia); RUB 7.5 billion – to closed airports, and another RUB 2.9 billion was distributed among cargo airlines. Taken together, this has helped to curb the rise in airfares and support domestic demand.

According to the comprehensive programme for developing the Russia's air transport sector to 2030, the forecast for domestic traffic in 2023 is 81.9 million people[8] (domestic traffic in 2022 was 77.7 million people). However, the volume of traffic in 2023 will directly depend on the amount of government subsidies, as at the moment demand in the market is very inelastic and falls sharply when prices rise. If subsidies are reduced compared to last year, the Ministry of Transport estimates that the cost of transportation could increase by 15–30%. In Q1 2023, Rosaviatsiya allocated RUB 25.3 billion to air carriers for domestic flights from November 2022 to March 2023 at

[6] According to the Bank of Russia's survey of companies in the non-financial sector (monitoring of businesses) conducted as part of preparing the analytical note «Import restrictions constrain exports: results of a survey of businesses» (January 2023). As part of the survey, companies could choose multiple answers to each question.

[7] According to the Federal Agency for Air Transport (Rosaviatsiya).

[8] Rosaviatsiya has adjusted the figure by 10% from the original forecast (91.1 mln people) as airports in the South of Russia were expected to close.

the rate of RUB 1.11 pkm[9]. A further subsidy programme has not yet been approved. Additionally, in 2023, Russian air carriers can receive more than RUB 100 billion in compensation from the federal budget (in excess of subsidies) under the aviation kerosene damping mechanism[10] and the reverse oil excise tax[11] for 2022.

Automotive manufacturers. The Russia's automotive industry continues to stagnate in early 2023 amid restrictions on the supply of cars, parts and components, as well as the shutdown of car factories owned by companies from unfriendly countries. According to Autostat, new car sales fell by 35% YoY in Q1 2023. At the same time, all Chinese manufacturers showed an increase in sales: their market share rose to 35% compared with 9% in Q1 2022. In the near term, the Russian market is expected to see a further growth in the share of Chinese manufacturers and a decline in sales of European, Japanese and Korean brands. The recovery in demand will largely be driven by a stabilisation of the price level due to the increase in the output of Russian-made vehicles and supply of Chinese make.

Commercial real estate. The exit of foreign companies from the Russian market had a significant adverse impact on the commercial real estate market, especially on the retail and office real estate in Moscow. Regional markets have probed more resilient due to the low penetration of global companies. According to real estate analytical agencies[12], the vacancy rate in Moscow shopping centres in 2022 reached a historical high of 12–16% since 2010. And although new brands from friendly countries are entering the market, the replacement process will take 1.5–3 years.

The office property segment was also negatively affected by the reduction in demand. At the end of 2022, the vacancy rate in Class A and Class B business centres increased to 11–13% and 7–8%, respectively, the highest since 2018–2019[13]. Space in quality business centres in key business districts, which have traditionally been occupied by foreign companies, has been released more actively. By the end of 2022, office space commissioned in Moscow amounted to 340,800 sqm, down 42% YoY. Many developers have decided to suspend projects in 2022 until market conditions improve.

Growing tax burden (including a one-off windfall tax on the big Russian business, increased burden on liquefied natural gas (LNG) producers)

Due to the widening budget deficit, the Russian Government has decided to raise taxes on the major exporters. New amendments to the Tax Code adopted at the end of 2022 imply a significant increase in the tax burden on companies in 2023–2025.

The largest increase is expected for companies in the natural gas production and processing industry. The amendments increase the Mineral Extraction Tax (MET) rate for all natural gas producers and raise the corporate income tax rate for LNG producers from 20% to 34%. In addition, the MET increased by RUB 50 billion monthly for owners of the facilities of the Unified Gas Supply System[14].

The amendments to the Tax Code also provide for an increase in the tax burden on companies in the oil sector through adjustments to the calculation of MET on oil and adjustments to payments under the damping mechanism. Additionally, the MET rate for all types of coal, except for lignite was temporarily increased in Q1 2023[15].

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[9] Pkm means a passenger-kilometre.

[10] The mechanism compensates carriers for 65% of the difference between the export price of kerosene and its fixed wholesale price in Russia (about RUB 55,900/ton in 2022).

[11] Amounts to RUB 2,800/t.

[12] According to CORE.XP (formerly CBRE) and NF Group (formerly Knight Frank).

[13] According to CORE.XP (formerly CBRE) and NF Group (formerly Knight Frank).

[14] The Unified Gas Supply System in Russia is mainly owned by Gazprom.

[15] The Ministry of Finance of Russia is considering an increase of the MET for coal companies in Q4 2023 in case of strong financial results in Q1.

Thus, according to the Ministry of Finance of Russia, the total of additional budget revenues from higher taxes on the Russian corporate sector is estimated to be about RUB 3.6 trillion, of which about RUB 2.3 trillion from the natural gas production and processing industry, and RUB 1.3 trillion from the oil industry[16]. Additional budget revenues from the MET increase on coal in Q1 2023 will amount to about RUB 30 billion.

At the same time, it is planned to introduce an additional one-off payment to the budget from companies with a net pre-tax profit for 2021–2022 above RUB 1 billion, except for companies in the oil and gas, coal sectors and small and medium-sized enterprises (SMEs). This payment will be processed through tax instruments. The amendments are expected to come into force on 1 January 2024. Currently, the tax rate is proposed to be set at 10% of the excess profits for 2021–2022 over the same indicator for 2019–2018, however, taxpayers will be able to apply a tax deduction for early payment, reducing the rate to 5%.

2.2. Vulnerability 2. Exit of foreign companies from Russian assets

Foreign owned companies are subject to political pressure in their home countries, which in some cases has led them to suspend their operations and investments in Russia, and sometimes withdraw from the Russian market. The economic impact of foreign investors selling their Russian subsidiaries is small: between March 2022 and March 2023, there were approximately 200 such transactions, with only 20% of them involving the sale of large assets (over USD 100 million) by non-residents. Among the deals approved since October 2022, only five involved actual payments to non-residents of more than USD 400 million.

These transactions are reviewed by the Subcommittee of the Government Commission on Monitoring Foreign Investment in the Russian Federation with the participation of the Bank of Russia. Attention is given to the financing of deals involving the withdrawal of foreign investors from Russian assets in the context of a possible increase in corporate sector debt and risks for banks, as well as to the impact of these deals on the volatility of the domestic foreign exchange market.

In addition to the sanctions officially imposed on the Russian economy, companies and individuals, unfriendly countries also apply informal constraints (the so-called 'covert sanctions'). Foreign owned companies are subject to political pressure to restrict their investments and operations in Russia and, in some cases, to exit from the Russian market. Under this pressure, a number of overseas companies, many of which have invested in and developed the Russian business segment over many years, are selling Russian assets at significant discounts and on unfavourable terms.

Russian consumers have experienced the impact of the exit of major Western players from the catering, retail sectors of clothing, furniture and household goods. This, in turn, has had an adverse impact on the commercial real estate market. The Russian market has been heavily influenced by the exit of several global automotive companies. A number of significant transactions took place in the engineering and chemical industries.

Such transactions are associated with higher risks due to the changes in cooperation chains that previously involved counterparties from unfriendly countries, which increases costs and reduces the business profitability. In some cases, a change of ownership leads to a complete restructuring of the business model of the acquired company. In addition, such transactions involve the debt burden rise in the corporate sector, as many transactions are financed by loans from Russian banks, and intra-group financing is replaced by more expensive financial resources from other sources. All of this can pose additional risks for banks. Moreover, these risks can accumulate and become more pronounced later on. In addition, payments to non-residents made in the currencies of unfriendly countries may

[16] As part of the oil and gas tax reforms, companies in the sector have applied to the Russian Ministry of Finance for an extension of the excess-profits tax (EPT) regime, however, this issue can only be considered after 2023 Q1 is summarised. EPT is intended to replace the export duty and partly the MET and is levied on proceeds from oil sales less the extraction and transportation costs.

cause bursts of volatility in the Russian currency market. This factor has not yet been that urgent: among the deals approved since October 2022, only five transactions involved actual payments to non-residents above USD 400 million. However, amid falling current account surplus of the balance of payments of the Russian Federation in 2023, these transactions may have a more significant impact on the foreign exchange market. So the Subcommittee will limit the monthly volume of non-residents' withdrawals from the Russian market.

At the moment, the share of foreign companies that have sold their Russian assets in relation to all overseas companies operating in Russia is small. About 200 such deals were completed in total from March 2022 to March 2023, with only 20% among them involving sales of major foreign owned assets (over USD 100 million). At the national scale, the impact of sales of Russian assets by global investors on the Russian market is limited for a number of reasons.

Firstly, the majority of these deals typically implies as a rule keeping or required licences to production, patents and trademark rights, and companies continue to be supplied with raw materials, supplies and components, technical and material assistance. Furthermore, many foreign companies, when exiting from Russian assets, reserve the opportunity to return for them. Such transactions comprise agreements (options) granting the right to buy assets back within a certain period. The business continues smooth functioning.

Secondly, a noticeable proportion of the Russian companies being acquired are characterised by a business model that is marginally dependent on foreign raw materials, equipment and components: commercial real estate assets, for example.

Nevertheless, in some cases, the risks associated with the exit of foreign investors from Russian assets remain and are linked to assets that are most dependent on foreign supplies. To mitigate such risks, the relevant transactions are scrutinised by the Subcommittee. Various aspects of future business operations are being considered for the sake of these risks reduction. Priority is given to purchasers with relevant industry experience, as well as those with businesses in related industries, to achieve synergies and enhance the operational and financial sustainability of the business being acquired.

The Subcommittee also pays much attention to the new owner's plans for further business development, including plans to restructure the technology, production and logistics chains that may be affected by the exit of a foreign investor. This is done by setting key performance indicators for the new owners of the acquired asset and monitoring their achievement by the relevant federal executive authorities.

As part of its participation in the Subcommittee, the Bank of Russia focuses on the financing of transactions, including controlling the increase in the corporate debt burden and the corresponding risks of banks. The Bank of Russia also strives to control the risks associated with possible volatility spikes in the Russian currency market resulting from such transactions, so buyers are advised to distribute their currency purchases evenly across the domestic currency market.

2.3. Resilience assessment of Russian non-financial companies

By the end of 2022, most Russian export-oriented companies had an acceptable debt burden ratio. Russia's oil and gas sector posted earnings growth on the back of high commodity prices in 2022. In contrast, the metallurgy and mining companies declined, which, however, had no significant effect on their debt burden. At the same time, revenues of a number of Russian companies, including major commodity exporters, declined at the end of Q1 2023 amid the continued sanctions pressure and the entry into force of previously imposed restrictions.

The corporate sector[17] is financed primarily through ruble-denominated loans and corporate bonds issues. While the demand for ruble-denominated loans and bond placements has so far been largely driven by substitution of foreign currency loans, in the future it will be supported by

[17] Non-financial companies (including SMEs) and individual entrepreneurs.

the need to finance transformation projects and investment programmes of companies. Yuan-denominated lending is growing, but the shortage of long-term financing limits the banks' ability to meet demand for long-term yuan loans.

The share of non-performing loans was reduced by the expansion of lending[18], while the quality of loans restructured from 1 March 2022 deteriorated, some of them becoming longer in arrears and repeatedly restructured.

Financial position of the top Russian export-oriented companies

The profitability of most Russian oil and gas companies improved in 2022 compared to the previous year. This is mainly due to a favourable price environment for their products. Russian companies managed to adapt quickly to the changing market conditions and divert some trade flows from the European market , which, combined with high prices, helped them boost their profits.

In contrast, profit margin of companies in the metallurgy and mining industry dropped due to lower steel prices and the impact of sanctions imposed on Russian steel companies.

In 2022, the debt burden of oil and gas companies did not undergo any significant YoY change due to high profit margins. At the same time, metallurgy and mining companies in 2022 saw a slight increase in the debt burden, which, nevertheless, remained acceptable.

The accumulated financial strength of companies in the export-oriented sectors of the Russian economy allowed for partial offsetting of the adverse effects of the tightening of sanctions. By the end of 2022, Russian exporters had fairly low debt burden and profits allowed them to meet their current obligations on time.

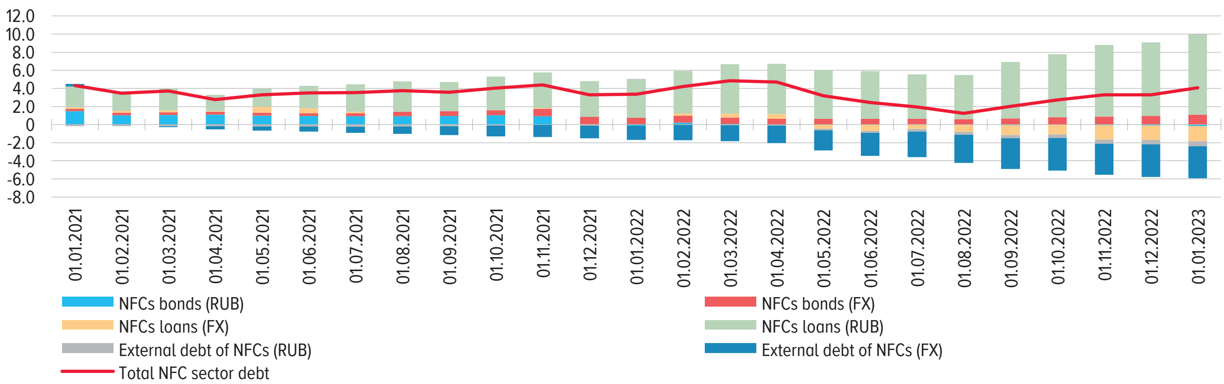
In Q1 2023, as the EU oil embargo took effect, amid the continued sanctions pressure expressed in financial and logistical restrictions, a number of Russian companies supplying foreign markets (predominantly in the oil and gas sector) began to face a decline in the volume of revenue received. The recovery of Russian exporters' profitability in the future will depend on the efficiency of trade diversion, optimisation of operating costs and stabilisation of price conditions on global markets.

Dynamics of the total debt of corporate borrowers

The imposition of unprecedented sanctions on the Russian economy has had a significant impact on the Russian non-financial sector and the type of financing involved. The corporate lending segment was actively transformed: foreign banks withdrew from syndicated loans, financing was raised to buy shares of foreign companies in Russian business, and borrowers restructured loans previously extended in unfriendly foreign currencies.

CONTRIBUTION OF SELECTED FACTORS TO THE ANNUAL DYNAMICS OF DEBT OBLIGATIONS OF NON-FINANCIAL COMPANIES (NFCS) *Chart 4*

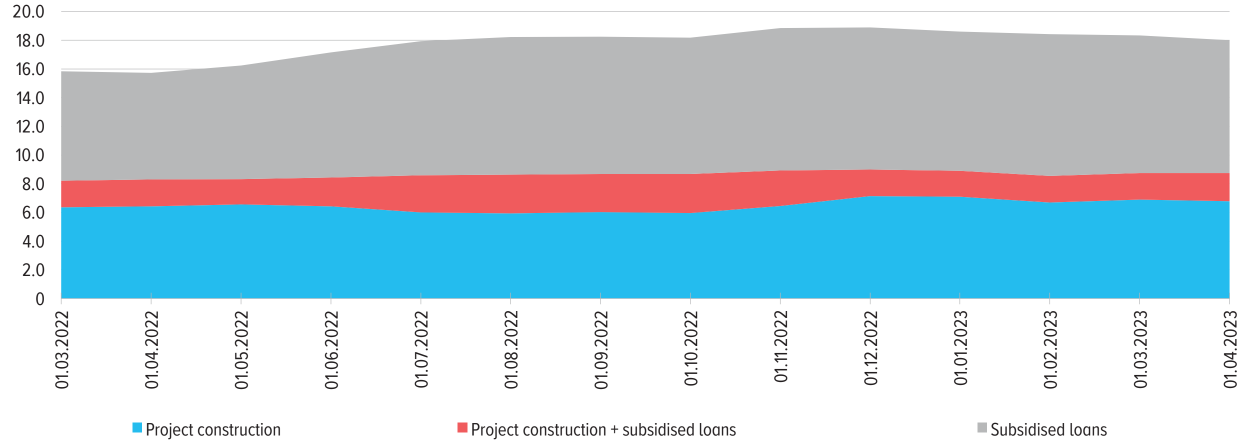
(RUB TRILLION, EXCLUDING FOREIGN CURRENCY REVALUATION)



Sources: loans and acquired rights of claim – Reporting form 0409101; Bonds – the Bank of Russia data (debt securities issued on the domestic market at par value); External debt – the Bank of Russia statistics (extended indicator of non-financial sector and household debt).

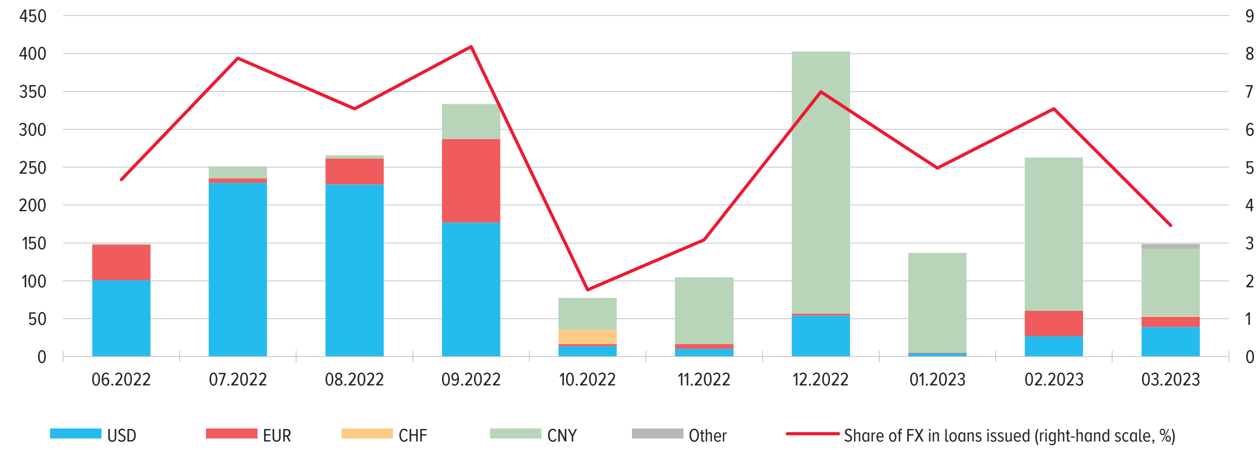
[18] As part of first-time loans and the use of credit limits on previously approved credit lines.

SHARE OF LOANS OF NON-FINANCIAL COMPANIES RECEIVING GOVERNMENT SUPPORT AND FOR CONSTRUCTION PURPOSES IN THE TOTAL DEBT ON CORPORATE LOANS, EXCLUDING FOREIGN CURRENCY REVALUATION (AS OF 1 APRIL 2023) *Chart 5*
(%)



Source: Reporting form 0409303.

FX-DENOMINATED LOANS TO NON-FINANCIAL COMPANIES WITH A MATURITY OF OVER ONE MONTH *Chart 6*
(RUB BILLION, WITHOUT EXCLUDING FOREIGN CURRENCY REVALUATION)



Source: Reporting form 0409303.

Debts of non-financial companies, both on loans and bonds, have been increasing since July 2022, primarily through ruble lending (as of 1 April 2023, the ruble portfolio in annual terms has grown by more than 28%) covering the contraction of the FX loan portfolio and external debt, as well as through the issuanse of corporate bonds (YoY increase in nominal value amounts to about 5%).

When back in March 2022 the European depositories (Clearstream, Euroclear) shut down settlement of National Settlement Depository, and Russian companies could no longer service Eurobonds, there turned up a need for a new instrument – substitute bonds. As of the end of Q1 2023 (over eight months), there were 32 substitute bond issues by 7 company groups. The total volume of outstanding substitute bonds as of 1 April 2023 amounted to USD 13.3 billion[19]. According to the Bank of Russia estimates, this reduced the external debt of the non-financial sector generated through intra-group financing by at least USD 9 billion[20].

[19] Par value of securities is provided according to the data from Cbonds.ru, part of them were issued by financial institutions within the group and are accounted for statistical purposes by the Bank of Russia as part of debt securities of financial companies.

[20] As to the external sector statistics, borrowings of the non-financial sector formed in the result of SPV Eurobonds issues are referred to as the external debt.

Currently, issuing of substitute bonds depends not only on the volume and maturity of already issued Eurobonds, but also on the need to switch to the Russian infrastructure due to the entry into force of the Russian presidential decree[21] urging all issuers to settle defaulted Eurobonds by issuing the substitute local bonds before the end of 2023.

As of 1 April 2023, the liabilities of non-financial companies (NFCs)[22] included ruble-denominated loans issued by Russian banks totaling RUB 45.0 trillion, and FX loans worth USD 119.4 billion; debt securities issued in the amount of RUB 9.4 trillion; liabilities to non-residents (external debt) amounting to RUB 13.7 trillion as of 1 January 2023[23].

Until 1 October 2022, lending was stimulated by state incentive programmes and financing of construction projects, some of which were also provided by banks under concessional programmes[24], grew rapidly. Up to a third of the increase[25] in the loan portfolio was due to these factors. But from the third quarter on, the share of such loans in total lending stopped growing and remained at 18% across the sector, with an uneven distribution among banks. The anti-crisis programmes have thus played their part in supporting companies in the real sector during a particularly acute period of crisis.

To support economic transformation and long-term lending, the Bank of Russia plans to introduce risk-sensitive incentive regulation[26], but within the set limits to withstand the possible risks of banks.

Since September 2022, the Chinese yuan has begun to displace other foreign currencies in the structure of loans provided, but the pace of yuan lending has not yet changed the trend to dedollarization – the total share of foreign currency loans in originations in Q1 2023 was around 5%. At the same time, the ability to meet the demand of non-financial companies for friendly currency, especially in long-term loans, largely depends on the availability of the required volume of the relevant currency for banks.

Resilience assessment of the corporate sector as a whole and the impact on the quality of bank loans

In 2022, banks built up an increased level of provisions for corporate loan losses in advance, despite no increase in borrower defaults. Default situation was favorable largely due to the restructuring of problem loans.

The share of 'bad'[27] loans remains minor for both large companies (4.7%) and SMEs (7.3%). Quality improvements are technical in nature and come at the expense of new loans rather than improving the quality of previous granted ones. At the same time, the debt service problems occur with some borrowers, which were temporarily stemmed by restructuring. In particular, Q1 2023 saw growing arrears on loans to commodity and construction companies. As a rule, banks form provisions for these loans without using regulatory easing.

[21] Decree of the President of the Russian Federation No. 364, dated 22 May 2023, 'On Amending Decree of the President of the Russian Federation No. 430, dated 5 July 2022, 'On Repatriation of Foreign and Russian Currency by the Residents who Participate in International Economic Activity'.

[22] Bond issues: debt securities issued on the domestic market at par value (according to the Bank of Russia); loans to non-financial companies and individual entrepreneurs (taking into account the acquired rights of claim): Form 0409101; extended indicator of non-financial sector debt: Bank of Russia data.

[23] Data as of 1 April 2023 currently unavailable.

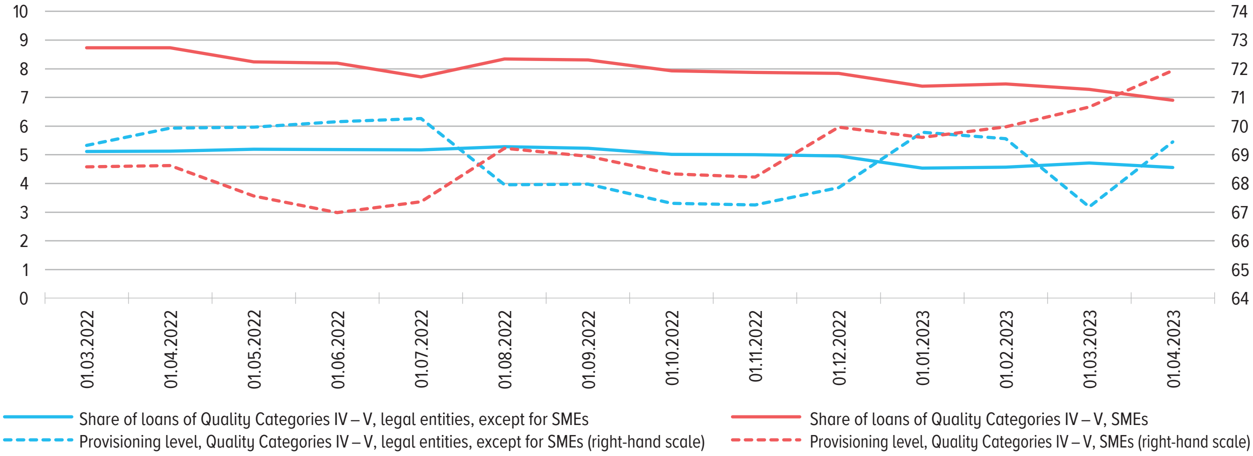
[24] According to Reporting form 0409303, they are defined as:
– loans indicating the allocation of borrowed funds for construction and development (codes «DP», «Zh», «E», «C» in Box 15 of Section 3);
– loans at preferential interest rates provided to borrowers as part of rate subsidisation under state incentive programmes (code «T» in Box 15 of Section 3).

[25] April 2023 to April 2022, excluding foreign currency revaluation as of 1 April 2023.

[26] See more details in 'Promising Areas for the Development of Banking Regulation and Supervision'.

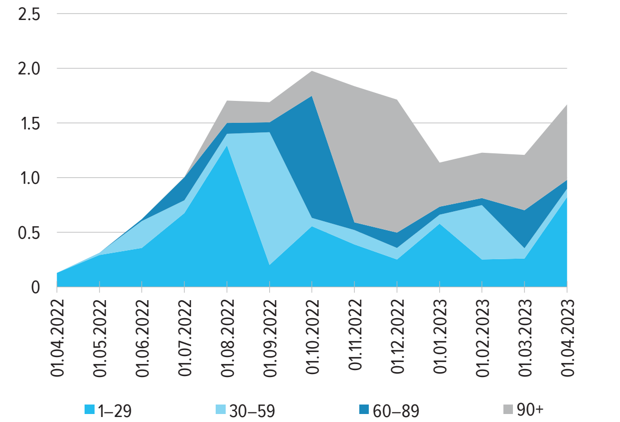
[27] Loans of Quality Categories IV – V in accordance with Bank of Russia Regulation No. 590-P, dated 28 June 2017, 'On the Procedure for Credit Institutions to Make Loss Provisions for Loans, Loan and Similar Debts' applicable to all banks, except for TRUST Bank.

SHARE OF LOANS OF QUALITY CATEGORIES IV–V AND SHARE OF PROVISIONING BY BANKS, EXCEPT FOR THE NON-CORE ASSET BANK *Chart 7*
(%)



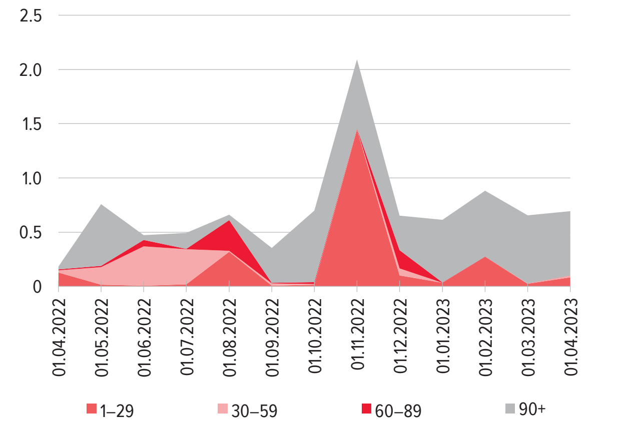
Source: Reporting form 0409115.

SHARE OF INITIALLY NON-OVERDUE LOANS RESTRUCTURED FROM 1 MARCH 2022 BY DAYS OVERDUE *Chart 8*
(%)



Source: Reporting form 0409303.

SHARE OF OVERDUE LOANS RESTRUCTURED FROM 1 MARCH 2022 (WITHOUT EXCLUSION OF FOREIGN CURRENCY REVALUATION) *Chart 9*
(%)



Source: Reporting form 0409303.

The share of loans restructured since 1 March 2022 has stopped growing – some of the old loans have amortised and the new restructurings have no longer grown at high pace (from November 2022 to March 2023 the share of restructured loans is about 25%).

However, every fifth loan restructured since March 2022 has been restructured repeatedly, and about 2% of the loans have been restructured 5 or more times. The quality category of such loans is usually downgraded by banks. In the first half of 2022 (excluding April) restructurings were mainly granted for loans with no or less than 60 days overdue, but from September banks started restructuring loans overdue for longer periods. As of 1 April 2023, 1.3% of restructured loans were overdue for more than 90 days, most of which had increased after earlier restructurings. The longer time elapses since the loan restructuring, the higher is the average level of loan-loss provisions.

3. VULNERABILITIES OF THE RUSSIAN FINANCIAL SECTOR

3.1. Vulnerability 1. Further restriction of access to payment infrastructure in 'toxic' currencies

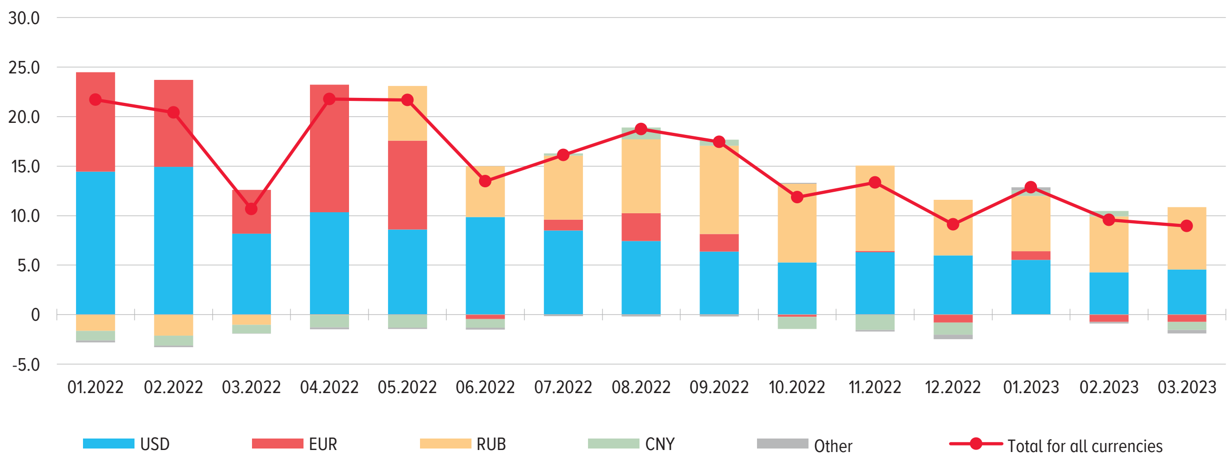
Sanctions pressure and the reorientation of the Russian economy towards counterparties from friendly countries have changed the Russian currency market and increased the importance of the currencies of friendly countries. Export and import transactions in currencies of friendly countries have increased significantly, but their growth is uneven, resulting in periodic imbalances in the foreign exchange market and a general deterioration of foreign exchange liquidity. Extension of timing and volume of deferred payments by exporting companies also fuel the imbalances in the foreign exchange market. Restriction of correspondent banking in the currencies of unfriendly countries hinders the elimination of emerging imbalances and intensifies the growing dependence on transactions through individual banks. The practice of hedging FX risks needs extension due to the accumulation of currency by market participants as a result of the overall positive balance of exports.

Unprecedented sanctions pressure from unfriendly countries in 2022–2023 transformed the structure of Russia's FX flows and reoriented them towards currencies of friendly countries (primarily, the yuan), while reducing the share of 'toxic' currencies.

The structure of foreign trade settlements, amid reorientation of export-import relations towards counterparties from friendly countries, has changed first. For example, from February 2022 to March 2023, monthly export revenues[1] denominated in Chinese yuan soared 53 times (to USD 7 billion), while those denominated in the US dollar and euro dropped by 58% and 75% (to USD 11 billion and USD 4 billion), respectively (Chart 10). Imports are also transitioning to settlements in friendly currencies (primarily the Chinese yuan, with the volume of settlements growing from USD 1 billion to USD 8 billion from February 2022 to March 2023). In February 2023, net exports settled in euro turned negative due to a strong decline in euro settlements for exports and a slower rejection of the euro in payments for imports. Due to the uneven pace of transition to new currencies for

NET EXPORTS BY CURRENCY
(USD BILLION)

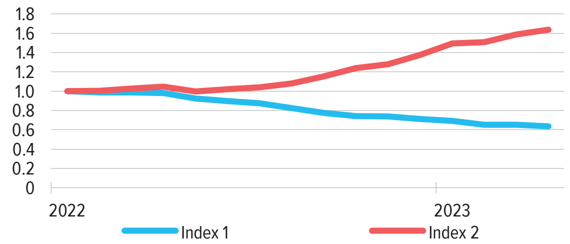
Chart 10



Source: Bank of Russia calculations.

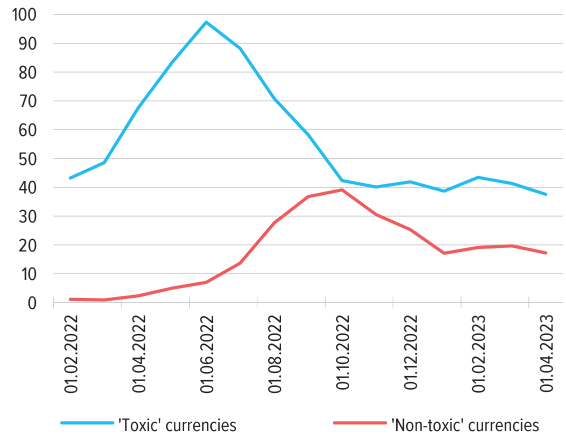
[1] The change in the currency structure of exports occurred amid the falling export value (from February 2022 to March 2023, exports fell by 24% to USD 38 billion due to drop in oil and gas prices).

CORRESPONDENT BANKING RELATIONSHIP INDICES (CORRESPONDENT ACCOUNTS AND DEPOSITS) THAT INDICATE THE NUMBER OF CORRESPONDENT BANKING RELATIONSHIPS IN FOREIGN CURRENCIES (1 JANUARY 2022 = 1). *Chart 11*



Sources: Reporting forms 0409501, 0409603. 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).

STRUCTURE OF RELATIONSHIPS (CORRESPONDENT ACCOUNTS AND DEPOSITS) OF CREDIT INSTITUTIONS WITH NON-RESIDENT BANKS (EQUIVALENT OF USD BILLION) *Chart 12*



Sources: Reporting forms 0409501, 0409603.

export and import settlements, temporary imbalances arise in the domestic FX market amid the weak interaction between the Russian and global markets. Thus, in late March–early April 2023, the currency swap market saw a shortage of euro liquidity (indicative swap transaction rates went negative).

Extension of the timing and volume of deferred payments by foreign counterparties, which leads exporting companies to a gap between the actual shipment of export goods and payment, also drives periodic imbalances in the foreign exchange market. Deferred payments limit the use of trade finance instruments and increase the necessity of companies to borrow from Russian banks.

This situation is aggravated by the constant deterioration of correspondent banking in the currencies of unfriendly countries. From the beginning of 2022 to March 2023, the number of correspondent banking relationships between Russian credit institutions and non-resident credit institutions in the unfriendly currencies[2] declined, which illustrates the change in the correspondent banking network index (Chart 11). Under such conditions, the structure of the banking sector relationship with non-resident banks has changed. On the one hand, the exposure of banks to sanctions risks has reduced (although the risk of new blocking remains) as the volume of funds deposited in friendly countries has increased, and the share of FX liquidity in the currencies of friendly countries has grown (Chart 12). On the other hand, the market increasingly depends on transactions through certain foreign banks, and Russian banks' access to the markets of 'toxic' currencies has become more complicated.

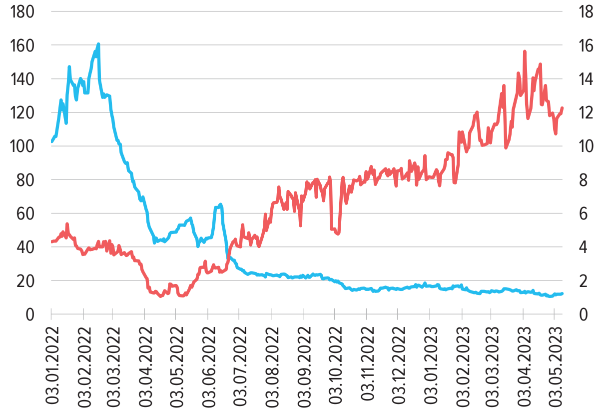
Hedging FX risks through derivatives

With the growing use of yuan in settlements for goods and its rising share in the spot FX market, participants increasingly need to hedge their positions through appropriate derivatives. For example, by early May 2023, the total volume of FX yuan swaps climbed to USD 12.3 billion and became commensurate to the volume of FX swaps in 'toxic' currencies (USD 12.3 billions) (Chart 13), which plummeted and did not recover due to the massive closure of deals with non-residents after February 2022.

In the FX forward market, the volume of transactions using 'toxic' currencies has also been declining since late February 2022 (as of mid-May 2023, it amounted to 29% of the value as of 1 January 2022). The demand for FX yuan forwards is growing, but the volume of transactions

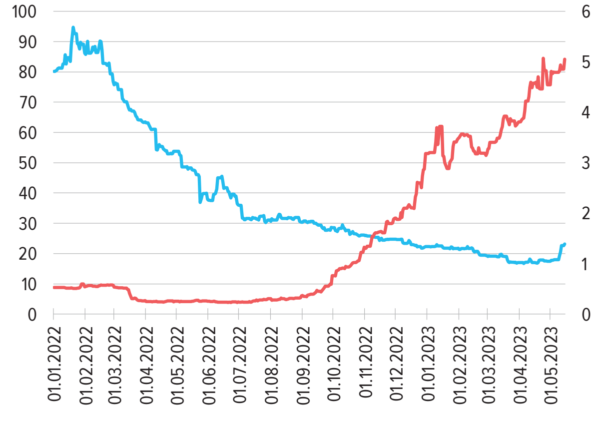
[2] Unfriendly countries are defined in Decree of the Russian Government No. 430R, dated 5 March 2022. Those not stated are considered friendly.

OPEN POSITIONS ON FX SWAPS *Chart 13*
(USD BILLION)



Source: PJSC Moscow Exchange.

OPEN POSITIONS ON FX FORWARDS *Chart 14*
(USD BILLION)



Source: PJSC Moscow Exchange.

remains insignificant (Chart 14). A meaningful development of the segment of interest-bearing and FX yuan derivatives is yet to be observed. Thus, yuan derivatives are growing much slower than yuan trading volumes on the spot market, which indicates an unrealised potential for the use of hedging instruments.

3.2. Vulnerability 2. Offshorisation of the citizens' savings

- **FX transfers to non-resident banks and non-resident brokers continued to grow in the reporting period[3], carrying risks of growing household savings in foreign instruments. From 1 January 2022 to 1 April 2023, household savings in foreign instruments[4] increased by 4.1 pp to 19.2%[5].**
- **Amid higher volatility, introduction of new sanctions, and the Bank of Russia's restrictions on the sale of foreign securities to unqualified investors, purchases of these instruments by retail investors via Russian stock exchanges dropped to their lowest levels.**
- **In 2022 and January–March 2023, retail investors still preferred ruble deposits (an increase of RUB 5.7 trillion), and also increased their purchases of Russian stocks (RUB 1.2 trillion). Maintaining the confidence of private investors in Russian stocks is becoming a key factor for the Russian equity market and long-term financing in a highly uncertain environment. In addition, disclosures of financial statements by issuers should be resumed (except for sensitive information) to improve confidence in the equity market and market development prospects.**
- **During the reporting period, there were no signs of a significant influx of new users into the cryptomarket; the activity of Russian cryptoinvestors in the market was in line with global trends. P2P trading and cash played a bigger role in cryptoassets purchases.**

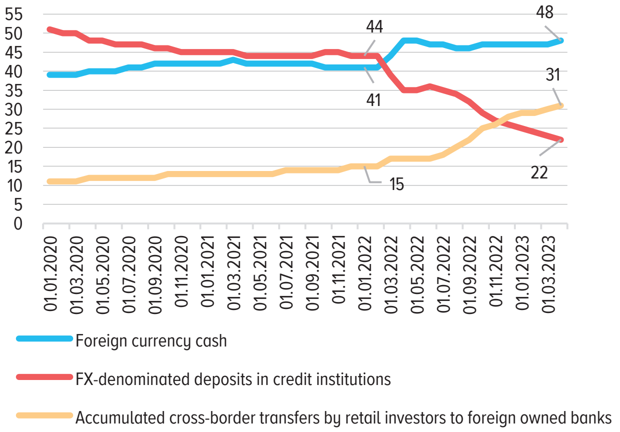
Q4 2022–Q1 2023 saw an ongoing trend towards a decrease in FX deposits of households in Russian banks and an increase in FX transfers to foreign banks. In general, in 2022 and Q1 2023, households reduced the volume of FX deposits in Russian banks by RUB 3.1 trillion (Chart 15), while

[3] Hereinafter: Q4 2022–Q1 2023.

[4] The indicator is calculated as the ratio of accumulated volumes of fund transfers by individuals to non-resident banks and brokers, foreign currency cash and foreign securities to the total of deposits and funds with brokers, cash, investments in securities, funds in ILI and ULI.

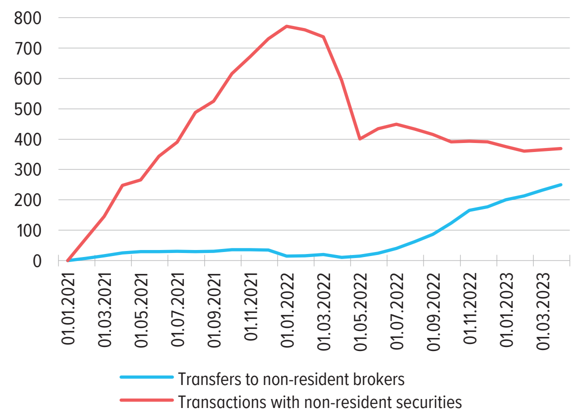
[5] The indicator is adjusted for the cost of goods purchased by individuals via payment from foreign accounts.

DYNAMICS OF THE SHARE OF FX-DENOMINATED MONETARY INSTRUMENTS HELD BY RETAIL INVESTORS *Chart 15*
(%)



Source: Savings rate of the Households sector.

VOLUMES OF INDIVIDUALS' TRANSFERS TO NON-RESIDENT BROKERS UNDER BROKERAGE SERVICE AGREEMENTS FOR 2019–2023, CUMULATIVE TOTAL *Chart 16*
(RUB BILLION)



Sources: Reporting forms 0409711, 0420415 and 0409405.

the volume of FX transfers to own accounts with non-resident banks for the period amounted to RUB 2.6 trillion[6], and the volume of FX cash on hand grew by RUB 1.9 trillion. Due to a significant growth in transfers of households to non-resident banks and foreign brokers, households savings in foreign instruments mounted by 4.1 pp to 19.2% from 1 January 2022 to 1 April 2023. The continued accumulation of funds outside Russia poses increasing risks associated with restrictions by unfriendly countries, as well as with the financial stability of foreign financial institutions.

The expansion of sanctions in early 2022 ended the trend for significant purchases of foreign stocks and bonds observed in 2020-2021. As a result, during the reporting period, retail investors bought foreign shares worth RUB 14 billion and sold foreign bonds worth RUB 36 billion[7]. The risks of further blocking of foreign securities purchased via the infrastructure of unfriendly countries remain high. To protect investors from sanctions risks, the Bank of Russia limited purchases of securities of issuers from unfriendly countries for unqualified investors.

Previously, retail investors bought foreign securities via the Russian infrastructure, but now they have increased transfers to non-resident brokers (Chart 16): in 2022, they grew 16 times YoY and amounted to RUB 228 billion, and in 2023, this trend continued (RUB 50 billion in Q1 2023).

To ensure a successful structural transformation of the Russian economy, it is vital to maintain the confidence in the equity market among a wide range of investors, including retail investors with small portfolios. In the long term, declining confidence of private investors in the Russian equity market may lead to an increase in household savings in foreign instruments and an outflow of funds from the Russian banking system, as well as reduce the ability of companies to raise long-term funding. One of the key factors for maintaining confidence in the equity market is the gradual disclosure of financial statements by Russian companies. Stockholders of companies and investors in debt instruments are currently limited in their ability to fully assess the risks of companies that have ceased to publish financial statements[8] and other disclosures.

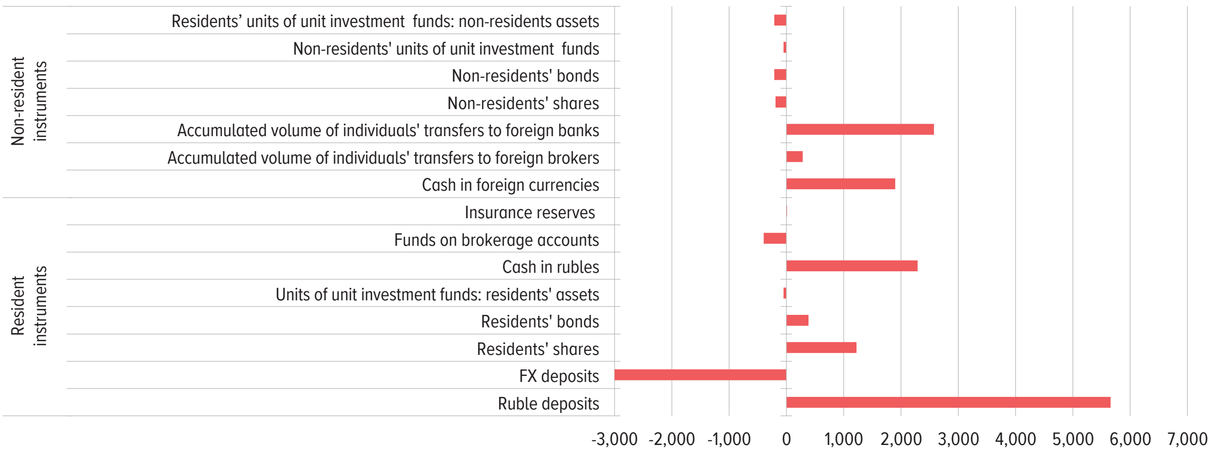
Retail investors still prefer to invest in ruble deposits: in 2022 and Q1 2023, their volume went up by RUB 5.7 trillion (Chart 17). During the reporting period, the share of yuan deposits and funds

[6] The amount of transactions of the savings rate of the Households sector in terms of FX deposits in non-resident banks. The funds transferred to foreign owned banks were partly spent on the current consumption of households in other countries.

[7] Via the Russian infrastructure.

[8] According to the Corporate Information Disclosure Center (CIDC), as a result of regulatory easing in 2022, the number of companies that provide access to financial statements dropped by 33%.

INFLOWS OF HOUSEHOLDS FUNDS BY INSTRUMENT FROM 1 JANUARY 2022 TO 1 APRIL 2023 *Chart 17*
(RUB BILLION)

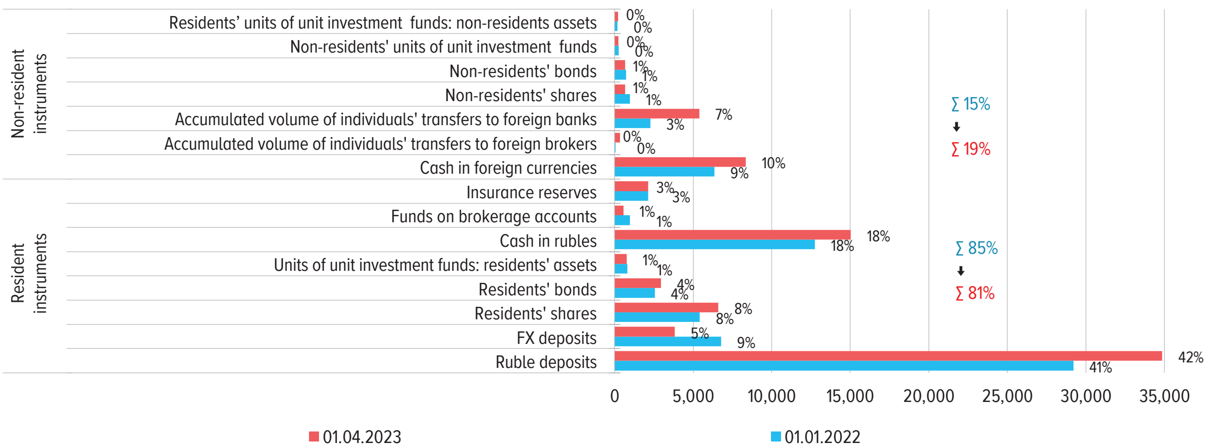


Sources: Reporting forms 0409711, 0420415, 0409405, savings rate of the Households sector.

in accounts increased by 1.2 pp to 10.2% of the total volume of FX deposits[9]. The share of ruble deposits in the total retail investments and funds in accounts grew by 1.3 pp to 42.2% in 2022 and Q1 2023 (Chart 18).

Russian stocks were the only type of securities that retail investors purchased during 2022–2023 (inflow of RUB 1.2 trillion[10]). An important difference from previous years is that after 2022, the main purchases were made not by mass (retail) investors in the organized market, but by owners of large blocks of shares on the over-the-counter market. The transactions were largely aimed at returning stocks to the Russian infrastructure and redomiciling property due to sanctions risks[11]. In the organized market, individuals have adopted a predominantly wait-and-see attitude and refrained from large purchases of stocks, despite a significant increase in the number of new customers since the early March 2022.

TOTAL INVESTMENTS OF INDIVIDUALS, BREAKDOWN BY INSTRUMENT *Chart 18*
(RUB BILLION)



Sources: Reporting forms 0409711, 0420415, 0409405, savings rate of the Households sector.

[9] Source: Reporting form 0409302.

[10] To assess inflows into securities from retail investors, this figure is adjusted for changes related to corporate actions, changes in the ownership of large blocks of securities, etc.

[11] The analysis of depository data showed that the growth in household deposits was accompanied by a simultaneous reduction of balances on depo accounts of non-residents.

Investments in cryptocurrencies

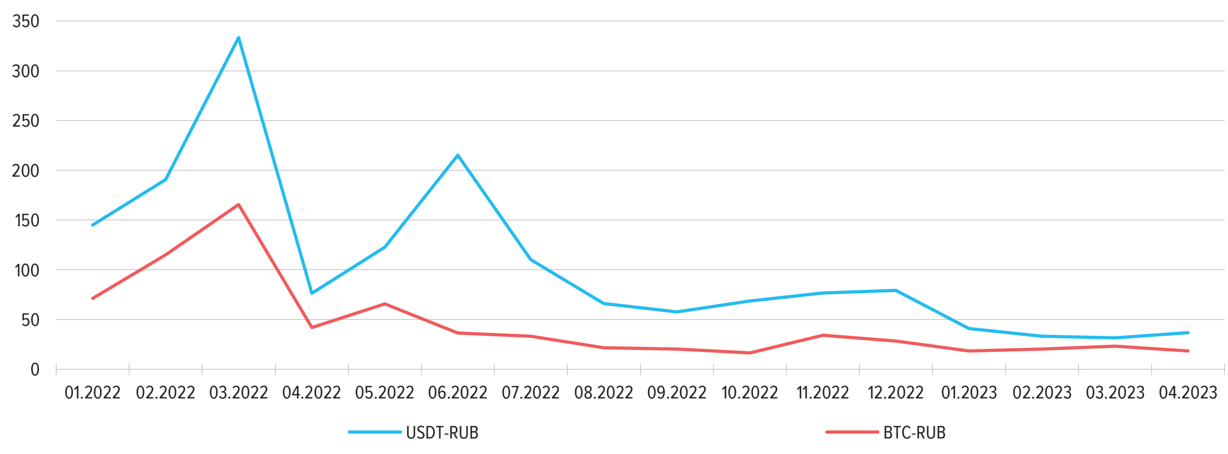
Against the backdrop of sanctions restrictions and reduced ability to transfer funds abroad (mainly until July 2022, when restrictions were relaxed on citizens' transfers abroad), cryptocurrencies have become an alternative way to settle, convert and transfer funds abroad. As a result, according to Huobi Research 2022, Russia was ranked the top three in the Cryptomarket Development Maturity Index[12]. In Chainalysis' Global Crypto Adoption Index[13] ranking, Russia got to the 9th line for 2022 up from 18th in 2021, with a notable increase in P2P crypto-asset transactions among the indicators assessed.

Estimates of the proportion of Russians owning crypto-assets vary. According to Huobi Research, about 10.1% of the population in Russia could own crypto-assets in 2022. Triple A cites a more conservative estimate — as of early April 2023, the percentage of Russians holding crypto-assets was 5.87%.

However, indirect data, including a decline in the web traffic of Russians on crypto exchanges during 2022, indicate no meaningful growth in the number of Russian cryptoinvestors. It is noted, however, that Q1 2022 saw a surge in Russians' interest in stablecoins amid uncertainty and the introduction of currency restrictions. For example, the share of stablecoin transactions on crypto exchanges targeting Russian users rose from 42% in January to 67% in March 2022. As evidenced by the trading volume on cryptocurrency exchange Binance, interest in the USDT stablecoin has begun to wane amid an increase in the limit on cross-border individual transfers to USD 1 million (Chart 19). Trading volume in the USDT-RUB and BTC-RUB pairs fell to its lowest levels since early 2022, due, among other things, to restrictions imposed by the exchange in relation to Russian users, including on P2P trading.

USDT-RUB AND BTC-RUB TRADING VOLUMES ON BINANCE
(USD MILLION)

Chart 19

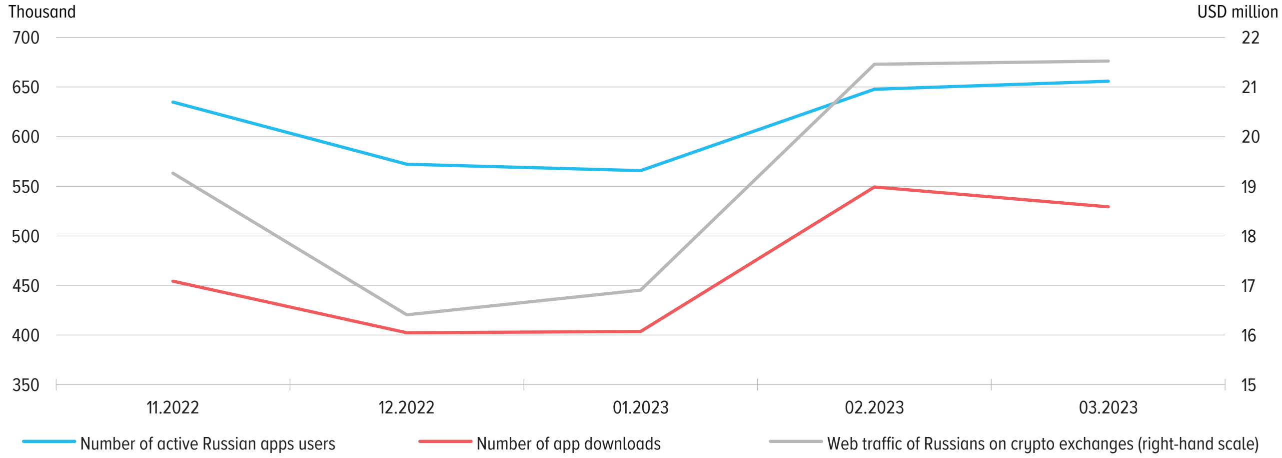


Source: TheBlock.

[12] The Cryptomarket Development Maturity Index is calculated based on the following indicators: 1) the share of users involved in crypto-asset transactions among the total population of the country; 2) user activity on centralised exchanges (based on data on active users of the top 100 centralised crypto exchanges as well as data on trading volume, reliability and market depth); 3) user activity in DeFi protocols (based on transaction volume and daily traffic to almost 300 different L1 (Layer 1) protocols and Blockchains); 4) public interest in the crypto-asset market (based on queries and Internet searches for keywords related to crypto-assets).

[13] The Global Crypto Adoption Index assesses the level of crypto-asset usage across countries on a number of measures: 1) the value of cryptocurrency received in Blockchain transactions, weighted by purchasing power parity (PPP) per capita; 2) the value of cryptocurrency transferred in retail Blockchain transactions, weighted by PPP per capita; 3) The volume of direct user-to-user (peer-to-peer) transactions of crypto-assets, weighted by PPP per capita and by the number of Internet users; 4) The per capita value of crypto-assets acquired through DeFi protocols in blockchain transactions, recalculated at purchasing power parity (PPP); 5) The value of crypto-assets purchased through DeFi protocols as part of retail Blockchain transactions (under USD 10,000), converted at PPP per capita.

RUSSIAN USERS' ACTIVITY ON CRYPTO EXCHANGES *Chart 20*



Source: SimilarWeb.

Chainalysis believes that the inflow of funds to cryptocurrency exchanges targeting Russian users was in line with general market trends. A significant increase in activity of Russians on crypto exchange was seen in November 2022 on the back of the collapse of FTX crypto exchange, and in February-March 2023 amid the rise of Bitcoin (Chart 20).

In terms of cryptoassets acquisition channels, the role of cross-border bank card transactions has become insignificant amid the exit of major international payment systems and the reaction of foreign regulators to cryptocurrency intermediaries serving Russian customers (the volume of funds channeled to cryptocurrency acquisition was RUB 0.7 billion in Q4 2022)[14]. In this regard, one of the likely channels for acquiring cryptoassets are P2P platforms, many of which remain available to Russian users. The average monthly volume of P2P transactions, including those resembling crypto-asset transactions, during the reporting period[15], is RUB 40 billion. In addition, there is a growing market for offline cryptocurrency exchanges offering cash for cryptocurrencies.

3.3. Vulnerability 3. Rising household debt

Unsecured consumer lending standards deteriorated significantly on the eve of establishment of macroprudential limits (MPLs). The introduction of MPLs has improved the loan structure: the share of loans with DSTI of 80%+ has fallen from 36% in Q4 2022 to 29% in Q1 2023, and the share of loans with an over 5-year term has dropped from 19% to 7% (excluding loans with credit limit). MPLs affect loans with credit limit with a lag, as they restrict the issuance of new cards and the limits increase for borrowers with excessively high debt burden, but do not limit disbursements within previously established limits. Because of this, the share of loans granted to borrowers with DSTI of 80%+ exceeds the MPL value of 25%.

The introduction of MPLs did not result in a contraction of consumer lending: in Q1 2023, the portfolio grew by 2.5%, with the largest increase in March (+1.4% MoM). The acceleration of growth in March is mainly due to seasonal fluctuations and higher demand for loans. Banks reduced the share of high-risk loans by reducing loan amounts and loan terms. Therefore, the share of loans with DSTI of 70–80% and with a term of 4–5 years has increased (i.e., in segments

[14] Quarterly Reporting form 0409263 'Information on Trans-border Transactions with the Use of Electronic Means of Payment and Transactions Performed by Non-Resident Holders of Corporate Electronic Funds for Electronic Money Transfers'.

[15] Bank of Russia Methodological Recommendation 16-MR, dated 6 September 2021, 'On Increasing the Attention of Credit Institutions to Certain Transactions of Individual Clients'.

close to the limited ones). After the introduction of MPLs, banks that previously provided loans in segments not covered by limits increased their market share.

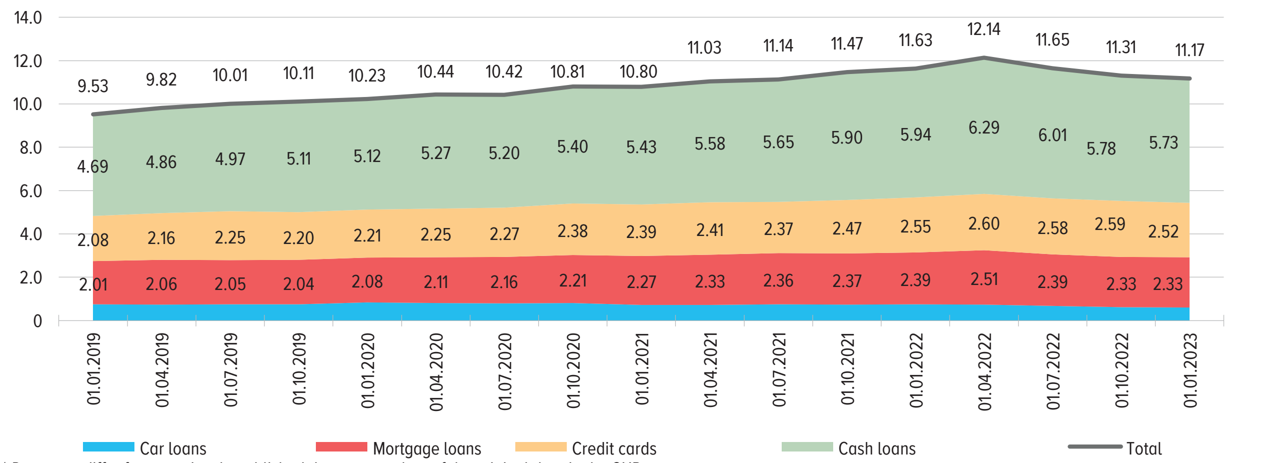
In Q3 2023, MPLs will be more stringent by 5 pp compared to Q2 as banks have successfully adapted to the new instrument and unsecured consumer lending continues to show steady growth. The changes are aimed at limiting the growth of household debt burden by discouraging lending to borrowers with high debt burden and artificially extending the loan terms.

1. Situation in Q4 2022, prior to the establishment of MPLs

In Q4 2022, the portfolio of unsecured consumer loans increased by 1.3% to RUB 12 trillion. The reduction in new lending in October 2022 was short-lived, and by the end of the year, disbursements on cash loans and credit cards approached the values of 2021, exceeding RUB 850 billion in total (Chart 22). In Q4 2022, the household debt burden at the macro level[16] slightly declined (by 0.1 pp to 11.2%) driven by the portfolio of unsecured consumer loans (Chart 21). As in the previous quarter,

DEBT SERVICE RATIO FOR RETAIL LOANS*
(%)

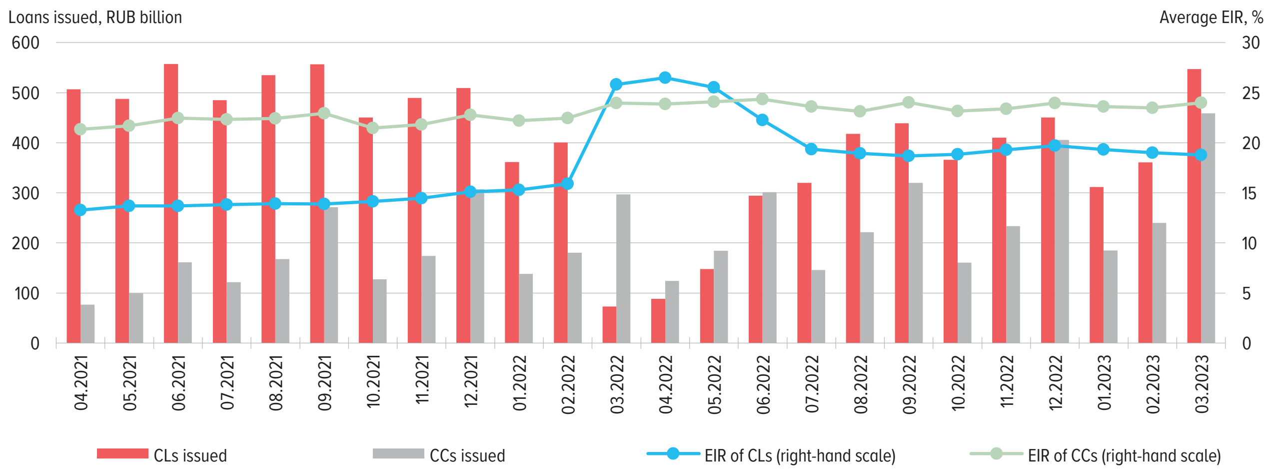
Chart 21



** Data may differ from previously published due to an update of the original data in the CHB.*
Sources: CHB, Forms 0409316, 0409126, 0409128, 0409102, Rosstat.

VOLUME OF LENDING AND EFFECTIVE INTEREST RATE (EIR) FOR CASH LOANS (CL) AND CREDIT CARDS (CC)

Chart 22



Source: Reporting form 0409704.

[16] The share of disposable income that households are expected to spend on loan servicing under the loan agreements.

an increase in the average loan term (by 4% to 3.4 years) and the growth in disposable household income, outstripping the growth of debt, facilitated the debt burden decline in consumer lending.

This minor reduction in the debt burden at the macro level was accompanied by a further deterioration of lending standards. In Q4 2022, the share of loans with DSTI of 80%+ amounted to 36% of all loans (versus 33% in Q3), and the share of loans with a maturity of over 5 years amounted to 19% of all cash loans (versus 15% in Q3). Anticipating the introduction of MPLs, banks could intentionally increase the share of loans that were intended to be capped.

Box 3. The interplay of macroprudential instruments limiting systemic risk in consumer credit

Prior to 2023, the Bank of Russia used macroprudential add-ons to limit risky loans and build up capital buffers. As a result, banks accumulated significant capital buffers, which were used during the pandemic and the sanctions crisis to support the capital of banks. However, this tool has shown limited efficiency of its influence on the risky lending growth rates. Add-ons have an indirect impact on the loan structure, by increasing the capital requirements for banks in risky segments. This restricts lending by banks with low capital buffers, while banks with substantial capital buffers can continue to build up high-risk loans. It is possible to change the loan structure through a very significant increase in capital requirements (which in fact become prohibitive measures).

Therefore, starting from 2023, MPLs[1] have become the key instrument used to curb the growth of the household debt burden on consumer loans and ensure a balanced loan structure. Unlike macroprudential add-ons, MPLs do not burden banks' capital, which is especially important in the current economic situation, when banks need capital to finance economic transformation projects.

From 1 January 2023, MPLs on unsecured consumer loans (credits) were established for banks with a universal license and for microfinance organisations (MFO). In Q1–Q2 2023, the maximum permitted share of loans to borrowers with DSTI of 80%+ was set at 25% for banks and 35% for MFOs, and loans with a maturity of more than 5 years should not exceed 10% of consumer loans issued by banks. The parameters of MPLs will be reviewed quarterly, and the relevant decisions of the Bank of Russia will be promptly delivered to the market participants.

Macroprudential add-ons are used to accumulate a capital buffer. In spring 2022, the macroprudential capital buffer was completely released; currently, the values of macroprudential add-ons are significantly less important than before February 2022, and they are used only for the highest-risk loans.

[1] 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)'.

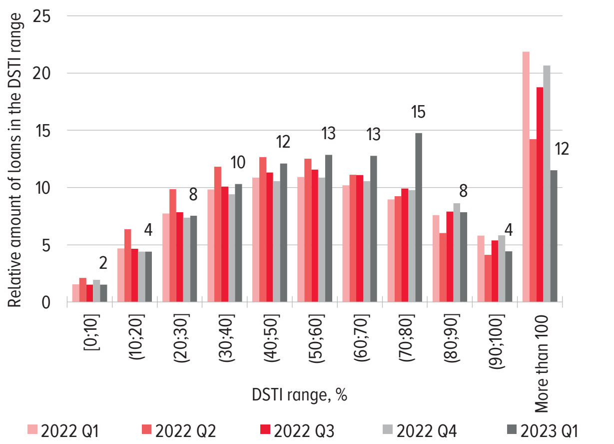
2. Assessment of the efficiency of macroprudential limits on unsecured consumer loans

2.1. Loan structure by DSTI and maturity in Q1 2023

The results of Q1 2023 prove the favourable impact of the MPLs on the standards in unsecured consumer lending. The share of all unsecured loans with DSTI of 80%+ issued[17] in Q1 2023 and covered by MPLs amounted to 28.9% at the end of the quarter against 36% a quarter earlier. For cash loans, this share was 23.8% against 35.1% the quarter before, and, for credit cards, 36.7% against 38.7%, respectively. Unlike cash loans, the impact of MPLs on the credit card portfolio is spread out over time. Due to the nature of credit cards, MPLs restrain the increase in limits and the issuance of new cards to borrowers with a high debt burden. At the same time, the debt of borrowers on previously issued cards may grow. As a result, the structure of the credit card portfolio by borrower debt burden changes with a lag. According to an estimate based on CHB data, the

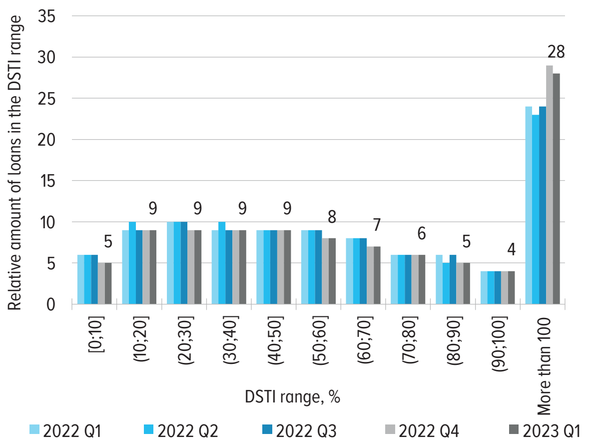
[17] Only the debt amount as of the balance sheet date on credit facilities granted during the reporting quarter is taken into account.

DISTRIBUTION OF ISSUED UNSECURED CONSUMER LOANS BY DSTI *Chart 23*



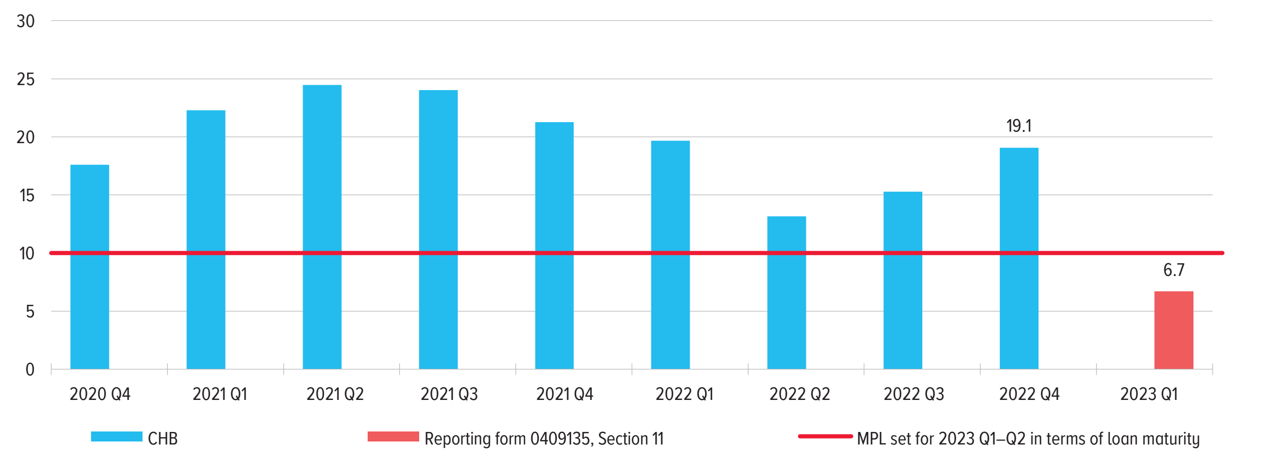
Source: Reporting form 0409704.

DISTRIBUTION OF CREDIT CARD LOANS ACTUALLY DISBURSED, BY DSTI *Chart 24*



Source: Reporting form 0409704.

SHARE OF LOANS WITH A MATURITY >5Y IN CASH LOANS *Chart 25*
(%)



Sources: CHB, Section 11 of Reporting form 0409135 (filed from 2023 Q1).

credit card portfolio is renewed[18] by 20% over a year, by about 50% over three years, and in six years, new issuances replace about 75% of the total debt.

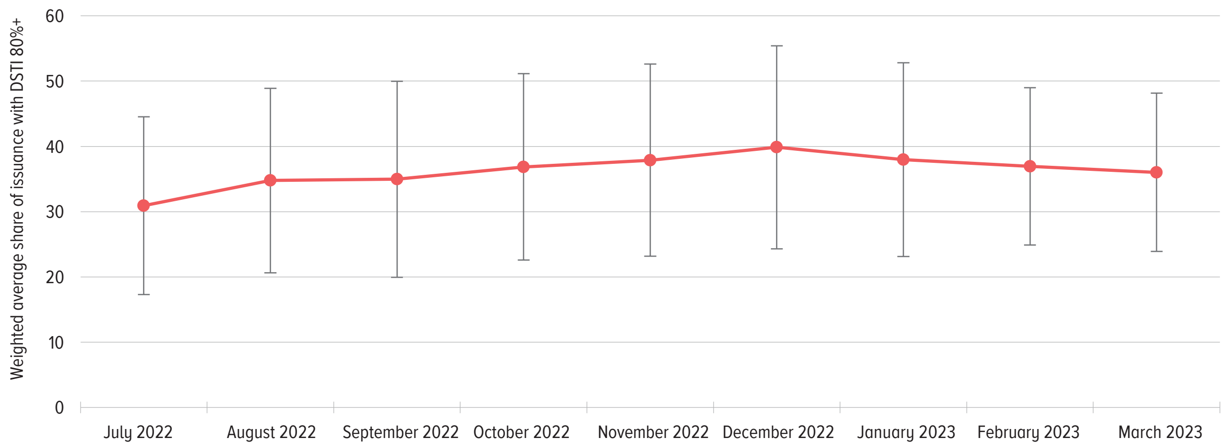
The share of cash loans with a maturity of more than 5 years that are subject to MPLs amounted to 6.7% against 19% in the previous quarter (Chart 25). This means that in Q1 2023, banks complied with the MPLs in terms of loan maturity (10% for Q1 2023) with a wide margin.

In January 2023, many banks did not meet monthly MPLs, however, they later adjusted their issuances to comply with MPLs at the end of the quarter (Charts 26, 27). The number of banks, in terms of share of DSTI of 80%+ relative to the weighted average, decreased. To comply with the MPLs for the DSTI, banks usually reduce the loan amount (limit) and refuse to lend to most indebted borrowers. This led to a redistribution of loans to segments not covered by limits, resulting in more loans with DSTI of 70–80% (Chart 23).

Most banks did not breach the MPL requirements, according to the Q1 2023 results. Only 11 out of 97 banks with universal licences issuing unsecured consumer loans failed to comply with the

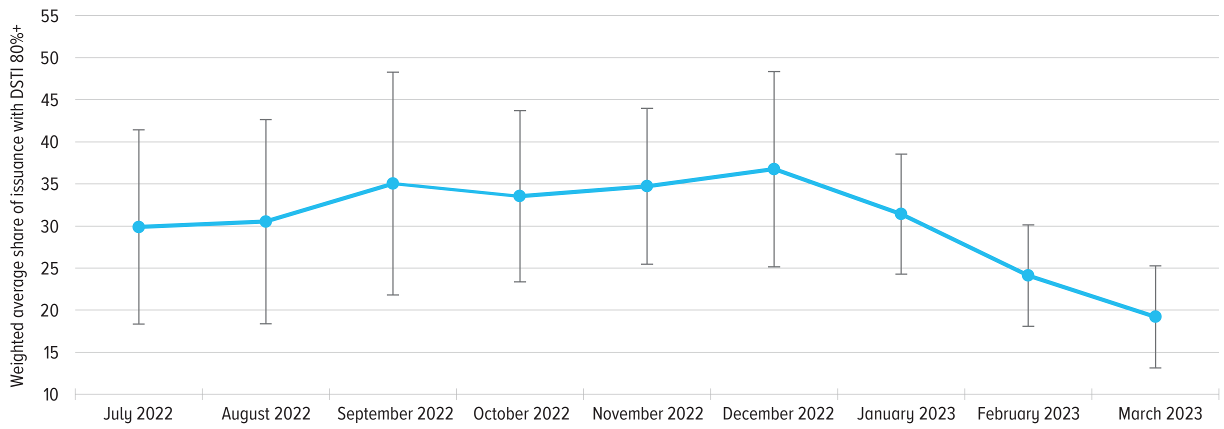
[18] Renewal refers to an increase in the proportion of debt corresponding to 'new' credit cards by issue date relative to the total debt of the credit card portfolio.

INCLUSION IN MPL: WEIGHTED AVERAGE SHARE OF LOANS WITH DSTI 80%+, WEIGHTED AVERAGE STANDARD DEVIATION BY VOLUME OF LOANS. CREDIT CARDS *Chart 26*



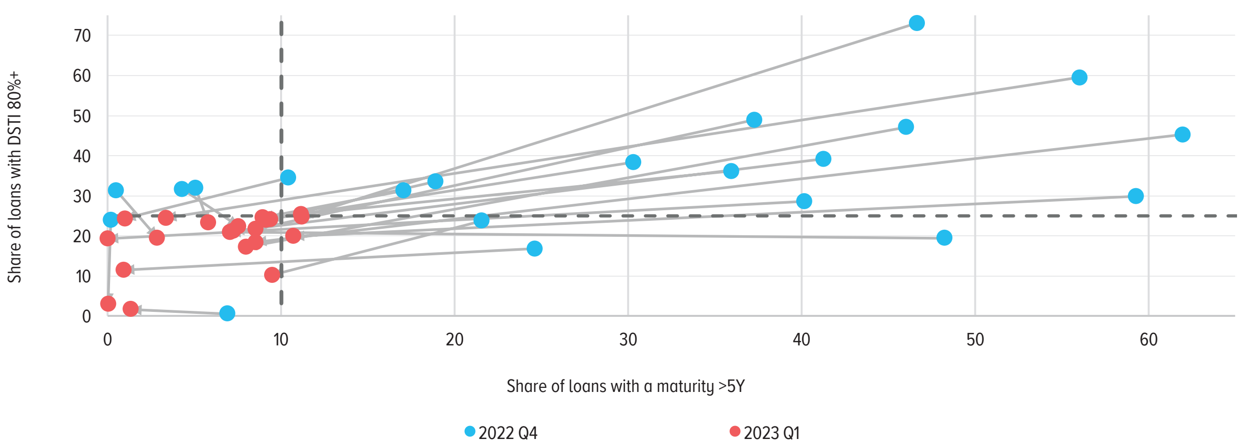
Source: Reporting form 0409704.

INCLUSION IN MPL: WEIGHTED AVERAGE SHARE OF LOANS WITH DSTI 80%+, WEIGHTED AVERAGE STANDARD DEVIATION BY VOLUME OF LOANS. CASH LOANS *Chart 27*



Source: Reporting form 0409704.

BEHAVIOUR OF BANKS UNDER MPL REQUIREMENTS FOR CASH LOANS *Chart 28*
(BANKS WITH LOANS OF MORE THAN RUB 1 BILLION PER QUARTER)



Sources: Q4 2022 – Reporting form 0409704 and CHB, Q1 2023 – Reporting form 0409135, Section 11.

MPLs. The big banks (Chart 28) complied with MPLs with a margin. At the same time, the total volume of outstanding loans issued in breach of MPLs was not significant: RUB 0.64 billion for cash loans and RUB 0.01 billion for credit cards.

In Q1 2023, the largest MFOs also showed favourable dynamics in reducing the share of consumer loans issued to borrowers with DSTI of 80%+ from 40% to 30%[19] (MPL: 35%). The loans were mainly redistributed to borrowers with DSTI of 0-50% (an increase from 25.3% to 32.9% over the quarter), which may result from tightening of scoring procedures. According to the quarter results, 39 MFOs[20] failed to comply with MPLs, but only 1.4% of loans issued for the quarter were non-compliant. Thus, market participants have generally been able to adapt their models to the new regulatory requirements in terms of MPLs.

2.2. Influence of MPLs on lending dynamics in general and variations by bank

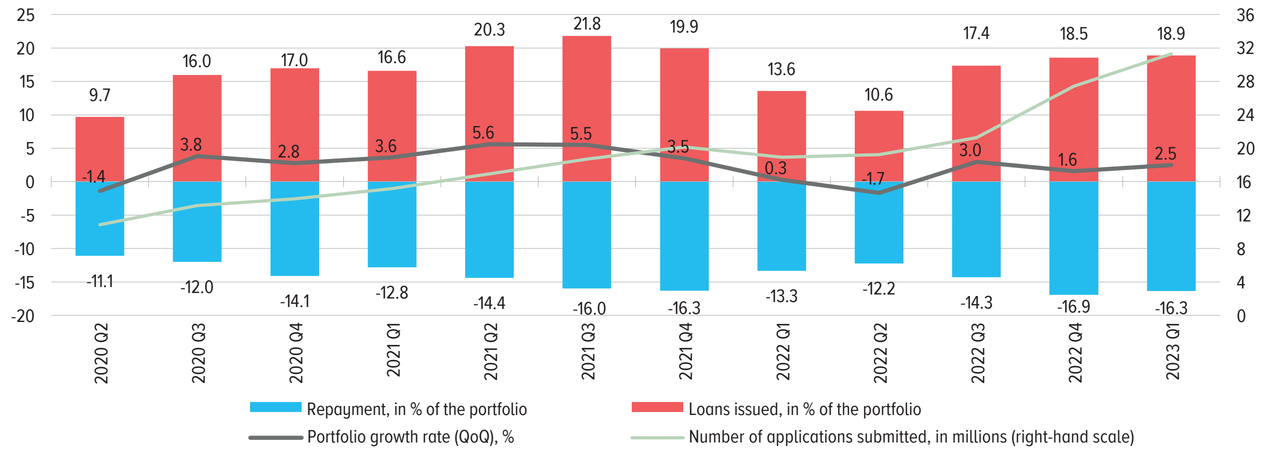
Consumer lending growth in Q1 2023, annualized, was 10%. While in January and February 2023 portfolio growth was minimal at 0.5% per month, in March it reached 1.4%. As a result, in Q1 2023, the portfolio grew by 2.5% compared to 1.3% the quarter before. The higher growth rate was due to the following factors:

1. An increase in the household demand for loans, reflected in a higher number of loan applications (Chart 29). Due to this[21], the volume of new unsecured consumer loans went up by 4% QoQ (Charts 22, 29).

2. Reduced depreciation of the portfolio (Chart 29). This effect is seasonal.

MPLs have a greater impact on banks that initially had looser lending standards (banks that would not have complied with the MPLs, set for Q1-Q2 2023, in Q4 2022). A number of such banks had to cut back on the loan issuance. The top five banks with a historically high share of loans to indebted borrowers saw their consumer loan portfolios shrink by 1% in Q1 2023, while the remaining banks saw a rise by over 3%. Redistribution in the market also counterbalanced the restrictive effect of MPLs on loan activity (Chart 30). Banks that previously had a margin on MPLs have remarkably grown in lending.

ISSUANCE AND DEPRECIATION OF LOANS, IN % OF THE PORTFOLIO, PORTFOLIO GROWTH (TOP* BANKS) AND THE NUMBER OF APPLICATIONS SUBMITTED (7 BANKS) *Chart 29*



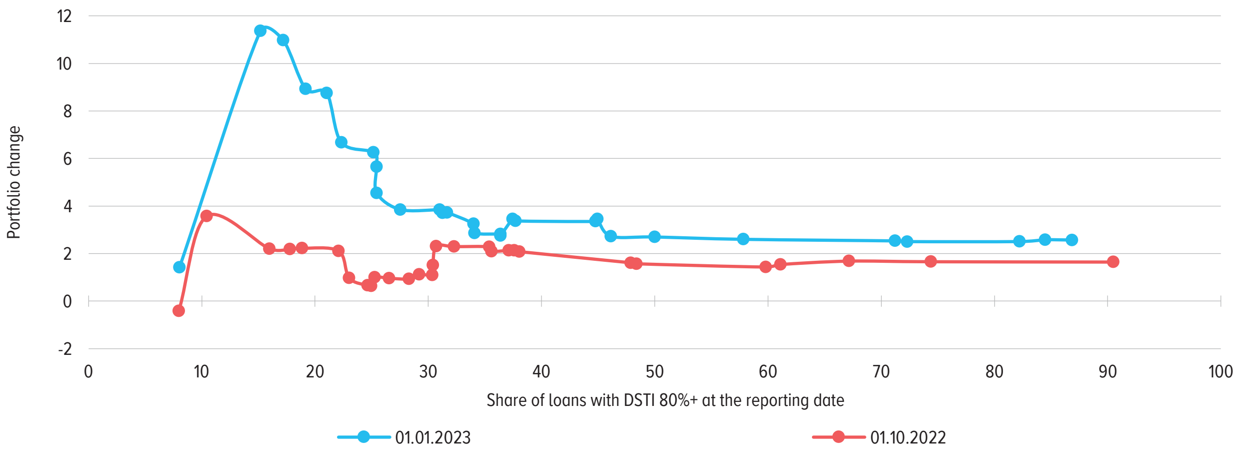
** Presented in Reporting form 0409704.*
Sources: Reporting forms 0409115, 0409704, survey of 7 largest banks in the cash loans segment.

[19] DSTI figures are based on preliminary data from a sample of the 30 largest MFOs (63.3% of the consumer microfinance market).

[20] The figures are based on preliminary data from a sample of 282 MFOs (73% of the consumer microfinance market).

[21] Provided that the correlation between the number of loan applications submitted and the number of loans issued is maintained.

PORTFOLIO CHANGE OVER THE NEXT THREE MONTHS FROM THE REPORTING DATE, CUMULATIVE TOTAL BY BANK, SORTED BY THE SHARE OF LOANS WITH DSTI 80%+ AS OF THE REPORTING DATE (THE LEFTMOST POINT IS 1 BANK, THE RIGHTMOST POINT IS ALL BANKS) *Chart 30*



Sources: Reporting forms 0409704, 0409115.

Due to adaptation of banks to MPLs and a stable growth trend in unsecured consumer lending, the Bank of Russia reduced the MPL values. This will ensure a more balanced loan structure and reduce household debt burden. MPLs for Q3 2023 are reduced by 5 pp versus those for Q2. In Q3 2023, the share of DSTI of 80%+ loans is not expected to exceed 20% (30% for MFOs), and the share of loans with a maturity of over five years, 5%. The reduction in MPLs will be partially offset by a change in the procedure for calculating DSTI on long-term loans. Banks will be able to calculate DSTI on unsecured consumer loans with a maturity of more than four years without assumption that such loans will be repaid within 48 months. This will reduce the share of loans with DSTI of 80%+ by 2–3 pp.

3. Quality of consumer loans portfolio, including previously restructured loans

The crisis year of 2022 was abounded by restructured retail loans. Borrowers were supported by measures from loan repayment holidays[22], mortgage holidays[23], restructuring of loans to military personnel and/or their families[24], to special supportive programmes developed by banks. The original loan repayment holidays valid until 31 March 2023, have been extended[25] until 31 December 2023. The Bank of Russia took part in drafting Law No. 196743-8 on the introduction of loan repayment holidays on a permanent basis for consumer loans, which is planned to be adopted in 2023 (it passed the first reading in the State Duma in December 2022).

According to a survey of banks, the cumulative volume of restructured loans as of 1 January 2023 is about RUB 518 billion, or 1.9% of the entire retail loan portfolio. Unsecured consumer loans make up the bulk of restructuring, i.e. RUB 327 billion (63%). At the same time, according to the Bank of

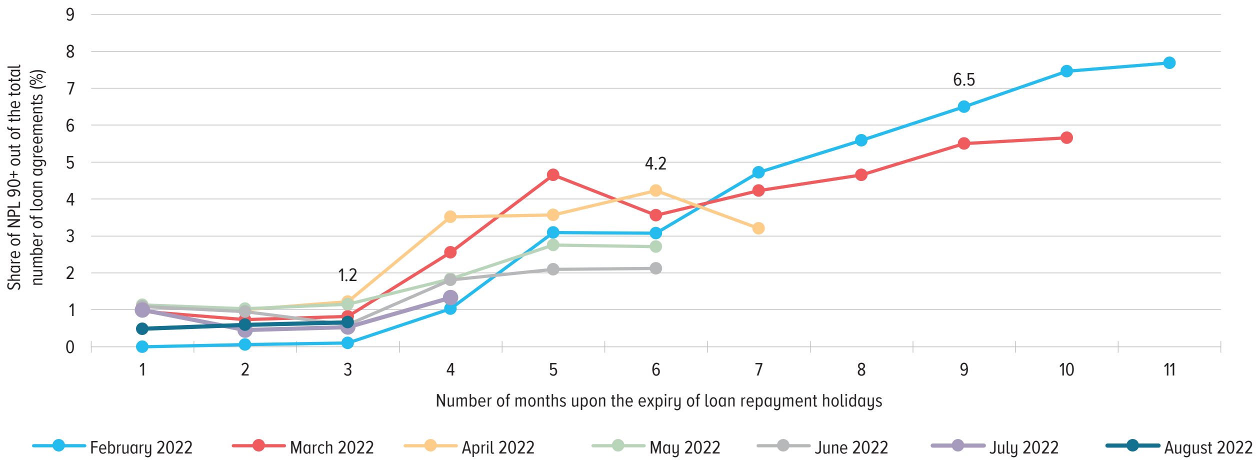
[22] In accordance with Article 6 of Federal Law No. 106FZ, dated 3 April 2020 (as amended on 14 April 2023), 'On Amending Federal Law 'On the Central Bank of the Russian Federation (Bank of Russia)' and Certain Laws of the Russian Federation with Regard to the Specifics of Changing the Terms of a Loan Agreement'.

[23] In accordance with Article 6.1–1 of Federal Law No. 353FZ, dated 21 December 2013 (as amended on 14 April 2023) 'On Consumer Credit (Loan)'.

[24] In accordance with Article 1 of Federal Law No. 377FZ, dated 7 October 2022 (as amended on 28 April 2023), 'On Performance of Obligations under Credit Agreements (Loan Agreements) by Persons Mobilised for Military Service in the Armed Forces of the Russian Federation, Persons Participating in the Special Military Operation, and by Members of Their Families, and on Amending Certain Laws of the Russian Federation'.

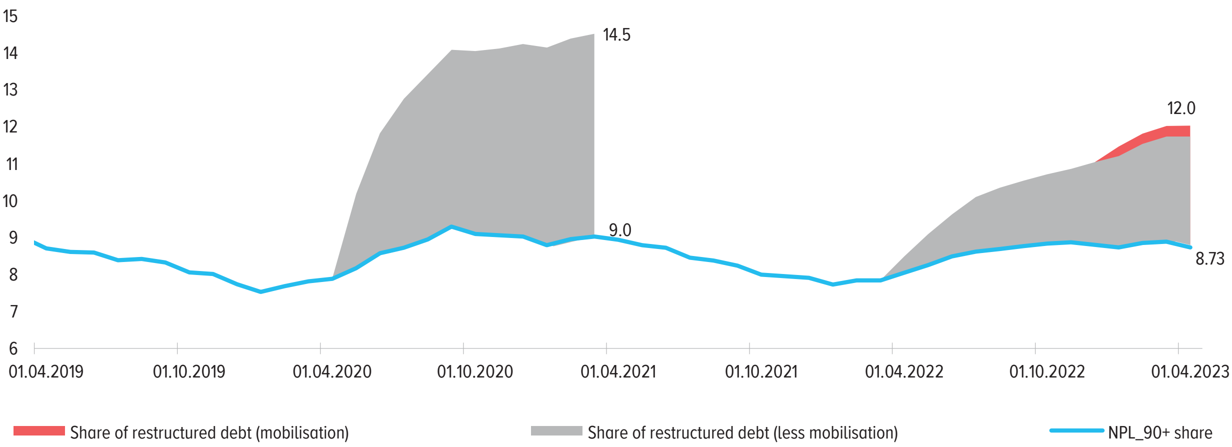
[25] Federal Law No. 132FZ, dated 14 April 2023, 'On Amending Articles 6 and 7 of the Federal Law 'On Amending the Federal Law 'On the Central Bank of the Russian Federation (Bank of Russia)' and Certain Laws of the Russian Federation with Regard to the Specifics of Changing the Terms of a Loan Agreement'.

DYNAMICS OF NPL 90+ IN THE RESTRUCTURED CONSUMER LOANS PORTFOLIO AFTER THE EXPIRY OF LOAN REPAYMENT HOLIDAYS BY GENERATIONS OF THE START OF THE GRACE PERIOD (LAST CALCULATION PERIOD: JANUARY 2023) *Chart 31*



Source: CHB.

QUALITY OF THE UNSECURED CONSUMER LOAN PORTFOLIO *Chart 32*
(%)



Sources: Reporting form 0409115, survey of banks (information on restructured debt is given as a cumulative total for the duration of regulatory easing for restructuring).

Russia's estimates based on CHB data, as of 1 January 2023, the balance of debt on restructured loans amounts to approximately RUB 120 billion. This difference is associated with the end of the grace period for most of the restructured loans and debt amortization. On average restructuring provides for a 4-month grace period. Out of unsecured consumer loans that are no longer covered by loan repayment holidays, only 3% are NPL 90+ on the 6th month after leaving the programme (Chart 31). This indicates that restructuring has allowed most of the borrowers to recover their financial position and resume payments under the debt service schedule.

The quality of the unsecured consumer loan portfolio remains stable. As of 1 April 2023, the share of NPL 90+ amounted to 8.7% (Chart 32).

3.4. Vulnerability 4. Imbalances in the residential real estate market and risks of project financing

The reporting period saw growing imbalances in the housing and mortgage markets, and a decline in the pricing transparency. Demand for housing has dropped largely due to the fact that rising property prices have not been accompanied by a corresponding growth of household incomes. To stimulate the demand without explicitly lowering prices in the primary market, starting from Q2 2022, developers and banks were actively resorting to various risky mortgage lending practices, which resulted in an artificial inflation of prices for new homes. As a result, the price gap between the primary and secondary housing markets has widened to 40%. Demand was also supported by deteriorating mortgage lending standards.

To limit mortgage risks, the Bank of Russia has implemented a number of macroprudential and microprudential measures to restrict loans with an overestimated collateral value of real estate and a low down payment. This reduced the scale of such practices, but banks started to offer reduction of the mortgage rate through a one-time payment made by the borrower when obtaining the loan. The Bank of Russia is evaluating the feasibility of restricting such schemes.

Low sales in the primary housing market may have a negative impact on the financial stability of developers. Banks are also exposed to risks, as in recent years the share of project financing for housing construction has increased to 9% of the corporate loan portfolio. Banks will continue to boost lending to developers, including to ensure that the projects under construction are completed on time.

1. Mortgage lending

Amid the distress of 2022, developers and banks started to further prop up demand through risky marketing campaigns (developer-subsidised mortgage, tranched mortgage, no-down-payment mortgage, cashback mortgage).

Practices involving an overestimation of the housing value pose the greatest risk. First of all, they include the so-called developer-subsidised mortgages. In this scheme, risks are mainly borne by the borrower. In case of failure to service the loan, the market value of the property may be insufficient to pay off the mortgage debt. In addition, such borrowers will not be able to improve their housing conditions for a long time, since the property price in the secondary market will be much lower than its purchase price. Banks also bear risks. Firstly, in the event of a default on such mortgage, they may face problems when compensating credit losses through the sale of collateral. Secondly, banks may underestimate interest rate risks, believing that borrowers would repay such loans ahead of schedule, just like a classic mortgage. Given the extremely low interest rates, this would be disadvantageous for borrowers. For example, early repayment under the Far Eastern Mortgage[26] (rates do not exceed 2%) is only 1–2% per year, while when purchasing commissioned house under a market-rate mortgage, early repayment amounts to about 15% per year.

Since the ‘developer-subsidised mortgage’ implies a reduction in the loan rate through overestimating the housing value, this requires an increase in the amount of the loan used to purchase the property from the developer. At the same time, no such increase in prices and loan amounts has been observed in the secondary market.

Early 2023 saw a reduction of the gap between the mortgage rate on loans for housing under construction and the market rate. The average rate increased from 3.5% in December to 5.6% in March. This is associated with modification and partial phasing out of ’developer-subsidised mortgage’ schemes in anticipation of higher provisioning rates for such loans, as well as the increase from 7% to 8% of the rate under the state preferential mortgage programme.

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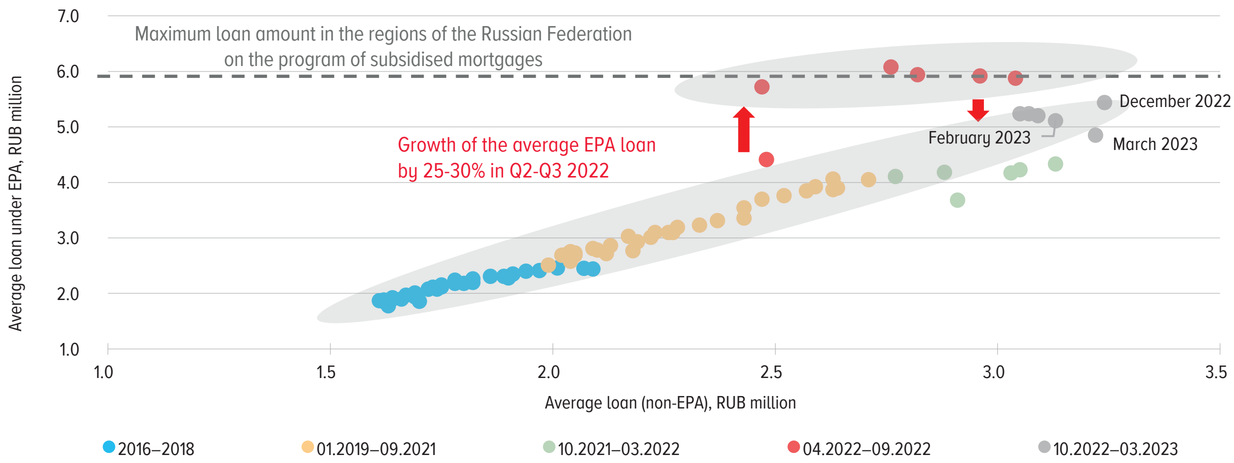
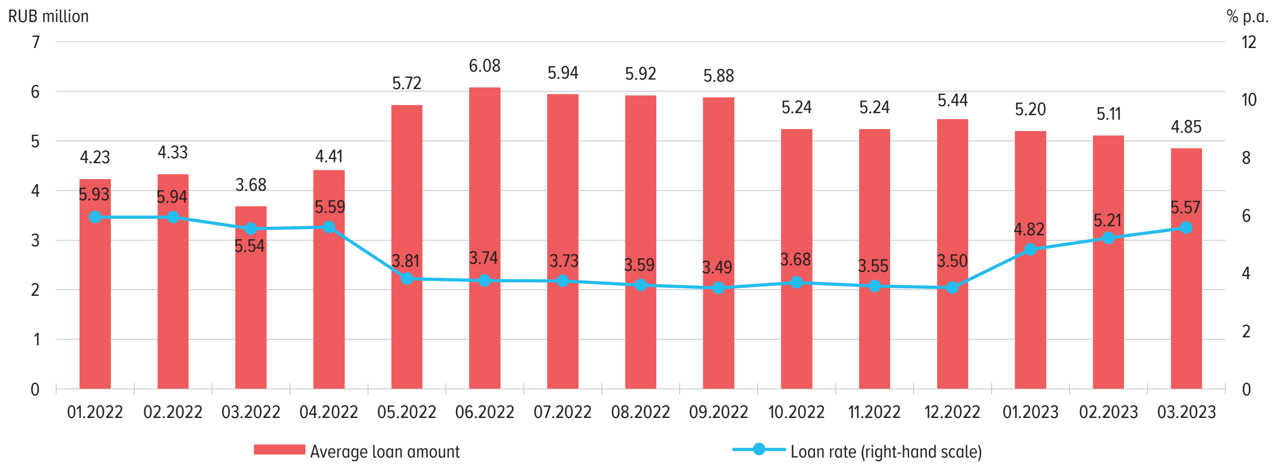
[26] Approved by Decree of the Russian Government No. 1609, dated 7 December 2019.

DEPENDENCE OF THE AVERAGE AMOUNT OF LOANS UNDER EQUITY PARTICIPATION AGREEMENTS (EPA) ON THE AVERAGE AMOUNT OF NON-EPA LOANS *Chart 33*



Source: Reporting form 0409316.

CHANGES IN THE AVERAGE LOAN AMOUNT AND ANNUAL INTEREST RATE ON NEW LOANS UNDER EQUITY PARTICIPATION AGREEMENTS *Chart 34*

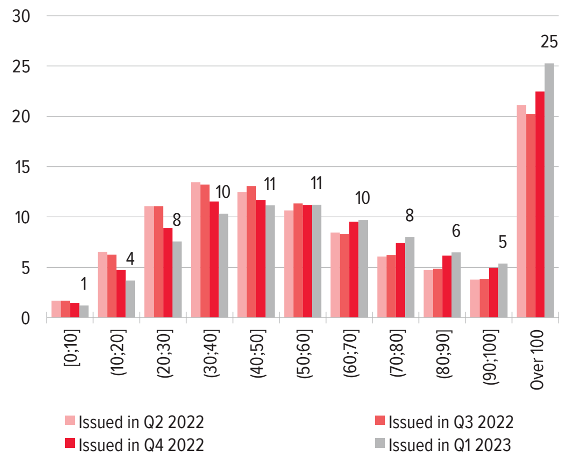


Source: Reporting form 0409316.

Amid the phasing out of 'developer-subsidised mortgages', the major mortgage banks have started to actively offer potential borrowers to buy a mortgage rate discount, i.e. to make a one-time payment when applying for a loan to reduce the interest rate. An analysis of these programmes showed that for the borrower, the 'benefit' from such rate reduction is achievable only over the 7–8 year horizon, provided that during this time, there will be no downturn in mortgage rates at which the borrower could refinance the loan. In case of early repayment or refinancing of the loan during the first seven years, the borrower will pay more in total compared to the market lending conditions. In addition, this option encourages borrowers to take a bigger loan, since the borrower will have to use some of their savings to make such one-time payment, and not a down payment. In turn, the bank reduces the likelihood of borrowers refinancing loans with another bank in the event of a decrease in market rates. However, the bank could face interest rate risk if the mortgage is not repaid within 7–8 years. Since the one-time payment is included in the calculation of the effective interest rate (EIR), the EIR will be consistent with the market rates for such mortgage. As such, the increased provisioning applicable to the 'developer-subsidised mortgage' issued at non-market rates, will not apply to such loans. The Bank of Russia will consider whether it is feasible to apply appropriate measures to mortgages with one-time payments.

DISTRIBUTION OF LOANS BY DSTI (EQUITY PARTICIPATION AGREEMENTS) *Chart 35*

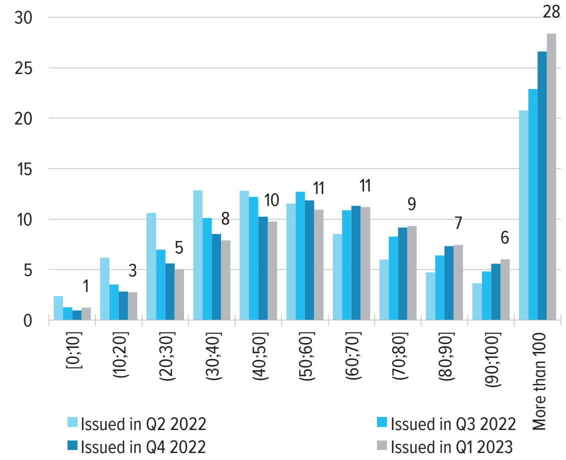
(%)



Source: Reporting form 0409704.

DISTRIBUTION OF LOANS BY DSTI (NON-EQUITY PARTICIPATION AGREEMENTS) *Chart 36*

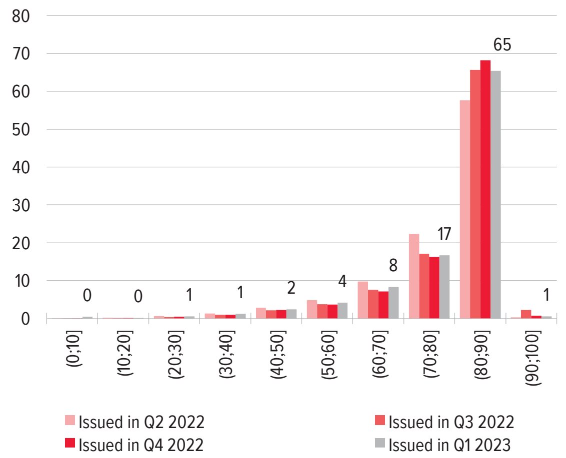
(%)



Source: Reporting form 0409704.

DISTRIBUTION OF LOANS BY LTV (EQUITY PARTICIPATION AGREEMENTS) *Chart 37*

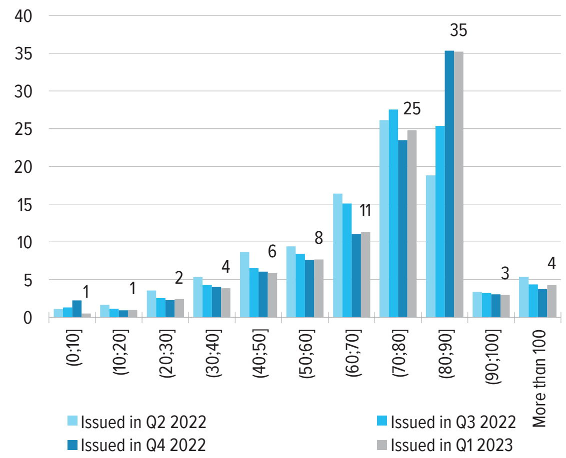
(%)



Source: Reporting form 0409704.

DISTRIBUTION OF LOANS BY LTV (NON-EQUITY PARTICIPATION AGREEMENTS) *Chart 38*

(%)



Source: Reporting form 0409704.

In addition to risky lending practices, lending standards are deteriorating, primarily in the EPA segment. In late 2022 and early 2023, the share of EPA loans provided to borrowers with a high debt burden (DSTI 80%+) was consistently growing, reaching 37% in Q1 2023 (+7 pp compared to Q2-Q3 2022). Starting from Q2 2022, the share of loans with a high debt burden also increased in the commissioned housing segment, and in Q1 2023 it already amounted to 42%.

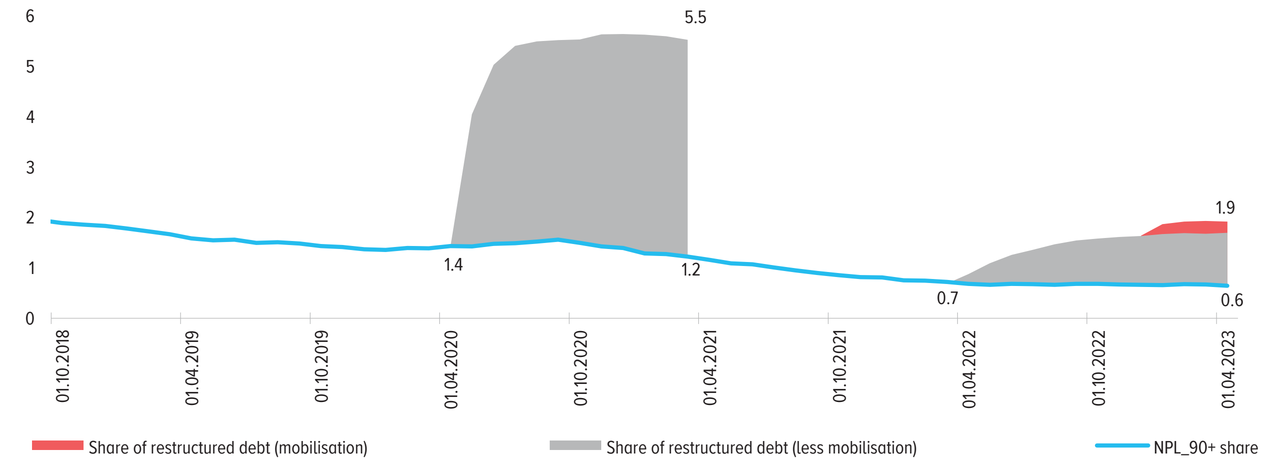
To reduce mortgage payments amid rising real estate prices, banks increase the loan maturity. In H2 2022, the share of loans with a maturity of 30 years or more reached 40%, whereas it had amounted to less than 20% a year earlier (see more details in ‘Analysis of Retail Lending Trends Based on Credit History Bureaus’ Data’).

Due to the rising real estate prices outpacing the nominal growth in household income, Q4 2022–Q1 2023 saw a high demand for housing loans with low down payments (less than 20%). The share of such loans for the first time exceeded 50% of all mortgage loans (53% and 51% in Q4 2022 and Q1 2023, respectively, against 38% in early 2022).

In the housing under construction segment, the share of low-down-payment loans in Q1 2023 was even higher, mounting to 66%. Among other things, this trend is associated with an increasing share

DYNAMICS OF DEBT RESTRUCTURING IN MORTGAGE LENDING
(%)

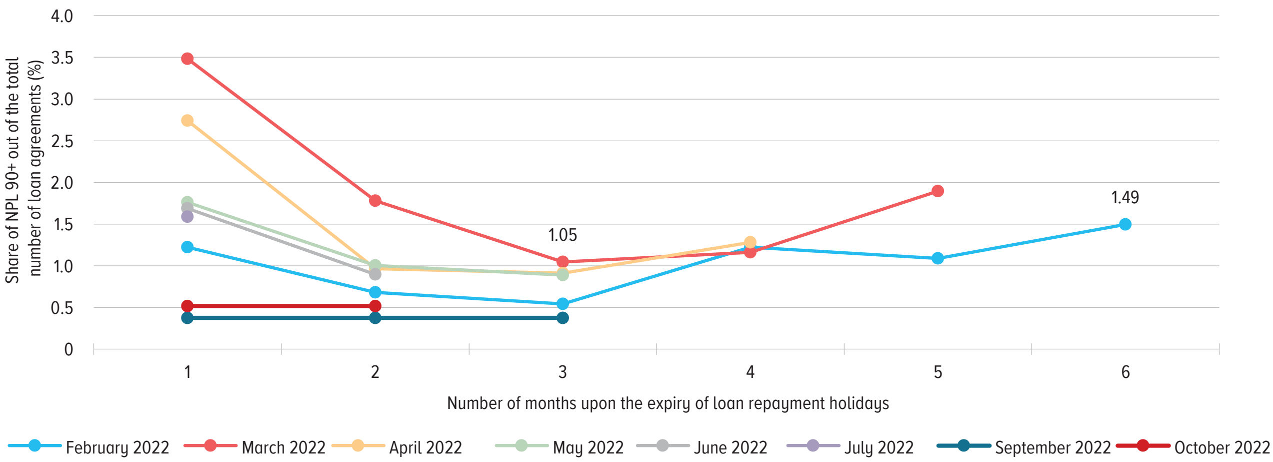
Chart 39



Sources: Reporting form 0409115, Bank of Russia survey.

NPL 90+ DYNAMICS IN THE PORTFOLIO OF RESTRUCTURED MORTGAGE LOANS UPON THE EXPIRY OF LOAN REPAYMENT HOLIDAYS

Chart 40



Source: CHB.

of loans provided under the state support programmes for mortgage lending with a down payment of 15% (except for the Rural Mortgage programme[27]).

The quality of the mortgage portfolio so far remains generally satisfactory: as of 1 April 2023, the share of NPL 90+ loans in the mortgage portfolio amounts to 0.6%. The share of restructured loans increased slightly (by 0.3 pp.) compared to November 2022, which is largely due to restructuring of loans issued to mobilised persons. As of 1 April 2023, the total share of all restructured loans (cumulative total, excluding repayments and return to the standard debt service schedule) and non-performing loans does not exceed 2%, which is significantly less than during the pandemic.

Out of mortgage loans that are no longer covered by loan repayment holidays, on average no more than 1% are NPL 90+ by the 3rd month after leaving the programme (Chart 40). This indicates that restructuring has allowed most of the borrowers to recover their financial position and resume payments under the debt service schedule.

[27] Approved by Decree of the Government of the Russian Federation No. 1567, dated 30 November 2019.

Box 4. Housing and its affordability

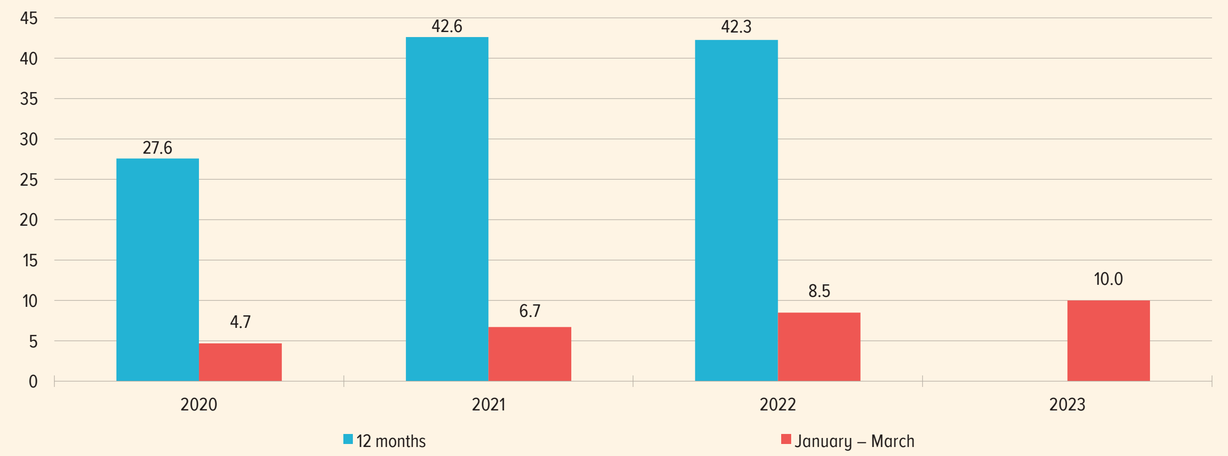
In 2022, the primary residential real estate market of Russia saw a decline in demand: the number of registered equity participation agreements (EPAs) dropped by 22% YoY (2021: an increase of 18%)[1]. In Q1 2023, the number of registered EPAs in Moscow dropped by 22% YoY. The key drivers of the reduced demand included high housing prices, decreasing real disposable household income and declining investment demand.

Despite the reduction in demand in the primary residential real estate market, in 2022, the area of new projects for sale was almost equal to the record high in 2021 and amounted to 42.3 million sqm. Q1 2023 retained a high level of new project launches at 10.0 million sq.m. (+18% YoY). Strong new project supply resulted from mass participation of developers in new projects in 2020-2022 in the context of high demand for concessional mortgage programmes.

Due to the fact that supply increased amid reduced demand, the area and share of unsold properties in facilities under construction surged (reaching in March 2023 71% (+10 pp YoY)).

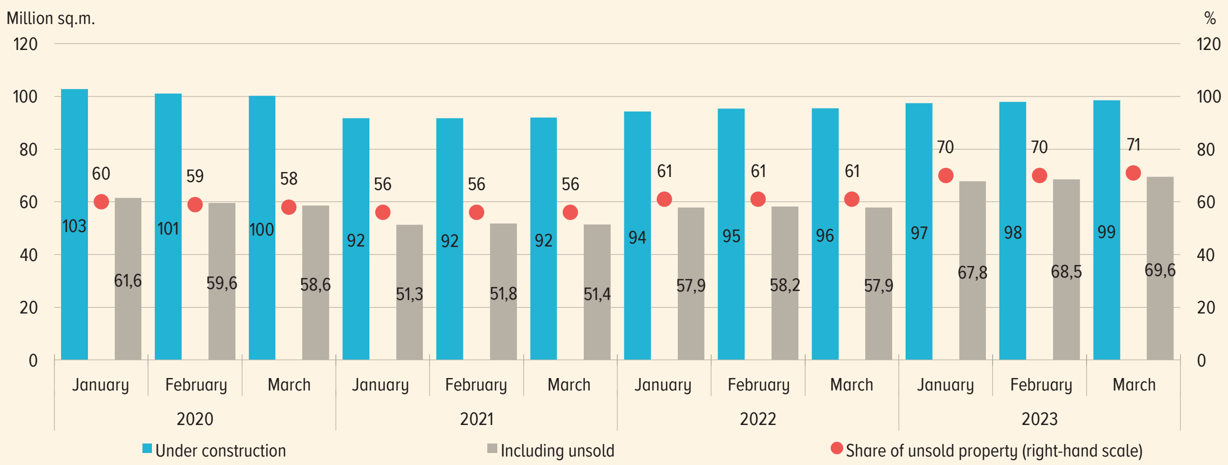
Out of the major residential real estate markets, the greatest imbalance of supply and demand was recorded in Moscow, the Krasnodar Territory, Novosibirsk, Tyumen, and the Sverdlovsk Region, where the area of housing under construction increased significantly.

LAUNCH OF NEW PROJECTS IN RESIDENTIAL REAL ESTATE IN RUSSIA (MILLION SQ.M.) *Chart 41*



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

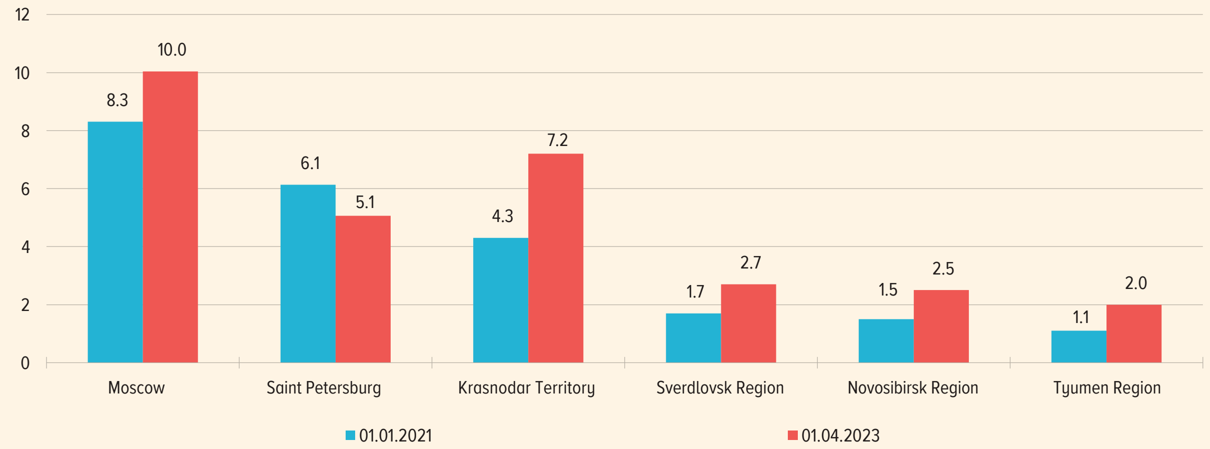
DYNAMICS OF THE TOTAL AREA OF PROJECTS UNDER CONSTRUCTION AND UNSOLD PROPERTIES IN RUSSIA *Chart 42*



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

[1] According to Rosreestr.

VOLUME OF UNSOLD SPACE IN BUILDINGS UNDER CONSTRUCTION IN RUSSIAN REGIONS
(MILLION SQ.M.) *Chart 43*



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

RESIDENTIAL REAL ESTATE PRICE INDEX, QOQ *Table 5*

	Residential real estate	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2	2022 Q3	2022 Q4	2023 Q1
Russian Federation	Primary	106.0	107.0	105.1	105.7	108.0	106.5	104.3	100.9	99.4
	Secondary	103.6	104.4	103.4	104.7	106.5	102.0	101.4	101.6	101.2
Moscow	Primary	106.7	110.2	104.2	103.4	105.3	105.2	102.5	102.1	97.8
	Secondary	100.4	110.6	104.5	103.5	101.7	102.2	102.0	101.1	97.9

Source: Rosstat.

The excess of supply over demand in Q1 2023 provoked a price downturn in the primary residential real estate market of Russia and a slowdown in growth rates in the secondary market.

High prices in the primary residential real estate market fueled by concessional mortgage programmes, and in 2022 also by high-risk marketing promotions of developers and banks, resulted in the gap between housing prices in the primary and secondary markets in the Russian Federation widening from 9% in 2019 to 40% in Q1 2023. In some regions, the price gap is even wider, e.g., in Penza and Astrakhan Regions, it grew to more than 50% over the comparable period. A significant difference in housing prices in the primary and secondary markets indicates that bank collateral on loans for housing under construction may be overpriced[2].

Initially, the state mortgage rate subsidy programme launched in 2020 as an anti-crisis measure had a positive impact on the affordability of primary housing purchased under a mortgage loan. But by 2021, amid rising prices outpacing the growth of household nominal incomes, the impact of improved lending conditions was exhausted. As a result, in Q1 2023, the housing affordability index[3] dropped to 42 sq.m. (Q1 2021: 45 sq.m.). Housing affordability in the secondary market also decreased since the beginning of 2021 to 41 sq.m.

Since the demand for mortgage loans depends on housing affordability, the decrease in affordability was accompanied by a relative decline in the number of loans. Thus, when the effect of reduced mortgage rates is offset by rising prices due to the impact of concessional mortgage programmes, the only driver of demand for mortgage loans is the growth of household incomes.

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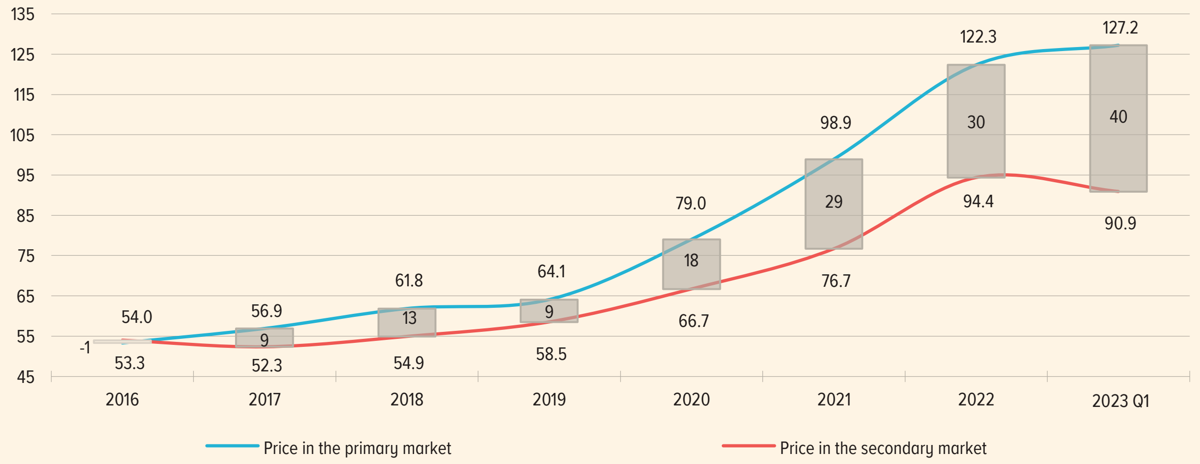
[2] As a rule, banks record the value of collateral in the form of rights of claim under equity participation agreements at the purchase price specified in the agreement, and the revaluation occurs after the building is commissioned.

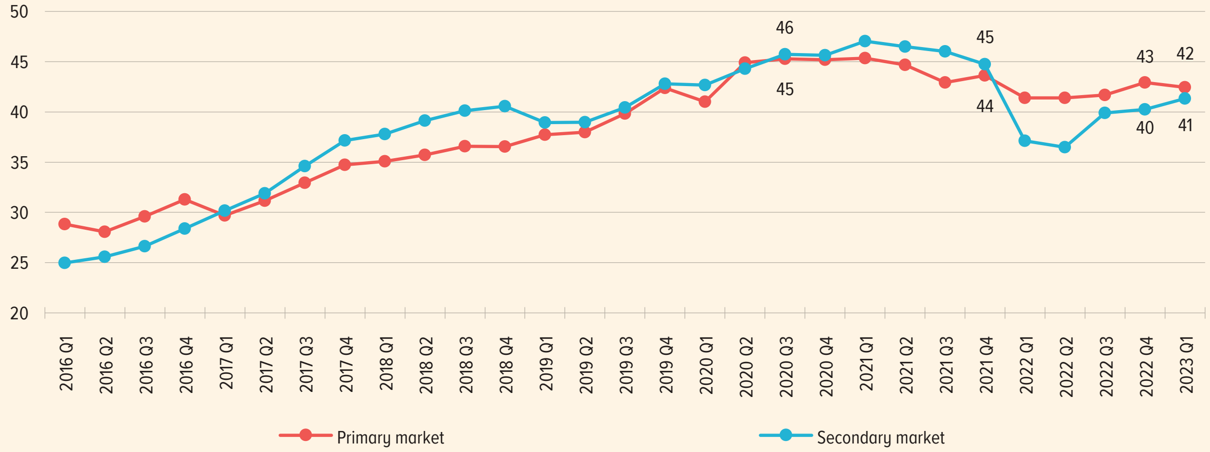
[3] The housing affordability index shows how many square metres an individual can buy with a mortgage loan with a monthly payment of 0.5 of the average wage.

DYNAMICS OF THE PRICE GAP BETWEEN THE PRIMARY AND SECONDARY HOUSING MARKETS IN RUSSIA *Chart 44*
(RUB THOUSAND PER SQ.M.)



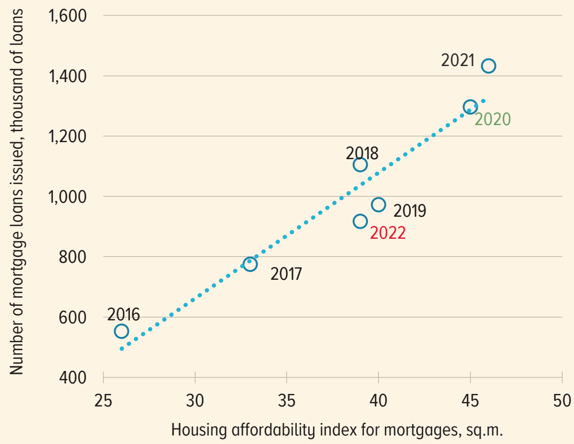
Sources: Rosstat, Bank of Russia calculations.

HOUSING AFFORDABILITY INDEX FOR MORTGAGE *Chart 45*
(SQ.M.)



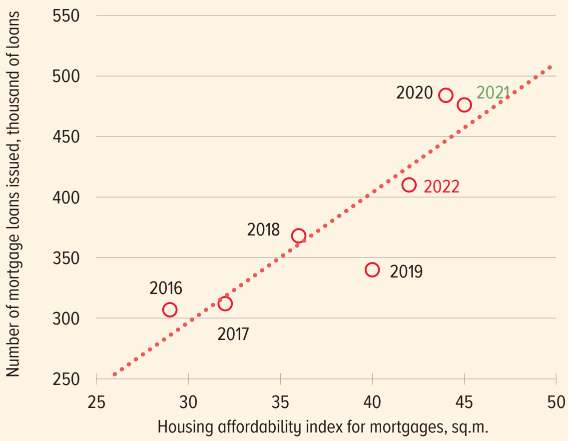
Sources: Reporting form 0409704, Rosstat.

CORRELATION BETWEEN THE NUMBER OF LOANS ISSUED AND THE HOUSING AFFORDABILITY INDEX BY YEAR IN THE SECONDARY REAL ESTATE MARKET *Chart 46*



Sources: Reporting form 0409704, Rosstat.

CORRELATION BETWEEN THE NUMBER OF LOANS ISSUED AND THE HOUSING AFFORDABILITY INDEX BY YEAR IN THE PRIMARY REAL ESTATE MARKET *Chart 47*



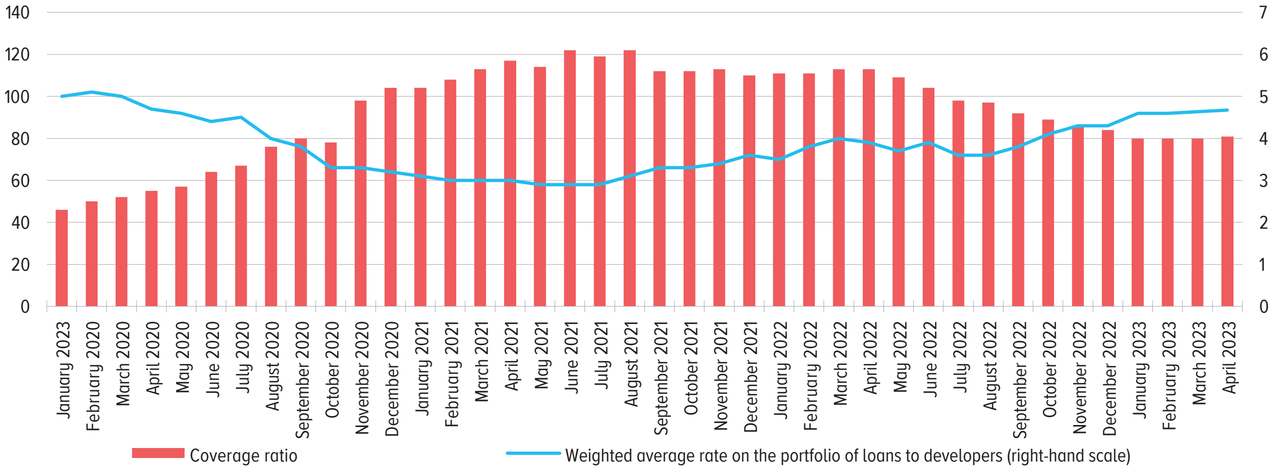
Sources: Reporting form 0409704, Rosstat.

2. Funding for housing construction

The risks of banks associated with the project financing of housing construction are slowly building up. Starting from H2 2022, due to lower demand for new buildings and the simultaneous launch of new construction projects, escrow accounts are replenished much slower than required for the housing project financing. As a result, starting from mid-2022, funds in escrow accounts do not cover loans to developers. This gap is growing rapidly and as of 1 April 2023, amounted to almost RUB 1 trillion (coverage ratio: 81%)[28]. The increase in the weighted average rate for project financing (up to 4.7% for the loan portfolio as of 1 April 2023) is caused, among other things, by a decline in the coverage ratio, since the loan rate depends on funds in escrow accounts. Higher borrowing costs and reduced demand for housing could potentially lead to a decrease in the profit margins of certain projects and as a result, affect borrowers' ability to service their debts.

LOANS COVERAGE RATIO OF HOUSING DEVELOPERS WITH FUNDS IN ESCROW ACCOUNTS AND INTEREST RATE ON LOANS TO DEVELOPERS *Chart 48*

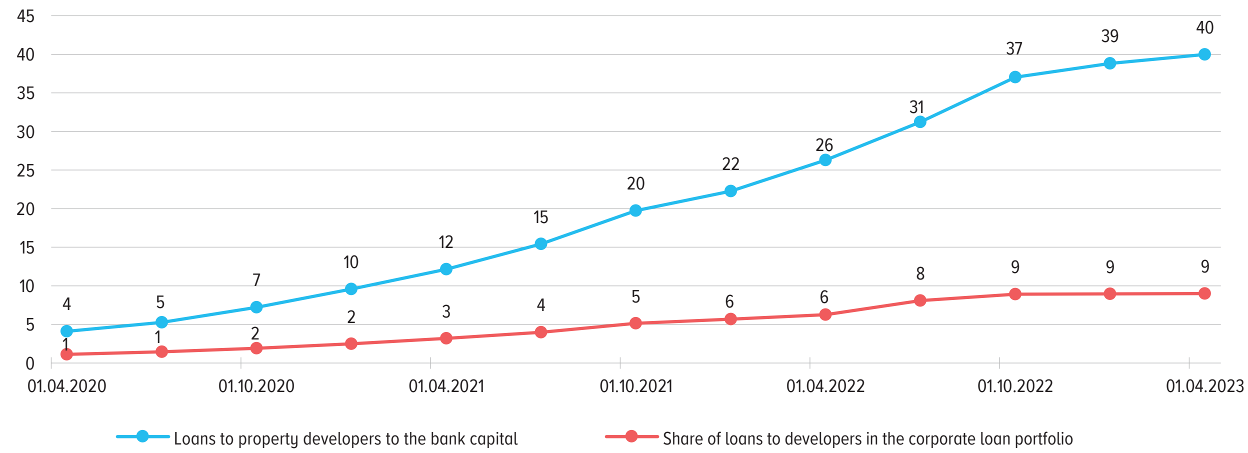
(%)



Sources: Reporting form 0409115, Bank of Russia survey.

EXPOSURE OF BANKS TO PROJECT FINANCE RISKS (AVERAGE FOR BANKS AUTHORISED TO OPEN ESCROW ACCOUNTS UNDER EQUITY PARTICIPATION AGREEMENTS) *Chart 49*

(%)



Sources: Reporting form 0409101, Bank of Russia survey.

[28] According to data on escrow accounts opened for projects where borrowed funds were provided for construction.

Banks that extensively lend to housing construction are the most vulnerable to possible risks in the primary real estate market. The concentration of risk on developers is already high: as of 1 April 2023, the total amount of loans to developers is comparable to 40% of the capital of banks providing such loans[29]. However, this risk is still limited, since most of the debt is still covered by funds in escrow accounts.

3. Bank of Russia measures aimed at limiting imbalances in the mortgage market

The Bank of Russia is implementing a number of measures to limit high-risk practices in mortgage lending and improve lending standards.

Firstly, from 30 May 2023, the Bank of Russia has increased provisioning for mortgage loans with effective interest rates significantly below the market level[30]. This measure directly affects 'subsidised mortgages from the developer' and discourages banks from issuing mortgage loans at near-zero rates accompanying it with overpricing collateral.

Secondly, in order to maintain acceptable lending standards and take into account the risks associated with inflated housing prices, mainly in the primary market, the Bank of Russia increased macroprudential requirements for low-down-payment mortgage loans. Starting from 1 December 2022, the Bank of Russia established a 'prohibitive' risk-weight add-on of 200% applicable to loans for housing under construction with a down payment of 10% or less. This measure restricts the so-called 'no-down-payment mortgages'. Starting from 1 May 2023, macroprudential capital requirements have been increased for the majority of mortgage loans with a down payment of less than 30%[31].

In addition, in order for banks to form a capital buffer adequate to the risks associated with low-down-payment loans (10–30%), from 1 May, risk-weight add-ons apply for mortgage loans for new buildings, including within a year after their commissioning. The introduction of this requirement is a trade-off, which allowed establishing significantly lower add-ons for mortgage loans for finished housing.

These measures are primarily aimed at reducing risks in mortgage lending and ensuring accumulation of capital buffers by banks in the event of growing losses on mortgage loans. But they will also facilitate the reduction of the price gap between the primary and secondary housing markets, which may increase the demand for new buildings from buyers ready to buy real estate with their own funds. At the same time, some slowdown is expected in the growth of mortgage lending and its redistribution in favour of the secondary market.

The Bank of Russia will consider reducing macroprudential add-ons, provided that market participants stop using high-risk schemes in mortgage lending, the gap between prices for housing under construction and finished homes decreases, and lending standards improve. However, if the already introduced measures fail to significantly reduce the spread of risky lending practices, the Bank of Russia will consider a statutory ban on such practices.

3.5. Vulnerability 5. Interest rate risks of banks amid growing public debt

The recovery of the net interest margin (NIM) in H2 2022 supports the banking sector's resilience in case of materialisation of interest rate risk. However, the exposure of banks to interest rate risk still exceeds the pre-crisis level: despite the influx of long-term deposits, the share of short-term liabilities[32] remains higher than in early 2022. To limit a possible decrease in net interest income (NII), banks strive to improve interest rate risk management, primarily through a better

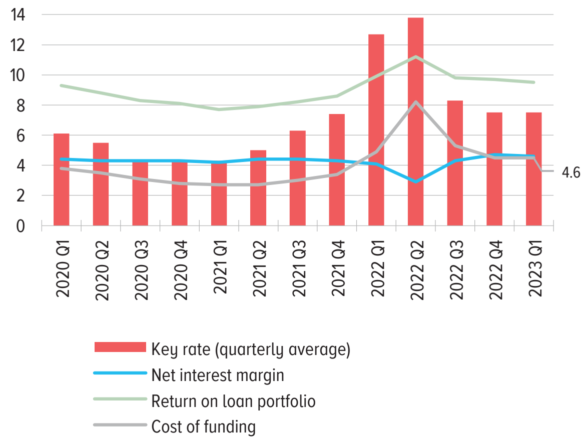
[29] Calculated for banks authorised to open escrow accounts for settlements under EPAs.

[30] Applicable to loans issued after 15 March 2023.

[31] Risk-weight add-ons on loans for commissioned housing with an LTV of 85–90% are differentiated according to DSTI.

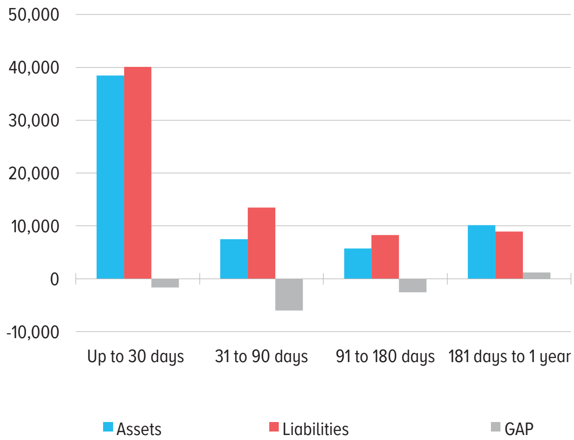
[32] Cash in accounts and in deposits for up to 1 year.

COST OF FUNDING AND RETURN ON LOAN PORTFOLIO (QUARTERLY) *Chart 50*
(%)



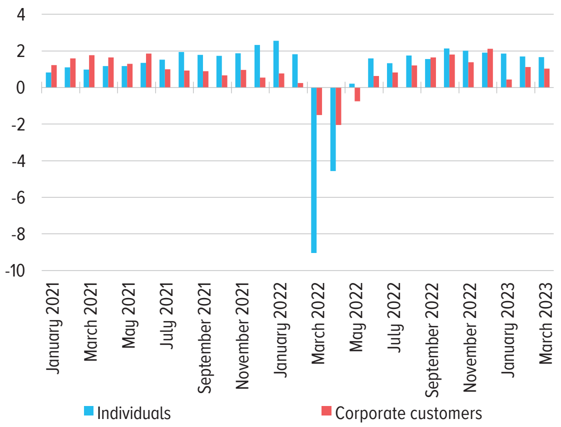
Sources: Reporting forms 0409102, 0409101.

INTEREST RATE GAP OF THE BANKING SECTOR RUBLE-DENOMINATED PORTFOLIO ON A HORIZON OF UP TO 1 YEAR (BASELINE ESTIMATE) *Chart 51*
(RUB BILLION)



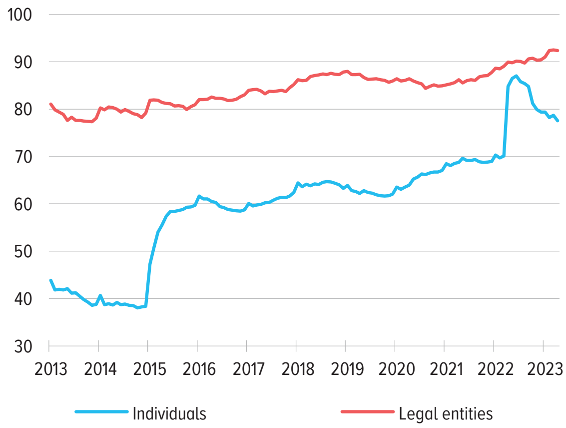
Source: Reporting form 0409127.

DIFFERENCE BETWEEN RATES ON NEWLY ATTRACTED LONG-TERM AND SHORT-TERM DEPOSITS IN RUBLES *Chart 52*
(PP)



Source: Interest rates on loans and deposits and structure of loans and deposits by maturity.

SHARE OF SHORT-TERM LIABILITIES (UP TO 1 YEAR, INCLUDING FUNDS ON ACCOUNTS) IN RUBLES TO INDIVIDUALS AND LEGAL ENTITIES *Chart 53*
(%)



Source: Reporting form 0409101.

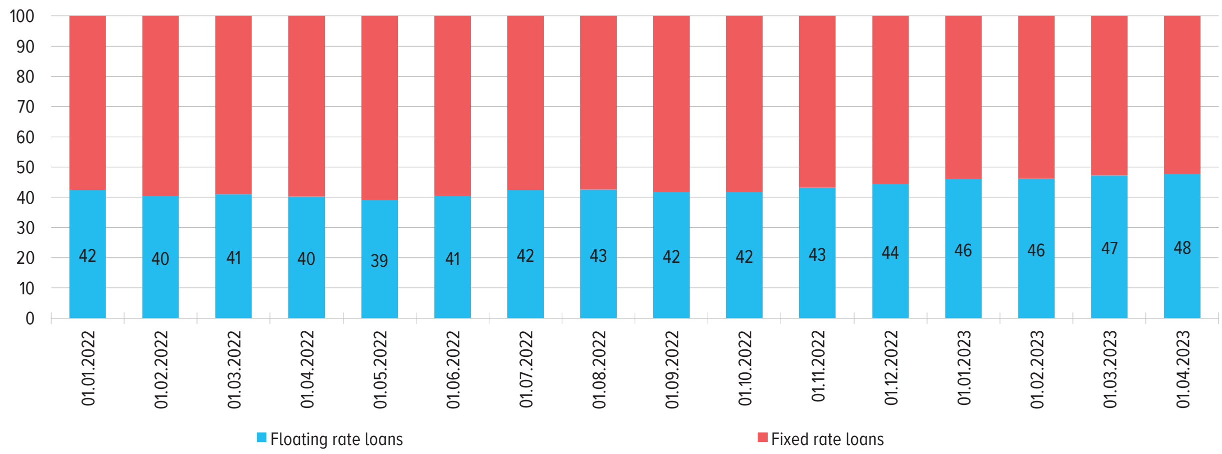
balance of assets and liabilities by maturity, and by using relevant approaches to calculating interest rate risk of the banking book.

In H2 2022, the difference between the returns on the loan portfolio and the cost of funding for banks recovered after a significant contraction during the crisis. The high NIM of banks (4.6% in Q1 2023 (Chart 50)) allows them to accumulate a safety margin in case of materialisation of interest rate risk due to a sharp increase in rates.

Since mid-2022, the long-term household ruble deposits have shown an upward trend. The premium to the rate on short-term household deposits reached the level of previous years: about 1.7 pp in March (Chart 52). The share of short-term household ruble deposits dropped from a peak of 87% to 78% as of 1 April 2023 (by 4 pp from 1 October 2022 to 1 April 2023), but it is still above the value observed in early 2022 (Chart 53).

Starting from H2 2022, legal entities and individual entrepreneurs gradually increased bank borrowings in rubles at floating interest rates. From 1 October 2022 to 1 April 2023, the share of such loans increased by 6 pp to 48% (Chart 54). As before, more than half of corporate ruble loans are fixed-rate loans.

STRUCTURE OF THE CORPORATE RUBLE LOAN PORTFOLIO BY RATE TYPE *Chart 54*
(%)



Source: Reporting form 0409303.

As of 1 April 2023, the bulk of debt at floating rates, i.e., 94.7%, is classified as debt on financial instruments, the rate for which is based on the Bank of Russia key rate (including its combinations with other interest rates). The share of loans under MosPrime Rate was 0.3%, under RUONIA, less than 0.01%.

Thus, maturity mismatches of assets and liabilities remain higher than their pre-crisis levels. Materialisation of interest rate risk in the event of an increase in rates by 2 pp may lead to a decrease in the annual NII of banks by 4–8%[33] (excluding and including behavioural assumptions, respectively). To improve financial stability, banks have to use relevant approaches to calculating the interest rate risk of the banking book[34].

Box 5. Budget deficit and interest rate risk of the banking sector

Amid escalating sanctions pressure from unfriendly countries, in January – April 2023, the budget deficit amounted to RUB 3.4 trillion (of which RUB 1.8 trillion formed in January, while March saw a surplus). The deficit was facilitated by decreasing oil and gas revenues and growing budget expenditures.

The introduction of a price cap for Russian oil and petroleum products, and a significant reduction in gas supplies to Europe led to oil and gas budget revenues plummeting by 52.3% YoY, and total revenues by 22.4% YoY in January-April 2023 (Table 6). At the same time, the total expenditures for four months amounted to RUB 11.2 trillion, making +26.3% YoY.

The increase in expenditures was observed due to rapid signing of a significant share of the contracts planned for the year and advance financing under certain contracts. The planned federal budget deficit for 2023 was approved at RUB 2.9 trillion. To meet the target, the budget should be balanced for most of the remaining months.

The budget deficit in 2023 will lead to an increase in borrowings in the primary OFZ market and growth of the government bond market. As of early May 2023, the volume of the OFZ market at the outstanding par value amounted to RUB 18.6 trillion, or about 12% of GDP. Despite the planned increase in government borrowing, the ratio of government debt to GDP in Russia will remain acceptable and significantly lower than in other countries.

OFZs are mainly held by the banking sector (65.6% of outstanding securities). After the exit of non-residents, banks increased their share in the primary OFZ market. In January – April 2023, they bought back 58.4% of the OFZs placed on the primary market. Those purchases were mainly made by systemically important banks.

[33] Estimated interest rate risk of the banking sector in rubles over a one-year horizon in the hypothetical scenario of an increase in rates by 2 pp, according to Reporting form 0409127 as of 1 April 2023.

[34] Bank of Russia Guidelines No. 8MR, dated 9 July 2020, 'On Calculation of Interest Rate Risk on Assets (Claims) and Obligations (Liabilities) of a Credit Institution (Banking Group)'.

Systemically important banks still have a shortage of high quality liquid assets amid the extension in 2023 of regulatory relief in terms of compliance with the liquidity coverage ratio (N26). The forthcoming termination of the said relief measure will contribute to further growth of the banks» demand for OFZs.

As of early May 2023, the share of OFZs in the assets of the banking sector was 8.3%, the OFZ portfolio with a fixed coupon (OFZ-PD) was 3.8%. Thus, the banking sector has a significant potential for further OFZ purchases, including OFZ-PD. At the same time, an increase in the OFZ-PD portfolio will mean higher interest rate risk in the banking book, so banks are advised to take measures to attract long-term sources of funding. The Bank of Russia plans to assess the interest rate risk management practices in large banks and is also developing new approaches to regulating liquidity risk.

REVENUES/EXPENDITURES AND BUDGET SURPLUS/DEFICIT *Table 6*
(RUB BILLION)

	January–April 2023	January–April 2022	%, YoY	Approved by Law No. 466-FZ, dated 5 December 2022
Revenues	**7,782**	**10,034**	**−22.40%**	**26,130**
Oil and gas revenue, including	2,282	4,787	−52.30%	8,939
– baseline oil and gas revenue	*2,601*	*2,374*	*9.50%*	*8,000*
Non-oil and gas revenue, including	5,500	5,247	4.80%	17,191
– VAT (production and imports)	*3,439*	*3,098*	*11.00%*	*10,417*
– income tax	*561*	*695*	*−19.40%*	*1,633*
Expenditures, including	**11,206**	**8,869**	**26.30%**	**29,056**
– public procurement	*2,840*	*1,759*	*1,081*	*4,982*
Deficit	**−3,424**	**1,164**	**−4,588**	**−2,925**

Source: Ministry of Finance of the Russian Federation.

4. ASSESSMENT OF THE FINANCIAL SECTOR RESILIENCE

4.1. Banking sector

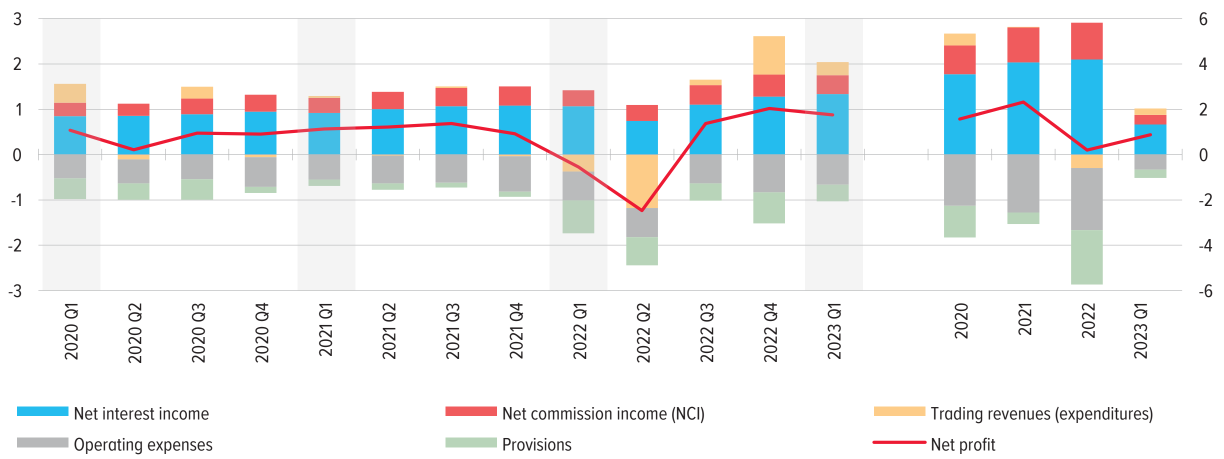
The financial position of credit institutions is improving. The capital reserve of the banking sector (excluding the effect of temporary support measures) remains at the level of RUB 6 trillion[1]. The financial performance is partially supported by the current regulatory relief measures. However, much of the regulatory requirements have already gone back to pre-crisis standards since the beginning of 2023. In addition to the regulatory relief, the capital reserve in 2023 was also maintained by the refusal of many banks to pay dividends (in 2022, only RUB 139 billion was allocated for this purpose, almost five times lower than in 2021).

The banking sector[2] is restoring its profitability. In Q1 2023, the net profit of the banking sector amounted to RUB 0.9 trillion (Chart 55). This is significantly higher than in the similar period of previous years (Chart 56) due to an increase in core income (NII and net commission income (NCI)) and normalisation of provisioning expenses, among other things.

As a result, the return on assets[3] increased to 1.1% by 1 April 2023, while the return on equity[4] increased to 10.7% (Chart 56). The key drivers behind the growth in return on assets (ROA) over the past six months are the growth of NII (Chart 57) (its contribution to the change in ROA amounted to +0.4 pp as rates normalised) and positive currency revaluation (+1.1 pp to ROA in the context of a long open currency position (OCP) due to weakening of the ruble). The financial performance is partly supported by the current easing in terms of credit risk, although a significant part of the requirements has already returned to pre-crisis standards in early 2023.

STRUCTURE OF BANKING SECTOR PROFITS*
(RUB TRILLION)

Chart 55



**For all credit institutions except the Bank of Non-core Assets.*
Source: Reporting form 0409102.

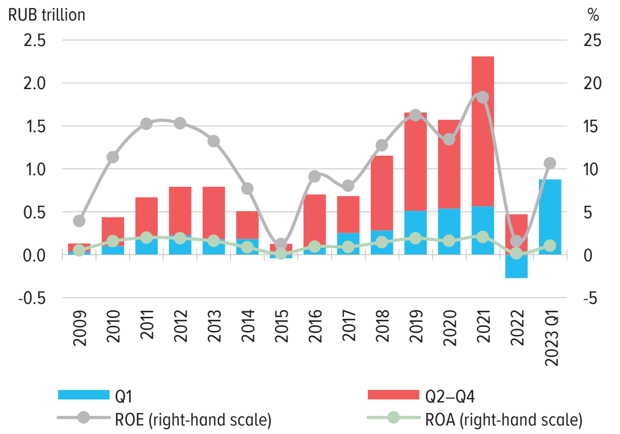
[1] The capital reserve is the total loss-absorbing capacity at which regulatory compliance is maintained. Estimate according to Reporting forms 0409135, 0409123, taking into account the surveys of banks as of 1 March 2023.

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

[3] Ratio of net income for 12 months to the average value of assets for 12 months.

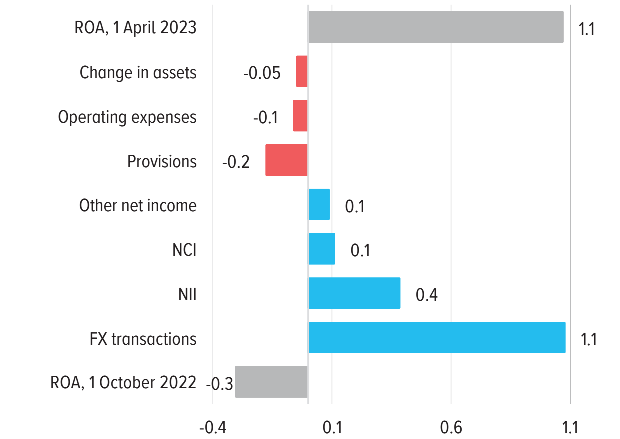
[4] Ratio of net income for 12 months to the average value of equity for 12 months.

NET PROFIT AND PROFITABILITY OF THE BANKING SECTOR* *Chart 56*



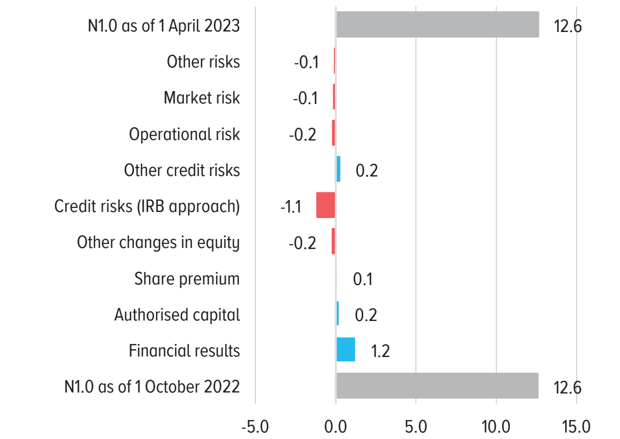
** For all credit institutions except the Bank of Non-core Assets.*
Source: Reporting form 0409101.

CHANGE IN RETURN ON ASSETS OF THE BANKING SECTOR* FROM 1 OCTOBER 2022 TO 1 APRIL 2023 *Chart 57*
(PP)



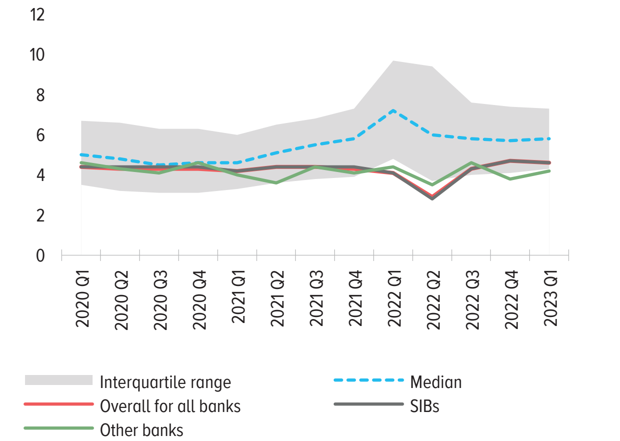
** For all credit institutions except the Bank of Non-core Assets.*
Sources: Reporting forms 0409101, 0409102.

CHANGE IN BANK CAPITAL ADEQUACY FROM 1 OCTOBER 2022 TO 1 APRIL 2023 *Chart 58*
(PP)



Sources: Reporting forms 0409135, 0409123.

QUARTERLY NET INTEREST MARGIN BY GROUPS OF BANKS *Chart 59*
(%)



Sources: Reporting forms 0409102, 0409101.

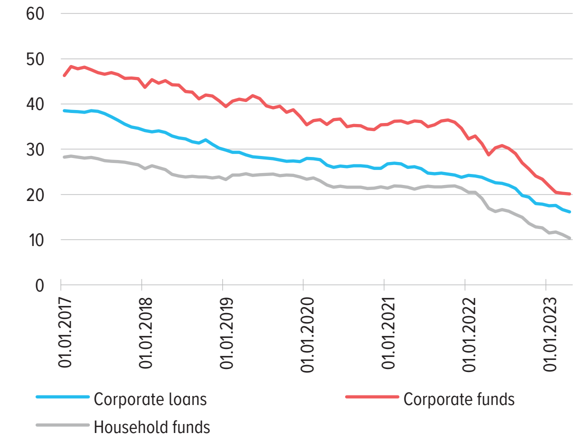
The increase in the financial performance supported capital adequacy, while the growing NII helped maintain NIM at a high level (Chart 59) and increased the banks' safety margin to be tapped in case of materialisation of interest rate risk. The capital adequacy ratio for all banks in general in the reporting period remained close to 12.6%. The increase in the financial performance in the sources of capital in the amount of RUB 1.2 trillion (+1.2 pp in terms of H1.0) supported the growth of lending. The reserve capital of the banking sector (excluding the effect of temporary support measures) remains at the level of RUB 6 trillion[5]. In addition to the regulatory easing, the reserve capital in 2023 was also supported by the refusal of many banks to pay dividends (in 2022, only RUB 139 billion was allocated for this purpose, almost five times lower than in 2021).

As mentioned in Section 3.1, the trend towards dedollarization of bank balance sheets and a reduction in the share of toxic currencies continues. For the period from 1 October 2022 to 1 April 2023, the share of FX assets dropped[6] by 4.3 pp from 19.5% to 15.1%; the share of liabilities, down by 3.4 pp from 18.9 to 15.5%. Open foreign exchange position has also decreased over the reporting

[5] Estimate according to Reporting forms 0409135, 0409123, taking into account the surveys of banks as of 1 March 2023.

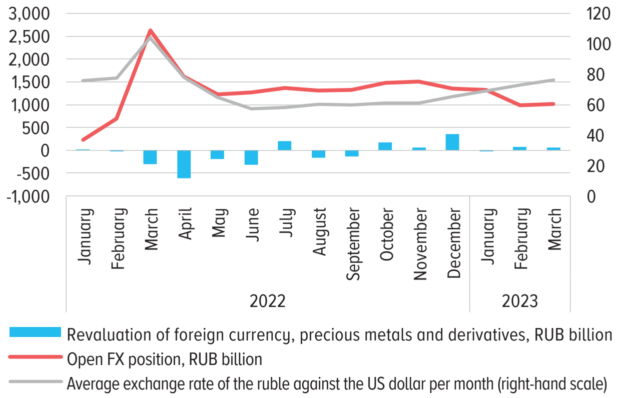
[6] At the exchange rate as of 1 April 2023.

DOLLARISATION AT THE RATE AS OF 1 APRIL 2023 *Chart 60*
(%)



Source: Reporting form 0409101.

FINANCIAL RESULT FROM REVALUATION OF FOREIGN CURRENCY, PRECIOUS METALS AND DERIVATIVES *Chart 61*

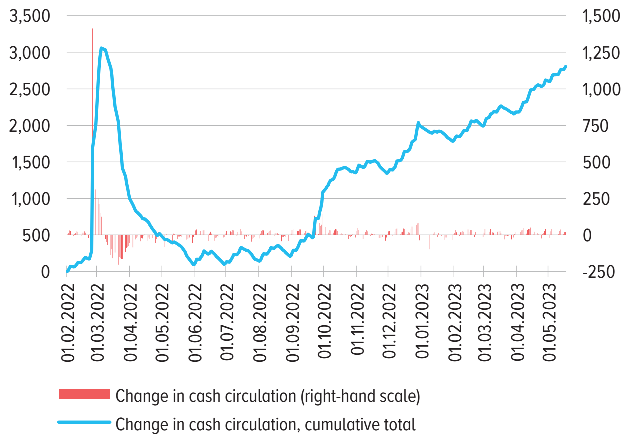


Sources: Reporting forms 0409101, 0409634. The financial performance from revaluation of foreign currency, precious metals and derivatives is determined according to Reporting form 0409101 and excludes the result of conversion transactions.

period (Chart 61) from RUB 1.3 trillion to RUB 1.0 trillion (from 23 to 13 billion in USD equivalent). The ratio of open foreign exchange position to the sector's capital over the reporting period decreased to a moderate level of 6.6% (-3 pp).

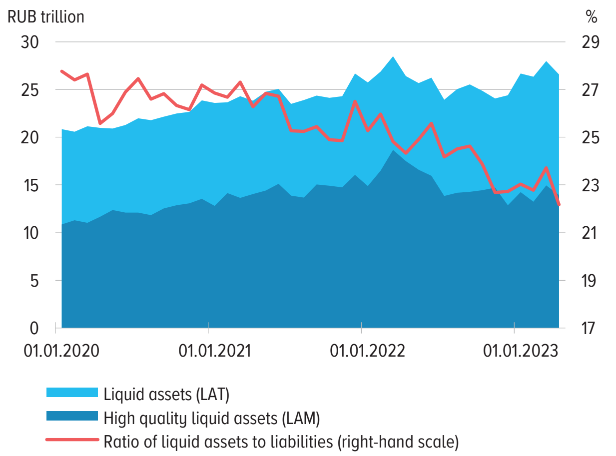
The liquidity situation in credit institutions remained generally stable. Amid growing geopolitical tensions, in September 2022, the Russian market resumed growth in household demand for cash (Chart 62). Despite the generally stable current situation, cash in circulation continues to grow in accordance with seasonal dynamics, however, the growth rate is slightly higher than in previous years (excluding the crisis period of 2022). The debt of credit institutions to the Bank of Russia on repo transactions increased to RUB 1.5 trillion (in March 2022 it reached RUB 5.6 trillion). However, in general, the liquidity situation in banks remains satisfactory. The volume of liquid assets of banks is more than sufficient to cover expected cash outflows over a 30-day horizon, taking into account the assumptions used in calculating the current liquidity ratio (N3), and amounts to about 22% of all liabilities (Chart 67). However, the liquidity coverage ratio (N26 (N27) for SIBs in general is below 100% (57% as of 1 April 2023)). The stable liquidity situation allows banks to maintain a high NIM, but in order to reduce exposure to liquidity risk, banks have to form a sufficient supply of liquid assets and increase the share of long-term funding.

CHANGE IN CASH CIRCULATION *Chart 62*
(RUB BILLION)



Source: Bank of Russia.

ASSETS INCLUDED IN THE CALCULATION OF N2 AND N3 LIQUIDITY RATIOS *Chart 63*



Sources: Reporting forms 0409135, 0409101.

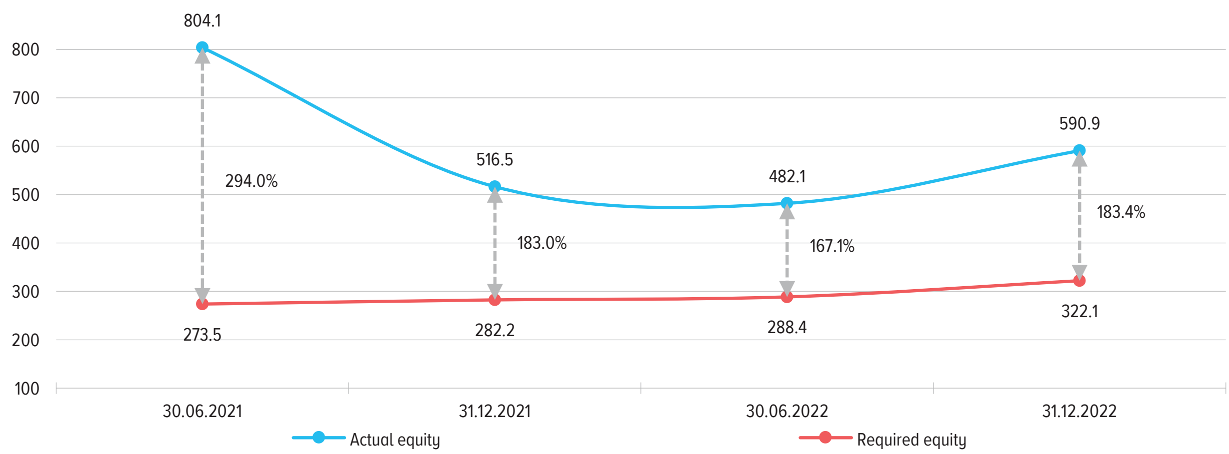
4.2. Non-bank financial institutions

In 2022, non-bank financial institutions (NBFIs) generally managed to maintain a high level of financial stability. However, the growth rate of their assets for the year was lower than the inflation rate, and their profit for 2022 showed a YoY decrease. It should be noted that the losses from the materialisation of geopolitical risks have not yet been fully reflected in the balance sheets of NBFIs. At the same time, NBFI investments in foreign assets are gradually declining.

Insurance companies. The insurance market in 2022 showed a symbolic increase in premiums (+0.5%). In the segment of non-credit life insurance, investment life insurance (ILI) products have been replaced by more conservative universal life insurance (ULI) products. In 2022, the profit of insurers before tax dropped by 17.3%, to RUB 202.6 billion. Such dynamics was mainly due to a 60.4% YoY decrease in income from investment activities, including loss from transactions with financial instruments and FX transactions. Life insurers and non-life insurers were responsible for the most significant losses from transactions with financial instruments and FX transactions, respectively. Despite the decline in financial performance, the required ratio of equity and liabilities of insurers remained at the level of 2021 amounting to 183.4% (+0.4 pp per year), including due to regulatory relief measures.

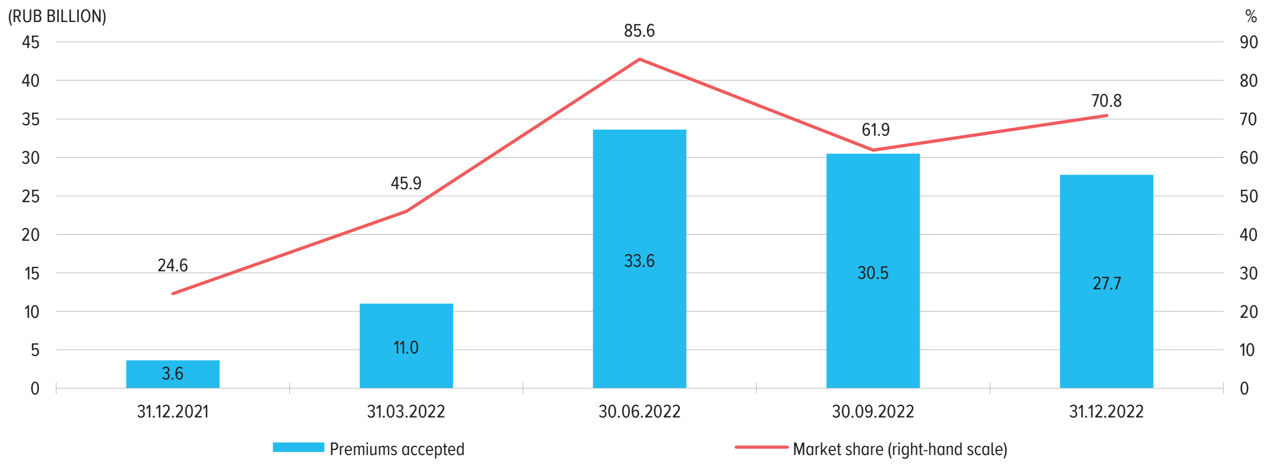
In 2022, the systemic importance of Joint Stock Company Russian National Reinsurance Company (JSC RNRC) played an increasingly significant role in reinsurance. The company's market share more than doubled over the year (from 31.5% to 67.4% of premiums ceded to reinsurance). Despite an increase in the loss ratio of the portfolio as a result of a series of major insured events in the commercial real estate in H2 2022, the equity cushion of JSC RNRC, including its guaranteed capital (RUB 750 billion), remains consistently strong. The required ratio of equity and liabilities of the company at the end of the year amounted to 178%.

STATUTORY EQUITY CAPITAL RATIO TO ASSUMED LIABILITIES
(RUB BILLION) *Chart 64*



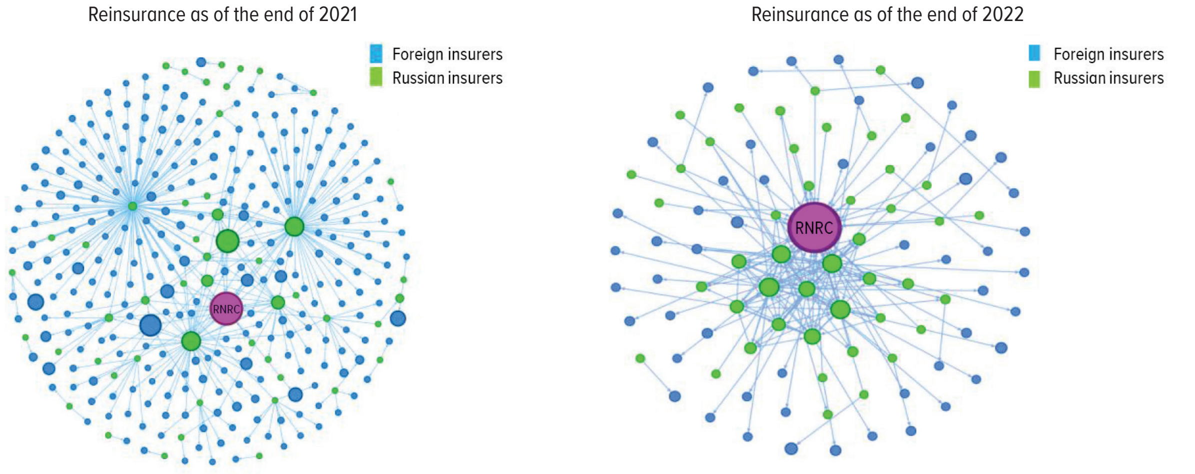
Source: Reporting form 0420156.

QUARTERLY PREMIUMS OF JSC RNRC *Chart 65*



Source: Reporting form 0420162.

INTERCONNECTIONS ON OUTGOING REINSURANCE *Chart 66*



Source: Reporting form 0420157.

The auto insurance segment reported higher losses. Thus, the combined loss ratio for compulsory motor third-party liability insurance (OSAGO) over the year increased by 2 pp to 93.7%. At the same time, OSAGO payments increased by 11.3% to RUB 159.8 billion. The growing costs of repairs and spare parts resulted in an increase in the average payment for settled insured events over the year by 10.8% to RUB 75,600. It should be noted that the increase in prices of spare parts was not yet fully reflected in the growth of payments for 2022. Due to the 'lag' effect (reimbursement at prices as of the date of the accident as the car accident victims apply for payment), payments are expected to grow further in 2023. In 2022, the Bank of Russia expanded the base tariff corridor in the OSAGO segment, which allowed maintaining fair pricing and applying individualised approaches to assessing risks of policyholders.

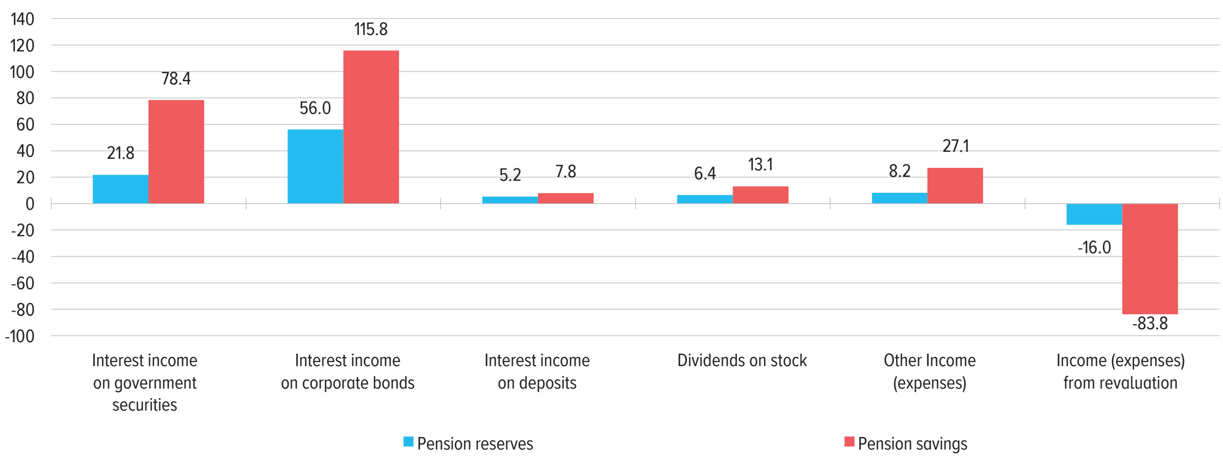
In the context of increasing costs of repairs, enforcement of the current limits on possible payments under OSAGO contributed to growing demand for motor hull insurance products. New product solutions of insurers (mini motor hull insurance, motor hull insurance programmes that replace warranties from manufacturers, etc.) have generated interest in such products among consumers who have never purchased motor hull policies. Voluntary motor vehicle insurance premiums in 2022 rose by 7.8% YoY to RUB 221.1 billion. The number of motor hull insurance agreements grew by 11.3% over the year despite a decrease in new car sales by 58.8%[7].

To improve financial stability of the OSAGO market, the Bank of Russia announced changes in terms of introducing differentiated capital requirements for companies depending on their market share. A systemic importance add-on for the largest OSAGO segment insurers (with a share of more than 15%) will not only increase the stability of the segment, but also promote competition among its participants. It is worth noting that in 2022, only three insurers had a share in the OSAGO market exceeding the threshold for additional solvency requirements. Taking into account their accumulated reserves, these companies do not currently require additional capital to comply with possible new requirements.

Non-governmental pension funds (NPFs). Pension products managed by NPFs demonstrated growth (the portfolio of pension savings (PS) increased by 2.5% over the year, and the portfolio of pension reserves (PR), by 7.7%). Profit before tax of NPFs for the year mounted to RUB 63 billion, +8% YoY. In NPF portfolios, the share of corporate securities was redistributed in favour of OFZs. Namely, in Q4, the share of such securities in the PS portfolio increased by 3.4 pp (to 36.8%), and investments PR funds in government securities grew by 2.3 pp (to 20.7%).

NON-GOVERNMENTAL PENSION FUNDS (NPFS) INCOME STRUCTURE
(RUB BILLION)

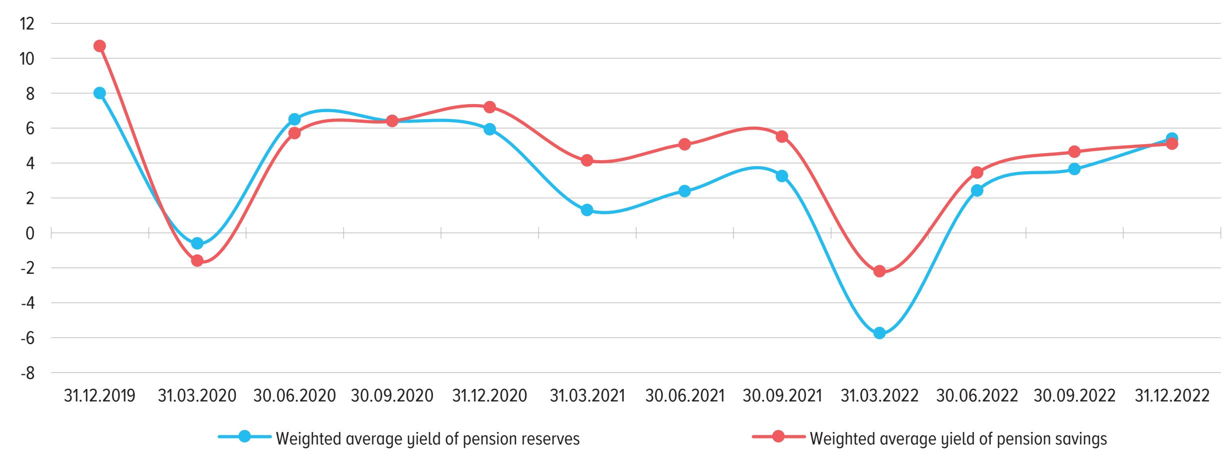
Chart 67



Sources: Reporting forms 0420254, 0420255.

RETURN ON PENSION SAVINGS AND PENSION RESERVES
(% P.A.)

Chart 68



Sources: Reporting forms 0420254, 0420255.

[7] According to the Association of European Businesses.

The returns[8] for 2022 amounted to 5.1% on pension savings and to 5.4% on pension reserves. The returns on PS exceeded the growth of the government bond index (RGBITR), as well as the moderate index of pension savings assets (RUPMI), which grew by 3.7% and 3.1% over the year, respectively. The use of regulatory relief measures on revaluation of securities had little influence on the financial performance: in 2022, the total contribution to the value of the weighted average return on investing in PS and placing PR of NPFs, which by 31 December 2022 had not revoked their decision to fix prices, amounted to only 0.2% for PS (out of 5.1%) and 0.9% for PR (out of 5.4%).

The financial performance from investing PS and PR was mainly contributed to by interest income on corporate bonds and OFZs, while the negative result from revaluation was generated by shares (-RUB 89.8 billion for the PS portfolio and -RUB 25.9 billion for the PR portfolio). Relatively low shares of floating rate assets (7% in the PS portfolio and 4% in the PR portfolio) and free cash limited the ability of NPFs to generate additional returns and reinvest at higher rates in the spring of 2022.

Since 1 January 2023, household savings under supplementary non-governmental (voluntary) pension schemes provided by NPFs have been insured up to the threshold of RUB 1.4 million in case of bankruptcy of the fund or revocation of its license. Additionally, the law[9] was amended to increase the amount of guaranteed compensation to RUB 2.8 million. The compensation will be paid by the state corporation Deposit Insurance Agency out of a separate guarantee fund formed from the annual contributions of NPFs, which will depend not only on the amount of NPF obligations under pension agreements, but also on each NPF's individual indicators of financial stability and asset quality. These amendments aim at increasing the level of customers' confidence in NPFs.

Brokers. The introduction of sanctions against a number of major market participants led to an outflow of customers from sanctioned companies and banks providing brokerage services to companies not affected by sanctions. The total number of brokerage accounts of credit institutions and NBFIs increased by 45% (to 29 million accounts) in 2022. However, this significant increase was partly due to the duplication of customer accounts when moving from one broker to another, and the number of active customers, in turn, declined by 13% (to 2.9 million clients). At the same time, industry concentration in terms of the number of customers served by market participants remained virtually unchanged, reaching 96% at the end of 2022 for the top 10 brokers, five of which are systemically important credit institutions (with 88% of the market share) and five are NBFIs (8% of the market share). Thus, the major systemic risks in the industry continue to be associated with the largest banks with a brokerage licence and a number of large brokerage NBFIs.

Due to the increase in sanctions risks, in 2022, brokerage companies significantly reduced their investments in foreign assets. Namely, from 30 September 2021 to 31 December 2022, the amount of funds in the accounts of non-resident brokers fell by 24% (to RUB 13.6 billion), the amount of foreign stocks and bonds in the portfolios of broker NBFIs plummeted more than four times (to RUB 27.8 billion). At the same time, investments of a number of brokers in the assets of unfriendly countries still remain rather substantial. In particular, the five top brokerage NBFIs hold 5–20% of their high quality liquid assets in securities of entities from unfriendly jurisdictions.

Despite the sanctions, the brokerage industry remains resilient, including in terms of compliance with the required ratios. In 2022, the capital adequacy ratio (CAR) and the liquidity coverage ratio (LCR) of the majority of brokerage NBFIs were above the regulatory threshold.

Unit investment funds[10]. In Q2 2022, the unit investment fund (UIF) market saw a significant inflow of funds (+RUB 764 billion), and a growing number of UIFs (+55 funds, or +3%). In early 2023, this trend continued, but the rate of inflows slowed down: during January–March 2023, the net

[8] Before fees paid to a management company, special-purpose depository or fund.

[9] Federal Law No. 158FZ, dated 28 April 2023 'On Amending Article 10 of the Federal Law 'On Guaranteeing the Rights of Participants in Non-Governmental Pension Funds as part of Non-Governmental Pension Provision'.

[10] The risks of the unit investment fund (UIF) segment are considered in terms of activities of management companies.

inflow of funds into the sector amounted to RUB 182 billion. The inflow was mostly due to closed-end unit investment funds (CUIFs)[11] focused on investments in real estate, with primarily legal entities as unit holders. At the same time, the retail segment of the UIF market focused on private investors saw an outflow of funds in the amount of RUB 4 billion in Q4 2022. This dynamics mainly resulted from outflows from open-end UIFs (-RUB 8.35 billion), while exchange-traded UIFs demonstrated inflows (+RUB 4.34 billion). In January–March 2023, outflows were replaced by inflows, which made up RUB 3.9 billion. In 2022 and early 2023, the scale of outflows and inflows from retail funds was insignificant compared to the dynamics of previous years, which may be due to more cautious investors' behaviour amid higher uncertainty. The observed trend in terms of outflows and inflows in the UIF market does not pose direct systemic risks.

It should be noted that retail investors also show growing interest in real estate funds. In 2022, the net asset value (NAV) of real estate closed-end unit investment funds with more than 100 individual unit holders increased by 46% over the year to RUB 257 billion. The growth in the assets of retail real estate funds in 2022 was mainly due to commercial real estate funds, namely the warehousing segment. The popularity of retail real estate funds stems from their low sensitivity to equity risk and a stable cash flow in the form of regular rental payments. However, investments in such funds often have a high level of concentration on certain facilities and developers. In addition, in the event of a surge in vacancy rates of real estate, fund management companies for unqualified investors will be forced to sell them, which may exacerbate pressure on the declining market.

The asset structure of UIFs is being transformed, including in response to sanctions: investments in foreign securities dropped by 6 pp from February 2022 to February 2023 (mainly at the expense of securities of unfriendly countries), and as of 28 February 2023, their share in the total volume of securities in UIFs for unqualified investors amounted to 29%.

Leasing. Q4 2022 saw a noticeable recovery growth in the leasing portfolio (+14.25%[12]). The leasing portfolio of the top lessors analysed by the Bank of Russia was able to partially recover with a decrease of 5%, amounting to RUB 4.65 trln by the end of 2022. The lack of growth in the leasing portfolio is associated with a decline in the volume of new business (in a number of corporate segments and in the group of lessors with foreign participation) and an uprising amount of distressed assets. Leasing companies continue to adapt to parallel imports, substitution of supply chains, and re-orientation of retail portfolios of equipment to suppliers from friendly countries. In 2022, the volume of new business of leasing companies diminished only slightly (-3%) despite a significant drop (-9.4%) in the middle of the year.

According to IFRS statements, the net loss for 2022 of the considered sample of the top lessors amounted to RUB 108.4 billion versus profit of RUB 66.5 billion in 2021. The loss was mainly incurred by companies operating in the aircraft leasing segment and having made provisions for potential losses, including as a result of asset freeze. Largely due to the air transportation segment, the distressed assets of the leasing market increased by RUB 173.6 billion over the year, the ratio of provisions for possible losses to the portfolio rose from 2.4% to 5.06%.

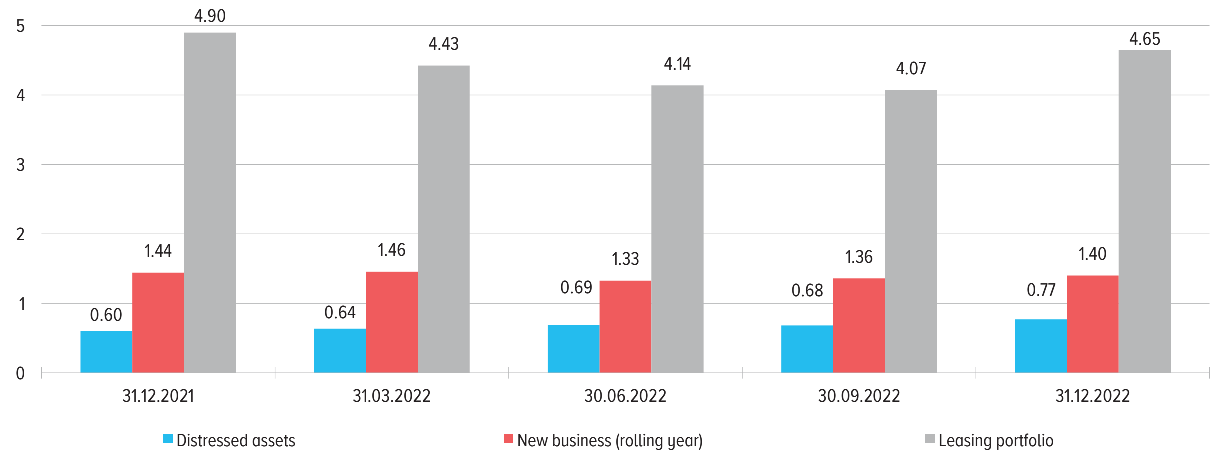
The return on equity of other analysed lessors (excluding aircraft leasing) amounted to 19.8% for the year, which indicates their successful adaptation to the new environment.

[11] Half of the inflow of funds to closed-end unit investment funds was provided by a fund for qualified investors established in October 2022 and focused on investments in the rental business in commercial real estate.

[12] According to 17 lessors with a combined market share of 69% (according to JSC Expert RA, the leasing companies' portfolio in Russia by the end of 2022 amounted to RUB 6.75 trillion).

KEY INDICATORS OF LEASING PORTFOLIO
(RUB TRILLION)

Chart 69



Source: Survey data.

LIST OF ABBREVIATIONS

BIS – Bank for International Settlements

CAR – capital adequacy ratio

CHB – credit history bureau

CRE – commercial real estate

CUIF – closed-end unit investment fund

DSTI – debt service-to-income ratio

ECB – European Central Bank

EIR – effective interest rate

EMEs – emerging market economies

EPA – equity participation agreement

EU – European Union

FDIC – Federal Deposit Insurance Corporation

FRB – First Republic Bank

GDP – gross domestic product

IFRS – International Financial Reporting Standards

ILI – investment life insurance

IMF – International Monetary Fund

INSTC – International North-South Transport Corridor

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)

MET – mineral extraction tax

MFO – microfinance organisation

MPLs – macroprudential limits

NBFI – non-bank financial institution

NCI – net commission income

NFCs – non-financial companies

NII – net interest income

NIM – net interest margin

NPF – non-governmental pension fund

OCP – open currency position

OFZ – federal government bonds

OFZ-PD – fixed rate federal government bonds

OPEC – Organisation of the Petroleum Exporting Countries

OSAGO – Compulsory Motor Third Party Liability Insurance

OUIF – open-end unit investment fund

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

PR – pension reserves

PS – pension savings

RGBITR – Russian Government Bond Index of the MOEX

ROA – return on assets

ROE – return on equity

RUONIA – Ruble Overnight Index Average

RUPMI – the MOEX Moderate Index used as investment vehicle by Russian pension funds

SIB – systemically important bank

SME – small and medium-sized enterprise

SVB – Silicon Valley Bank

SWIFT – Society of Worldwide Interbank Financial Telecommunication

TEU – twenty-foot equivalent unit (unit of cargo capacity)

UIF – unit investment fund

ULI – universal life insurance

US Fed – US Federal Reserve System

VAT – value added tax

LIST OF CHARTS

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