Bank of Russia

Q4 2021 – Q1 2022

FINANCIAL STABILITY REVIEW

Information and analytical review

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SUMMARY

In the reporting period, the Russian economy and financial system were mainly affected by the introduction of large-scale sanctions by unfriendly countries. A significant portion of the restrictive measures was primarily aimed at the financial sector. In this context, the measures taken by the Bank of Russia were aimed at supporting financial institutions, ensuring stable payments and mitigating threats to financial stability, preventing creditor and depositor panics, and forestalling fire sales of Russian assets. Due to the freezing of reserves of the Bank of Russia in unfriendly jurisdictions, measures to restrict the movement of capital were introduced. In the acute phase of the crisis, the financial system remained stable due to the measures taken by the Bank of Russia, accumulated safety buffers and the prior experience of financial institutions in operating amid sanctions.

In the next phase, the crisis to a greater degree affected the real sector. The restricted access of Russian non-financial companies to foreign markets led to disruptions in technological, production and logistics chains. The sanctions affected almost all economic entities, both exporters that faced a ban on the import of their products into certain countries and enterprises that use imported components in production. The redirection of trade flows is further complicated by restrictions on transport infrastructure, lengthy compliance procedures, foreign counterparties' fears of secondary sanctions and a persistently unfavourable epidemic situation in a number of countries. At the same time, high global prices for commodities serve as a supporting factor for Russian companies. In addition, a significant increase in profits after the pandemic allowed many Russian companies to significantly reduce their debt burden in 2021, which allowed them enter the crisis with a strong financial position.

The future prospects and credit standing of companies will be determined by structural transformation processes in the Russian economy. By the beginning of the crisis, credit institutions had built a capital reserve of ₽6.6 trillion[1], which allows them to absorb a significant amount of possible losses and increase their loan portfolio. Stabilisation of the foreign exchange market, lower interest rates and long-term yields in April reduced losses in the financial sector. Temporary regulatory easing provides banks and non-bank financial institutions with extra time to restore their financial position. The easing remains relevant in the highly uncertain environment where sanctions continue to escalate and losses (primarily from materialisation of credit risk) cannot yet be reliably calculated. However, to prevent chronic underestimation of credit risks and subsequently underfunding of viable companies, the Bank of Russia will gradually phase out the easing when possible. If necessary, banks with a capital shortfall will be provided with state support in the form of additional capitalisation. The long-term equilibrium of the Russian state budget provides enough room for the use of fiscal support measures.

Amid severe sanctions, the Russian financial market will be forced to rely primarily on domestic investors for an indefinite period of time. The Bank of Russia will focus on maintaining the confidence of the population and businesses in the Russian financial market and ensuring that the financial sector is sufficiently stable to provide the necessary support in the restructuring of the Russian economy.

[1] *Capital reserve of the banking sector, with add-ons and the accumulated macroprudential buffer (as of 1 February 2022).*

1. Restrictions introduced by unfriendly countries and the global market situation

Geopolitical issues have had a negative impact, not only on the Russian economy and financial market, but also on the global economy. Global growth prospects have deteriorated significantly due to disruptions in the supply of commodities and other logistical barriers, which have led to record highs in commodities and food prices. As a result, post-pandemic global inflation has accelerated even further, and the restrained response of leading central banks could lead to high inflation becoming a chronic problem. In the event of a noticeable increase in the cost of funding in the global markets, debt risks may escalate, threatening the financial stability of more vulnerable countries with accumulated structural imbalances. In the future, episodes of increased volatility in the global markets may be exacerbated in the context of decreased confidence in existing mechanisms of the global financial and economic system, which will encourage its fragmentation and may result in changes in national approaches to reserve management policies, transition to the use of national currencies in transactions, etc.

Due to the severe sanctions introduced by unfriendly countries and reciprocal currency controls, the Russian market's vulnerability to risks from global capital flows has decreased significantly. However, the high share of foreign trade in GDP means that the Russian economy is still vulnerable to global risks through the current account channel. The significant slowdown in the global economy may lead to lower prices for oil, metals, and other components of Russian exports. A potential reduction in income from exports may result in increased volatility in the foreign exchange market, deterioration of the financial position of exporters and related industries, increased credit risks for financial institutions and a decrease in budget revenue. The moderate debt burden in both the public and private sectors will act as a stabilising factor.

2. Materialisation channels for geopolitical risks and policy response

In total, we can distinguish six channels for the transmission of the sanction shock to the Russian financial sector: the currency channel, the stock market channel, the interest rate channel, the income channel, the credit channel, and the insurance channel.

Currency channel

The sanctions introduced by unfriendly countries primarily affected the foreign exchange market. The introduction of sanctions contributed to a sharp rise in demand from foreign investors for currency and a decrease in FX liquidity in the FX swap market. The sanctions against certain Russian banks resulted in a growing volume of failed transactions. In early March, the market saw an acute shortage in FX liquidity.

The situation stabilised after the introduction of currency controls. As foreign currency accumulated in the domestic market due to the sales of exporters, the introduced currency restrictions were somewhat relaxed. March and April saw more active use and trading of currencies other than the US dollar and the euro. Due to the implemented measures, the behaviour of individuals was generally countercyclical.

The changes in the market situation generated new medium-term trends in the development of the foreign exchange market, such as a general dedollarisation of the economy and a decrease in the role of the US dollar and the euro in the market. The reduction of the use of the currencies of unfriendly countries will be accompanied by an increase in the role of the currencies of friendly countries and a gradual growth in the use of the ruble in settlements on foreign trade transactions.

Stock market channel

Initially, the contagion of the sanction shocks led to a record high exit of foreign investors from Russian assets, a drop in stock indices and an increase in government bond (OFZ) and corporate bond yields. The MOEX markets saw an increase in defaults on the obligations of clearing members to the central counterparty and in the volumes of margin calls placed. However, this did not affect the financial stability of the MOEX central counterparty. Later, these indicators returned to their pre-crisis values.

The suspension of exchange trading and other measures[2] introduced by the Bank of Russia made it possible to stabilise the situation. After stock market trading resumed in the second half of March, the situation quickly stabilised. Currently, the contagion of shocks through the stock market channel has led to a significant decrease in financial instrument transactions, an increase in the role of retail investors in the stock market and an inflow of new customers of NBFI brokers.

In the near future, the stock market will be primarily affected by internal economic factors, and the further development of the market will be closely linked to the speed of the structural transformation of the Russian economy. Further on, additional foreign capital may be attracted by developing links with the financial systems of friendly countries.

Interest rate channel

The large-scale exit of non-residents from the Russian market in February caused a sharp increase in yields on the Russian market. The hike in the Bank of Russia key rate also led to a significant growth in yields in the short end of the curve in March. The increased key rate made it possible to reduce risks to financial stability, ease inflationary pressure, ensure the safety of households' savings and stabilise the liquidity situation in the banking sector. However, at the same time, this resulted in the materialisation of interest rate risk in companies with floating-rate loans and other liabilities (about 40%[3] of the ruble corporate loan portfolio), as well as in banks and leasing companies that faced greater than expected growth of expenses on borrowed funds. On the other hand, the subsequent rate cut helped significantly reduce the expected loss from interest rate risk. The estimate of the interest rate risk of the banking sector in rubles over a one-year horizon lies between ₽0.3 to 0.7 trillion[4], which is equivalent to 8-17% of the banking sector's net interest income for 2021.

A law[5] that allowed large companies to obtain a three-month transition period for a step-by-step increase of rates on their loans up to the market rate was adopted to support borrowers and reduce the potential for the transformation of interest rate risk into credit risk on floating rate loans. As of 17 May 2022, loans totalling ₽1.8 billion[6] have been restructured. Small and medium enterprises (SMEs) can apply to banks for a 6-month loan repayment holiday and refinance floating rate loans under a Bank of Russia programme launched especially for banks. In accordance with the instruction of the President of the Russian Federation, a law was adopted to prevent an increase in variable rates for mortgage borrowers. To limit such risks in the future, the Bank of Russia is finalising a

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[2] *Restrictions on operations of non-residents, a ban on short sales, fixation of the value of financial instruments for banks and NBFIs, and expansion of the Lombard List.*

[3] *Bank of Russia estimates based on the data from reporting form 0409303 for loans and acquired rights of claim on loans granted to resident legal entities and individual entrepreneurs.*

[4] *Interest rate risk estimate over a horizon of up to 1 year in accordance with the structure of assets and liabilities as of the time of the rate shock (data from reporting form 0409127 as of 1 January 2022), taking into account the hike in the Bank of Russia key rate from 9.5% to 20% and subsequent rate cuts in the banking sector during the year. The estimate varies depending on assumptions about the changes of maturities of attracted funds due to interest rate shock.*

[5] *Federal Law No. 71-FZ, dated 26 March 2022, 'On Amending Certain Laws of the Russian Federation'.*

[6] *According to data provided by 83 banks surveyed by the Bank of Russia as of 17 May 2022 (60% share in banking sector assets as of 1 May 2022).*

draft law for consideration by the State Duma in the second reading that proposes to limit risks of floating rate loans provided to households and SMEs.

The rise in interest rates also had an adverse impact on the market of interest rate derivatives. The volume of open positions in simple interest rate swaps dropped almost twofold amid reduced transactions between large banks and non-residents. The exit of non-residents and the decrease in the liquidity of the interest rate derivatives market restricts Russian companies' options in hedging interest rate risk.

Income channel

The restrictions introduced by unfriendly countries against Russian exporters and importers, disruptions in production chains, and the withdrawal of a number of foreign companies from the Russian market lead to a downturn in economic activity and a drop in the income of businesses and households. According to S&P Global, in March 2022, the composite PMI index for output in the Russian Federation[7] dropped to 37.7 points (in April, it rose slightly to 44.4 points) compared to 50.8 points in February due to a decline in production and customer demand and a reduction in new export orders. Real household money income for Q1 2022 decreased by 1.0% YoY.

Financial and operational issues were primarily experienced by companies directly or indirectly subjected to severe sanctions.

Companies in the air transportation industry were among the first to suffer due to restrictions on air traffic between the Russian Federation and a number of Western countries and a ban that prevents foreign companies from supplying aircraft and providing aircraft leasing services to Russian companies. Due to the sanction pressure and resulting loss of income, Russian *air transportation* companies may need additional government support to maintain financial stability.

A number of *export-oriented companies (in metallurgy, oil and gas, etc.)* face serious difficulties in supplying their products abroad. However, a potential drop in foreign sales could be partly offset by both rising commodity prices in the short term and a partial reorientation of supplies to other markets in the medium term. The generally low debt burden of the largest exporters in 2021 will allow them to better adapt to evolving market conditions in the context of sanction pressure.

The *automotive industry* saw a significant decline in production in March–April amid rising production costs, component shortages and falling household incomes. The Association of European Businesses (AEB) expects that, by the end of 2022, sales of new cars may fall by 50%. The production of other import-dependent industries declined to a lesser extent.

The *construction industry* may begin to experience financial difficulties in the short term due to rising production costs, possible shortages of building materials and disruptions in logistics, which may ultimately lead to an increase in the debt burden of businesses. However, the ongoing state support measures will partially mitigate the emerging risks.

The *commercial real estate market* suffered after a number of foreign retail chains suspended their activities in the Russian Federation. Analysts expect an increase in vacancy rates in Q2–Q3 2022: 30–35% of rental spaces in shopping centres may remain vacant.

The recession in the economy, the reduction in real household income and the resulting decrease in effective demand may also negatively affect SMEs, which are less financially stable than large market players.

Retail companies are less affected by the sanctions, but still face problems with logistics and payments and fear a drop in demand after a surge in panic buying in March due to the deteriorating economic situation.

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[7] The Russia Composite Output Index reflects the total output in the services and manufacturing sectors. An index value of more than 50 points indicates growth compared to the previous month, and a value of less than 50 points indicates decline.

Credit channel

The sanctions introduced by unfriendly countries and the subsequent shift in the macroeconomic situation made banks more cautious in their selection of borrowers, including taking into account sanction risks. As a result, corporate foreign currency loans are being gradually amortised, but this process may slow down due to banks' restructuring of loans to borrowers experiencing financial difficulties. For certain borrowers, a change in the loan currency to the ruble is noted, and it is expected that this process will continue in the future. At the same time, banks continue to increase their ruble corporate loan portfolio, although at a somewhat more moderate pace.

In retail lending, we are seeing a downturn in lending activity. While mortgage lending is supported by state concessional lending programmes, which accounted for about 40% of loans granted in 2021, the segment of unsecured consumer lending is declining. The scale of the decline is comparable to the reduction in lending that was seen in the first months of the pandemic (April – May 2020).

During crisis periods, such a slowdown in lending exacerbates the economic downturn, which in turn causes further deterioration in the credit quality of the loan portfolio. The countercyclical policy of the Bank of Russia (regulatory easing, release of macroprudential buffers) and state programmes to stimulate lending are aimed at preventing this 'vicious circle'. The Government of the Russian Federation has launched a concessional lending programme for systemically important companies under the guarantees of VEB.RF; VEB.RF guarantees will also be provided for loans to manufacturing companies. Together with SME Corporation JSC, the Bank of Russia has developed programmes to support lending to SMEs. Loans in the amount of ₽301 billion[8] (as of 17 May 2022) and ₽103 billion (as of 1 May 2022) have been provided under the programme of the Government of the Russian Federation and the programmes of the Bank of Russia, respectively.

The quality of the corporate loan portfolio remains uncertain as banks need more time to assess the viability of borrowers' business models in the new economic environment. Banks are restructuring loans so that borrowers can better adapt to the new conditions. In turn, the Bank of Russia has provided banks with temporary regulatory easing which allows them to suspend reassessment of loan quality and, accordingly, not to increase provisions for possible losses on restructured loans. The share of loans restructured by banks amounts to about 6% of the corporate loan portfolio, which is higher than at the beginning of the pandemic; however, the losses on such loans are fully covered by the current capital reserves of the banks.

The quality of the retail loan portfolio so far remains stable. Borrowers' demand for loan restructuring, including for obtaining loan repayment holidays under the law, remains moderate: as of 1 May, only 0.6% of debt on retail loans to individuals had been restructured, which is significantly less than in the first month of the pandemic. However, a number of banks have already seen an increase in the share of consumer loans with a first overdue payment. Amid growing unemployment and declining real household incomes, the quality of the retail loan portfolio may deteriorate, and the demand for loan restructuring may increase.

Insurance channel

Blocking sanctions imposed on a number of insurance companies and a direct ban on insurance of aviation and other risks in the context of the high dependence of the Russian insurance market on reinsurers from unfriendly countries have affected Russian insurers and their policyholders. The Bank of Russia is taking measures aimed at mitigating the consequences of the possible refusal of foreign reinsurers to cooperate and/or fulfill their obligations to Russian insurers, in particular, by increasing the capital of Russian National Reinsurance Company (RNRC) to cover more risks.

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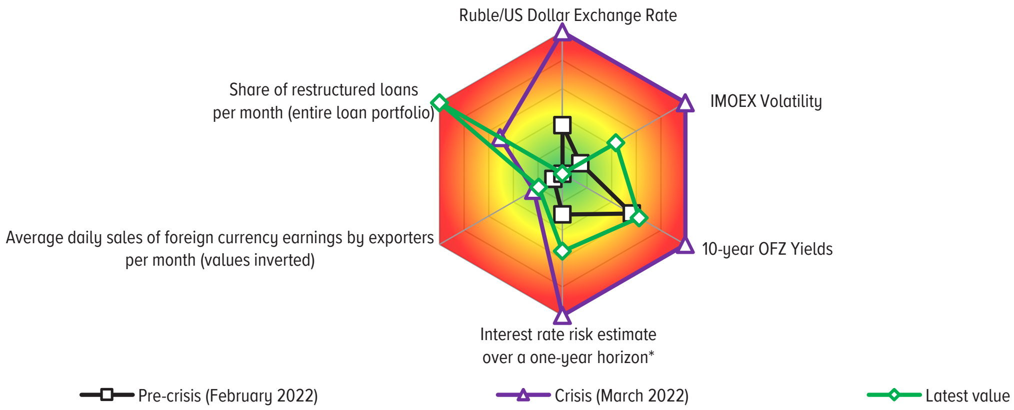
[8] *According to data provided by 83 banks surveyed by the Bank of Russia as of 17 May 2022 in regards to concessional loans to systemically important companies of agricultural sector (Decree of the Government of the Russian Federation No. 375, dated 16 March 2022) and industrial and trade sectors (Decree of the Government of the Russian Federation No. 393, dated 17 March 2022).*

In the car insurance segment, interruptions in the supply of car parts and consumables contribute to the rising costs of restoration of damaged vehicles and put pressure on the loss ratio of compulsory motor third party liability (OSAGO) insurers. To alleviate the situation, the Bank of Russia has proposed a new procedure for calculating OSAGO compensations, which takes into account the prices of equivalent car parts in the absence of original parts.

RISK MAP

FINANCIAL STABILITY RISK MAP

Chart 1



Note: The scale from 0 to 100 units reflects the minimum and maximum values of the indicators during the period from the beginning of 2020 to 24 May 2022. A degradation of an indicator is shown from the centre to the edge.

** Interest rate risk estimate over a horizon of up to 1 year in accordance with the structure of assets and liabilities as of the time of the rate shock (data from reporting form 0409127 as of 1 January 2022), taking into account the hike in the Bank of Russia key rate from 9.5% to 20% and subsequent rate cuts in the banking sector during the year. The estimate varies depending on assumptions about the changes of maturities of attracted funds due to interest rate shock.*

1. RESTRICTIONS INTRODUCED BY UNFRIENDLY COUNTRIES AND THE GLOBAL MARKET SITUATION

Geopolitical issues have had a negative impact, not only on the Russian economy and financial market but also on the global economy. International organisations and regulators in advanced and emerging market economies have noticeably downgraded their growth forecasts for 2022 and 2023. However, the slowdown in GDP growth may be even more significant due to a number of spillover effects. Accelerated inflation, already increased after the pandemic, remains to be the primary risk. Commodity and food prices have reached record highs over many years. The restrained response of leading central banks may contribute to the transition of high inflation to chronic. In the case of the aggressive policy tightening, a marked increase in the cost of financing in global markets would increase debt service costs and could threaten the financial stability of more vulnerable countries. New challenges will also emerge from inevitable fragmentation of the global financial and economic systems due to emerging barriers and decreased confidence in their existing functioning mechanisms.

In 2022, the Russian economy and population experienced sanctions at an unprecedented scale. Blocking sanctions were introduced against financial institutions (including the largest banks), real sector companies and individuals, whose assets were frozen in the US, EU, UK and a number of other countries. Due to the sanctions, exports of some Russian goods and imports of some categories of foreign products into Russia were affected. Air, rail passenger and cargo transportation, activities of logistics operators are restricted, access of Russian ships to European and American ports is limited. Besides, sectoral sanctions banned certain types of transactions with a number of Russian organisations, including those related to funds raising, and restricted transactions with Russian government stock. The assets of the Bank of Russia for a total amount of about $300 billion were frozen. Certain Russian commercial banks were disconnected from the global SWIFT system. Many large global companies in various fields left the Russian market or suspended their operations and stopped new investments in the Russian economy. The payment systems Visa and Mastercard announced termination of service for Russian cards, and the international settlement and clearing organisations (Euroclear and Clearstream) suspended operations with securities and payments for Russian customers.

It all led to a restricted access of the Russian economy to foreign capital and sales markets and disruptions in technological, production and logistics chains, as a result. The sanctions affected companies in the fuel and energy, military sectors, metallurgy and coal industry, engineering, IT, production of minerals and fertilisers, consumer goods and others. The restrictions had an impact on almost all economic entities engaged in foreign trade operations. Russian companies, using imported raw materials and components, have faced difficulties. Exporters reorient export flows to new markets. The search for new suppliers and partners is time-consuming, in part due to the fact that certain foreign counterparties refuse to cooperate, fearing secondary sanctions.

In this context, global growth outlook have also deteriorated significantly. In April 2022, the International Monetary Fund (IMF) lowered the forecasted global GDP growth in 2022 compared to the January estimate by 0.8 pp (to 3.6%) after 6.1% growth in 2021 (Table 1). The estimated GDP growth was downgraded for both advanced and emerging market economies. However, the slowdown in GDP growth may be even more significant than currently expected.

Spillover effects of the sanctions primarily materialised through a shock in the commodity markets, which led to acceleration of the already high post-pandemic inflation. The growth of commodity prices has accelerated (Chart 3) primarily due to supply-side factors. The shortage of goods in the global commodity markets has formed in the context of sanctions, which caused disruptions in Russian exports that account for a high share of global commodity exports (Chart 2).

GDP GROWTH RATES, IMF FORECAST AS OF APRIL 2022
(%)

Table 1

	2021	Forecast as of April 2022		Deviation from January 2022 forecast (pp)	
		2022	2023	2022	2023
Global GDP growth rates	***6.1***	***3.6***	***3.6***	***-0.8***	***-0.2***
Advanced economies	***5.2***	***3.3***	***2.4***	***-0.6***	***-0.2***
USA	5.7	3.7	2.3	-0.3	-0.3
United Kingdom	7.4	3.7	1.2	-1.0	-1.1
Euro area	5.3	2.8	2.3	-1.1	-0.2
Germany	2.8	2.1	2.7	-1.7	0.2
France	7.0	2.9	1.4	-0.6	-0.4
Italy	6.6	2.3	1.7	-1.5	-0.5
Spain	5.1	4.8	3.3	-1.0	-0.5
Japan	1.6	2.4	2.3	-0.9	0.5
EMEs and developing countries	***6.8***	***3.8***	***4.4***	***-1.0***	***-0.3***
China	8.1	4.4	5.1	-0.4	-0.1
India	8.9	8.2	6.9	-0.8	-0.2
Russia	4.7	-8.5	-2.3	-11.3	-4.4
Brazil	4.6	0.8	1.4	0.5	-0.2
South Africa	4.9	1.9	1.4	0.0	0.0
Mexico	4.8	2.0	2.5	-0.8	-0.2

Source: IMF.

Both direct (bans on supply of certain types of Russian goods, sanctions against Russian companies, restricted access of Russian ships to ports) and indirect restrictions (increased cost of transportation, high freight rates and insurance premiums for leasing ships) had their impact on prices. As a result, energy and industrial metals prices hit their record highs over many years. In addition, prices for agricultural products also increased in the current environment. At the same time, commodity prices maintain a high degree of volatility due to ongoing uncertainty regarding a possible expansion of sanctions (including an embargo on oil and gas supplies from Russia, which is being discussed in the EU).

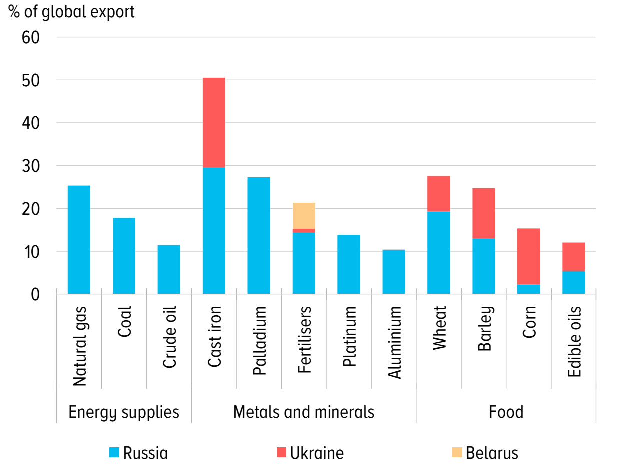
In early March 2022, the price of Brent crude oil reached $130 per barrel, and as of 17 May it amounted to $111 per barrel. To prevent excessive price growth, in March–April, the member countries of the International Energy Agency (IEA) and the United States decided to release oil from their strategic reserves[1]. However in May, the US announced its intention to buy oil to replenish its reserves, which could cause upward pressure on oil prices. In early March, natural gas prices in Europe reached $3,700 per 1,000 cubic meters, and currently European price quotes are in the range of $1,000–1,200 per 1,000 cubic meters. In the global non-ferrous metals markets, the most noticeable price growth occurred in the nickel market (more than 35% QoQ in Q1 2022) and aluminium market (18% QoQ in Q1 2022)[2]. A significant decline in production volumes and, accordingly, global stocks of industrial metals due to rising electricity prices (*stocks of nickel, aluminium, copper and zinc decreased by 70% over the past year*) additionally impacts on the metal prices.

In addition, the global market for agricultural and food products is also experiencing a significant price growth, which further aggravates the situation, in particular, for poorer countries. For example,

[1] *According to the IEA statement, 240 million barrels of oil from strategic reserves will be supplied to the market over the next six months, which is equivalent to more than 1 million barrels per day (about 20% of Russian exports according to the World Bank (Commodity Markets Outlook April 2022)).*

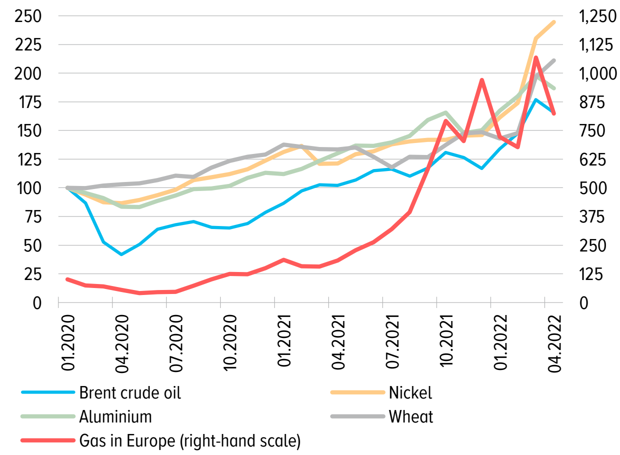
[2] *According to the World Bank (Commodity Markets Outlook April 2022).*

SHARE OF RUSSIA AND UKRAINE IN GLOBAL EXPORTS OF RAW MATERIALS *Chart 2*



Source: World Bank.

DYNAMICS OF AVERAGE MONTHLY COMMODITY PRICES *Chart 3*
(JANUARY 2020 = 100)



Source: Westmetall.com, Investing.com.

from the beginning of 2022 to 22 April, wheat prices increased by 66%[3]. The FAO Food Index reflecting global food prices rose by 13.2% in March compared to February 2022, reaching a record high since 1990 (in April, the index fell by 0.8% compared to the previous month). The decision of the Russian Government[4] to increase export quotas for Russian producers of mineral fertilisers by 501,000 tons[5] positively affected the global market for agricultural products.

Higher inflation requires a more severe tightening of monetary policy by leading central banks. The acceleration in inflation has proved more resilient than initially expected by many foreign central banks, and, as a result, their somewhat belated response could lead to high inflation becoming a chronic global problem. According to the April IMF estimate, in 2022, inflation in advanced economies will rise to 5.7% (a new 38-year high), and in emerging market (EMEs) and developing economies, to 8.7% (a record high since 2008).

This year, money markets expect the US Federal Reserve System (US Fed) to increase its key rate range to 2.50–2.75% (in March, the US Fed increased the rate by 0.25 pp, and in May, by 0.5 pp to 0.75–1.00% and announced that starting from June 2022 it will start selling bonds from its balance). Markets expect the European Central Bank (ECB) to start raising its key rate in July 2022. Rising financing costs in many countries already reflect expectations of monetary policy tightening. Since the beginning of 2022, 10-year government bond yields in the US grew up by 146 bp (to 2.98%) as of 17 May; during the same period, they grew by 89 bp (to 1.86%) in the UK, by 122 bp (to 1.04%) in Germany and by 155 bp in 15 major emerging markets (Chart 4).

Monetary policy tightening and continued acceleration of inflation result in downward dynamics of stock markets and declining risk appetite of global investors. From the beginning of 2022 to 17 May, US stocks (S&P 500) dropped by 14.2%, European stocks (STOXX Europe 600), by 10.2%, and China's stock markets (Shanghai Composite) are down by 15.0% over the same period, losing all growth gained since the beginning of 2020. Sell-offs in the stock markets of leading countries could lead to a rebalancing and restructuring of risks in emerging market economies, which may result in even more significant capital outflows.

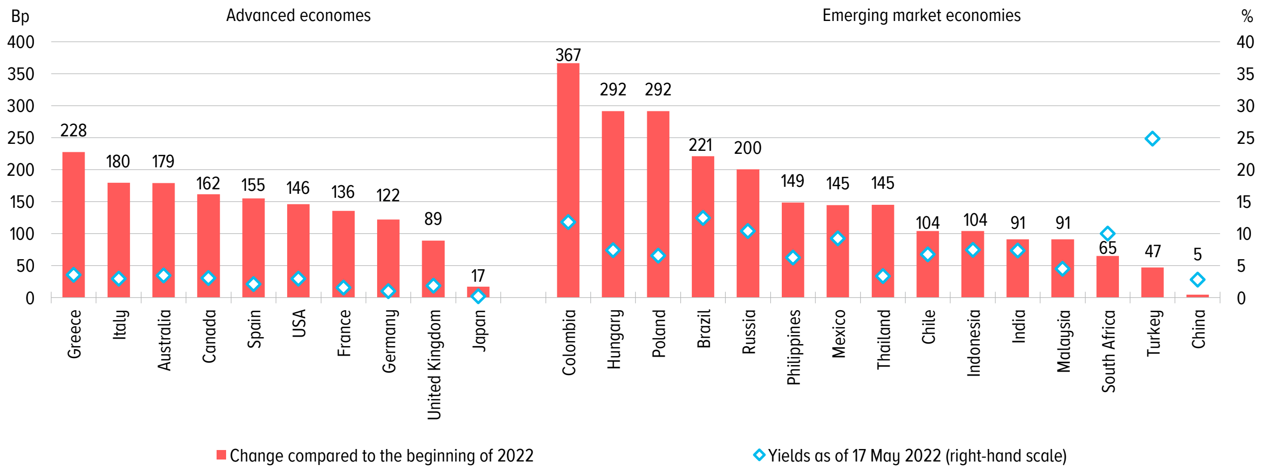
Stock markets volatility have led to a collapse in the cryptocurrency market. According to CoinMarkertCap, on 12 May 2022, bitcoin dropped below $27,000, a record low since 2020; taking

[3] *According to the World Bank (Commodity Markets Outlook April 2022).*

[4] *Decree of the Government of the Russian Federation No. 779, dated 29 April 2022.*

[5] *However, in the EU, a restriction on mineral and chemical fertilisers introduced on 8 April 2022 as part of the fourth package of sanctions is still in force.*

DYNAMICS OF 10-YEAR GOVERNMENT BOND YIELDS COMPARED TO THE BEGINNING OF 2022 *Chart 4*



Source: Cbonds.

into account the record high reached in November 2021, bitcoin price plunged by more than 60%. As for stablecoins, TerraUSD made the news when 'depegged' from the US dollar, to which it is algorithmically pegged: Terra dropped by 70% on 11 May. The cryptocurrency continued to plunge, and by 21 May its value lost more than 90%. This shows that algorithmic methods for backing rates of cryptocurrencies may be ineffective. Backing stablecoins with reserves may also prove unreliable since stablecoins are essentially money market funds with all their inherent risks (primarily, a risk of exchange rate plunging during massive sell-offs by investors). Tether, the largest stablecoin by market value, saw one of its largest falls on 11–13 May, reaching a local low of $0.95 per 1 USDT.

The tightening of global financial conditions may increase debt risks and related financial stability risks. Debt burden in many countries rose significantly during the pandemic. According to the Bank for International Settlements (BIS), the total debt of the G20 countries, including the debt of governments, non-financial companies and households, *increased to 267.7% of GDP as of 1 October 2021 compared to 246.8% of GDP as of 1 January 2020*. The record levels of debt burden exacerbate the impact of rate hikes by central banks. Due to that, in the current environment, many countries will struggle to achieve a 'soft landing' of the economy, striking a balance between lowering inflation through higher rates, on the one hand, and avoiding unemployment growth and higher risks to financial stability, on the other hand. Both emerging markets (Sri Lanka default is a recent example) and advanced economies (for example, the problem of highly leveraged companies in the US[6] and Europe[7]) are exposed to the risk of a debt crisis. Against the backdrop of debt problems, there is a risk of a negative feedback loop between the public, financial and corporate sectors that could further exacerbate the risks of economic slowdown.

In addition, a downturn in commodity prices due to the slowdown in global growth as well as new waves of the pandemics cannot be ruled out. And although the global pandemic situation has improved, and many countries are actively lifting previously imposed restrictions, new variants of coronavirus may still emerge and spread. Recently, the pandemic challenges moved from Europe to Asia. Hong Kong saw the highest death rate in March–April. In Shanghai, amid a surge in infections, a 'zero tolerance' lockdown was introduced in late March, which led to a slowdown in business activity and reduced turnover in China and had a negative impact on global supply chains.

[6] *The decline in demand for risky assets led to a slight decrease in S&P/LSTA US Leveraged Loan 100, which reflects the efficiency of credit instruments in the leveraged loans market in the US, by 2% from the beginning of 2022 to 10 May.*

[7] *In Europe, banking risk on leveraged loans increased from 40% to 60% of CET1 for a period of less than four years.*

Finally, the further development of the global economy and financial system will also be affected by growing fragmentation. Large-scale sanction risks create prerequisites/incentives for the formation of currency and trade blocs, local payment systems. The case of freezing of the foreign exchange part of the Bank of Russia's reserves (as well as a discussion on their possible confiscation in the US Congress) will make central banks (primarily in Asia and the Middle East) rethink the risks of keeping their reserves in US dollars and euros. An increase in demand for gold and a decrease in the role of the US dollar and euro as reserve assets may be expected. According to the World Gold Council, *global demand for gold in Q1 2022 grew by 34% YoY.* Such global changes may lead to periods of increased volatility in the global markets, which will contribute to higher interest rates.

Despite the sanctions, global risks will continue to have a certain impact on Russia. Risks of capital outflow are currently irrelevant since financial account movement in Russia is restricted, and interaction is maintained mainly with friendly jurisdictions. However, risks could spread through the current account channel if the slowdown in the global economy causes commodity prices and other Russian exports to fall. In an extremely negative scenario, the reduction in income from exports will put pressure on the ruble, exacerbate the situation for exporters and related industries, have a negative impact on the budget and generate increased credit risks. Simultaneously, the moderate level of debt burden in both the public and private sectors will serve as a stabilising factor.

2. MATERIALISATION CHANNELS FOR GEOPOLITICAL RISKS AND POLICY RESPONSE

2.1. Currency channel

At the initial phase of the sanctions, the primary risk materialised through the currency channel, which led to a significant change in the balance of supply and demand of currency in the foreign exchange market and, as a result, extreme volatility of the ruble exchange rate. Similarly to previous periods of increased volatility in the Russian market, foreign investors sought to quickly exit from local assets and convert rubles into foreign currency. Amid intensive capital outflow, a number of currency controls were introduced by decree of the President of the Russian Federation as the Bank of Russia was unable to employ foreign exchange interventions. The implemented controls allowed mitigating the effect of sanctions, reducing the negative impact of foreign participants on the market and gradually normalising the situation in the domestic foreign exchange market. This provided the Bank of Russia with a possibility to gradually start easing currency controls which limited the operations of Russian residents. Structural transformations taking place in the economy in the medium term will reduce the role of the US dollar and the euro in the Russian market and increase the importance of currencies of friendly countries.

Initial phase

At the initial stage of the shock, the sale of Russian assets by non-residents and a sharp increase in demand for foreign currency, followed by its withdrawal abroad, resulted in the weakening of the ruble. From 21 to 28 February, subsidiaries of foreign banks and non-residents purchased foreign currency in the amount of ₽429.4 billion, which exceeded the volume of currency purchases of this category of participants in all previous crisis periods (Table 2). A rapid introduction of a large package of sanctions by unfriendly countries (blocking of part of the gold and foreign exchange reserves of the Bank of Russia, inclusion of systemically important banks in the SDN List[1]) and readiness for their further expansion led to the introduction of currency controls. The implemented controls facilitated a swift shutdown of the outflow of foreign capital from the country. In addition to foreign investors, local banks also demonstrated a growing demand for FX liquidity used to close open positions on transactions with non-residents.

The impact of sanctions on the Russian economy through the currency channel also entailed reduction of liquidity in the FX swap market. As non-residents curtailed their short position in

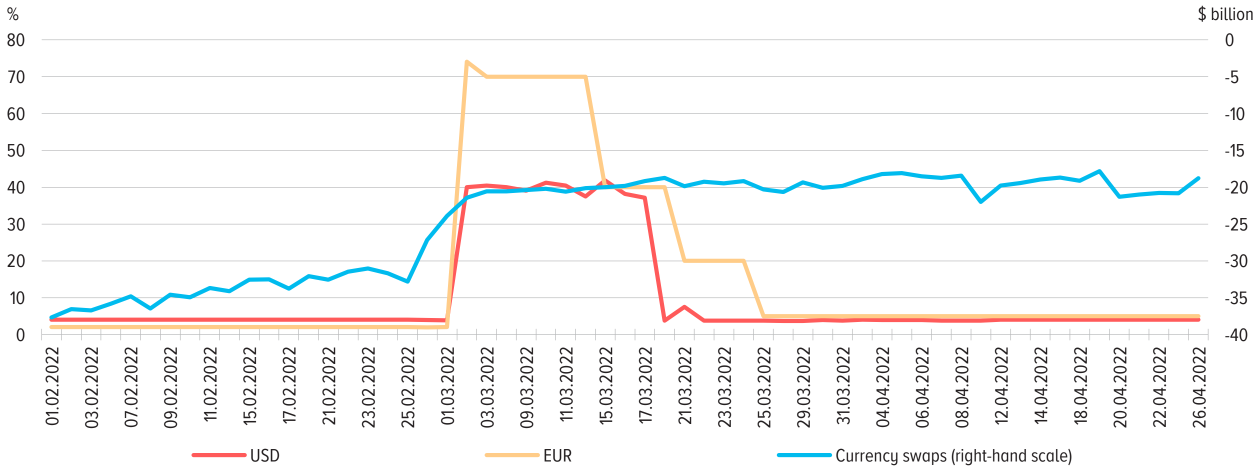
DYNAMICS OF THE RUSSIAN FX MARKET DURING EPISODES OF INCREASED VOLATILITY *Table 2*

Market response indicators	FX market (spot)	
	Weakening (+)/strengthening (-) of the ruble against the US dollar, %	Net FX sales (+)/purchases (-) by non-residents and foreign subsidiaries, ₽ billion
6–12 April 2018 (the US sanctions)	6.6	-153.5
7–17 August 2018 (draft laws on sanctions and outflow of funds from EMEs)	5.6	-99.4
20–28 February 2020 (coronavirus pandemic)	5.2	-164.5
2–19 March 2020 (coronavirus pandemic and oil market shock)	18.4	-314.3
13–25 January 2022 (global security talks)	5.3	-164.3
21–28 February 2022 (outflow of non-residents)	26.6	-429.4

Source: PJSC Moscow Exchange.

[1] *Black list of individuals and companies maintained by the Office of Foreign Assets Control (OFAC) of the US Treasury.*

THE AVERAGE PENALTY RATE OF NCC FOR USD AND EUR ROLLOVERS (%) AND TOTAL POSITION (LIABILITY) OF MARKET PARTICIPANTS IN FX SWAPS *Chart 5*



Source: PJSC Moscow Exchange, NCI JSC NSD.

the foreign currency and their long position in the ruble, the total liabilities of market participants dropped from $34 to $19 billion. The narrowing supply of foreign currency liquidity led to a sharp increase in its value in the domestic market. In particular, in some periods, average rollover penalty rates for USD and EUR swaps established by the National Clearing Centre (NCC) rose above 41% and 71% per annum, respectively (currently, about 4% and 5%) (Chart 5).

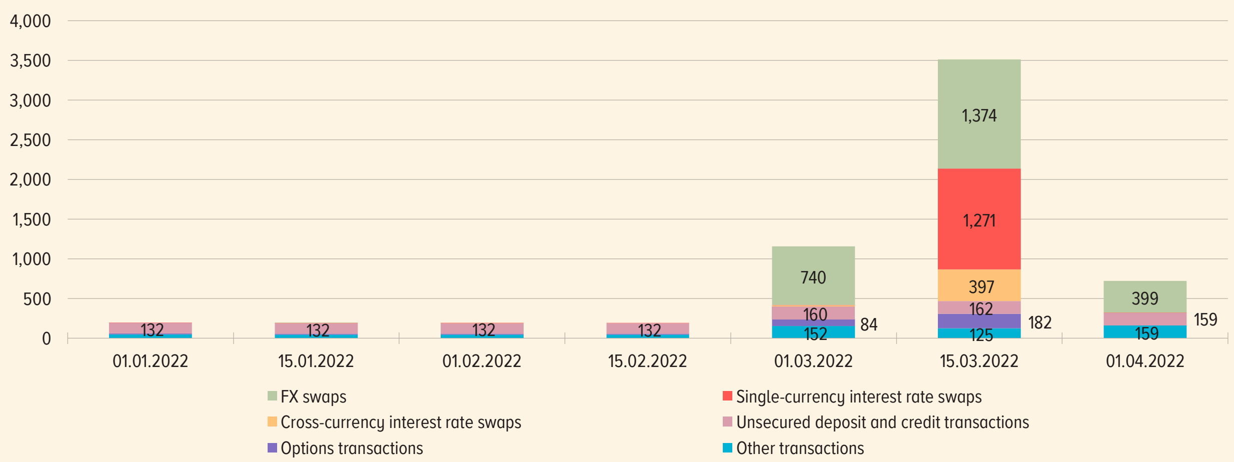
Box 1. Closing of transactions in the financial market

March saw a growth in the volumes of closed transactions of banks in the derivatives market.[1]

The growing volume of failed transactions related to the inability for Russian banks under sanctions to continue fulfilment of contracts with non-residents (mainly from unfriendly countries[2]).

Defaults peaked in the second half of March (Chart 6) when they amounted to ₽3.5 trillion (₽1.4 trillion in FX swaps, ₽1.3 trillion in single-currency interest rate swaps, ₽0.4 trillion in cross-currency interest rate

OUTSTANDING TRANSACTIONS IN 2022 IN RUBLE EQUIVALENT (₽ BILLION) *Chart 6*



Note: volumes of non-performance of the other party to the transaction are shown.
Source: Reporting form 0409702.

[1] *According to reporting form 0409702. The report includes outstanding OTC repo transactions, derivatives and loans/deposits of credit institutions and those of customers of credit institutions as of the reporting date (cancelled or settled transactions excluded).*

[2] *Directive of the Government of the Russian Federation No. 430-r, dated 5 March 2022.*

swaps). By 1 April, the bulk of defaults were settled, most of the transactions of sanctioned banks with non-residents were terminated.

A reduction in the volume of transactions with non-residents reduces credit institutions' options for hedging currency and interest rate risks in the long term, but for most credit institutions this does not seem critical since Russian banks have primarily used balance sheet methods of hedging risks before.

Policy response

Emergence of a significant supply and demand imbalance in the domestic foreign exchange market at the initial stage and reduced options for foreign exchange interventions by the Bank of Russia required countermeasures in terms of currency restrictions and controls. As the situation on the market stabilised, the introduced currency restrictions gradually loosened.

CURRENCY CONTROLS *Table 3*

No.	Currency control measure	Current state
1	Mandatory sale of 80% of foreign currency earnings by exporters to increase the supply of foreign currency	The amount of foreign currency subject to mandatory sale is reduced to 50%, the period for sale of foreign currency ernings is extended to 120 business days
2	Restrictions on the purchase of foreign currency on the Russian market for non-residents from unfriendly countries	Remains in force
3	Quantitative restrictions on the cash withdrawal of foreign currency and on cross-border foreign currency transfers	The limit for cross-border transfers by individuals has been raised (to $50,000 from their accounts and to $5,000 without opening an account). From 18 April 2022 banks may sell cash foreign currency (the US dollar and the euro) received at banks' cash desks after 9 April 2022; from 20 May 2022 banks are allowed to sell currency other than the US dollar and the euro without restrictions
4	Additional 30% commission fee for the purchase of certain types of foreign currencies (USD, EUR, GBP)[1]	The fee was first reduced to 12%, at the moment it is no longer levied

** To reduce inflationary risks, importers were provided with exemptions to buy foreign currency with a small spread against the exchange rate.*

Foreign exchange market in the new economic environment

The policy response changed the transmission of the sanction shock through the currency channel. Demand for foreign currency increased as banks and other financial companies needed foreign currency to close their foreign exchange obligations, including derivatives transactions (see Box 1), which was largely responsible for a sharp deficit of foreign currency in the market. In April, that demand declined, most of the outstanding derivatives transactions were settled, banks and other financial companies switched to net sales of foreign currency.

With the accumulation of foreign currency in the domestic market due to the sales of exporters and the decrease in demand for foreign currency due to reduced imports and liabilities to foreign investors, the situation stabilised, which allowed for a gradual relaxation of the currency controls. The FX swap market also stabilised, the remaining participants maintained a certain volume of open positions.

Amid the outflow of customer funds from foreign currency accounts, the decline in the share of foreign currency liabilities of the banking sector accelerated. In February–April, the share of foreign currency liabilities of credit institutions decreased by 1.2 pp (to 24%) by 1 May 2022[2]. Over the three months, by 1 May 2022, the share of foreign currency liabilities to corporate customers decreased by 2.6 pp (to 31%), to individuals, by 4.2 pp (to 16%). At the same time, the share of foreign currency assets increased by 3.0 pp (to 24%) amid the growth of liquid foreign currency assets of banks, and

[2] *Adjusted for foreign currency revaluation. Calculated for the exchange rate as of 31 January 2022. Source: Data from reporting form 0409101.*

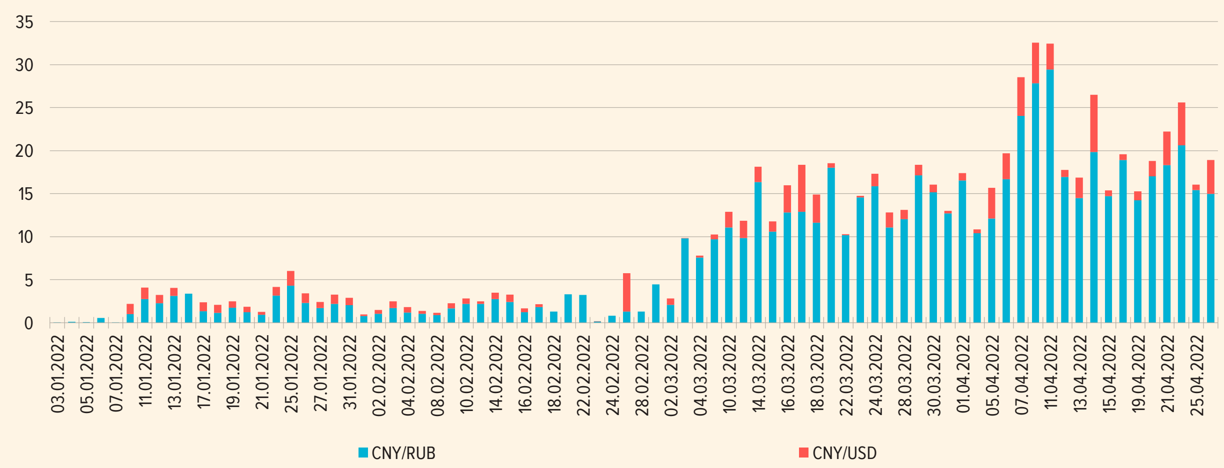
the share of foreign currency-denominated loans in the loan portfolio remained at around 16%. As a result, by 1 May 2022, the foreign currency gap[3] widened to $32 billion.

A growing trend of using currencies alternative to the US dollar and the euro became one of the results of the imposed sanctions on the foreign exchange market (see Box 2). Increased demand for physical gold in the context of VAT abolition on gold bar purchase is also noted.

Box 2. Increasing role of the yuan in the Russian foreign exchange market

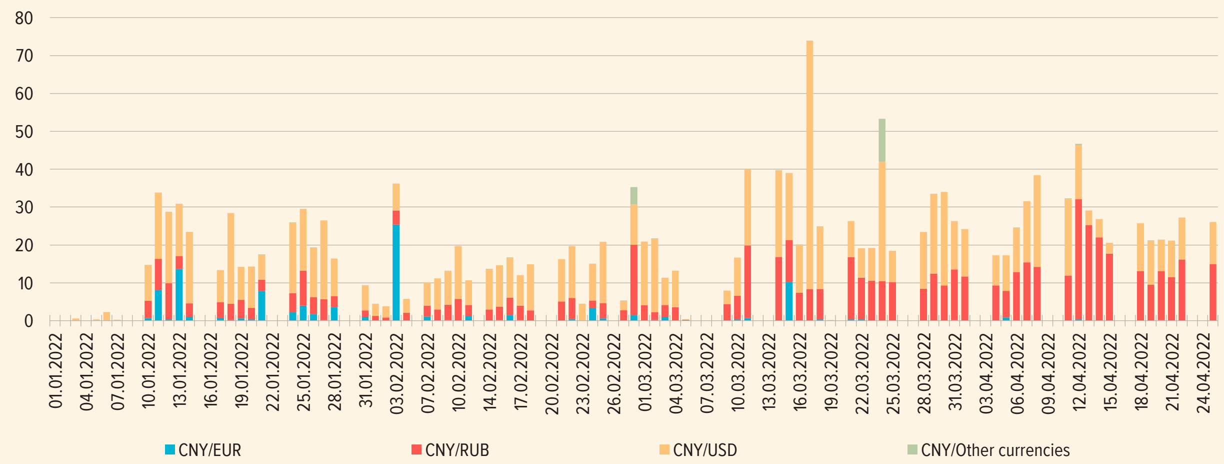
Activity on the exchange and over-the-counter CNY/RUB market began to grow in early March 2022 (after the aggravation of sanctions pressure), and since then trading volumes stabilised at ₽10–30 billion per day in the exchange and over-the-counter segments. In addition, an increase in the CNY/USD pair trading in the exchange market can be noted. However, in the exchange segment, it is significantly lower, in the range from ₽0 to 5 billion per day (Chart 7), while on the OTC market it averages over ₽10 billion per day. In general, the share of the yuan in the exchange spot trading increased significantly, from 0.5% in January to 7% in April.

CNY TRADING ON THE RUSSIAN EXCHANGE SPOT MARKET *Chart 7*
(₽ BILLION)



Source: PJSC Moscow Exchange.

CNY TRADING ON THE OTC SPOT MARKET *Chart 8*
(₽ BILLION)

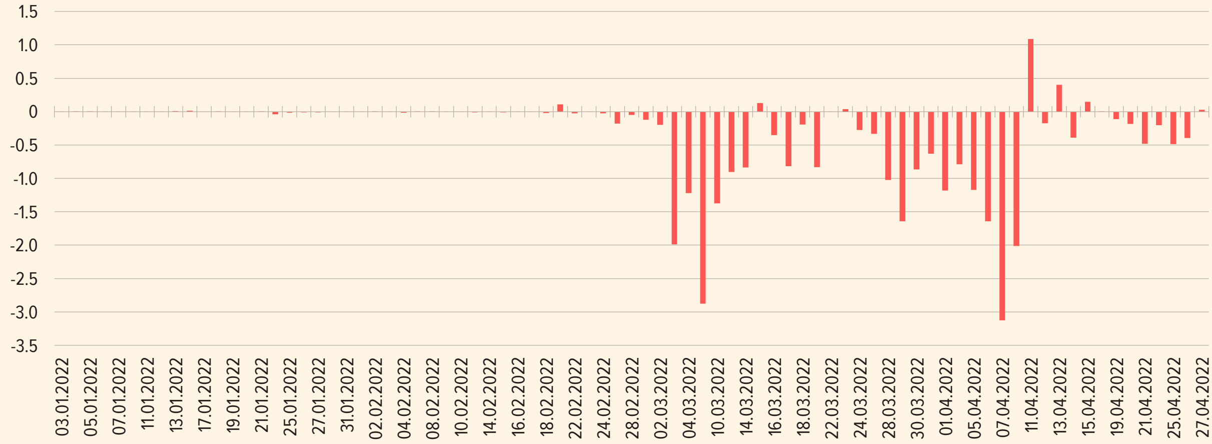


Source: Reporting form 0409701.

[3] *The difference between balance sheet assets and liabilities of the banking sector in foreign currency.*

NET CNY SALES (+)/PURCHASES (-) FOR RUBLES BY INDIVIDUALS ON THE EXCHANGE SPOT MARKET
(₽ BILLION)

Chart 9



Source: PJSC Moscow Exchange.

Basically, a higher level of liquidity differs the OTC market for the CNY/other currencies instrument from the exchange one. The most actively traded instruments are CNY/USD and CNY/RUB, CNY/EUR (Chart 8) is a little less popular.

Starting from the beginning of March, the interest of individuals in the yuan market has been steadily growing as they use it to diversify their savings and invest part of their funds in more reliable financial instruments in terms of geopolitical risks. During the crisis, individuals purchased yuan in the total amount of ₽27.3 billion on the exchange market. (Chart 9).

Foreign exchange operations of households

The behaviour of individuals in the foreign exchange market was countercyclical. In the context of a significant weakening of the national currency, individuals generally switched from net purchases to net sales of foreign currency both on the exchange and OTC markets (net sales of cash and non-cash currency through the largest banks) (Charts 10–13). From late February to early March, there was a sharp outflow of household funds from foreign currency deposits (-19%, or -$16.4 billion for the period from 20 February to 10 March 2022[4]), foreign currency funds were withdrawn and transferred into cash; subsequently, the outflow ceased. In April, household foreign currency deposits remained virtually unchanged (-$0.2 billion), while the share of foreign currency household funds in the banking sector continued to decline: -0.7 pp to 16.4% amid an influx of ruble deposits (+₽1.3 trillion in April); compared to the beginning of the year, the decline in the share of foreign currencies amounted to 4.2 pp[5].

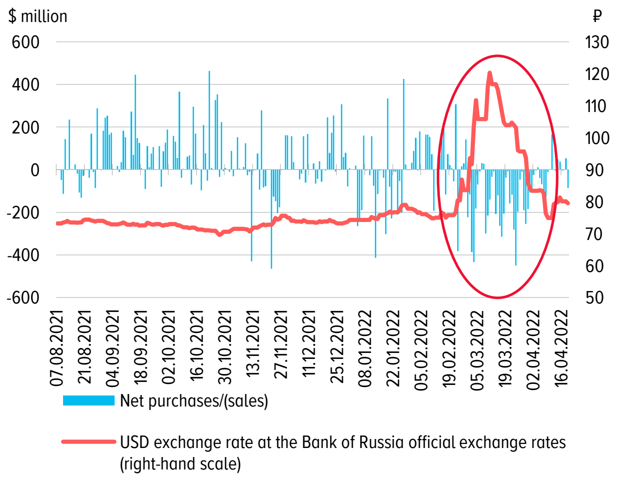
With the gradual strengthening of the Russian ruble and the relaxation of currency controls, net purchases of foreign currency by households were resumed from 11 April 2022; however, no large net purchases of foreign currency were made. The households' demand for foreign currency remained lower than the same period of previous years in the context of a decrease in outbound tourism and demand for foreign stocks (Charts 14, 15).

From 21 February to 22 April 2022, net FX sales by individuals in the largest banks and on the Moscow Exchange amounted to ₽551 billion, which significantly exceeded the net FX sales in the past periods of increased volatility in the FX market (Table 4).

[4] *Source: Reporting form 0409301.*

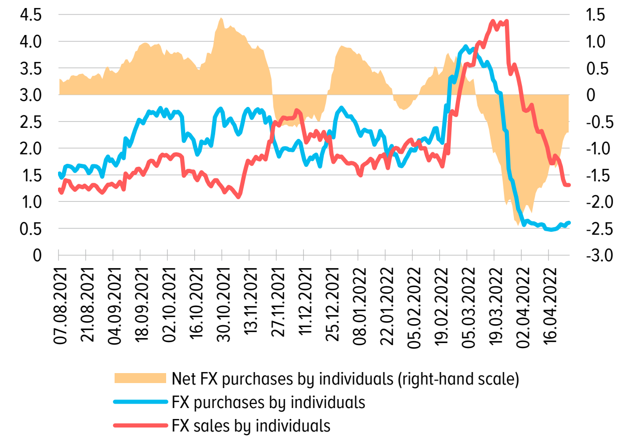
[5] *Adjusted for foreign currency revaluation. Calculated for the exchange rate as of 31 January 2022. Source: Data from reporting form 0409101.*

NET CASH FX PURCHASES (+) (SALES (-)) BY INDIVIDUALS AND THE EXCHANGE RATE *Chart 10*



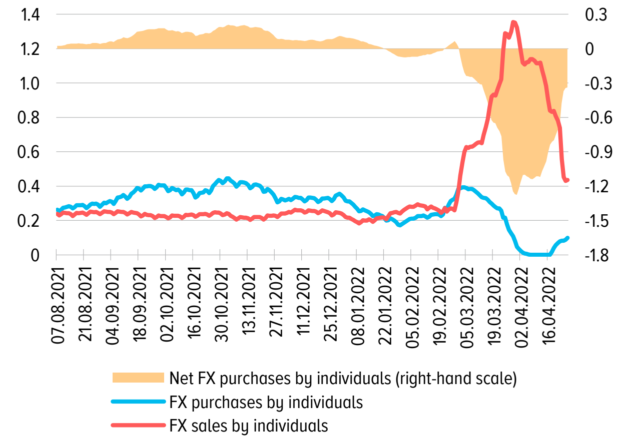
Source: Survey of the largest banks, PJSC Moscow Exchange, Bank of Russia.

NET NON-CASH FX PURCHASES (+) (SALES (-)) BY HOUSEHOLDS ON THE OTC MARKET (CALCULATED BY A 30-DAY ROLLING WINDOW METHOD) *Chart 11*
($ BILLION)



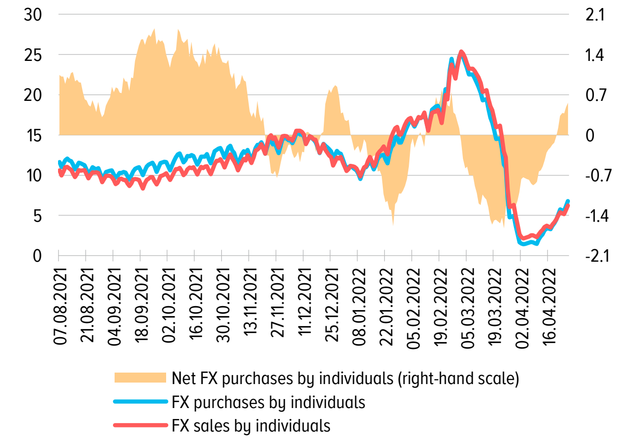
Source: Survey of the largest banks.

NET CASH FX PURCHASES (+) (SALES (-)) BY HOUSEHOLDS ON THE OTC MARKET (CALCULATED BY A 30-DAY ROLLING WINDOW METHOD) *Chart 12*
($ BILLION)



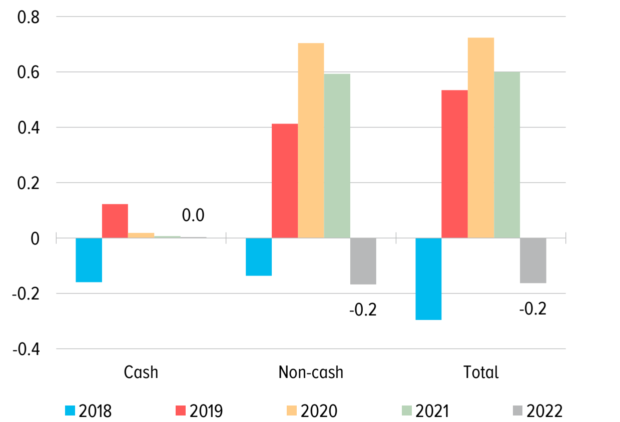
Source: Survey of the largest banks.

NET FX PURCHASES (+) (SALES (-)) BY HOUSEHOLDS ON THE EXCHANGE MARKET (CALCULATED BY A ROLLING 30-DAY WINDOW METHOD) *Chart 13*
($ BILLION)



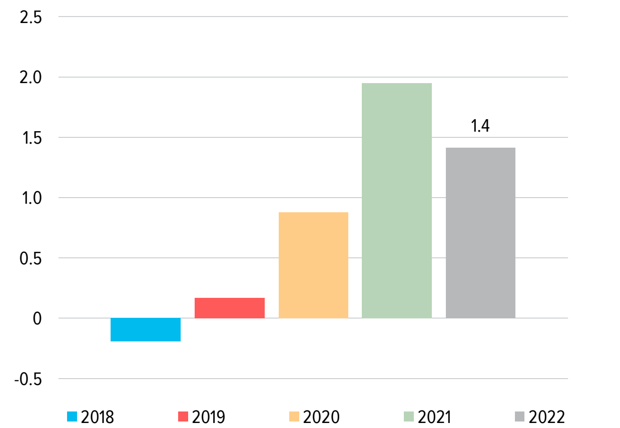
Source: PJSC Moscow Exchange.

NET FX PURCHASES (+) (SALES (-)) BY HOUSEHOLDS IN THE LARGEST BANKS FROM 11 APRIL TO 8 MAY IN 2018–2022 *Chart 14*
($ BILLION)



Source: Survey of the largest banks.

NET FX PURCHASES (+) (SALES (-)) BY HOUSEHOLDS ON THE MOSCOW EXCHANGE FROM 11 APRIL TO 8 MAY IN 2018–2022 *Chart 15*
($ BILLION)



Source: PJSC Moscow Exchange.

NET FX SALES (+)/PURCHASES (-) BY INDIVIDUALS DURING PERIODS OF INCREASED VOLATILITY
(₽ BILLION)

Table 4

	Cash FX in the largest banks	Non-cash FX in the largest banks	Non-cash FX at the Moscow Exchange	Total
6–12 April 2018 (the US sanctions)	3	12	19	33
7–17 August 2018 (draft laws on sanctions and outflow of funds from EMEs)	-5	-7	4	-8
20–28 February 2020 (coronavirus pandemic)	0	22	35	58
2–19 March 2020 (coronavirus pandemic and oil market shock)	11	30	-17	24
13–25 January 2022 (global security talks)	4	8	75	87
21–28 February 2022 (outflow of non-residents)	-3	-16	48	30
1 March–22 April 2022 (anti-crisis measures)	147	280	95	521

Source: Survey of the largest banks, PJSC Moscow Exchange.

Medium-term trends and new challenges for the foreign exchange market

A paradigm shift in the operation of the Russian foreign exchange market and a number of associated risks accompany the transition to a new economic reality under the sanctions pressure.

In the near future, the Russian foreign exchange market will be mainly characterised by a downward trend for the role of the US dollar and the euro in all aspects of economic activity and the growing role of the currencies of friendly countries and the ruble. This will take place amid a significant reduction in export/import relations with the Western partners. The decline in the role of the US dollar and the euro will be significantly affected by risks of settlements in these currencies for all Russian counterparties, currency controls and transition to ruble settlements for European consumers paying for Russian natural gas supply. A gradual decrease in the use of currencies of unfriendly countries through the development of an infrastructure for payments in national currencies will form a promising vector for the development of foreign exchange relations.

Both the banking and household sector will continue to demonstrate the decline in the foreign currency predominance. Due to the isolation of the foreign exchange market in the context of the absence of non-residents, banks with foreign currency liabilities and assets face additional risks since they are unable to hedge their foreign exchange position. The presence of such additional risks will contribute to the natural reduction of bank balance sheets in the currencies of unfriendly countries. The policy of the Bank of Russia may lead to further decline in the dollarisation in the banking sector; in April 2022, after the alleviation of the liquidity situation, the legal reserve requirements for foreign currency liabilities were increased from 2% to 4%. Creation of legal grounds for introduction of negative interest rates on corporate deposits in US dollars and euros could accelerate the decline in the share of foreign currency assets and liabilities of economic entities.

2.2. Stock market channel

At the initial stage of the crisis, the exit of non-residents from Russian assets and the sales of Russian investors led to a significant drop in the major sectoral indices, higher bond yields and increased volatility in the stock market as a manifestation of risk transmission through the stock channel. To stabilise the market situation, the Bank of Russia made a decision to temporarily suspend exchange trading in securities. The Bank of Russia implemented a set of measures aimed at reducing volatility and limiting the ability of foreign holders to influence the market. After exchange trading resumed, the situation stabilised. At the same time, restrictions on the participation of non-residents in trading and pricing uncertainty led to a significant decrease in the volume of secondary trading in financial instruments and had an impact on the primary

DYNAMICS OF THE RUSSIAN FINANCIAL MARKET INDICATORS DURING THE EPISODES OF INCREASED VOLATILITY* *Table 5*

Market response indicators	Stock market		OFZ market	
	Index decline	Net purchases (+)/sales (-) by non-residents and foreign subsidiaries in secondary exchange trading	Growth of 10-year OFZ yields, bp	Net purchases (+)/sales (-) by non-residents and foreign subsidiaries in secondary exchange trading
6–12 April 2018 (the US sanctions)	-3.8	-16.9	38	-80.5
7–17 August 2018 (draft laws on sanctions and outflow of funds from EMEs)	-1.9	-2.6	77	-55.9
20–28 February 2020 (coronavirus pandemic)	-10.6	-29.6	48	-27.5
2–19 March 2020 (coronavirus pandemic and oil market shock)	-18.3	-100.1	170	-132.1
13–25 January 2022 (global security talks)	-14.9	-107.5	108	-78.4
21–25 February 2022 (outflow of non-residents)	-27.2	-139.9	277	-78.2
21 March–22 April 2022 (anti-crisis measures)	-11.5	-6.5	-261	9.1

** Sales by non-residents in the period from 21 March to 22 April 2022 result from reduction in their liabilities to residents.*
Source: PJSC Moscow Exchange.

market: no new issues of government bonds were placed since the beginning of the sanction shocks, and issues of corporate bonds started back only in May. The stock and bond market saw a growing role of retail investors (share in trading). Despite the change in external environment, brokers managed to bring in new customers.

The spread of sanction risks through the stock market channel led to a greater outflow of foreign capital from the Russian stock market than in the previous periods of volatility (Table 5).

The shock materialisation through the stock market channel in 2022 can be roughly divided into three phases:

1) acute phase (21–25 February): outflow of non-residents and financial indicators' decline

2) adjustment phase (26 February–20 March): suspension of trading and introduction of support measures

3) structural transformation phase (from 21 March on): decrease in yields and trading volumes, the growing role of individuals in the stock market.

Acute phase

During the fairly short acute phase in the stock market, non-residents sold securities totalling ₽139.9 billion (Table 5), which led to the IMOEX decrease by 27.2%. The market was mainly supported by retail investors who bought stocks in the amount of ₽111.2 billion, expecting a future growth of the plummeting prices, and, to a lesser extent, by NBFIs (₽24.8 billion).

OFZ sales by non-residents and foreign banking subsidiaries through secondary exchange trading (₽78.2 billion) were comparable to previous episodes of volatility. Overall, during the acute phase, 10-year OFZ yields grew by 277 bp, with faster gains in the short end of the yield curve. Despite sales by some participants, systemically important banks (SIBs) and other banks acted as main net buyers of OFZs (₽23.5 and ₽61.7 billion, respectively).

During the acute phase of the crisis, volumes of margin calls placed on clearing members were increased due to a drop in the value of traded assets and a growth of collateral rates on them[6]. Volumes of defaults on the obligations of clearing members to the central counterparty of the MOEX (NCI NCC (JSC)) for the supply of securities and cash grew as well. However, the growth

[6] *On the MOEX markets, first level collateral rate grew on average two times for the most liquid instruments. Currently, collateral rates are still high.*

of margin calls and defaults of members did not affect the financial stability of the MOEX central counterparty. Later on, those indicators turned back to their 'pre-acute-phase' values.

The suspension of servicing payments on Eurobonds of Russian issuers by foreign depositories Euroclear Bank S.A./N.V. and Clearstream Banking S.A turned out to be a significant risk materialised through the stock market channel. That affected Russian holders of Eurobonds serviced in the Russian accounting system. *Consequently, the Ministry of Finance of the Russian Federation is developing alternative ways for issuers to fulfil their obligations*, namely:

- making payments to securities holders separately, depending on the place of registration. In particular, to holders with rights registered in the Russian accounting system, through a Russian payment agent in accordance with the Decree of the President of the Russian Federation[7] without using C-type accounts[8].
- early redemption for rubles through the Russian market infrastructure.

Adjustment phase

To avoid sharp fluctuations in the securities value at the time of an unprecedented change in the economic environment, the Bank of Russia suspended trading in securities (stock section) and derivatives on the Moscow Exchange as well as:

1) limited the list of permitted operations for participants from unfriendly countries;

2) introduced exemptions for banks and NBFIs in terms of freezing of the value of financial instruments, allowing recording securities acquired before 18 February 2022 at their fair value as of 18 February 2022 or at the purchase price for the financial instruments acquired from 18 February to 31 December 2022;

3) suspended short sales on the exchange and OTC markets;

4) significantly expanded banks' ability to attract ruble liquidity from the Bank of Russia (expansion of the Lombard List);

5) announced its readiness to purchase OFZs to prevent excessive volatility and risks to financial stability;

6) provided certain participants with an opportunity to refuse, partially or completely, to disclose information that could potentially lead to the introduction of restrictive measures.

Structural transformation phase

The measures introduced and the gradual resumption of exchange trading (with the use of mechanisms aimed at smoothing out price fluctuations, such as a discrete auction, ban on short sales) allowed containing a surge in market volatility after the opening of trading in the stock and debt markets.

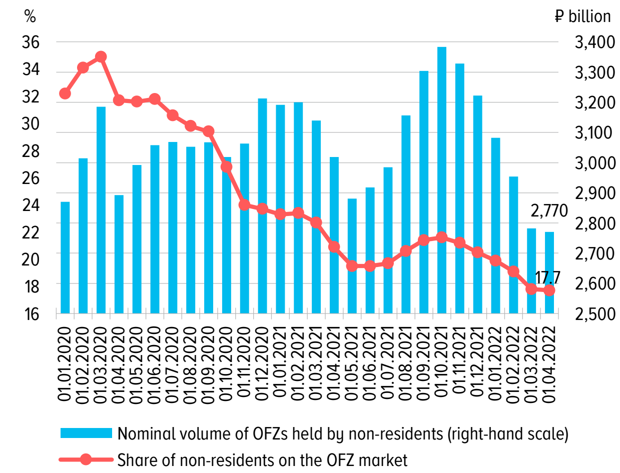
Restrictions on the participation of non-residents in OFZ trading and unfavourable market conditions led to changes in the composition of active trading participants, a significant decrease in the volume of daily secondary trading (from about ₽40 to ₽10 billion) and a temporary cessation of primary placements. As of 1 April, investments of non-residents in OFZs amounted to ₽2,770 billion, having decreased in March by ₽12 billion, and the share of non-residents amounted to 17.7% (Chart 16). OFZ yields gradually declined, approaching pre-crisis levels in the middle and far sections of the curve; on average for the curve, from 22 March to 11 May, yields went down by 4.3 pp (Chart 17). In the secondary exchange market, the main sellers were NBFIs (own funds) and non-SIB banks (₽16.6 billion and ₽10.3 billion, respectively), while other participants, including subsidiaries of foreign institutions (₽8.1 billion), acted as buyers of OFZ.

[7] *Decree of the President of the Russian Federation No. 95, dated 5 March 2022, 'On a Temporary Procedure for Meeting Obligations to Certain Foreign Creditors'.*

[8] *To ensure residents fulfilment of their loan and borrowing obligations, Russian credit institutions open C-type ruble accounts for the financial instruments to unfriendly foreign creditors.*

DYNAMICS OF THE OFZ VOLUME HELD BY NON-RESIDENTS AND THEIR MARKET SHARE

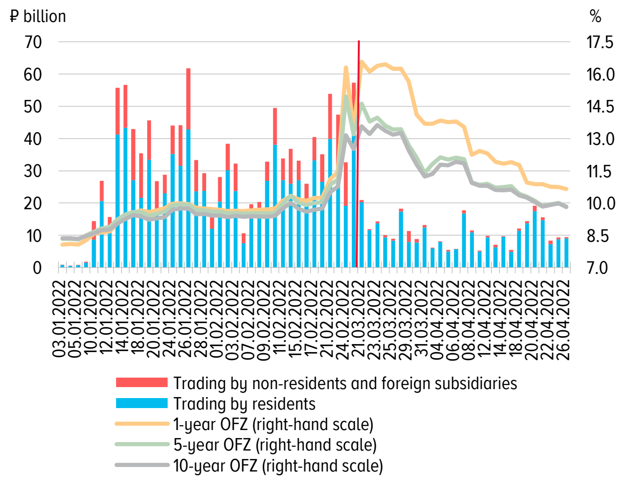
Chart 16



Source: NCI JSC NSD.

THE VOLUME OF TRADING ON THE SECONDARY OFZ EXCHANGE MARKET (₽ BILLION) AND YIELD DYNAMICS

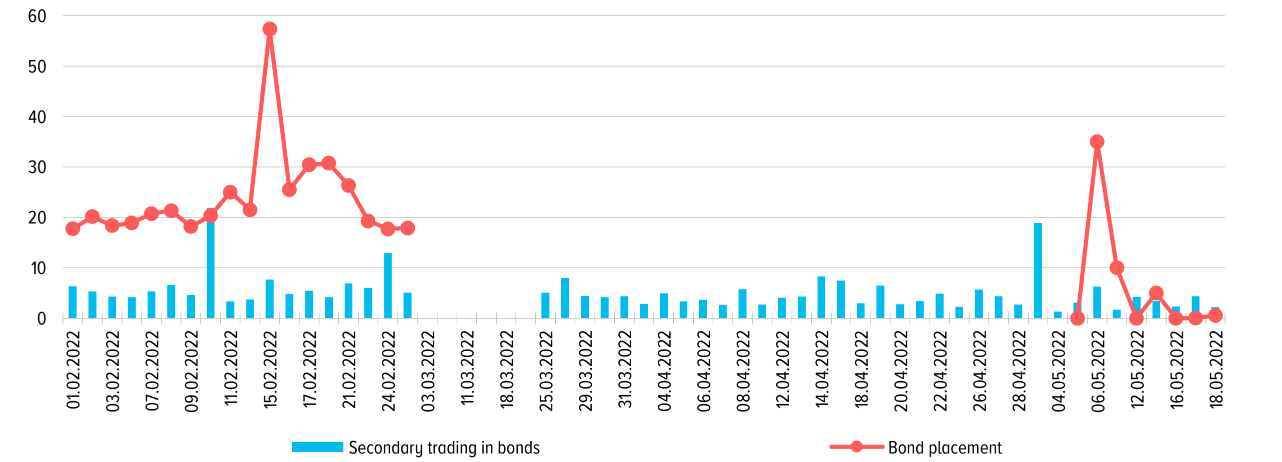
Chart 17



Source: PJSC Moscow Exchange.

TRADING IN CORPORATE BONDS ON THE SECONDARY AND PRIMARY EXCHANGE MARKETS (₽ BILLION)

Chart 18

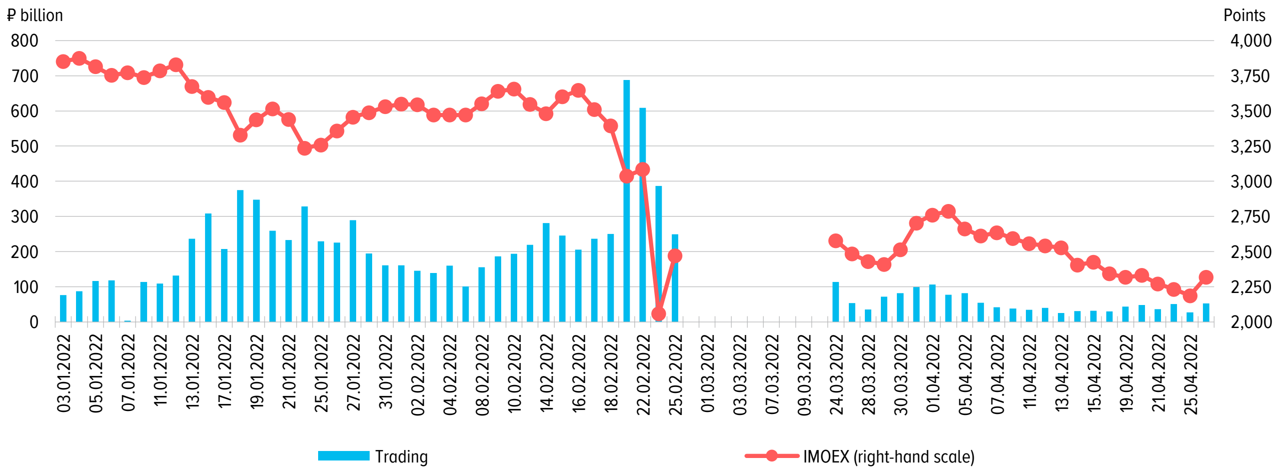


Source: PJSC Moscow Exchange.

Due to a significant change in market conditions for Russian companies and the inertia of rating actions, the secondary corporate bond market saw a significant difference in the yield levels of issues with the same rating (especially for second- and third-tier stocks). At the same time, the volume of secondary trading compared to the pre-sanction level decreased insignificantly (Chart 18). Amid increased pricing uncertainty in March–April 2022, no new bond issues were placed on the market. In May, placements were resumed, bonds were placed mainly by non-financial companies with maturities of 3–5 years at a fixed coupon rate.

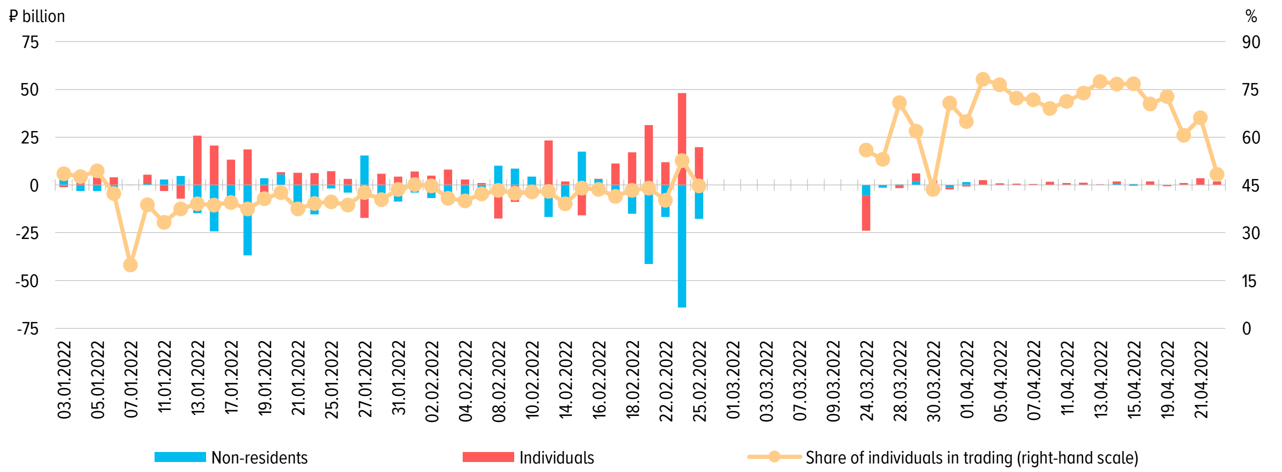
During the phase of structural adjustments in the stock market, IMOEX continued to decline (by 11.5%) (Chart 19). The absence of non-residents led to a reduction in trading and the growing role of retail investors in the stock market as their share in the trading volume increased from 43% in February to 66% in March–April (Chart 20). Currently, the situation on the stock market largely depends on the actions of private investors.

TRADING ON THE SECONDARY STOCK EXCHANGE MARKET AND IMOEX DYNAMICS *Chart 19*



Source: PJSC Moscow Exchange.

NET PURCHASES/SALES OF SHARES BY PARTICIPANTS IN SECONDARY EXCHANGE TRADING, SHARE OF INDIVIDUALS IN TRADING *Chart 20*



Source: PJSC Moscow Exchange.

Operations of individuals in the stock market

Since Q4 2021, retail investors have supported the Russian market by investing significant amount in Russian stocks (₽840 billion[9]) and in Russian bonds (₽208 billion) (Chart 21), which equals to an increase in retail investments by 15.6% and 8.9%, respectively. After the opening of trading at the end of March, individuals predominantly adopted a wait-and-see attitude, retaining their investments in Russian assets (net sales amounted to only ₽5 billion).

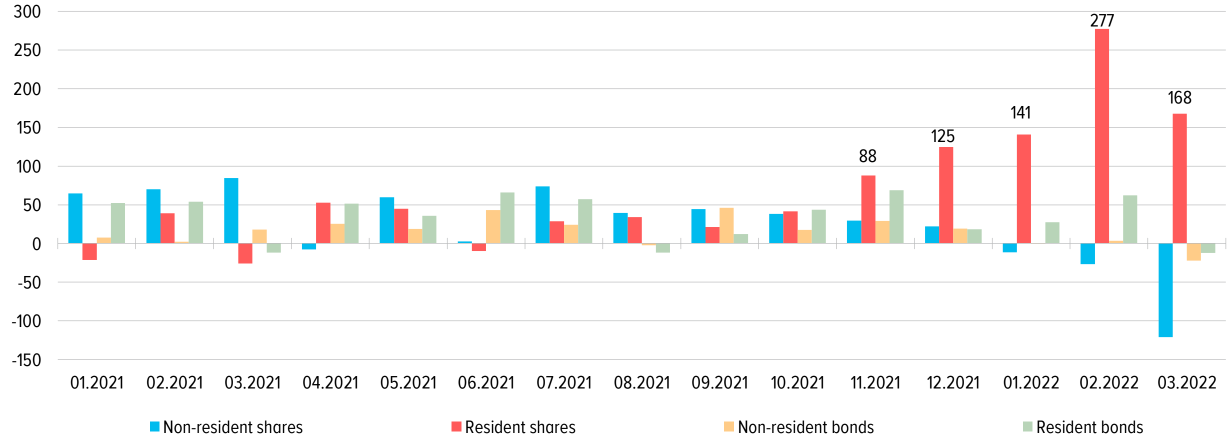
In addition, in Q1 2022, retail investors stepped up sales of non-resident shares (to ₽159 billion) (Chart 22) due to increased risks of investing in foreign assets.

In the context of a significant imbalance between the prices of Russian stocks and their corresponding depositary receipts traded on foreign exchanges and the freezing of trading in the latter, a regulation was adopted to stop the circulation of such depositary receipts abroad (with certain individual exceptions). To control risks to financial stability, the Bank of Russia decided that the sale of those stocks by their owners might be carried out in exchange trading only in limited volumes (no more than 0.2% of their number in depository accounts).

[9] *About 31% of inflows occurred in the stocks of SIBs, 19% in the stocks of the oil and gas sector.*

INFLOWS OF FUNDS FROM INDIVIDUALS BY ASSET TYPES* (₽ BILLION)

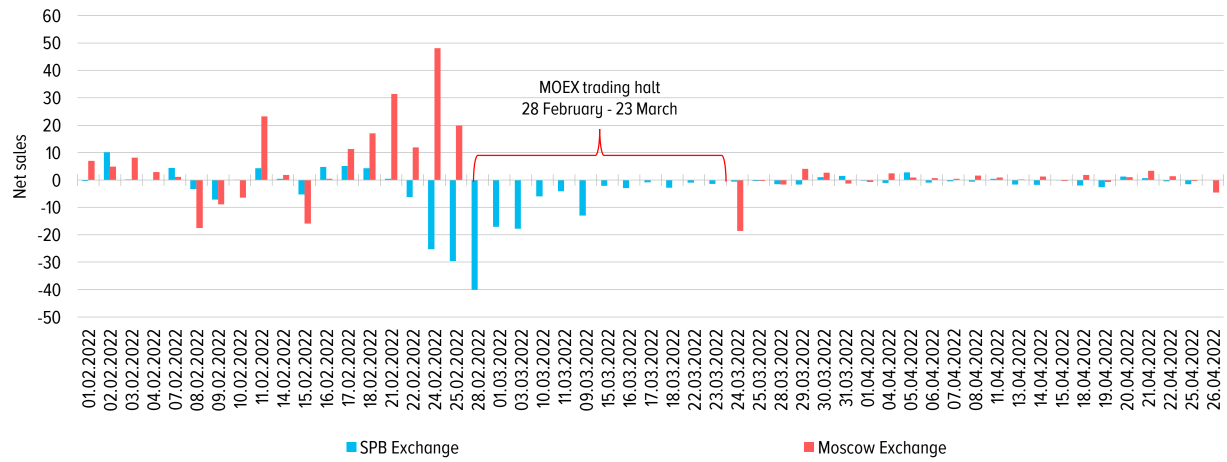
Chart 21



** Shares of residents include shares of quasi-non-residents affiliated with Russian companies.*
Source: Reporting forms 0409711, 0420415.

SHARES PURCHASES BY INDIVIDUALS ON MOSCOW EXCHANGE AND SPB EXCHANGE (₽ BILLION)

Chart 22



Source: PJSC Moscow Exchange, SPB Exchange.

Box 3. Resilience of investment financial intermediaries

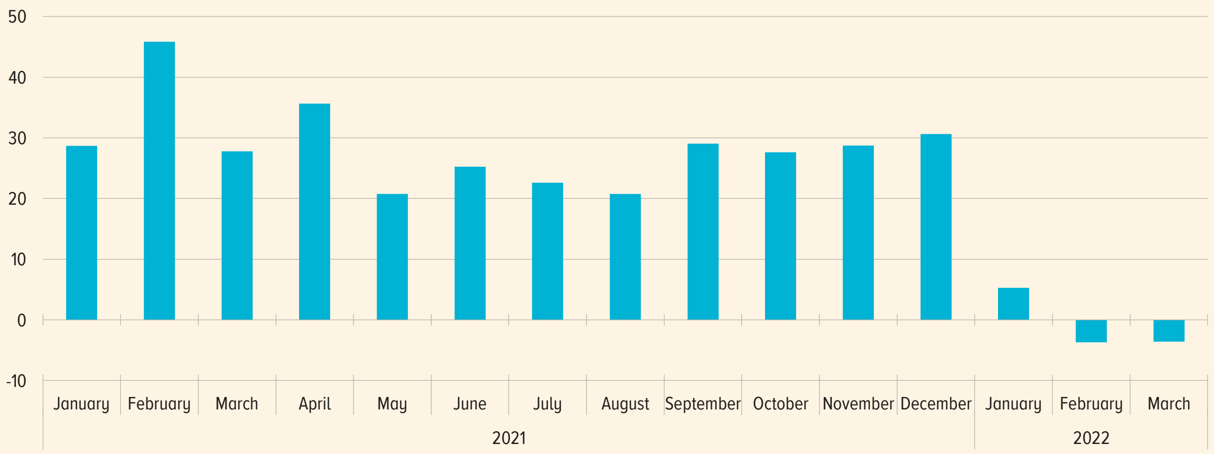
The sanction pressure, falling prices and the temporary suspension of trading in the stock market had a negative impact on the broker industry; however, in general, it proved resilient to shocks.

Despite the deteriorating market environment since the beginning of 2022, the broker industry saw an influx of new customers: the number of NBFI broker customers grew by 7.7% to 2.3 million in the first quarter. That was due to the interest of private investors in buying Russian securities going down in price. In addition, the influx of new customers was caused by the transfer of foreign securities of customers from sanctioned banks, which fully began to be implemented in April.

Starting from the beginning of the year, 9 of the 24 largest brokers have experienced a decrease in the liquidity coverage ratio (LCR) associated with both growth in expected net cash outflows and drop in the volume of high-quality liquid assets amid the downturn in the stock market. In addition, the industry saw a general decline in the capital adequacy ratio (CAR), the CAR of a number of broker companies (not large ones) fell below the required value due to a decrease in the amount of capital and growing credit risks. The decrease in ratio values is likely to be temporary and largely linked to the consequences of external negative events. In this regard, the Bank of Russia took measures to reduce the regulatory burden on

INFLOW/OUTFLOW OF FUNDS FROM UIFS
(₽ BILLION)

Chart 23



Source: Reporting forms 0420503.

professional participants: broker companies got an exemption from enforcement measures for violations of the liquidity coverage and capital adequacy ratio.[1]

In the current environment, the liquidity risk remains to be most significant for the industry. However, according to the simulation, in the event of an additional shock associated with a further downturn in the stock market, an outflow of customer funds and increased sanction pressure, the largest brokers will generally remain stable in terms of liquidity adequacy.[2]

Unit investment funds for unqualified investors

Amid the imposed sanctions and increased volatility in the stock market, the situation in the UIF market remained stable. During January–March 2022, the net asset value (NAV)[3] of UIFs decreased by 13%, which is significantly less than the drop observed in the stock market (about 30%), in part due to diversification of investments of UIFs. In the current uncertain environment, the risk of outflows from funds still remains.

As part of its support for the collective investment market, the Bank of Russia took measures to reduce the regulatory and supervisory burden, including for management companies. Due to the suspension of trading on the Moscow Exchange, starting from early March 2022, management companies suspended the calculation of the NAV of funds and, accordingly, operations with fund units. At the moment, operations with units of some funds have been resumed, with the possibility of issuing, exchanging and redeeming units determined by management companies. Operations with a number of funds with foreign securities assets are still unavailable due to the restrictions of European depositories and clearing organisations.

During January–March 2022, cash outflow from UIFs was not significant (about ₽2 billion); however, the risk of fire sales remains. The Bank of Russia conducted a liquidity risk analysis for OUIFs and EUIFs for unqualified investors with portfolios including more than 90% of Russian assets. The analysis showed that less than 1% of UIFs (of the total NAV of the funds considered) would face a lack of liquid assets in the event of a 30% net outflow of depositors. It should be noted that funds facing a lack of liquidity are relatively small, with an average NAV of about ₽300 million. Thus, in the event of an increase in the redemption of investment units, most funds will not experience a lack of liquidity due to their ability to sell liquid assets.

Investment and endowment life insurance

Through the stock market channel, the sanctions affected the operations of life insurers.

In Q1 2022, premiums under life insurance contracts decreased by 11.2% (to ₽94.1 billion). That included 32.3% of premiums for investment life insurance products (₽30.4 billion) and 41.4% for endowment life insurance products (₽39 billion). As of the end of March, the reserves of life insurers were estimated at ₽1,462

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[1] *The measures will be in force until 31 December 2022.*

[2] *Liquidity stress testing based on LCR was conducted. The assumption included stock prices fall by 60%, bond prices fall by 15%, outflow of clients' funds in the amount of 30%, increase of sanction pressure.*

[3] *The analysis was based on the reporting data provided by UIFs for Q1 2022.*

billion. The investment (risk) part of investment life insurance funds is largely represented by purchase of structural bonds responsible for the additional investment income of policyholders. As a result, the primary risk in the segment is that policyholders will not receive additional investment income. The stable financial position of life insurers will allow preserving the 'investment body'.

Medium-term trends and new challenges for the stock market

Further development of the stock market will be closely linked to the speed of the Russian economy recovery, whereas the restructuring of the economy will take some time. In the absence of Western investors in the Russian market, it will be mainly affected by internal economic factors, while the role of retail investors will increase. Foreign investors capital from friendly countries may act as additional incentive for the stock market in the future. The Bank of Russia will seek to establish interaction between the financial system of Russia and that of friendly jurisdictions.

The reduced placements of corporate bonds in the primary market and their absence in the OFZ market restrains the growth in the volume of securities that can serve as collateral to attract liquidity from the banking sector and other participants, which limits the potential depth of the repo market. Nevertheless, at the moment, the banking sector has sufficient ruble liquidity, and when the situation improves, volumes of placements on the stock market are expected to return to the pre-sanction level.

2.3. Interest rate channel

In the context of a sharp increase in volatility in the financial markets due to the introduction of sanctions by unfriendly countries, the Bank of Russia temporarily raised the key rate to 20%. This reduced risks to financial stability, stabilised the situation with the liquidity of credit institutions and eased inflationary pressure. On the other hand, higher rates also have negative effects on the economy: increased debt burden of non-financial companies on loans with variable rates and higher interest rate risk for banks and leasing companies. Accordingly, as soon as the threat to financial stability was neutralised, the Bank of Russia started to gradually reduce the key rate and eventually lowered it to 11%. The rate cut helped significantly mitigate the interest rate risk of the financial sector, and the interest rate risk of borrowers was also partly offset by restructuring programmes.

The growing uncertainty in the context of Western sanctions against Russia was accompanied by an increased demand for cash from households. The outflow of liquidity in the banking sector started in late February and reached its peak by early March. In March, the annual inflation rose to 16.7%. To limit risks to financial stability, the Bank of Russia raised the key rate from 9.5% to 20% per annum from 28 February 2022. That allowed stopping the outflow of ruble funds from bank deposits, prevented the materialisation of systemic liquidity risk and reduced inflationary pressure.

Since the demand for cash remained strong[10] in early March, in addition to standing facilities, when necessary, the Bank of Russia held fine-tuning auctions to provide credit institutions with sufficient liquidity. By mid-March, credit institutions' repo debt with the Bank of Russia reached ₽5.6 trillion (Chart 24).

To stabilise the banking sector liquidity, the Bank of Russia took the following key measures:

- Expansion of the Lombard List and easing of the requirements for the minimum credit rating of the issue (issuer) of securities included in the Lombard List.
- *Extending the terms for Bank of Russia standing lending facilities secured by securities (Lombard loans) to 90 days*. Previously, such loans were issued for 1 day.

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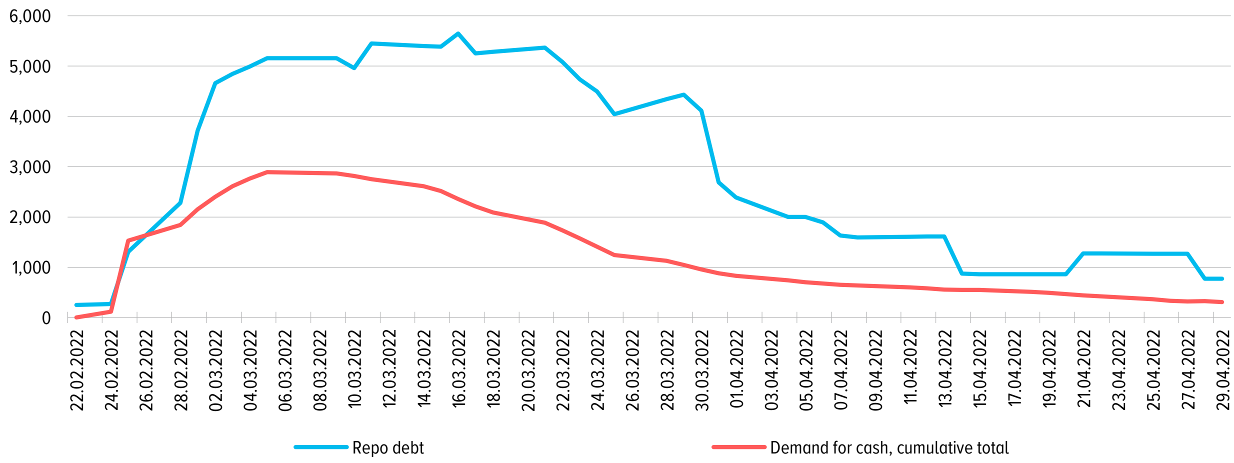
[10] *From 22 February to 5 March, the total accumulated volume of cash in circulation increased by ₽2.89 trillion, which resulted in the need for additional ruble liquidity of credit institutions.*

REPO DEBT OF CREDIT INSTITUTIONS TO THE BANK OF RUSSIA AND INCREASE IN THE AMOUNT OF CASH IN CIRCULATION (CUMULATIVE TOTAL) *Chart 24*
(₽ BILLION)



Source: Bank of Russia.

- Decreased required reserves ratio. The required reserves ratio was reduced to 2% for all categories of funds raised for universal licence-holder banks and non-bank credit institutions[11]. The measure allowed freeing up additional liquidity of banks by reducing the total amount of required reserves of credit institutions by about ₽2.7 trillion.

Gradually, as cash returned to banks (accumulated demand for cash decreased), the need for ruble liquidity in the banking sector dropped. By the end of April, almost the entire volume of cash issued in late February was returned to bank accounts, and the total debt of banks on repo transactions with the Bank of Russia fell below ₽0.3 trillion (₽0.2 trillion as of the beginning of February).

The rate hike led to the materialisation of the ***interest rate risk of banks and also increased the debt burden of companies on variable-rate loans.*** In March, following the key rate hike, banks raised deposit rates (Chart 25) by 11.7 pp on household deposits and by 9.3 pp on corporate deposits. As the situation stabilised, the Bank of Russia began to reduce the key rate: to 17% from 11 April 2022, to 14% from 4 May 2022 and to 11% from 26 May 2022.

In the context of a negative interest rate gap (Chart 26, the short-term liabilities of the banking sector by the time of the rate shock significantly exceeded its short-term assets volume), the rate hike led to a decrease in the NII of banks. Nevertheless, the subsequent key rate cut helped significantly reduce the expected loss from the materialisation of interest rate risk. The interest rate risk in rubles over a one-year horizon is estimated in the range of ₽0.3–0.7 trillion[12], which is equivalent to 8–17% of the banking sector's NII for 2021. For comparison, as of 1 October 2021, the baseline estimate of interest rate risk of the banking sector amounted to ₽0.2 trillion, while the negative interest rate gap in absolute terms was larger.

In recent years, most banks have accumulated sufficient safety buffers to protect their financial position from a significant deterioration under such NII decrease.

The gradual increase in variable-rate lending was an important factor in reducing the sensitivity of NII to the interest rate risk. As of 1 April 2022, about 40%[13] of ruble-denominated corporate loans

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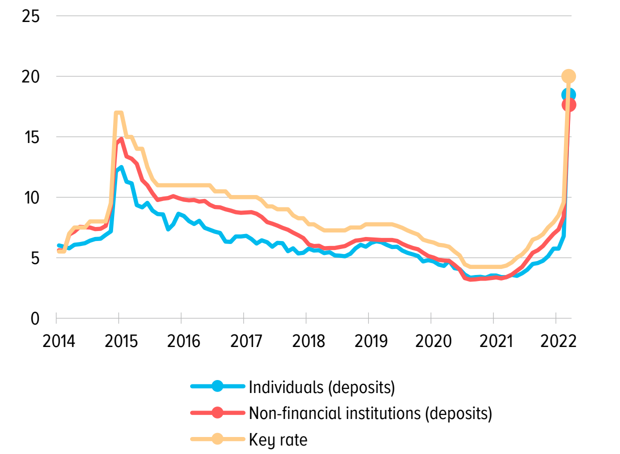
[11] *Similarly, for basic licence-holder banks, the ratio was reduced to 2% for liabilities to non-resident legal entities and other foreign currency liabilities (the ratio for other liabilities for basic license-holder banks remained unchanged at 1%). Later, the Bank of Russia raised the required reserve ratios for foreign currency liabilities from 2% to 4%.*

[12] *The estimate of the interest rate risk is calculated over a one-year horizon adjusted for the structure of assets and liabilities as of the time of the rate shock (data from reporting form 0409127 as of 1 January 2022), taking into account the hike in the Bank of Russia key rate from 9.5% to 20% and subsequent rate cuts during the year. The estimate varies depending on the assumptions applied regarding the changes in the maturity of raised funds generated by the rate shock.*

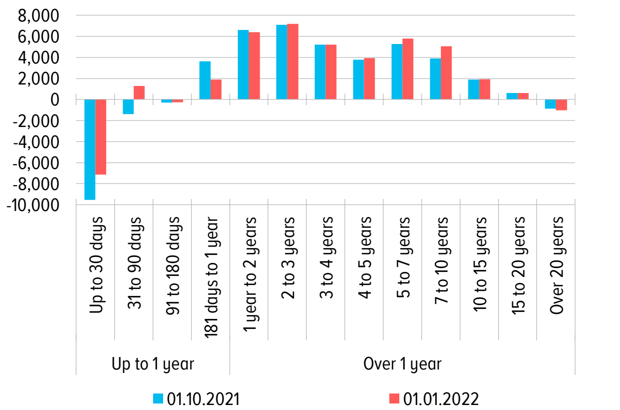
[13] *Bank of Russia estimates based on the data from reporting form 0409303 for loans and acquired rights of claim on loans granted to resident legal entities and individual entrepreneurs.*

DYNAMICS OF RATES IN THE DEPOSIT MARKET *Chart 25*
(%)



Source: Reporting form 0409129

INTEREST RATE GAP IN THE BANKING SECTOR PORTFOLIO FOR RUBLE OPERATIONS (BASELINE ESTIMATE, WITHOUT BEHAVIOURAL AND OTHER ADJUSTMENTS) *Chart 26*
(₽ BILLION)



Source: Reporting form 0409127.

had variable rates. In the context of rising interest rates, the transition from fixed to variable loan rates allows banks partially to cover the higher interest costs on raised funds with higher interest income on loans via the increased interest rates on such loans.

At the same time, banks may face credit risk, if interest rates rise significantly, as higher interest rates on ruble loans increase the debt burden of borrowing companies. Most of such loans were issued with the Bank of Russia key rate as a benchmark; therefore, the rates for such loans changed in sync with the hike in the Bank of Russia key rate, which significantly increased the debt burden of companies and the risks of their default.

To mitigate the risks associated with the increased debt burden of companies on loans with variable rates, on 26 March 2022, a law[14] was adopted to allow large companies to apply to banks for a three-month transition period. During this period, the loan rate is gradually increased to the value provided for by the terms of the agreement but should not exceed 12.5% per annum in the first month of the transition period; 13.5% per annum in the second month of the transition period; 16.5% per annum in the third month of the transition period. By 17 May 2022, such loans have been restructured for a total of ₽1.8 trillion[15] (9% of the debt of large companies on variable-rate loans).

Although only large companies could use such transition period, SMEs could obtain loan repayment holidays of up to six months or, by agreement with the bank, refinance variable-rate loans under the Bank of Russia programme, which allows them to fix loan rates at no higher than 13.5% for medium enterprises and no higher than 15% for small enterprises. Banks also restructured loans to large companies and SMEs under their own restructuring programmes.

Following the hike in the Bank of Russia key rate in February 2022, the payment burden on borrowers with variable-rate mortgage loans was supposed to increase. As of 1 April 2022, there were 1,800 such loans[16]. To limit the possible growth of defaults on such loans, a law[17] was adopted, according to which the variable interest rates should not exceed its values as of 27 February 2022 (before the Bank of Russia raised the key rate to 20%). Currently, to mitigate possible future risks on variable-rate loans, the Bank of Russia is finalising a draft law for consideration by the State Duma in the second reading that proposes to ban lenders from providing unsecured variable-rate consumer

[14] *Federal Law No. 71-FZ, dated 26 March 2022, 'On Amending Certain Laws of the Russian Federation'.*

[15] *As of 17 May 2022, according to the Bank of Russia survey of 83 credit institutions (which account for about 60% of the banking sector assets as of 1 May 2022).*

[16] *According to reporting form 0409316.*

[17] *Federal Law No. 71F-Z, dated 26 March 2022.*

loans and mortgage loans (with the exception of large loans to affluent individuals). For household mortgage loans (for which floating rates will be allowed) and for SME loans, the possible growth of rates will be limited to 4 pp but not more than one-third of the initial rate under the loan agreement.

Leasing companies and their lessees also faced a significant interest rate risk. Agreements with floating and variable rates amount to about a third of credit obligations of lessors. In March 2022, the increase in the cost of funds raised by lessors averaged +5.3 pp. The interest rate risk of lessors was mainly mitigated by a mirror revision of rates under leasing agreements – that is, the interest rate risk was partially transferred to lessees. At the same time, according to a survey conducted by the Bank of Russia in late March–early April, leasing companies recorded a decrease in the yield spread by 1.5 pp.

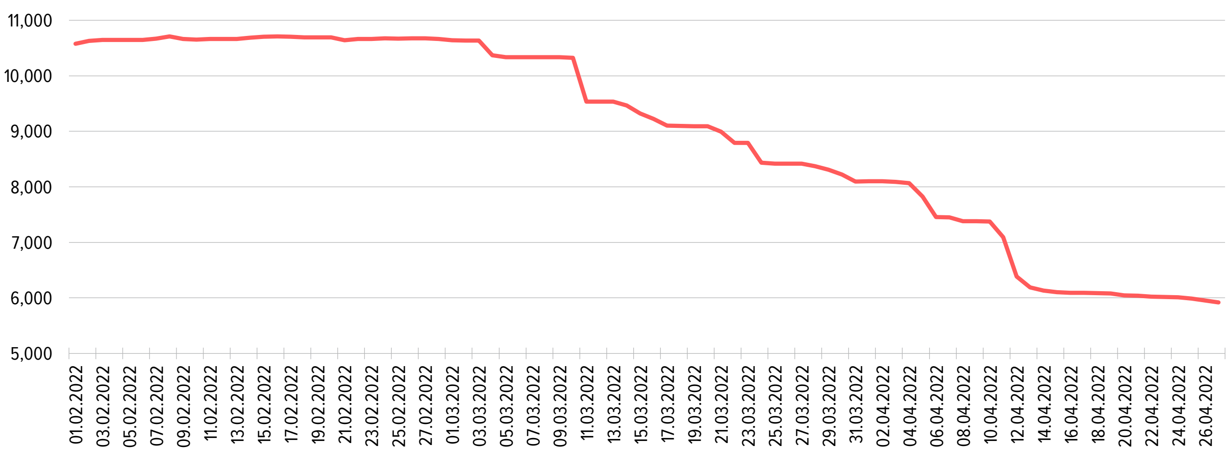
Materialisation of interest rate risk in the interest rate derivatives market

Due to the imposed sanctions, access to the global interest rate swap market was limited, which resulted in a significant drop in liquidity in the interest rate swap market and reduced options for hedging interest rate risk. Since early March 2022, the volume of open positions on interest rate swaps has almost halved (Chart 27).

Large banks, NBFIs and non-residents are the main participants in the segment of ruble interest rate swaps (Chart 28). After the introduction of sanctions, the market saw a cessation of new operations (Chart 29) and early termination of transactions between banks and non-residents, which led to a significant decrease in the volume of transactions in the market. Since within the 'large bank–non-resident' group of counterparties there was a simultaneous decrease in transactions where large banks received cash flows both at fixed and floating rates, the change in the net position of these categories in ruble interest rate swaps was less than the decrease in the volume of transactions. Thus, the structure of open net positions in the ruble interest rate swap market remained stable despite the decrease in market liquidity. However, the exit of a significant part of foreign investors from the market and the resulting liquidity decrease of the interest rate swap market limit the ability for Russian companies to hedge interest rate risk. In addition, current payments are also hindered by difficulties in cross-border payments within existing transactions with non-residents.

OPEN POSITIONS ON RUB INTEREST RATE SWAPS
(₽ BILLION)

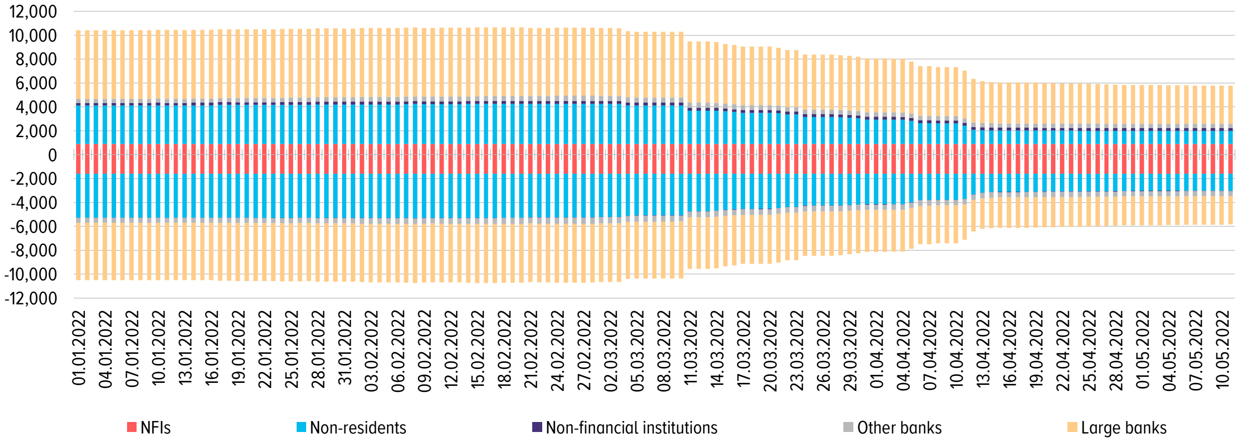
Chart 27



Source: NCI JSC NSD.

POSITION OF MARKET PARTICIPANTS ON RUB INTEREST RATE SWAPS DEPENDING ON THE RATE OF PAYMENT (FIXED/FLOATING)*
(₽ BILLION)

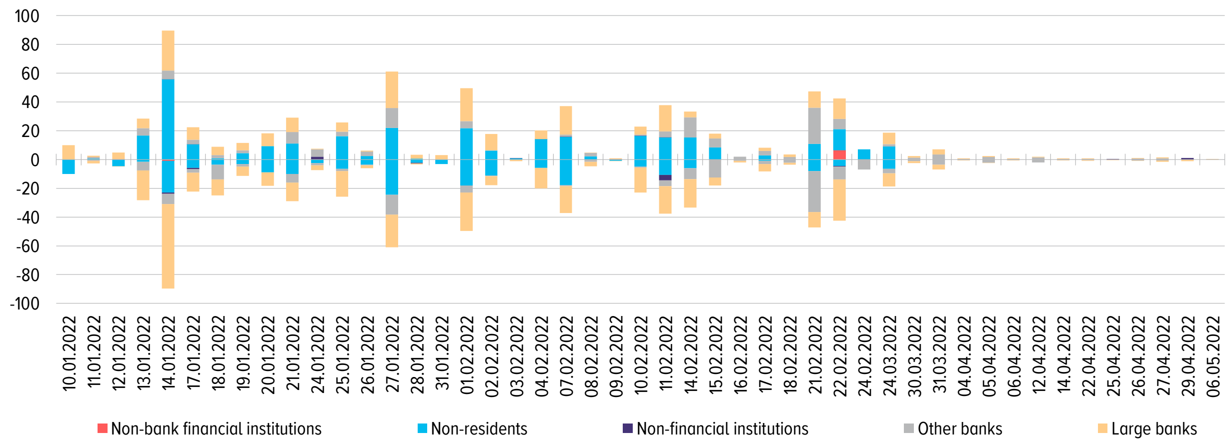
Chart 28



** Positive value means that market participant makes fixed-rate payments; negative value means floating-rate payments.*
Source: NCI JSC NSD.

NEW TRANSACTIONS ON INTEREST RATE SWAPS DEPENDING ON THE RATE OF PAYMENT (FIXED/FLOATING)*
(₽ BILLION)

Chart 29



** Positive value means that market participant makes fixed-rate payments; negative value means floating-rate payments.*
Source: NCI JSC NSD.

2.4. Income channel

The introduction of sanctions by unfriendly countries had a negative impact on the income of Russian companies and individuals. Russian exporters faced restrictions imposed by unfriendly countries on imports of key commodities (metals, oil, fertilisers etc). Supply chains were disrupted due to the closure of borders and difficulties in transporting Russian goods. Exports of equipment, components and other goods necessary for domestic production to Russia were banned. Currently, companies experience continuing pressure in the form of new restrictions. To neutralise the impact of sanctions, exporters try to find other buyers and suppliers and seek to switch to settlements in the national currency. This process often requires long-term changes and affects the profitability of companies and ultimately the income of households.

According to S&P Global, in March 2022, the composite PMI index for output in the Russian Federation[18] dropped to 37.7 points (in April, it rose slightly to 44.4 points) compared to 50.8 points

[18] *The Russia Composite Output Index reflects the total output in the services and manufacturing sectors. An index value of more than 50 points means growth compared to the previous month, and a value of less than 50 points means decline.*

in February due to a decline in production and customer demand and a reduction in new export orders. Real household money income for Q1 2022 decreased by 1.0% YoY.

The oil and gas industry, metallurgy, air transportation, commercial real estate and automotive manufacturers were the most affected by the sanctions of unfriendly countries. In the future, a decrease in demand from households (below the pre-sanction consumption) may affect the retail trade and the SME sector due to the economic downturn and the reduction in real household income.

Oil and gas. In February–March 2022, the Russian oil and gas industry faced sanctions from the US, Canada and Australia, which led to price volatility in the oil market in Q1 2022. In early March 2022, the price of Brent crude oil reached $130 per barrel, and as of 11 May it amounted to about $107 per barrel. In the context of the restrictive measures, despite the absence of direct bans from European consumers, Russian oil companies, nevertheless, face difficulties in supplying oil abroad due to the following factors: increasing uncertainty with financial settlements, rising insurance premiums for transportation in Russia and a reduction in the number of sea freight carriers willing to transport Russian oil, refusal of other participants in supply chains to cooperate due to fears of expanding sanctions[19].

The introduced restrictions on equipment imports may affect the revision of capital expenditure programmes by Russian oil and gas companies and stimulate import substitution and search for new suppliers in related industries.

Metallurgy. The price situation in the global *ferrous metallurgy* market has an upward trend due to the restrictions imposed on Russian exports. Due to the refusal of a number of foreign buyers to import Russian ferrous metals, Russian exporters consider the possibility of redirecting supplies to other markets. At the same time, possible risks of selling products on alternative markets may include a discount to European commodity prices, an increase in transportation costs, limited capacity of the eastern markets and an insufficient number of ships to transport Russian cargo. However, in the short term, the possible drop in the supplies from Russian manufacturers may be partially offset by rising prices: in 2021, the share of revenue of the largest companies of the ferrous metallurgy industry from sales to Europe amounted to 17%, while the prices for steel products in Q1 2022 grew by about 6% QoQ, for iron ore, by 27% QoQ.

Logistics issues in export destinations partially affect Russian producers of *non-ferrous metals*. Global prices for the industry's products are high (in Q1 2022, aluminium prices increased by 18% QoQ; nickel, by 35% QoQ; copper, by 3% QoQ)[20] amid continued uncertainty regarding possible shocks on the supply side (see Section 1).

Air transportation. The EU countries, the UK, Canada and the US imposed sanctions against the Russian air transportation industry, which significantly affected its financial position and operations.

The airspace over the entire territory of the above countries was closed, which significantly reduced the revenue of airlines from foreign flights. According to Rosstat, in 2021, countries that are now inaccessible and at the same time more marginal for Russian companies accounted for 30% of passengers traveling abroad by air. The need to detour around closed airspace resulted in increased travel time to accessible regions. In turn, Russian airspace was also closed to aircraft from the unfriendly states, which reduced royalty payments. Domestic traffic has grown after the pandemic[21]. The Federal Tourism Agency (Rostourism) expects an increase in domestic tourist traffic[22], which may partly offset the drop in airline revenues, coupled with flights to open countries popular with

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[19] *In particular, from the EU countries.*

[20] *According to the World Bank (Commodity Markets Outlook April 2022).*

[21] *According to the Federal Air Transport Agency (Rosaviation), in 2021, the number of passengers carried increased by 60% YoY, and in January–February 2022 compared to January–February 2021, the growth amounted to 33.8%.*

[22] *In May–September 2022, the growth is expected to amount to 4–30% YoY depending on the region, the largest growth is expected in the south of Russia.*

tourists in the summer. However, some of the airports in southern Russia, which accounted for 7% of passengers in 2021 according to Rosaviation, are temporarily closed.

On 26 February 2022, the EU adopted a new package of sanctions, including a ban on the supply of aircraft to Russia and the provision of services by foreign leasing companies in the air transportation industry for Russian lessees. The ban also covers insurance of foreign-made aircraft, maintenance of aircraft[23] and supply of spare parts and components for aircraft manufacturers.

In early March, the aviation authorities of Bermuda and Ireland withdrew airworthiness certificates from aircraft of Russian airlines registered in those countries. In response, the Russian authorities adopted a law allowing re-registration in the Russian Federation of aircraft owned by foreign companies and leased by Russian air carriers; about 800 aircraft were transferred to the Russian registry[24].

With the growing debt burden and declining revenues due to the sanctions, the industry may need further government assistance to maintain a sustainable financial condition.

The surge in jet fuel prices[25] following the rise in energy prices also has a negative impact on the air transportation industry but is partially offset by a damper[26]. In addition, to ensure transportation of at least 100 million passengers by Russian companies by the end of 2022, the Government of the Russian Federation was instructed to develop a programme to compensate airlines for domestic transportation costs. It was also instructed to provide subsidies to companies for the costs associated with repayment to passengers of the carriage fee for international flights and flights to Russia cancelled due to the restriction of flights to a number of airports[27].

In addition, foreign sanctions directly affected the *air leasing* segment, which was estimated at ₽0.8 trillion in 2021, or 14% of the total leasing portfolio according to Expert RA. Most of the Russian aircraft fleet was owned by foreign leasing companies, some of which were affiliated with the largest Russian lessors.

As it was impossible to service debt to foreign creditors from unfriendly countries in foreign currency, the President of Russia issued a decree providing for settlements with lessors in rubles at the exchange rate of the Bank of Russia to support the industry[28]. It allowed Russian banks or Russian parent companies of lessors from the unfriendly countries financing the transactions to repay obligations under leasing transactions in Russian rubles in the name of the parent company or creditor bank. Thus, lessors operating in the air leasing segment were able to restore their cash flows at least partially. At the same time, the issue of market revaluation of aircraft on the balance sheet of leasing companies remains to be of importance.

Retail (food retail). Retail companies also face new challenges due to the introduction of anti-Russian sanctions by a number of countries.

Many manufacturers broke off cooperation with domestic importers, a number of foreign companies announced their intention to leave the Russian market or significantly limit their activities in the Russian Federation, which had a negative impact on purchases.

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[23] On 2 March 2022, American company Boeing also announced the termination of supplies of spare parts, maintenance and support for aircraft of Russian airlines.

[24] Russian companies make payments to foreign leasing companies in rubles.

[25] According to Rosaviation, the growth amounted to 6% from ₽63,300 per ton without VAT in January to ₽67,200 per ton without VAT in March.

[26] Airlines receive compensation from the budget when the export price of jet fuel exceeds the price level set by the Government of the Russian Federation within the country. According to the Federal Antimonopoly Service (FAS), the export price of jet fuel based on the exchange rate of the US dollar doubled from ₽77,810 per ton in February to ₽142,707 per ton in March.

[27] The instruction also includes reimbursement for airport costs incurred during the period when such restrictions are in effect.

[28] Decree of the President of Russian Federation No. 179, dated 1 April 2022, 'On the Temporary Procedure for Discharge of Financial Obligations in the field of Transportation to Certain Foreign Creditors'.

Logistic failures and disruption of established supply chains stem from the following factors: delay and blocking of goods imported into the Russian Federation by decisions of the customs authorities in the largest European seaports; a ban on international cargo transportation[29] across the EU[30] by Russian and Belarus vehicles, including transit; refusal of the largest international transportation companies to do business with Russian companies. Services of foreign transportation companies are much more expensive. As a result, the cost of delivering goods into Russia has increased due to the closure of transportation corridors, the lengthening of supply chains and logistics routes, higher tariffs and exchange rates movements.

The sanctions against Russian banks hinder payments for goods and services. Foreign manufacturers switched to full prepayment for supplies, which forced the importers to finance the purchase of goods on their own amid difficulties in attracting trade financing due to the key rate hike. The combination of those factors led to a decrease in retailers' margins as part of curbing price growth and supporting current demand.

The increase in households' demand for durable goods observed in late February and March led to an increase in retailers' revenues. However, according to the Check Index service, in April, grocery store sales stabilised, declining by 12% compared to March due to a smoothing of the rush demand, while growing by 15% compared to April of the previous year.

Commercial real estate. This industry is traditionally vulnerable in times of crisis. In addition, it has not yet fully recovered from the pandemic. According to analysts[31], 160 international retail chains announced a temporary suspension of business in the Russian Federation. They expect the prospects to become clearer within the next six months: pressure on international brands in their home countries persists, so the chains that have suspended their operations will close their outlets down or sell business to investors, or malls will insist on closing due to a serious traffic drop, relying on the Russian companies and loyal partners from other countries.

Analysts[32] expect an increase in vacancy rates in Q2–Q3 2022: 30–35% of rental spaces in shopping centres may remain vacant.

Automotive manufacturers. The industry was slowly recovering from the pandemic in 2021, and after the introduction of the sanctions in February–March it shifted to stagnation due to restrictions on supplies of spare parts and components for the automotive manufacturing and blocking sanctions against a number of companies associated with the segment. Although automotive manufacturers managed to replace some components with Chinese equivalents, deliveries were greatly delayed due to the lockdown introduced in certain regions of China.

According to the AEB, in April 2022, new car sales fell by 78.5% YoY, and in March, by 62.9% YoY amid rising prices. In the short term, reorientation of supplies and development of the Russian production of automotive parts will partially offset sanction risks and help resume automotive manufacturing.

According to Rosstat, as of 29 April 2022, the increase in prices for domestic passenger cars amounted to 46.11%, and for foreign makes, to 50.73% compared to the beginning of the year. Such a significant increase in prices amid a reduction in real household income will have a strong negative impact on automotive manufacturers. The AEB expects that by the end of 2022 sales of new cars may be reduced by 50% (to 800,000–850,000 units).

SMEs. After the removal of pandemic-related restrictions and the resumption of trade, the number of participants and the volume of trade turnover among SMEs increased. According to Rosstat, the retail trade turnover of small businesses in 2021 increased by 8.1% YoY, and in Q1 2022, by 12.5% YoY.

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[29] Except for trucks delivering pharmaceutical, medical, food and agricultural products, including wheat, energy commodities, non-ferrous metals and fertilisers.

[30] Transit flows to the Kaliningrad Region still remain.

[31] Estimate by Knight Frank, a consulting agency for residential and commercial real estate.

[32] According to Knight Frank.

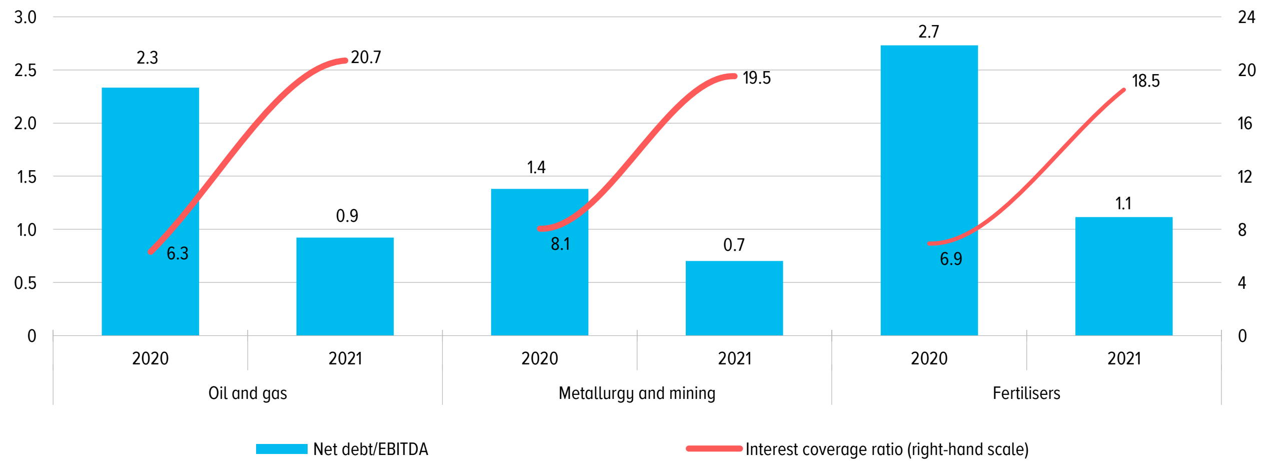
However, since real household income has already begun to decline in Q1 2022, and the coming months may see rising unemployment, SMEs expect the demand of households to drop below the pre-sanction consumption due to the economic downturn.

Debt burden of the largest companies in the non-financial sector

In 2021, the debt burden of the largest companies in the non-financial sector decreased compared to 2020. Thus, the aggregate Net debt/EBITDA for the oil and gas industry decreased by 1.4 points to 0.9; for metallurgy and mining, by 0.7 points to 0.7; for the fertiliser industry, by 1.6 points to 1.1. The interest coverage ratio also improved, with indicators for the sectors covered rising by an average of 12.5 points (Chart 30). Decrease in the debt burden was associated with an improvement in the financial condition of companies due to rising prices for products sold and the post-pandemic recovery of business activity.

In the current unstable geopolitical situation, the accumulated financial strength of most export-oriented companies in the non-financial sector will allow them to better adapt to changing market conditions. The need to restructure business models of companies affected by the sanctions may provoke a revision of the volume and direction of capital investments in a number of organisations. Moreover, rising prices on the global commodity markets will partly compensate for potential losses from a decreasing volume of products sold.

AGGREGATE DEBT BURDEN INDICATORS FOR THE OIL AND GAS INDUSTRY, METALLURGY AND MINING, FERTILISER PRODUCTION FOR 2020–2021 *Chart 30*



Source: consolidated financial statements of companies, Bank of Russia estimates.

Box 4. Housing market situation

Q1 2022 saw a continued price growth in the housing markets amid an increase in investments of households in residential real estate as a secure asset during the crisis, with growth rates in the primary market exceeding those of the secondary market (Table 6).

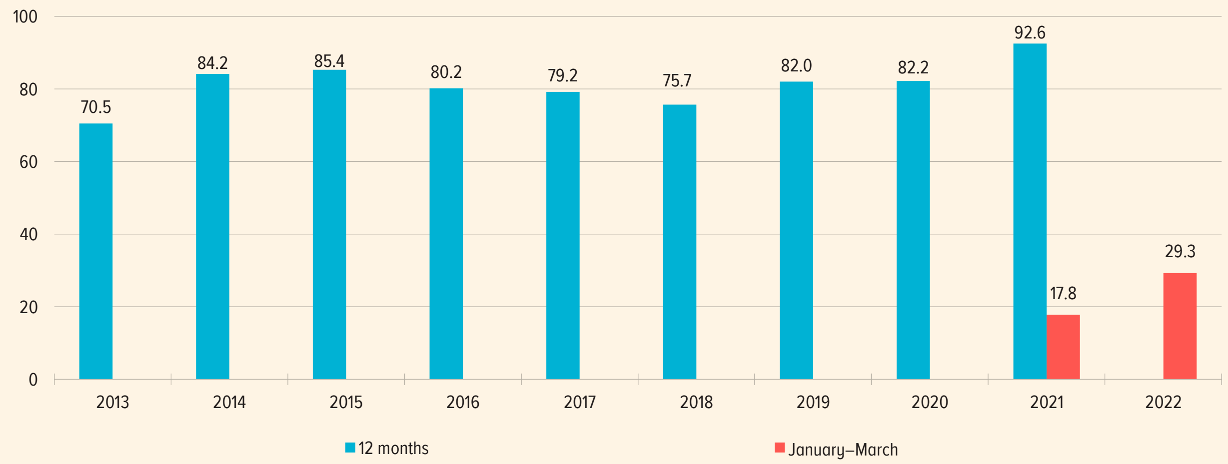
PRICE INDEX ON THE PRIMARY AND SECONDARY HOUSING MARKETS IN RUSSIA
(QoQ) *Table 6*

	Housing market	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1
Russian Federation	Primary	102.7	103.7	103.7	106.0	107.0	105.1	105.7	108.0
	Secondary	101.4	103.2	104.4	103.6	104.4	103.4	104.7	106.5
Moscow	Primary	100.4	105.4	102.0	106.7	110.2	104.2	103.4	105.3
	Secondary	105.1	110.2	108.5	100.4	110.6	104.5	103.5	101.7

Source: Rosstat.

RESIDENTIAL REAL ESTATE COMMISSIONED IN RUSSIA
(MILLION SQ. M)

Chart 31



Source: Unified Information System for Housing Construction (EISGS).

The beginning of 2022 saw the continued upward trend in residential real estate commissioning (+64% YoY in January–March 2022), which is associated with the inertia of the construction industry (Chart 31). At the same time, a more moderate growth is observed in the segment of apartment block construction: in Q1 2022, the volume of commissioning increased by 36% YoY. However, by the end of 2022 and in the next 1–2 years, a slight decrease in the growth rate of commissioning volumes should be expected due to higher production costs and a possible shortage of building materials, an increase in construction duration due to changes in logistics amid disruptions in imports and a moratorium on fines for delaying delivery of housing in force until the end of 2022. In the long term, prices in the housing market are likely to stagnate due to a decrease in consumer demand amid rising mortgage rates and a reduction in real income.

Currently, we identify the following primary risks in the segment of lending to developers:

- deteriorating debt burden indicators (Net debt/EBITDA, interest coverage ratio) in the context of lower operating income due to reduced demand and higher costs (rising prices for a number of building materials and labour) and higher costs of servicing loans;
- an increase in construction duration resulting in the need to restructure loans to increase loan maturities.

The lending risks to developers will be partially offset by various government support measures for the construction industry, including the extension until the end of the year of the universal subsidised mortgage programme with a rate for end borrowers reduced to 9%, and subsidised programmes for loans to developers.

2.5. Credit channel

Due to the sharp and simultaneous decline in financial sustainability across various sectors of the economy and the deterioration in credit conditions, the economy becomes vulnerable to 'credit crunch'. A 'credit crunch' means that the lending reduction leads to a slowdown in economic growth, which in turn again reduces the demand for lending, consequently, the contraction process begins to unwind in a spiral. To mitigate such risk, the Government of the Russian Federation and the Bank of Russia launched concessional lending programmes for companies, while concessional mortgage lending programmes continue to operate for households.

2.5.1. Corporate lending market

The banking sector approached the crisis with a steadily growing corporate loan portfolio, a low cost of risk and a declining share of foreign currency corporate loans. As of 1 February 2022, lending growth amounted to 13.9% YoY and was driven by an increase in ruble debt on loans, while foreign currency debt was gradually decreasing. Foreign currency corporate loans (24%

share) are mainly represented by claims on Russian companies and non-residents affiliated with Russian businesses. As in the first month of the pandemic, the beginning of the current crisis saw utilisation of limits on credit facilities by borrowers and demand for restructuring of existing debt. Amid the imposed sanctions, foreign currency lending decrease in March–April (-2.9% and -2.2%, respectively) was partially offset by the demand for ruble loans (+0.6% and +0.7%, respectively). To support lending and prevent credit contraction, the Government of the Russian Federation launched a concessional lending programme for systemically important companies, and the Bank of Russia launched a programme to support SMEs lending.

The quality of the corporate loan portfolio is still uncertain as many companies are in the process of adapting to new economic environment. Some companies have to restructure their loans to overcome difficulties with servicing debt. Banks have already restructured about 6% of their corporate loan portfolio. In turn, the Bank of Russia exempted banks from forming additional provisions for such loans. Immediately before the crisis, many banks had capital reserves to cover possible losses on credit claims (for the sector as a whole, capital reserves amounted to ₽6.6 trillion[33], but they are distributed unevenly).

As of 1 February 2022, lending growth amounted to 13.9% YoY and was driven by an increase in ruble debt on loans, while foreign currency debt was gradually decreasing. As of 1 February 2022, the share of foreign currency loans amounted to 24% of the corporate loan portfolio, with a significant part of the debt related to non-resident companies affiliated with Russian organisations that were highly likely to convert debt into rubles and continue servicing loans despite the sanctions. To cover possible risks on corporate foreign currency exposures, banks had a macroprudential buffer of ₽158 billion in capital, which was released by the Bank of Russia for that purpose.

The quality of the loan portfolio gradually improved after the acute phase of the pandemic in 2020 as some large non-performing loans were written off against loan loss provisions. As a result, by 1 February 2022, the share of non-performing loans dropped to 7.1% for loans to large companies (excluding SMEs) and to 10.3% for loans to SMEs.

After the introduction of the anti-Russian sanctions by unfriendly countries and the hike of the Bank of Russia key rate aimed at maintaining financial stability, the situation with corporate lending has largely developed according to the scenario observed at the beginning of the pandemic in 2020. Companies showed an increased demand for lending in late February–early March, utilising limits on credit facilities previously approved by banks. The growth of ruble debt in February amounted to 2.8%, of which 2.7 pp through the utilisation of credit facilities[34]. In March and April 2022, the growth of ruble lending was moderate (+0.6% and +0.7%, respectively) amid increased lending costs and a more cautious approach of banks to the selection of borrowers.

To prevent credit crunch in the economy, the Government of the Russian Federation and the Bank of Russia launched concessional lending programmes for enterprises.

Joint programmes of the Bank of Russia and SME Corporation JSC aim at supporting SMEs and allow companies to both receive new loans and refinance existing liabilities. By the end of April, the Bank of Russia issued loans to banks participating in the programmes for concessional lending to SMEs in the amount of ₽103 billion[35], and ₽160 billion to refinance existing debts of SMEs, which

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[33] Capital reserve of the banking sector, with capital add-ons and the macroprudential buffer accumulated before the beginning of the crisis (as of 1 February 2022).

[34] Funds provided under credit facility agreements (according to reporting form 0409303).

[35] Including new tranches of disbursements under restructured loans.

LIMITS ON CONCESSIONAL LOANS FOR SYSTEMICALLY IMPORTANT COMPANIES *Table 7*

Sector	Limit on concessional loans, ₽ billion
Industry and trade	1,200
Transportation	250
Agriculture	225
Construction of commercial real estate	89
Fuel and energy	58.3
IT	54.5
Information and communication related to media	38.8
Utility services	35.5
Total	1,951

Sources: Orders and directives of the Government of the Russian Federation (Directives No. 532-r, dated 18 March 2022; No. 534-r, dated 18 March 2022; No. 714-r dated, 1 April 2022; No. 777-r, dated 7 April 2022; No. 831-r, dated 11 April 2022; No. 1046-r, dated 28 April 2022; No. 1047-r, dated 28 April 2022; No. 1048-r, dated 28 April 2022; No. 1235-r, dated 19 May 2022), press releases of the Government of the Russian Federation.

is equivalent to 3.6% of the SME loan portfolio. The available limit on the concessional lending programmes of the Bank of Russia allows it to issue ₽318 billion more[36].

The programmes of the Government of the Russian Federation primarily aim to support systemically important companies by subsidising interest rates on loans. Since the beginning of March, banks have issued concessional loans aimed at replenishing working capital of systemically important companies in the amount of ₽39.2 billion for agricultural companies and ₽261.5 billion for companies from manufacturing and trade sectors[37], which amounted to 6% of the corporate loan portfolio[38] and 21% of the limits set under the programmes. In total for 2022, a significant limit (₽1.9 trillion) has been allocated for concessional loans, mainly for manufacturing and trade companies (Table 7). To implement the programme of concessional lending for housing construction projects, JSC DOM.RF distributed ₽35 billion allocated by the Government of the Russian Federation among credit institutions[39]. In addition, the state support programme for the economy has been significantly expanded in terms of providing guarantees of State Development Corporation VEB.RF on loans. The limit on lending to manufacturing enterprises[40] secured by guarantees will amount to ₽1.1 trillion.

Compared to the beginning of the pandemic, the current period is characterised by a significant reduction in foreign currency lending amid the sanctions against certain Russian banks and companies introduced by a number of unfriendly countries (old loans are amortised, while practically no new loans are issued). Claims on loans to certain companies are transferred from foreign currency into rubles. If in February the foreign currency debt increased by 1.2%, in March it dropped by 2.9% and continued to decline in April by 2.2%.

[36] The Bank of Russia programmes for concessional lending to SMEs (Bank of Russia Order No. OD-2479, dated 25 October 2019, 'Extended SME Lending Incentive Programme', Bank of Russia Order No. OD-490, dated 11 March 2022, 'Working Capital Lending Programme for SMEs') allow businesses to receive working capital loans with a maturity of up to one year and investment loans with a maturity of up to three years. The working capital concessional lending programme for SMEs allows small enterprises to receive concessional loans (to refinance previously received loans) or investment loans at a rate of no more than 15% per annum, and medium-sized enterprises, at no more than 13.5%. The programme will operate until 30 December 2022.

[37] As of 17 May 2022, according to the Bank of Russia survey of 83 credit institutions (which account for about 60% of the banking sector assets as of 1 May 2022).

[38] Bank of Russia calculations based on the data from reporting form 0409303 for loans granted to resident legal entities and individual entrepreneurs.

[39] Decree of the Government of the Russian Federation No. 629, dated 30 April 2020, as amended by Decree of the Government of the Russian Federation No. 534, dated 31 March 2022.

[40] Non-SME and non-systemically important companies. Liability limit under VEB.RF guarantees is up to 50% for each loan.

The current quality of the corporate loan portfolio remains uncertain. The corporate sector will require a lot of time to reconfigure business processes partially paralysed due to disruptions in production and supply chains, limited access to traditional sales markets and difficulties in foreign economic settlements and insurance (see Subsection 2.4 for more details in the context of industries). Therefore, banks are unable to fully assess the current quality of the loan portfolio. Taking this into account, the Bank of Russia temporarily exempted banks from downgrading loan quality, including for debt restructuring, if borrowers experience difficulties with debt servicing due to the direct or indirect impact of sanctions. To support lending capacity, the accumulated macroprudential capital buffer for retail loans and foreign currency exposures has been released.

To allow companies to adapt to new economic environment, banks are restructuring previously issued loans. The law allowing SMEs to apply to lenders for loan repayment holidays of up to six months was renewed[41]. In the first month after the law came into force, the number of applications for loan repayment holidays and for loan restructuring under the banks' own programmes did not exceed the demand at the beginning of the pandemic. In total, as of 1 April 2022, banks restructured 3.3% of debt of SMEs, including provision of loan repayment holidays under the law (1.4% of debt)[42].

The restructuring demand from large companies has exceeded the value observed at the beginning of the pandemic. Since the beginning of March, banks have already restructured 6.3% of the portfolio of loans[43] granted to large corporate borrowers mainly from the following industries: chemical industry, mining, oil and gas, real estate transactions. Half of these restructurings (3.2% of the portfolio of loans to large companies) are variable-rate loans, which became difficult to service for many borrowers after the Bank of Russia key rate hiked to 20%. To encourage banks to restructure corporate loans, the Bank of Russia allowed them not to downgrade the quality category of loans in case of restructuring.

In the future, as the economy structurally adjusts to the sanctions introduced by the unfriendly countries, import substitution in certain industries grows, and interest rates decrease, a gradual recovery in demand for corporate loans can be expected. At the same time, the expected dedollarisation of liabilities will contribute to a reduction in the share of foreign currency loans.

As the situation in the financial system stabilises, banks will gradually start to recognise losses on restructured loans. The volume of loans restructured since the end of February already amounts to 54% of the existing capital reserves of the banking sector[44], but the total credit losses of banks may grow in the future as the stability of individual large companies and entire sectors of the economy remains highly uncertain, and a number of investment projects that have been launched may turn out ineffective.

2.5.2. Retail lending market

Before the beginning of the crisis, a record high level of household debt burden at the macro level (10.6% of disposable household income) was observed in the retail lending market, while banks had accumulated a significant macroprudential capital buffer (₽730 billion). As external economic conditions deteriorated, and cost of lending grew, in March 2022, the issuance of unsecured consumer loans decreased, which led to a decline in this portfolio by 3.4% over March–April. At the same time, the mortgage lending portfolio started to slightly decrease only in April since a significant part of loans issued in March was provided on previously approved applications and under state programmes for concessional lending. The change of the concessional lending

[41] The deadline for filing applications for loan repayment holidays under loan agreements made prior to 1 March 2022 shall be 30 September 2022.

[42] According to the Bank of Russia's monitoring of debt restructurings of SMEs by credit institutions in March 2022. According to preliminary data, as of 1 May 2022, the share of restructured debt amounted to about 7%.

[43] Including acquired rights of claim, excluding loans issued by VEB.RF. Share in the volume of the corporate loan portfolio, excluding SMEs, according to reporting form 0409303 as of 1 April 2022.

[44] Amounted to ₽6.6 trillion before the violation of required ratios as of 1 February 2022.

programme parameters by the Russian Government (reducing the rate to 9% and increasing the maximum loan amount to ₽30 million) will help stabilise the mortgage market and support the growth rate of loans in Q2–Q4 2022.

No significant deterioration in the quality of the retail loan portfolio has been observed so far. March and April saw a significant growth in the share of consumer loans with missed regular payment (from 5.3% to 7.5%), which indicates a potential future accumulation of non-performing loans in this segment.

To cover banks' possible losses on loans and support lending in general, the Bank of Russia released the entire accumulated macroprudential capital buffer, lowered macroprudential capital requirements for newly issued retail loans and temporarily allowed banks to restructure loans without forming additional provisions. While household demand for loan restructuring remains low, 0.6% of retail loan debt has been restructured, but demand for restructuring may increase in the second half of the year.

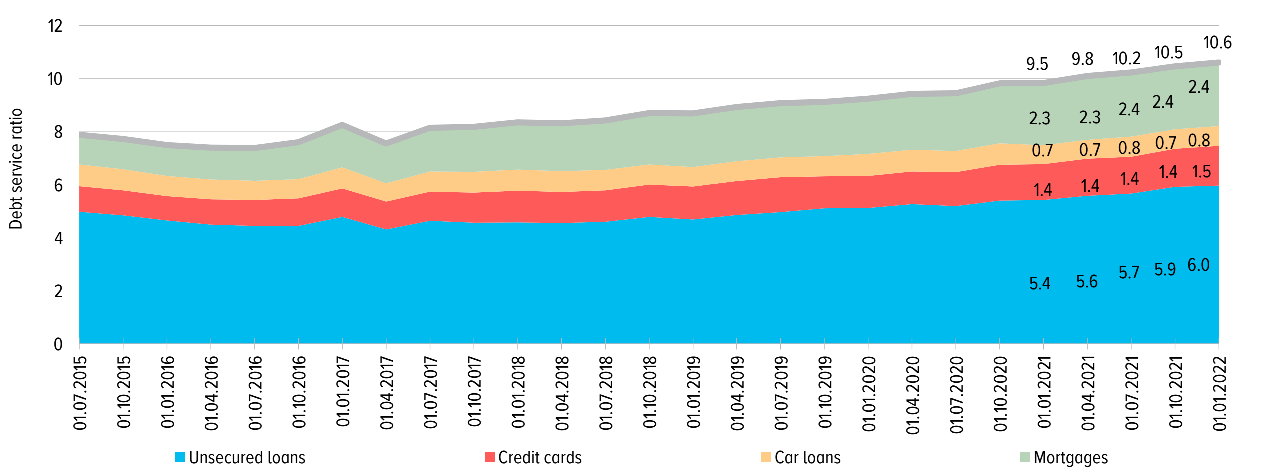
The banking sector entered the crisis with a rapidly growing retail loan portfolio, accumulated macroprudential capital buffer for possible losses and a steadily declining share of non-performing debts. Before 1 February 2022, the active growth in lending outpaced the growth of household income, and the reduction in banks' requirements for the payment burden of borrowers led to an increase in the household debt burden. By 1 January 2022, the ratio of planned payments of households on loans in accordance with the terms of agreements amounted to 10.6% of the entire disposable household income (taking into account all households, not only those with outstanding loans).

Therefore, the macroprudential policy of the Bank of Russia in the previous year aimed at limiting the growth of risky lending and accumulation of capital buffers by banks to cover possible future losses. The total accumulated capital buffer for retail loans amounted to ₽730 billion as of 1 February 2022. The macroprudential capital buffer covered possible losses in the unsecured lending segment in the amount of 5.3% of the portfolio, in the mortgage segment, 1.2%.

Since the beginning of the crisis, households prefer to postpone application for a loan in the face of rising borrowing costs and increased economic uncertainty, which is reflected in a decrease in the number of applications for cash loans in Q1 2022 by 44% compared to Q4 2021. Banks also tightened requirements for borrowers. It resulted in a 1.9% and 1.5% reduction in unsecured consumer loans in March and April 2022, respectively, and a decrease in the share of loans provided to borrowers with a high debt service-to-income ratio (DSTI). While in Q4 2021 33.4% of consumer

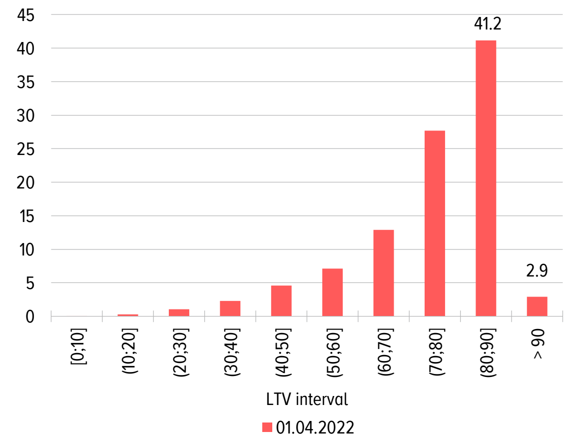
HOUSEHOLD DEBT BURDEN
(%)

Chart 32



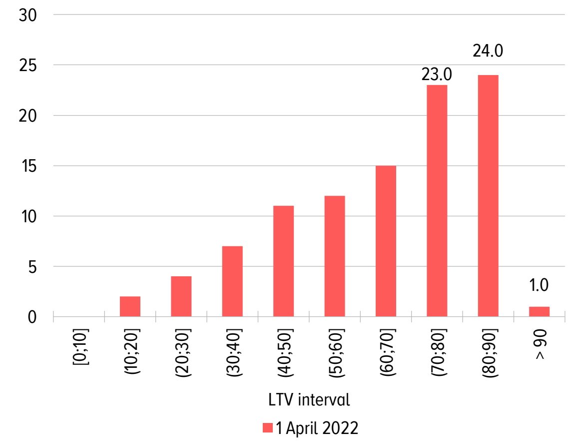
Source: Bank reporting forms 0409126 and 0409115, combined data of CHBs.

DISTRIBUTION OF DEBT ON MORTGAGE LOANS UNDER EQUITY PARTICIPATION AGREEMENTS BY LTV *Chart 33*
(%)



Source: Bank reporting form 0409704.

DISTRIBUTION OF DEBT ON NON-EQUITY PARTICIPATION MORTGAGE LOANS BY LTV *Chart 34*
(%)



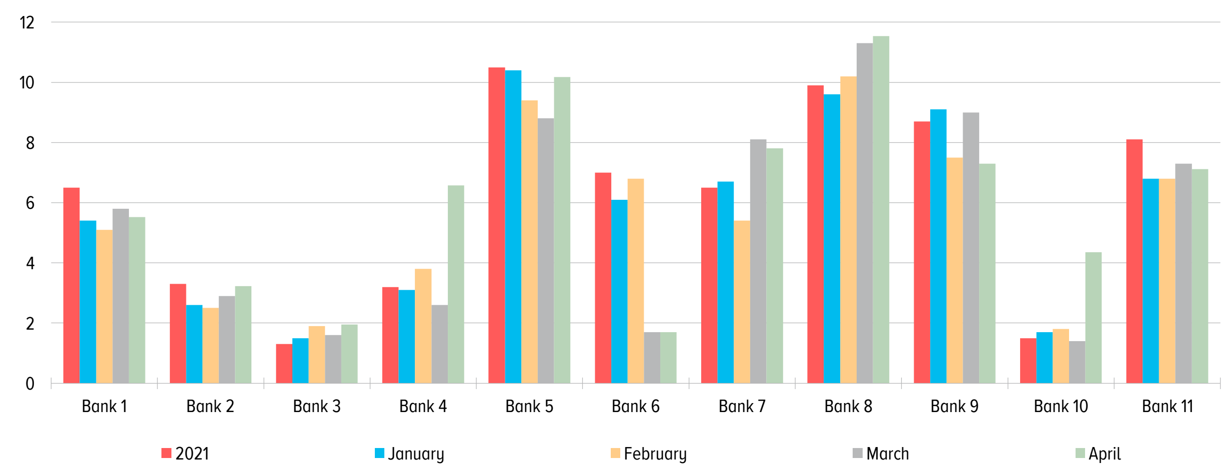
Source: Bank reporting form 0409704.

loans were granted to borrowers with DSTI over 80%, in March 2022 it decreased to 31.6% despite the regulatory tightening of approaches to calculating DSTI for long-term consumer loans[45].

In mortgage lending, the debt growth rate in March 2022 remained high at 2.1%, which was largely due to realisation of investment demand for residential real estate by households, including in order to protect savings from depreciation amid increased inflation. A significant part of loans was provided on applications approved by banks prior to the crisis. The mortgage segment is also supported by state programmes for concessional lending, which in March accounted for 43% in the volume of loans granted. In April, the effect from loans on previously approved applications was exhausted, and the portfolio showed a decrease of 0.1% per month.

The expansion of state mortgage subsidy programmes leads to increased vulnerability of the formed portfolio to the event of a drop in housing prices since under state programmes the minimum down payment amounts to 15%. The portfolio of such loans has a higher LTV value compared to mortgage loans provided for the purchase of housing on the secondary market. In the event of a

DYNAMICS OF THE FIRST OVERDUE PAYMENT INDEX FOR UNSECURED HOUSEHOLD LOANS *Chart 35*

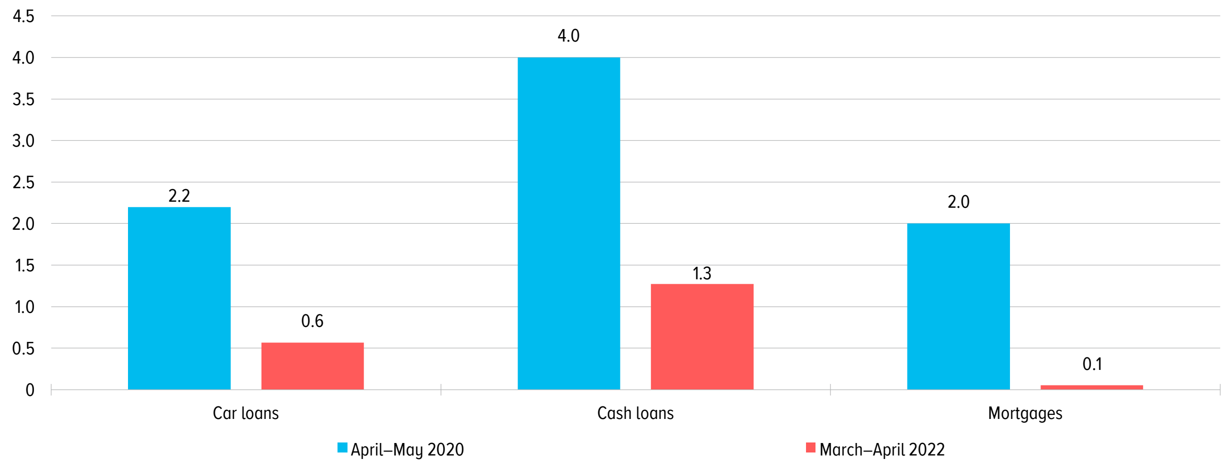


Source: Bank of Russia survey.

[45] *Starting from 1 February 2022, DSTI for consumer loans with a maturity of more than 5 years is calculated on the assumption that the loan must be repaid within 48 months.*

SHARE OF DEBT RESTRUCTURED PER MONTH
(%)

Chart 36



Source: Bank of Russia survey.

significant price downturn, debts of some borrowers in the primary mortgage segment will exceed the current value of the housing they purchased.

No deterioration in the quality of the retail loan portfolio has been noted. The share of loans overdue by more than 90 days for consumer loans is 8.0%, for mortgage loans, 0.7%. However, this indicator does not take into account a potential growth in non-performing debt on the portfolio of loans restructured after 1 March 2022 (Chart 36). In addition, March saw a growth of leading credit risk indicators, pointing to a potential increase in non-performing consumer loans in Q2 2022. In particular, according to a survey of the largest credit institutions engaged in retail lending, March and April saw an increase in the share of consumer loans with missed regular payment from 5.3% to 7.5% (first overdue payment index). This level corresponds to the values of 2021, the synchronised growth of the indicator for most banks reflects a systematic increase in credit risk caused by macroeconomic factors.

To cover possible banks' losses on loans and to support lending, the Bank of Russia released the entire accumulated macroprudential capital buffer, reduced add-ons to risk weights for newly issued retail loans and suspended the cap on effective interest rate for consumer loans until 30 June 2022. In addition, the Bank of Russia temporarily allowed banks to restructure loans to borrowers facing a deterioration in financial condition without forming additional provisions for such loans. This will facilitate restructuring under banks' programmes. Borrowers also have the right to apply for repayment holidays under the law[46] if their income dropped by more than 30%. In March–April, the demand for loan restructuring was modest, well below the demand at the start of the pandemic in 2020. However, in the future, the share of restructured loans may increase due to rising unemployment and a decrease in real household income.

In the second half of 2022, the share of concessional mortgage loans is expected to grow due to the contraction of the secondary mortgage market in the context of high rates. The segment of unsecured consumer lending may face portfolio stagnation. In the current crisis, this process can be extended over time, unlike in the crisis caused by the pandemic, when borrowers actively applied for loan restructuring. Moreover, the deterioration in the quality of the loan portfolio may be more significant and prolonged than in 2020 as the economy will need more time to adapt to the new external economic conditions and to implement structural changes.

[46] *Federal Law No. 106-FZ, dated 3 April 2020.*

2.6. Insurance channel

In the case of a major insured event, the restrictions on international reinsurance could have a negative impact on the financial position of both Russian insurers and their policyholders. In response, the Russian insurance market is reducing its dependence on reinsurance companies from the unfriendly countries and is reorienting to expanded domestic reinsurance capacities.

OSAGO insurers may face some increased losses due to rising prices for spare parts and difficulties with their delivery, but the segment is not expected to face any significant issues.

2.6.1. Reinsurance

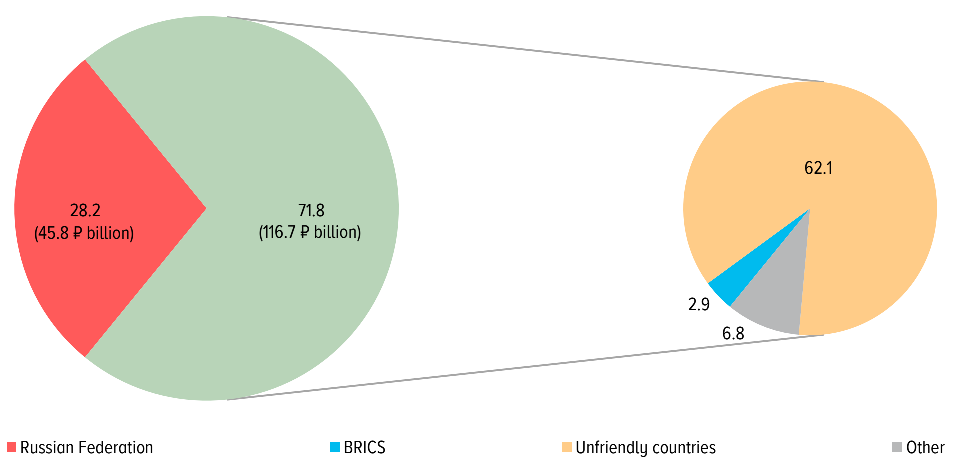
The sanctions affected the Russian insurance market primarily through reinsurance operations. As a result, Russian insurers are unable to fully reinsure risks and, at the same time, face increased likelihood of problems with obtaining reinsurance claims recoveries for losses incurred due to the refusal of international reinsurers or settlement banks to fulfil their obligations. In the case a major insured event, the lack of reinsurance could have a negative impact on the financial position of insurers, from which it could spill over to policyholders.

In 2021, about 72% of reinsurance premiums were transferred to the global market, about 62% of total reinsurance premiums were transferred to the unfriendly countries. Insurance premiums transferred for reinsurance in the Russian Federation in 2021 amounted to about ₽46 billion.

To minimise the risk of default on obligations by reinsurers from unfriendly countries, transactions with insurers, reinsurers and insurance brokers that are residents of unfriendly countries have been banned. In addition, a number of measures were taken to resolve problems in the reinsurance market: a law was adopted to raise the mandatory share of the RNRC in liabilities placed for reinsurance from 10% to 50%; the declared capital of the RNRC was increased more than 4 times from ₽71 billion to ₽300 billion and the guaranteed capital of the RNRC reached ₽750 billion. In addition to ensuring coverage of sanction risks accepted for reinsurance by the RNRC, the guarantee of the Bank of Russia covers all insurance risks that cannot be placed on the international reinsurance markets due to external factors.

These measures aim at maintaining the financial stability of the Russian insurance market, allowing Russian companies to provide reliable insurance coverage for their customers and handle the new sanction risks.

STRUCTURE OF PREMIUMS CEDED TO REINSURANCE IN 2021 *Chart 37*
(%)



Source: Reporting form 0420157.

2.6.2. Car insurance

The rising cost of spare parts and disruptions in their deliveries lead to an increase in the cost of restoration of damaged vehicles and, as a result, to higher cost of insurance. The situation is complicated by the inertia in the procedure for revising the Russian Association of Motor Insurers (RAMI) reference books on the average cost of spare parts, materials and standard hours of work, which regulate the calculation of OSAGO payments. Namely, the reference books currently in force (since 19 March 2022) are formed on the basis of the costs as of December 2021–January 2022; however, surging prices for spare parts will be fully reflected in the future version of the reference books, which will negatively affect the loss ratio of OSAGO insurers.

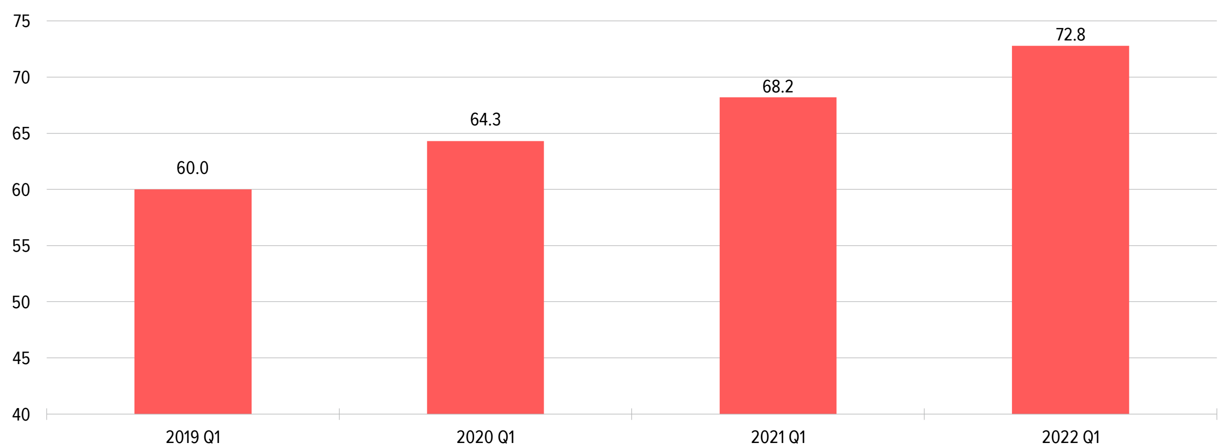
At the same time, in 2021, the loss ratio for OSAGO slightly increased, amounting to 69.4% (68.2% in 2020). In Q1 2022, the combined loss ratio amounted to 93.7%, growing by 1.3 pp compared to the same period last year. The payout ratio of OSAGO insurers in Q1 2022 increased from 74.4% to 77.7%. The average payment under OSAGO also demonstrated an upward trend.

The new procedure[47] proposed by the Bank of Russia for the development of cost reference books used to determine insurance indemnity under OSAGO will take into account the prices of equivalent components in the absence of original spare parts and help mitigate the shock from the shortage of original spare parts and the growth of losses.

In general, the insurance market has sufficient capital reserves to cover risks: the measures taken by the Bank of Russia to support the insurance sector allowed insurance companies to maintain the required ratio of equity and liabilities at the level of 1.64, and the value of total equity, at the level of ₽465 billion as of the end of March.

DYNAMICS OF AVERAGE PAYOUT UNDER OSAGO
(₽ THOUSAND)

Chart 38



Source: Reporting form 0420162.

[47] *Draft Ordinance of the Bank of Russia 'On Amendments to Clause 6.2 of Bank of Russia Regulation No. 755-P, Dated 4 March 2021, "On the Unified Methodology for Calculating Expenses on a Full Vehicle Overhaul"'.*

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