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FINANCIAL STABILITY REVIEW

Information and analytical review

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SUMMARY

The global economy is in a state of high uncertainty due to new lockdowns; however, governments, central banks and businesses have already accumulated certain experience in dealing with the environment created by the pandemic. As for the economy, the third quarter demonstrated opportunities for rapid recovery on the back of a declining epidemical threat in Russia and other countries. The financial system showed a fairly high degree of stability, problems with liquidity in markets were quickly mitigated by actions of regulators. Subsequently, risks related to solvency of the corporate sector would increasingly come to the fore. Stress tests conducted by the Bank of Russia demonstrate, that banks' capital buffers are sufficient to absorb losses.

External risks

By now, four stages in the development of the global crisis due to the COVID-19 pandemic can be distinguished. During the first stage, in March-April, markets experienced a drastic slump amid lockdowns. Regulators around the globe took unprecedented support measures to limit the severity of the impact on markets and the economy. After that, by May-June, markets stabilised (*the second stage*). In summer, the gradual lifting of COVID-19-related restrictions contributed to a rapid recovery in economic activity. However, since mid-August, the positive trend slowed due to an increase in two types of risk: epidemical and geopolitical (*the third stage*). In certain emerging market economies (EMEs) in particular, Turkey and Brazil, market volatility increased due to idiosyncratic factors. During the current *fourth phase*, a significant deterioration in the epidemical situation and reintroduction of restrictive measures have led to a return to negative trends in global markets, including the oil market. Uncertainty with regard to the prospects for a recovery in global growth has increased. The situation will remain uncertain until epidemical risks are eliminated, for example, as a result of large-scale COVID-19 vaccination. US election, Brexit and other geopolitical risks were additional factors that contributed to market volatility.

In the future, certain countries may face problems in issuing and servicing sovereign debt. If additional economic support measures are required to respond to the worsening epidemical situation, sovereign debt risks[1] may be realised in a wide range of countries: not only in EMEs, which traditionally have limited fiscal policy space, but also in certain advanced economies that have already faced a problem with stability of public finances. Through the use of government bond purchase programmes, some EME central banks were able to partially stabilise markets. However, if such policy is maintained over an extended period, market participants may have concerns with regard to central banks' adherence to their stated objectives and their susceptibility to fiscal pressure, which, on the contrary, will increase market volatility and lead to proinflationary risks. Therefore, EME central banks should use the purchase of assets with caution as a last resort. Bubbles in various segments of the financial market amid record low interest rates can become side effect of the accommodative monetary policy implemented in leading economies.

The financial and real sectors in the context of COVID-19

Russian debt market

In Russia, during the first stage of pandemic – the acute phase of COVID-19 – the peak in volatility in the OFZ market was reached in March and ended in April 2020 largely due to the timely implementation of measures. Unlike a number of other central banks that directly purchased government securities in the secondary market, the Bank of Russia stabilised the market without

[1] *Since early summer, credit rating agencies have downgraded the sovereign ratings of the UK, Canada, Turkey, and Chile.*

interfering with market pricing by allowing participants not to revalue securities. This allowed them to purchase bonds without the risk of their subsequent devaluation. Owing to this, the demand of local participants in the OFZ market in March fully compensated for the net sale of securities by non-residents (₽294 billion from 27 February to 1 April 2020).

During the second stage (Q2 2020), the OFZ market environment returned to normal: foreign investors did not sell large amounts of OFZ and did not show any significant demand in the primary market, taking a wait-and-see position. Overall, their investments in Q2–Q3 grew by ₽93 billion, while OFZ yields decreased by 134 bp on average.

Significant factors in the government bond market at the third stage (Q3 2020) included elevated geopolitical risks and the increased amount of OFZ placements in the primary market by the Ministry of Finance of Russia (MinFin). On the back of the growing budget deficit in the context of the pandemic, the Russian MinFin revised its borrowing plans upwards (from ₽1.7 trillion to ₽4.5 trillion in 2020) and changed the instrument structure in favour of floating-coupon OFZs, whose share reached almost 50% of the volume of OFZs placed since the beginning of the year. Through increased investment in floating-coupon OFZs, Russian banks get more flexibility in managing liquidity and interest rate risks. The volume of non-residents' investment in OFZs has remained stable and has been at the same level during the reporting period (about ₽2,940 billion), while the share of non-residents' investments in OFZs has decreased as most of the new debt issuance has been acquired by local participants. The declining share of non-residents and the growing role of local participants in financing the budget deficit increase the sustainability of the OFZ market to potential risks in the event of capital outflow from emerging markets. Despite the planned growth of Russian public debt in the medium term, it will remain low relative to GDP (20.8% of GDP in 2022, as estimated by the MinFin), which means that the fiscal sustainability of the Russian economy will be maintained.

Ruble and foreign currency liquidity

In the context of increased uncertainty during the first stage of the epidemic, the banking sector faced growing demand from individuals for cash and contracting maturity terms for borrowed funds. This was reflected in the worsening dynamics of the liquidity coverage ratio (LCR). In order to support the banking sector, the Bank of Russia temporarily expanded the number of cases allowing the use of highly liquid assets within the existing flexible LCR compliance regime and also eased the conditions for providing irrevocable credit lines (ICL). In addition, amid the growing share of banks' short-term liabilities, the Bank of Russia launched one-month and one-year REPO auctions in Q2 2020; however, they were not in demand by the banking sector. Only several credit institutions requested them when structural liquidity surplus decreased significantly due to the calendar effect of fiscal policy. However, the decrease was uneven.

Already during the second stage of the epidemic, the overall situation with ruble liquidity in the banking sector normalised with respect to margin calls and required ratios. Active purchases of OFZs by banks created conditions for further growth of highly liquid assets (HLA). With this in mind, the Bank of Russia decided not to prolong the period of extended flexibility of the LCR compliance regime and to encourage LCR compliance of systemically important banks (SIBs) through market instruments. In order to smooth out the uneven distribution of liquidity, including amid growing public borrowing, the Bank of Russia held a one-month and a one-year REPO auctions in October and in November.

The situation with foreign currency liquidity in the Russian market remained calm throughout all stages of the epidemic in 2020. During the period of increased volatility, the Bank of Russia extended the limit on FX swaps, but they were not in demand by market participants. This was largely due to the fact that banks had accumulated excess reserves of foreign currency liquidity by the beginning of the pandemic. The following period saw a normalisation of liquid foreign currency assets amid low interest rates in external markets. The USD/RUB cross-currency basis did not widen by more than 50 bp during the summer months and September 2020, which corresponds to 2019

levels. According to the survey of the largest credit institutions conducted by the Bank of Russia, banks have sufficient foreign currency liquidity to cover the expected repayment of their foreign currency liabilities over a one-year horizon.

Lending dynamics in the real sector

In contrast to the past crises, a reduction in corporate lending has been successfully avoided during the pandemic. As a result of the pandemic, businesses has faced a collapse of production chains and of demand for goods and services. This has led to a reduction in operating cash flows and an emergence of cash gaps, which has increased the need for companies to borrow funds to replenish working capital, pay salaries and cover other needs. Loan indebtedness of legal entities in Q2–Q3 2020 increased by 11.7% in annual terms. Companies have been supported by government measures (loans in the amount of ₽580 billion in Q2–Q3), the Bank of Russia programme for refinancing SME loans (₽449 billion in refinanced loans as of 27 October 2020), the transition to an accommodative monetary policy (the key rate was cut from 6% to 4.25%), and regulatory relaxations.

Unlike businesses, households reduced their demand for loans at the beginning of the pandemic. For unsecured consumer loans, the number of loan applications dropped by 14% in Q2 2020 compared to Q1; however, Q3 already saw a partial recovery in demand. Mortgage lending has been less hit by the shock of the pandemic, owing, among other things, to the timely launch of a government programme to subsidise interest rates at 6.5%. As early as Q3 2020, mortgage loans became the main driver of retail lending growth, which was also facilitated by the Bank of Russia's transition to an accommodative monetary policy. In Q2-Q3 2020, retail lending grew by 12.6% in annual terms. Lending has been also supported by countercyclical macroprudential measures to dissolve accumulated capital buffers and reduce macroprudential capital requirements for newly issued loans.

Credit risks of the banking sector

At the beginning of the pandemic, the Bank of Russia recommended that banks restructure loans to businesses and households affected by the pandemic to help borrowers get through the acute phase of the crisis. Measures were also taken to allow banks temporarily not to increase provisions for such loans. On the one hand, this made it possible to postpone the recognition of loan losses by banks and allow borrowers to gradually restore their financial position and, on the other hand, procyclicality of lending was reduced. The share of problem loans and non-performing loans (NPLs) has decreased by 0.1 pp to 9.3% as of 1 October 2020 since the beginning of the pandemic (1 March). At the same time, the amount of restructured loans has increased and totalled ₽6.6 trillion as of 1 October 2020. The largest volume of restructured loans (over ₽5 trillion) is concentrated in the segment of lending to large companies.

The Bank of Russia extended regulatory relief measures on reserves until 1 April 2021 for loans to large companies and until 1 July 2021 for loans to SMEs and households. As the restructuring programmes end, an increase in the share of NPLs can be expected, the scale of which will largely depend on the ability of large companies to recover their financial position. In general, active realisation of credit risks can be expected during the current stage of the crisis. It is important not to delay for a long time recognition of losses on non-performing loans, as this can lead to the emergence of 'zombie borrowers' and hinder lending to efficient companies.

As a result of the pandemic, the corporate sector's debt burden has increased (in absolute terms, by 14%, and by 9.3 pp to GDP since the beginning of the year) due to both the fall in corporate profits and the revaluation of the foreign currency component of debt as a result of the weakening of the ruble. This increases the risks of companies not being able to service their debt on time. Companies involved in air transportation, retail and office real estate, tourism, hotel business and catering will face the greatest difficulties in restoring their financial position. As air carriers' debt burden grows and the expenses on epidemical safety measures increase, the industry may require

further government support to maintain a stable financial position. Such industries as tourism, hotel business and catering do not create significant risks for the banking system due to their small share in the total corporate loan portfolio (1.1%). The pandemic had a negative impact on oil and gas companies, which experienced a decline in revenues due to falling oil prices and forced production cuts as part of the OPEC+ agreement, but most companies in the industry maintain a moderate debt burden and stable financial position.

The Russian banking sector is now more resilient to credit risks than in 2008–2009 and 2014–2015, both because of the initially higher quality of the loan portfolio and because of the substantial accumulated capital buffers (a total of ₽6.5 trillion, including a macroprudential capital buffer of ₽0.6 trillion). Capital buffers will be sufficient to recognise loan losses and to continue lending to the economy.

Non-bank financial institutions

The impact of the pandemic on insurance companies, non-government pension funds (NPFs) and brokers is limited. Market risk is significant for non-bank financial organisations as it can materialise if periods of elevated market volatility are repeated. The threat of credit risk materialisation for non-bank financial institutions (NBFIs) is not systemic due to the fact that the credit quality of assets is maintained at a sufficiently high level. At the same time, amid lowering interest rates the risk of reinvesting future cash flows at lower interest rates increases for life insurers and NPFs with long-term liabilities. Low interest rates had the opposite effect on the brokerage market. Since early 2020, there has been an increase in the inflow of new customers who prefer higher returns on alternative financial instruments compared to current deposit rates. Since the beginning of the year, the amount of client funds at NBFI brokers has increased by 20% to ₽6.2 trillion.

Leasing was among the sectors most affected by the pandemic due to its customer base (airlines, passenger and cargo transportation, SMEs). This has led to an increase in the share of restructured lease agreements. A significant deterioration in the financial position of major market participants was not observed, but it is difficult to accurately estimate the amount of bad assets due to the sector's continued lack of transparency.

Potential new vulnerabilities in the medium and long term

Risks of overheating in the residential real estate market

Significant price growth in the primary residential property market at the beginning of the pandemic was driven by strong demand for real estate from households amid market volatility, followed by the implementation of a government mortgage lending subsidy programme. Mortgage market has great growth potential (considering that less than 6% of the population in Russia has mortgage loans); falling interest rates contribute to increased availability of mortgage loans. However, if mortgage growth is not supported by an increase in supply from developers, this can lead to higher real estate prices, less available housing and higher debt burden of households. For this reason, the Bank of Russia supports the limited term of the government mortgage interest rate subsidy programme. The Bank of Russia's regulations help limit the debt burden risk on mortgages for households (higher risk weights for loans with high payment-to-income (PTI) ratio and macroprudential add-ons for loans with low down payment were established).

Risks associated with the transfer of savings from deposits to the securities market

In recent years, households have become increasingly active in investing their savings in securities market instruments. In the first 8 months of 2020, the growth of individuals' investments in shares and bonds exceeded the growth of retail bank deposits. The adjustment of the savings model of households in the face of declining interest rates is a natural process that can become a driver of

the securities market development. However, potential risks associated with both the flow and its speed must be considered.

Firstly, many securities market products are new to customers, and misselling risks need to be monitored. The Bank of Russia monitors the potential risks and consults with the market to reduce investment risks for various categories of investors, primarily non-professional participants, in complex products. Secondly, if a significant share of investments is made in foreign securities market instruments, this process, similar to the investment in cash foreign currency, essentially reflects an outflow of funds from the Russian economy and carries corresponding risks. Currently, this kind of investment is not on a large scale and does not exceed the reduction in foreign currency deposits, therefore, it is most likely related to a redistribution of foreign currency assets of households in favour of more profitable instruments. In 2019–2020, bonds of Russian issuers accounted for 71% of the funds invested by households in this kind of instruments. Thirdly, increased household participation raises the systemic importance of the securities market and non-bank financial institutions in general. Two effects occur simultaneously: on the one hand, the securities market environment becomes a significant factor for the well-being of individuals; on the other hand, the participation of retail investors can increase the volatility of the securities market. For the Bank of Russia, this makes it necessary to focus more on monitoring these risks, and additional tools may be needed in the future to mitigate them.

Increased interest rate risk in the banking sector

In recent years, banks have been increasing the share of short-term borrowing in order to maintain their net interest income (NII) amid declining interest rates. This strategy helps maintain a stable level of NII, but in the long term, with an increase in the share of mortgage and other long-term assets, it increases the banks' vulnerability to interest rate risk. If market rates rise, banks may face a significant reduction in their net interest income.

Lending at floating interest rates is one of the instruments for managing interest rate risk for banks. The current growth of banks' investment in floating-coupon OFZs and the increase in the share of corporate lending at floating interest rates help reduce banks' exposure to interest rate risk. However, it is important that in this case interest rate risk does not exert too strong impact on borrowers' financial conditions. Retail loans at floating interest rates are not yet common in Russia, because they would be too risky for many households. Correct assessment of the solvency of borrowers is crucial in both retail and corporate lending, so that banks' interest rate risk does not translate into credit risk. If floating-rate loans for retail borrowers become popular in the market, the Bank of Russia will develop approaches to accounting for their specifics in the PTI ratio calculation methodology.

Climate risks

Climate risks and the measures taken by various countries to mitigate them can have a significant impact on the real sector, and in turn, on the stability of financial institutions. The planned introduction of a carbon tax on imports by the European Union (EU) under the European Green Deal in 2022 could affect almost 42% of Russia's exports, primarily in the oil and gas and mining sectors. Active measures by the private and public sectors are needed to reduce exposure to climate risks.

1. RISKS OF THE GLOBAL ECONOMY AND GLOBAL FINANCIAL MARKETS

The summer of 2020 saw a gradual recovery in global economic activity as restrictive measures were lifted. However, in autumn 2020, the epidemical situation started to deteriorate, and certain countries renewed lockdowns. Negative trends in the markets are moderate for now, which may be the result of measures taken by regulators this spring. We cannot rule out the possibility of more significant consequences of the intensification of the pandemic, which may lead to new vulnerabilities arising. The situation in some countries may further deteriorate as the number of insolvent borrowers and defaults grows. We have certain concerns associated with the policy of regulators: risks may arise both due to exhausted potential for further support of the economies and markets and as a result of side effects in the form of an excessive increase in public debt amid significant budgetary incentives and formation of new 'bubbles' in the markets in the context of the exceedingly accommodative monetary policy of the leading central banks.

Forecasts predict a decline in the global economy in 2020 as a result of the crises caused by the spread of coronavirus. According to the International Monetary Fund (IMF) baseline forecast as of October 2020[1], after a 2.8% growth in 2019, global GDP will fall by 4.4% by the end of 2020, which will be the greatest drop since the Great Depression. The GDP of advanced economies will fall by 5.8% (against 1.7% growth in 2019), while the GDP of emerging market economies (EMEs) and developing economies will fall by 3.3% (against 3.7% growth in 2019) (Table 1).

GDP GROWTH RATES (%), IMF FORECAST FOR OCTOBER 2020 *Table 1*

	2019	Forecast for October 2020		Deviation from April 2020 forecast (pp)	
		2020 r.	2021 r.	2020 r.	2021 r.
Global GDP growth rate	***2.8***	***-4.4***	***5.2***	***-1.1***	***-0.5***
Advanced economies	1.7	-5.8	3.9	0.3	-0.6
USA	2.2	-4.3	3.1	1.6	-1.6
United Kingdom	1.5	-9.8	5.9	-3.3	1.9
Euro area	1.3	-8.3	5.2	-0.8	0.5
Germany	0.6	-6.0	4.2	1.0	-1.0
Italy	0.3	-10.6	5.2	-1.5	0.4
Spain	2.0	-12.8	7.2	-4.8	2.9
Japan	0.7	-5.3	2.3	-0.1	-0.7
EMEs and developing countries	***3.7***	***-3.3***	***6.0***	***-2.1***	***-0.5***
China	6.1	1.9	8.2	0.7	-1.0
India	4.2	-10.3	8.8	-12.2	1.4
Russia	1.3	-4.1	2.8	1.4	-0.7
Brazil	1.1	-5.8	2.8	-0.5	-0.1
South Africa	0.2	-8.0	3.0	-2.2	-1.0
Mexico	-0.3	-9.0	3.5	-2.4	0.5
Growth rates of global trade in goods and services	***1.0***	***-10.4***	***8.3***	***0.6***	***-0.1***
Imports					
Advanced economies	1.7	-11.5	7.3	0.0	-0.2
EMEs and developing countries	-0.6	-9.4	11.0	-1.2	1.9
Exports					
Advanced economies	1.3	-11.6	7.0	1.2	-0.4
EMEs and developing countries	0.9	-7.7	9.5	1.9	-1.5

Source: IMF.

[1] *The forecast did not take the new autumn lockdowns into account.*

MARKIT PMI INDICATORS *Table 2*

	April	May	August	September	October	April	May	August	September	October	April	May	August	September	October
	Industry					Services					Composite				
World	39.6	42.4	51.8	52.4	53.0	23.7	35.2	52.0	52.0	52.9	26.2	36.3	52.5	52.5	53.3
USA	36.1	39.8	53.1	53.2	53.4	26.7	37.5	55.0	54.6	56.9	27.0	37.0	54.6	54.3	56.3
United Kingdom	32.6	40.7	55.2	54.1	53.7	13.4	29.0	58.8	56.1	51.4	13.8	30.0	59.1	56.5	52.1
Euro area	33.4	39.4	51.7	53.7	54.8	12.0	30.5	50.5	48.0	46.9	13.6	31.9	51.9	50.4	50.0
Germany	34.5	36.6	52.2	56.4	58.2	16.2	32.6	52.5	50.6	49.5	17.4	32.3	54.4	54.7	55.0
France	31.5	40.6	49.8	51.2	51.3	10.2	31.1	51.5	47.5	46.5	11.1	32.1	51.6	48.5	47.5
Italy	31.1	45.4	53.1	53.2	53.8	10.8	28.9	47.1	48.8	46.7	10.9	33.9	49.5	50.4	49.2
Spain	30.8	38.3	49.9	50.8	52.5	7.1	27.9	47.7	42.4	41.4	9.2	29.2	48.4	44.3	44.1
Japan	41.9	38.4	47.2	47.7	48.7	21.5	26.5	45.0	46.9	47.7	25.8	27.8	45.2	46.6	48.0
Australia	44.1	44.0	53.6	55.4	54.2	19.5	26.9	49.0	50.8	53.7	21.7	28.1	49.4	51.1	53.5
China	49.4	50.7	53.1	53.0	53.6	44.4	55.0	54.0	54.8	56.8	47.6	54.5	55.1	54.5	55.7
Russia	31.3	36.2	51.1	48.9	46.9	12.2	35.9	58.2	53.7	46.9	13.9	35.0	57.3	53.7	47.1
India	27.4	30.8	52.0	56.8	58.9	5.4	12.6	41.8	49.8	54.1	7.2	14.8	46.0	54.6	58.0
Brazil	36.0	38.3	64.7	64.9	66.7	27.4	27.6	49.5	50.4	52.3	26.5	28.1	53.9	53.6	55.9

Note: Green indicates growth of PMI (PMI>50), red indicated decline of PMI (PMI<50).
Source: Bloomberg.

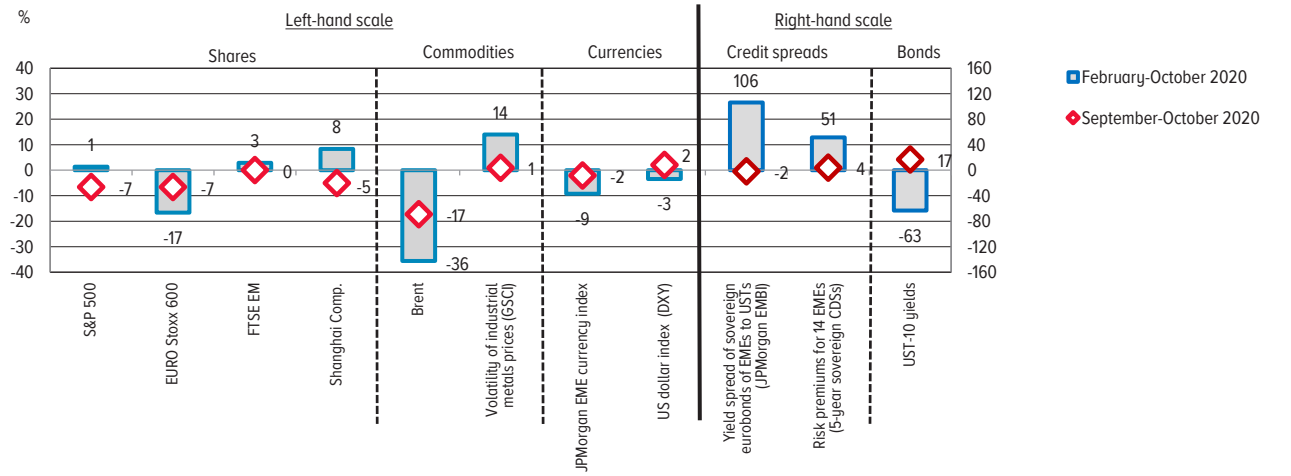
In Q2 2020, the economic downturn in the leading countries reached its lowest point: in the United States GDP fell by 31.4% QoQ in annualised terms, while in the euro area it fell by 11.8% QoQ. However, as the restrictive measures were lifted, economic activity started to recover. The Markit PMI in the service sector rose to 52.9 points in October (23.7 points in April 2020), and in the production sector it rose to 53.0 points (39.6 in April 2020) (Table 2). In 2021, the IMF expects global economic growth to return to a positive trajectory at 5.2%.

However, the recovery process is constrained by a number of factors. First, autumn saw an increase in the COVID-19 incidence rate. The re-introduction of social distancing and other restrictive measures[2] may cause another drop in business activity. Amid the second wave of the pandemic in the euro area, business activity in the service sector started to decline again (in October, the PMI fell to 46.2 points). Second, the population's behaviour is still restrained in terms of consumption due to both the persistence of the risks associated with the pandemic (many people are afraid of losing their jobs) and high unemployment rates. Third, high uncertainty is holding back investment activity. The pandemic has triggered the need for structural change in various industries. Companies will require time to adapt their business processes to the new environment and to establish logistics and production chains. Recovery may take a long time in some industries, and some borrowers may become insolvent.

After the fall in March–April, the situation in the global financial markets quickly recovered by May–June primarily due to the systemic measures taken by governments and central banks (Box 2. Key measures of foreign regulators and their efficiency). The US stock market rose to new highs in August mainly owing to the technology sector, which did not suffer and even gained during the pandemic. At the same time, in September, the situation on the markets began to adjust due to the deteriorating epidemical environment (Chart 1). In September–October, the US S&P 500 fell by 7%, and in the euro area Eurostoxx 600 went down by 7%. Oil prices also dropped during this period (Brent crude oil fell by 17%). The oil market is under pressure from the deteriorating prospects for global economic recovery and, accordingly, for demand for oil. In this situation, OPEC+ may decide to postpone the reduction in oil production from 7.7 to 5.8 million barrels per day planned for 1 January 2021. On the one hand, this will support oil prices, but, on the other hand, oil companies will not be able to increase production.

[2] *As of 23 November, a lockdown had been announced in Israel, Ireland, the Czech Republic, France, Austria, the UK, Italy and Iran, a partial lockdown had been introduced in Portugal, Spain and Turkey, severe restrictions had been introduced in Germany and Sweden, which refrained from strict restrictions during the first wave, introduced some restrictive measures.*

CHANGE IN KEY PERFORMANCE INDICATORS OF THE GLOBAL FINANCIAL MARKET *Chart 1*
(UNITS)



Sources: Bloomberg, Thomson Reuters.

COMPARISON OF SITUATION IN EMES *Table 3*

Country	Change in indicators in August-October 2020					Values of indicator	
	Exchange rate of the national currency against the US dollar	Stock index	10-year government bond yields	5-year sovereign CDS spread	Rank (1 – being the worst, 15 – the best)	10-year government bond yields	5-year sovereign CDS spread
	%		б.п.			%	б.п.
Turkey	-16.4	-1.3	140	-1	1	14.10	552
Brazil	-9.1	-8.7	133	0	2	7.61	215
Russia	-6.6	-7.6	26	1	3	6.19	106
Chile	-2.1	-11.9	38	-13	4	2.79	58
Poland	-5.3	-12.6	-10	3	5	1.19	60
Hungary	-7.1	-7.0	18	-11	6	2.33	63
Thailand	0.3	-10.1	15	7	7	1.37	50
Malaysia	2.0	-8.5	0	-11	8	2.63	49
Colombia	-3.4	0.2	2	-3	9	5.26	125
China	4.2	-2.6	22	-4	10	3.19	41
South Africa	5.1	-7.2	7	-30	11	9.32	276
Mexico	5.2	-0.1	32	-15	12	6.05	127
Indonesia	-0.2	-0.4	-22	-17	13	6.61	99
Philippines	1.3	6.7	23	-9	14	3.05	48
India	1.0	5.3	4	-28	15	5.88	87
14 EMEs excluding Russia	**-1.7**	**-4.2**	**29**	**-10**		**5.10**	**132**

Latin America Europe, Middle East, Africa Asia-Pacific Region

Thresholds	Exchange rates of national currency against the US dollar	Stock index	10-year government bond yields	5-year sovereign CDS spread
	%		б.п.	
Minimum	*-15*	*-15*	*-100*	*-100*
	0	*0*	*0*	*0*
Maximum	*15*	*15*	*100*	*100*

Sources: Bloomberg, Thomson Reuters.

In autumn, the situation in EMEs also deteriorated. The index of EME currencies against the US dollar (JPMorgan) in September–October fell by 2% and is now 9% below the figures for the end of January (in the first phase of the pandemic, the largest drop was 12.5%). Country risk premiums in EMEs resumed their growth: 5-year CDS value for 14 EMEs increased by 4 bp to 132 bp on average as of 30 October (51 bp higher than at the end of January). Yields on EME government bonds have been growing somewhat since August.

Starting from August, some EMEs (Turkey and Brazil) saw a more significant weakening of their national currencies and an increase in government bond yields due to idiosyncratic factors (Table 3). In Turkey, amid investors' concerns about the adequacy of foreign exchange reserves at the central bank and the aggravation of the military confrontation between Turkey and Greece, pressure on the Turkish lira grew as speculative operations in the offshore market increased, and capital outflows accelerated. The central bank of Turkey was forced to tighten its monetary policy and raised its key rate from 8.25% to 15.00%. In Brazil, investors are concerned about the sustainability of public finance. The country has noticeably increased government spending on the prolongation of support programmes for households during the pandemic. The Russian financial market is affected not only by the overall deterioration in market sentiment due to the pandemic and lockdowns but also by the downturn in oil prices and growing geopolitical tensions (Box 1).

Box 1. Rhetoric on sanctions against Russia

After a relative calm period in terms of sanctions initiatives at the beginning of Q2 2020, presumably caused by the need to fight the COVID-19 epidemic, summer and autumn saw growing activity among US and EU lawmakers. It included the following initiatives:

- the June report of the US Republican Party 'Strengthening America and Countering Global Threats', which mentions possible sanctions against the Russian public debt, introduction of restrictive measures against SWIFT until the network drops Russian banks, inclusion of VEB.RF in the SDN[1] as well as *proposed sanctions against China and Iran*
- the June proposal of representatives of the US Democratic Party to amend the current defence budget for 2020, banning any transactions with enterprises of the Russian defence industry
- the October announcement of representatives of the US Democratic Party of the bill *'Safeguarding Elections by Countering Unchallenged Russian Efforts (SECURE) Act'*, also providing for sanctions against the Russian national debt
- Germany's July proposal to introduce EU sanctions against persons allegedly involved in the hacker attack on the Bundestag, followed by their introduction in October
- introduction of EU sanctions against the leadership of the Republic of Belarus, in connection with the EU's non-recognition of the presidential election results.

The attention of US lawmakers was also focused on opposing the construction of Nord Stream 2. US Secretary of State Mike Pompeo, representing the Executive Office of the US President, declared it unacceptable to American interests. In particular, there were reports about a proposal to cancel the grandfather clause exempting project participants that entered the project before 2 August 2017, the date of the adoption of the Countering America's Adversaries Through Sanctions Act, from sanctions. In June 2020, two versions of a bill for clarifying the Protecting Europe's Energy Security Act[2] adopted in 2019 were introduced to the US Senate and House of Representatives to expand sanctions against Nord Stream 2, in particular, against insurance companies participating in the project. In October, the US Department of State announced an extension of sanctions against companies providing modernisation services for ships involved in the construction of the Turkish Stream and Nord Stream 2 projects.

Additionally, US lawmakers increasingly attempted to exploit the topic of chemical weapons using the existing legal mechanism provided for by the Chemical and Biological Weapons Control and Warfare Elimination Act[3], previously applied in connection with the Skripal case. In August 2020, the topic of chemical weapons was also used as an excuse for placing several research centres of the Ministry of Defence of Russia engaged in the development of a vaccine against COVID-19 on the blacklist of the Bureau of Industry and Security of the Department of Commerce.

The position of the EU member states is similar to that of the United States. Accordingly, in September 2020, the European Parliament adopted a resolution toughening sanctions against Russia in connection with the Navalny case. As a result, on 15 October 2020, six Russian individuals and one legal entity were

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[1] *The Specially Designated Nationals List (SDN) is a special blacklist of persons created by the Office of Foreign Assets Control (OFAC) of the US Treasury Department listing people, organisations, aircrafts and ships that US citizens and permanent residents are prohibited from doing business with.*

[2] *Protecting Europe's Energy Security Act, PEESA.*

[3] *Chemical and Biological Weapons Control and Warfare Elimination Act of 1991.*

included in the EU sanctions list. The EU is also discussing a new sanctions mechanism similar to the Magnitsky Act that will be applicable to non-EU residents accused of serious human rights violations.

The Bank of Russia continues to monitor the possible risks of sanctions and analyse possible consequences for price and financial stability, and it is prepared to respond promptly to any changes in the external environment. During the period of the sanctions starting in 2014, in addition to measures aimed at improving the overall stability of the financial sector, the Bank of Russia has developed a set of policies to mitigate sanctions risks:

- adjustment of transactions in the foreign exchange market under the fiscal rule
- use of foreign exchange repo operations and foreign currency lending
- a moratorium on the recognition of negative revaluation of securities in the portfolios of financial institutions as well as the use of a special exchange rate for calculating required ratios
- introduction of regulatory easing in terms of reserves and certain ratios for corporate borrowers under sanctions.

In addition, in August-September, the tension in relations between the United States and China has been increasing (US President Donald Trump signing the Hong Kong Autonomy Act providing for sanctions against China; reports of a possible ban on the Chinese mobile applications WeChat and TikTok in the United States). However, this factor has not had any significant adverse impact on the sentiment of global investors. Currently, risks of possible deterioration of the US-China relations declined, but uncertainty remains.

The possibility of an even more significant deterioration of the COVID-19 situation and the subsequent large-scale introduction of severe restrictive measures is a key uncertainty factor for the global economy and markets. Currently, some governments have already introduced nationwide lockdowns, but most countries are trying to avoid strict quarantine measures and using restrictions selectively. Additional risks to financial stability and sales in the global markets may arise from geopolitical risks and social unrest (for example, a wave of volatility may be caused by deteriorating relations between the US and China, including due to periodically intensifying protests in Hong Kong; the finalisation of Brexit after the end of the transition period this year; the further escalation of conflicts in the Middle East; the exacerbation of the situation in Europe amid terrorist attacks by the extremist group Islamic State (banned in the Russian Federation) etc). At the same time, a number of vulnerabilities in the global markets could aggravate the situation in the global economy:

In the short and medium term:

- Growth of debt burden in the corporate sector may continue. Even before the pandemic, the US and the EU had the problem of the growing debt of overindebted companies. Amid the pandemic, companies were forced to further increase their debt burden due to a lack of funds (both through bond issues and the increase of loans). If the trend toward economic recovery breaks down due to the intensification of the pandemic, the number of bankruptcies may grow. In this respect, small- and medium-sized companies are more vulnerable due to the lack of adequate liquidity buffers and diversified sources of income as well as limited access to capital markets.
- Insolvency risks of non-financial companies may negatively affect the banking sector, although the resilience of global banks has increased markedly in recent years. Reassessment of the risks of affected companies (airlines, commercial real estate, services, small- and medium-sized enterprises) may present a challenge for banks. At the same time, in the event of a more significant downturn in the economy and a drop in income in the corporate sector, credit risks may soar.
- Non-bank financial intermediaries continue to accumulate vulnerabilities. Leading central banks were forced to significantly expand their asset purchase programmes at the onset of the pandemic as intermediaries sharply reduced their presence in the markets due to the outflow of investor funds. Investment funds and asset managers remain exposed to this risk.

- Certain countries may face problems concerning sovereign debt. According to the IMF, global public debt will increase from 83.0% of GDP in 2019 to 98.7% of GDP in 2020. Additional support measures may need to be deployed to contain the effects of the pandemic, resulting in a further build-up of public debt. This could decrease market confidence in countries with significant debt burdens.

In the long term:

- A longer period of low interest rates in the leading economies may contribute to the formation of 'bubbles' in various segments of the financial market. Market participants may get accustomed to the long-term continuation of softened financial conditions, which may subsequently lead to episodes of volatility as the rates normalise. Exceedingly long periods of regulatory easing involve a risk of 'zombie companies' emerging, which will hinder the financing and development of efficient companies and slow down economic growth.
- Massive purchases of government bonds in EMEs may lead to fiscal dominance and loss of independence for central banks. Purchases of government securities in EMEs are mainly aimed at ensuring financial stability. Until now, their volumes have been insignificant[3] and did not lead to an increase in investor distrust, but the abuse of this instrument may result in decreased market confidence.

In these conditions, many regulators are already contemplating the need to find a trade-off between the short-term goals of supporting lending and the long-term sustainability of the financial sector (see Box 2). Every measure taken has its pros and cons. Encouraging banks to use capital buffers would facilitate lending in the short term, but it also would reduce their ability to withstand future losses. Capital allocation restrictions increase banks' capacity to continue lending but may reduce investor confidence and banks' ability to raise new capital in the market.

During the pandemic, many regulators extensively eased regulatory requirements, deviating from the Basel ratios and allowing banks to underestimate risks. This further underscores the importance of macroprudential measures that can be eased without distorting risk assessment and calling into question the resilience of banks.

Overall, unprecedented and timely policies of central banks and governments have helped boost market confidence, support the flow of loan funds into the economy, facilitate swift normalisation of the financial markets and avoid adverse macro-financial feedback loops[4].

Box 2. Key measures of foreign regulators and their efficiency

In 2020, governments around the world were forced to introduce lockdown measures to contain the spread of the COVID-19 pandemic. This led to a widespread economic crisis. Business activity in the service and production sectors has decreased significantly, and the liquidity and solvency of companies have deteriorated. Thus, it was necessary to implement comprehensive anti-crisis policies, including a set of fiscal, monetary and regulatory support measures. Many of the measures taken at the end of the first quarter are still in effect or were extended during the reporting period.

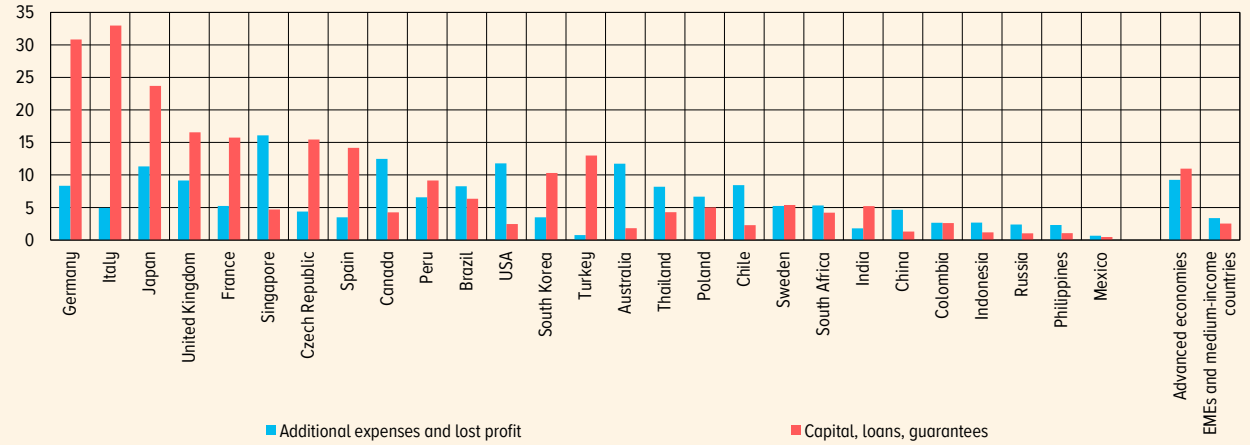
Fiscal support. Fiscal incentives are mainly aimed at supporting income and lending. As of September 2020, the IMF estimated the total volume of fiscal incentives at $11.7 trillion, or 12% of global GDP (Chart 2). In this context, the global budget deficit will increase from 3.9% in 2019 to 12.7% in 2020 (Chart 3). Key measures include:

- Government guarantees on loans (the most significant relative to GDP in Italy, Germany, France and Great Britain).
- Special government programmes to support business (grants to small- and medium-sized enterprises, targeted support for the healthcare sector and airlines).

[3] *The most significant volumes of purchases of government bonds have been observed in the Philippines (7.3% of GDP) and Indonesia (3.8% of GDP).*

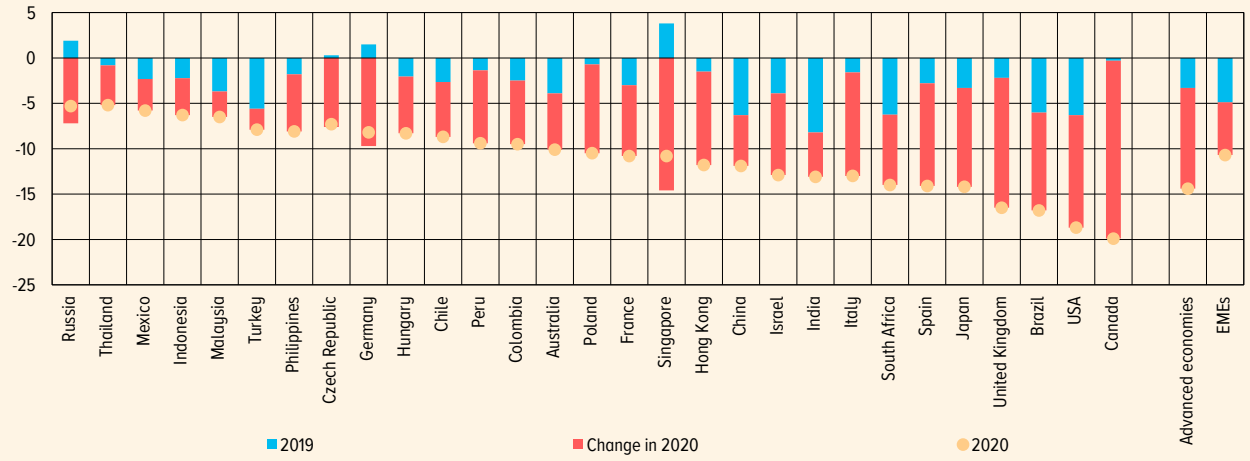
[4] *Macrofinancial feedback loop – secondary effects that result from mutual impact of real and financial sectors.*

FISCAL STIMULI IN RESPONSE TO COVID-19 *Chart 2*
(% OF GDP)



Sources: IMF (Fiscal Monitor, October 2020).

ESTIMATES OF EXPANDED BUDGET DEFICIT IN 2020 *Chart 3*
(% OF GDP)



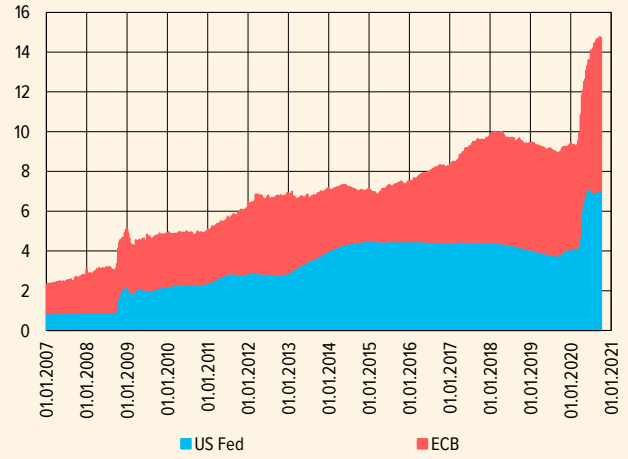
Sources: IMF (Fiscal Monitor, October 2020).

- Direct social benefits to the population: subsidies for wage payments (UK, Denmark), increased unemployment benefits (US), eased requirements for unemployment benefits (Singapore, Europe), direct one-time payments to households (US), payments to the poor (Singapore, Indonesia).
- Various tax breaks. The United States announced tax holidays for individuals and businesses with a 90-day deferral of tax payments. Tax deferrals were also announced in Spain, France, Indonesia and other countries.

Monetary policy and market support. The main goal of monetary policy is to stimulate demand and economic growth, while market support measures are aimed at supporting the liquidity of the markets amid a massive outflow of asset managers.

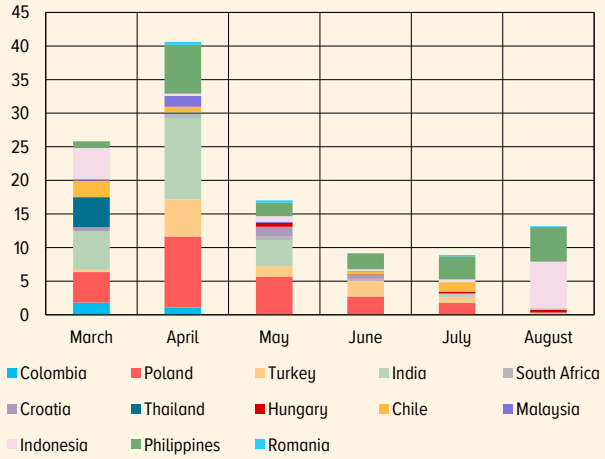
- Central banks reacted to the crisis primarily by cutting key rates. The US Fed cut its key rate range to a low of 0–0.25%. The rate cuts by leading central banks facilitated the easing of conditions for EMEs. Most central banks of EMEs also cut key rates to historic lows.
- Many central banks also expanded banks' access to available liquidity provision mechanisms (repo operations) by increasing maturities and limits and easing requirements for collateral accepted in re-

US FED AND ECB ASSETS *Chart 4*
($ TRLN)



Source: Bloomberg.

ASSET PURCHASES IN EMES *Chart 5*
($ BILLION)



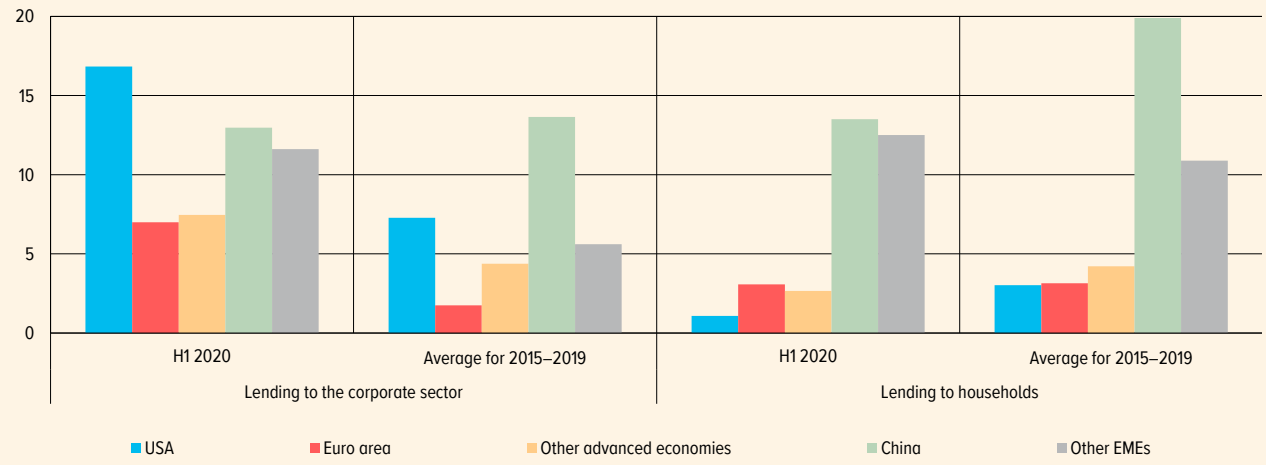
Source: IMF (Global Financial Stability Report, October 2020).

financing operations. The ECB launched additional long-term refinancing operations (LTRO). To release additional liquidity, central banks have also lowered reserve requirements (the US Fed from 10% to zero for liabilities exceeding a certain volume and from 3% for liabilities below a certain volume).

- Countries launched new lending support programmes amid the loss of liquidity in many markets due to the exit of asset managers. These programmes were implemented to support financial stability, with central banks effectively acting as lenders of last resort for asset managers. For example, the US launched nine credit programmes, including programmes aiming to support money market investment funds, facilitate lending to municipalities and support lending to SMEs and consumers. A number of countries expanded (UK) or introduced (Australia) concessional lending programmes for banks that increase lending to SMEs. Amid the preserving unfavourable epidemic situation, regulators adjusted (US) or prolonged (Singapore) support programs for lending to SMEs. These measures made it possible to support the inflow of loans to the real sector and also helped maintain the ability of companies to raise funds in the bond markets.
- More and more countries are using unconventional support measures, while leading central banks have significantly expanded their asset purchase programmes (Chart 4). The US Fed announced that it would repurchase treasury and mortgage-backed securities in the amount necessary to ensure the smooth functioning of the market and the efficiency of the monetary policy transmission mechanism. The ECB launched a programme to buy assets (government and corporate securities) for an unprecedented €750 billion (the programme was extended to €1.35 trillion in June). The Bank of England and the Bank of Japan increased the volumes of their asset purchase programmes.
- At least 18 EMEs have resorted to unconventional monetary policy measures for the first time (Chart 5). Unlike advanced economies, most countries (for example, India, South Africa, the Philippines) began to intervene in the government bond markets to stabilise the situation in the debt markets and support liquidity, and not with the aim of monetary stimulation. Overall, the IMF considers purchases of government bonds in EMEs effective in the short term while contributing to a decrease in government bond yields.[1] In Russia, no unconventional measures were required, and government bond yields returned to pre-crisis levels amid stabilisation of external markets and a gradual reduction in the Bank of Russia key rate. Even after some growth due to increased geopolitical risks in August–October, long-term OFZ yields in Russia remained lower than in countries that resorted to unconventional policy measures.
- Coordinated central bank measures were taken to support dollar-denominated liquidity in the global market. The US Fed expanded swap lines to a wider list of countries (in addition to Canada, the UK, Japan, Switzerland, and the ECB, the list included Australia, Brazil, Denmark, South Korea, Mexico, Norway, New Zealand, Singapore and Sweden). The US Fed also launched the Facility for Foreign and International Monetary Authorities, a mechanism for repo operations with foreign central banks.

[1] *Global Financial Stability Report, Chapter 2 'Emerging and Frontier Markets'/IMF, October 2020.*

LENDING GROWTH RATES IN H1 2020 *Chart 6*
(%)



Source: IMF, GFSR October 2020.

- Many central banks of EMEs carried out foreign exchange interventions, but they had to resort to them mainly when the crisis was at its highest in spring of 2020. The use of FX reserves for this purpose was rather limited due to the short stress period and the rapid recovery of global risk appetite. In some countries, foreign exchange interventions were carried out simultaneously with interventions in the government bond market.

Financial regulatory forbearance. Regulators introduced a number of temporary regulatory forbearance measures to 'buy time' and mitigate the adverse impact of the crisis on the real sector and the financial system. Temporary relief and countercyclical measures under macroprudential policy were aimed at bolstering lending to the economy, including through the use of buffers.

- In many countries, regulators allowed banks to postpone the recognition of bad loans that deteriorated due to the pandemic. The logic behind such measures is related to avoiding a negative spiral – that is, the loss of access to credit leading to an additional downturn in the economy and losses for the financial sector. In the US, restructured loans from affected borrowers are temporarily exempt from being classified as non-performing. The ECB does not classify loans with a state guarantee as non-performing. Certain countries increased the number of days for loan to be classified as non-performing (Turkey, from 90 to 180 days; Argentina, 60 days added to each category).
- Many countries issued recommendations to banks on restructuring the debt of companies (primarily SMEs) and households. In autumn of 2020, many regulators extended loan repayment holiday programmes to avoid a massive increase in the amount of insolvency cases. For example, loan repayment holidays were extended in one form or another in the UK, Singapore, Israel, Spain, Hong Kong, South Korea, Saudi Arabia, India and Argentina. So far, the holidays have been extended for a short period, at the same time the UK decided to reintroduce the extension of credit holidays for some categories of borrowers until 31 January 2021. Canada made a decision to end the forbearance permitting banks not to reclassify loans for which loan repayment holidays had been granted into a lower quality category.
- Regulators that used macroprudential measures before the pandemic have eased them:
  - in spring, Sweden, the UK, Belgium and Germany completely released the countercyclical capital buffer, reducing it to 0%, and a number of countries reduced the countercyclical capital buffer to a much lower positive level: Hong Kong (1%), Norway (1%) and the Czech Republic (reduced twice, in spring to 1% and in summer to 0.5%).
  - Sectoral macroprudential measures were eased. For example, the Czech Republic lifted DSTI[2] limits and eased LTV[3] requirements for mortgage loans, and Hong Kong increased minimum LTV value for commercial real estate loans. New Zealand lifted LTV mortgage limits until May 2021.

[2] *DSTI - debt service-to-income ratio.*

[3] *LTV – loan-to-value ratio.*

- A number of measures were implemented as part of the temporary easing of the buffer requirements and Basel ratios:
  - Canada and the Netherlands reduced systemic importance buffers; Brazil reduced the capital conservation buffer. The ECB reminded banks that in accordance with the standards of the Basel Committee on Banking Supervision they can operate with a capital conservation buffer below the established level of 2.5%. At the same time, regulators in many countries extended the instructions to postpone the payment of dividends until the end of 2020 (the US, the ECB, Spain, Italy, Argentina, Brazil and Singapore).
  - A number of countries (Switzerland, Japan and the US) reduced the requirements for the leverage ratio mainly due to the exclusion of government bonds and reserves in central banks from the calculation; some countries excluded certain types of assets from the list of assets subject to deduction from regulatory capital.
  - Easing of liquidity ratios was introduced. A number of central banks (the ECB, Sweden, Japan, the US and South Korea) allowed banks to temporarily maintain the Liquidity Coverage Ratio (LCR) below the established regulatory level. India postponed the introduction of the net stable funding ratio (NSFR).

2. THE FINANCIAL AND REAL SECTORS IN THE CONTEXT OF THE COVID-19 PANDEMIC

After a surge in volatility at the start of the pandemic, the Russian financial market quickly returned to its start-of-year figures. This was facilitated both by the safety margin accumulated by market participants in the form of capital and liquidity buffers and a balanced structure of assets and by anti-crisis measures taken by the Bank of Russia.

The coronavirus pandemic has driven an increase in OFZ placements in 2020. In Q2-Q3 2020, non-residents did not reduce the absolute volume of their investments in OFZs; however, most of the securities during the placements were purchased by local investors, primarily, SIBs using OFZ-PKs to manage interest rate risk and liquidity risk.

The global coronavirus pandemic and the introduction of extensive restrictive measures, including in the Russian Federation, have caused serious damage to the Russian economy. Business closures, disruptions in global supply chains and a sharp drop in population mobility have significantly reduced business activity in the country.

Since the beginning of 2020, we have seen an increase in the debt burden of companies due to both a drop in profits and revaluation of foreign currency debts related to the weakening of the ruble. Despite the moderate overall debt burden of the non-financial sector in Russia compared to other countries, the high concentration of corporate debt in a small number of the largest borrowers may become a source of systemic risk.

The main risks for banks are associated with enterprises from industries affected by the pandemic. Airlines, retail and office real estate companies have significant debts to banking groups. The Q1 2020 downturn in oil prices did not critically influence the financial position of the major Russian oil companies; nevertheless, it led to a deterioration in their main operating indicators and a reduction in investment programmes.

To support lending, the Bank of Russia expanded its liquidity provision instruments and also introduced temporary regulatory exemptions related to the 'freezing' of the value of financial assets and the possibility of postponing an increase in provisions for possible loan losses. Amid the normalisation of the market situation as well as the lifting of quarantine restrictions, some of the measures expired on 30 September 2020; however, the easing of requirements for reserves was extended. The Bank of Russia also released the accumulated macroprudential capital buffer for mortgage and unsecured consumer loans in the amount of about ₽300 billion, allowing banks to cover possible future loan losses and support lending.

Dealing with non-performing assets accumulated during the pandemic, including restructured loans, which had reached 10.3% of the loan portfolio as of 1 October 2020, becomes a priority. The banking sector has adequate capital reserves, taking into account macroprudential buffers in the amount of 11.5% of the total loan portfolio, allowing banks to recognise loan losses in a timely fashion and continue lending to the economy. Stable dynamics of interest income in the context of the loose monetary policy will support banks' profits.

Non-bank financial institutions with predominantly high credit quality assets are generally characterised by a stable financial position and the absence of obvious negative trends during the pandemic.

2.1. SITUATION IN THE RUSSIAN DEBT MARKET

Amid growing spending and budget deficits due to the pandemic, Russia's public debt has grown significantly, although it is still low compared to other major economies. The reduced risk appetite of global investors amid the pandemic and geopolitical risks have weakened the interest of non-residents in the Russian market. Demand for new OFZ issues came mainly from Russian banks. In the corporate debt market, the volumes of newly issued securities were comparable to those of 2019 and 2018.

Impact of the coronavirus pandemic on the behaviour of debt market participants

In the first phase of the pandemic, amid a sharp decline in the risk appetite of investors in global markets and problems with the conclusion of an agreement on oil production cuts, foreign investors reduced their investments in Russian government and corporate bonds. In March, the share of non-residents' investments in OFZs in foreign depositories' accounts with the National Settlement Depository (NSD) decreased from 34.1% to 31.1% (by ₽280 billion in absolute terms). In the corporate bonds segment, non-residents sold ₽11 billion worth of securities from 20 February through the end of March. Sales by foreign investors stimulated a sharp rise in bond yields (peaking on 18 March – the yields on 10-year OFZs were up 242 bp from 20 February and reached 8.42%, and corporate bond yields grew by 74 - 262 bp depending on the industry). The impact of the coronavirus shock on the growth of OFZ yields per ₽1 billion net sales of non-residents (2.3 bp) was the largest in comparison with the previous periods of volatility (Table 4). This can be explained by the unprecedented scale of the shock and its global and prolonged impact. During this phase, the Ministry of Finance did not place any new OFZ issues.

To support the Russian financial market during the period of volatility, the Bank of Russia has allowed banks and other financial institutions that maintain accounting records under Bank of Russia regulations to recognise equity and debt securities purchased before 1 March 2020 at fair value as of 1 March 2020 and debt securities purchased between 1 March and 30 September 2020 at fair value as of the acquisition date. This measure allowed financial institutions to suspend sales as well as to make purchases of financial assets without the risk of their subsequent negative revaluation, contributing to the stabilisation of the market environment. By the end of March, most of the growth in debt instrument yields had been won back, and the values of the OFZ yield curve returned to the pre-pandemic levels.

Stable demand from local investors and the rapid recovery of yields on the market allowed the Bank of Russia to avoid employing a central bank government bond repurchasing programme, unlike a number of other EMEs. It should be noted that due to the prevailing demand from local participants the volume of such purchases in the EMEs that used this instrument was moderate[1], which made it

DYNAMICS OF OFZ YIELDS AND AMOUNTS OF SALES BY NON-RESIDENTS DURING PERIODS OF HIGH VOLATILITY *Table 4*

Indicators/periods of continuous growth of yields	6–12 April 2018 (US sanctions)	7–17 August 2018 (sanction draft laws and outflow of funds from EMEs)	20–28 February 2020 (coronavirus)	5–18 March 2020 (coronavirus and oil)
Days	5	9	6	9
Sales by non-residents and subsidiary banks, ₽ billion	-80	-56	-27	-106
Sales per 1 day	-16	-6	-5	-12
OFZ yield growth	38	77	48	242
Yield growth per ₽1 billion of sales	0.5	1.4	1.7	2.3

Sources: Moscow Exchange, Bloomberg.

[1] *Arslan Y, Drehmann M, Hofmann B. Central bank bond purchases in emerging market economies. BIS Bulletin No. 20, 2 June 2020.*

DYNAMICS OF 10-YEAR EME GOVERNMENT BOND YIELDS IN % AND YIELD CHANGES IN BP *Table 5*

Country	20.02.2020	18.03.2020	24.04.2020	09.10.2020	20.02.2020 – 18.03.2020	18.03.2020 – 24.04.2020	24.04.2020 – 09.10.2020
Russia	**6.0**	**8.4**	**6.1**	**6.0**	**243**	**-231**	**-12**
Brazil	6.6	8.5	7.3	7.7	190	-121	40
Mexico	6.6	8.3	7.0	5.8	171	-129	-122
China	2.9	2.8	2.5	3.2	-16	-27	69
South Africa	8.9	11.3	11.0	9.5	240	-30	-146
Indonesia	6.5	7.5	7.9	6.9	103	38	-102
Colombia	5.6	8.8	6.8	5.1	319	-200	-175
Hungary	2.4	3.4	2.6	2.2	98	-80	-35
Thailand	1.1	1.6	1.3	1.4	45	-32	12
Malaysia	2.9	3.2	2.9	2.7	25	-31	-18
Turkey	11.7	12.4	11.5	13.3	69	-89	175
India	6.4	6.3	6.2	5.9	-13	-13	-23
Philippines	4.4	4.8	3.7	2.9	43	-112	-84
Poland	2.1	2.0	1.4	1.3	-13	-61	-6
Chile	3.6	3.6	2.7	2.9	-2	-89	16

Note: the coloured countries used a QE programme.
Source: Bloomberg.

possible to prevent a deterioration in the perception of local risks on the part of global investors. However, some countries announced bond repurchasing programmes to finance anti-pandemic efforts and not to stabilise the financial market (for example, Indonesia[2]). The dynamics of yield changes (Table 5) reflect local characteristics of the EMEs (macroeconomic characteristics, financial conditions and accumulated imbalances) as well as the impact of other factors, such as oil prices and geopolitical risks. Fluctuations in OFZ yields in Russia were significant but short-lived, reflecting the complexity of the impact of the pandemic, oil market volatility and geopolitical factors on the Russian market.

The second phase of the crisis (May–June 2020) saw optimistic sentiment of Russian debt market participants. The further decline of OFZ yields in the third phase was limited by the influence of geopolitical factors. Starting from the third quarter, the market situation was largely determined by the policy of the Ministry of Finance of the Russian Federation. To finance the state budget deficit resulting from the pandemic, starting from Q3 2020, the Ministry of Finance increased the planned volume of OFZ placement (in Q3 to ₽1 trillion[3], in Q4 to ₽2 trillion, in total for 2020 from ₽1.7 trillion to ₽4.5 trillion[4]) and changed the structure of securities issuance in favour of variable-rate OFZs. The demand for such instruments is mainly generated by local participants. At the same time, foreign participants made minor purchases of new OFZ issues at auctions (mainly OFZ-PDs); whereas on the exchange (Chart 8) and over-the-counter segments of the secondary market, their transactions had mixed dynamics. As a result, the share of non-residents' investments in OFZs decreased mainly under the influence of overall market growth with the overall volume of investment staying unchanged in the reporting period (around ₽2,940 billion), and by 1 October it amounted to 26.0% (a 5 pp decrease over two quarters, Chart 7).

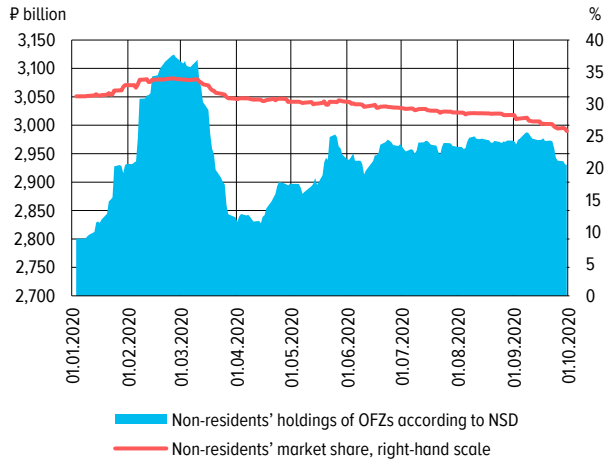
The return of the OFZ yield curve to pre-pandemic values was accompanied by a drop in the interest rates on corporate borrowing. In May and especially in June 2020, the volume of corporate borrowing by Russian companies exceeded the level of 2019 (more than ₽460 billion worth of bonds were placed in two months). After nine months of 2020, the volume of placed corporate bonds exceeded the figures for the same periods of 2018–2019 (Chart 9). Thus, there was no 'crowding out' effect on corporate bonds from public debt.

[2] *S&P Global. EM central banks risk reputations with bond-buying programs.*

[3] *The target for the Q3 was exceeded (123.8%).*

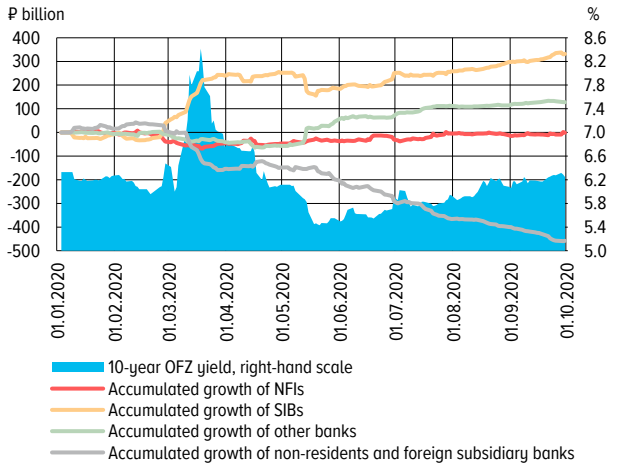
[4] *'Key Areas of the Fiscal, Tax, and Customs and Tariff Policy for 2021 and the 2022–2023 Planning Period'.*

NON-RESIDENTS' HOLDINGS OF OFZS ACCORDING TO NSD *Chart 7*



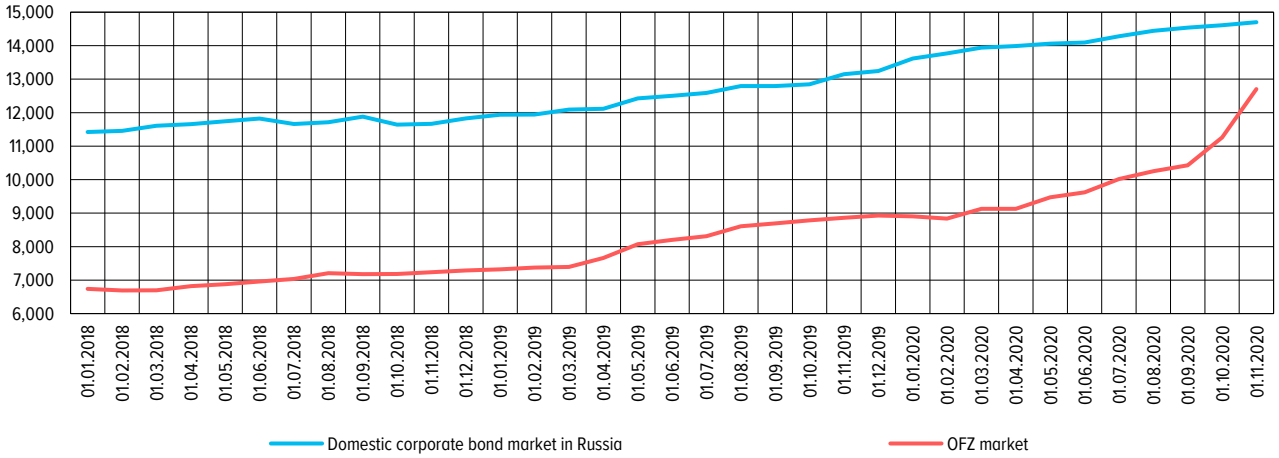
Source: NSD.

ACCUMULATED EXCHANGE SALES OF OFZS BY TYPE OF PARTICIPANTS AND DYNAMICS OF OFZ YIELDS *Chart 8*



Sources: Bloomberg, Moscow Exchange.

VOLUMES OF THE OFZ AND CORPORATE BOND MARKETS (₽ BILLION) *Chart 9*

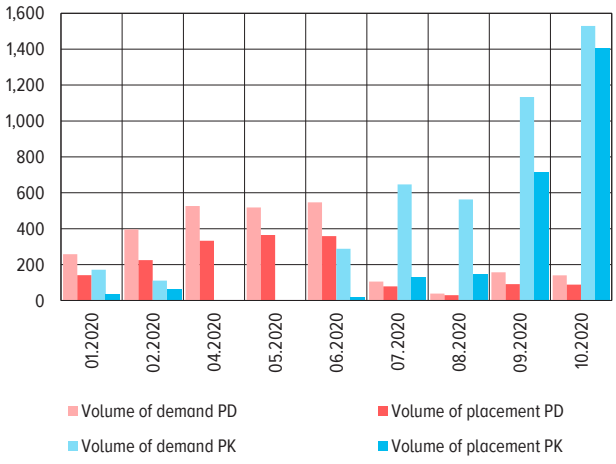


Sources: Cbonds.ru, MinFin.

Despite growth in the planned volumes of OFZ placement, starting from Q3 2020, the Ministry of Finance of the Russian Federation was able to exceed the Q3 plan by 24%, and the Q4 plan was already 75% fulfilled by 3 November. This success was achieved due to the adjustment of the placement structure in favour of variable-rate securities (OFZ-PKs) and high demand for this type of instruments from domestic investors. At the same time, demand for fixed-rate OFZs, which were previously of interest to a large extent to non-residents as part of their carry trade strategy, fell significantly in the context of the interest rates in the economy dropping to local historical lows. Compared to the beginning of the year, the share of fixed income instruments decreased significantly (by 10.3 pp to 62.4% as of 30 October 2020), while the share of variable-rate OFZs, on the contrary, grew to 31.3% (from 19.2 %) (Chart 11). In general, the trend toward an increase in local participants' purchases at auctions continued; their share grew from 73.6% in Q2 to 88.8% in the Q3 (the share of SIBs was 48.1% and 75.1%, respectively).

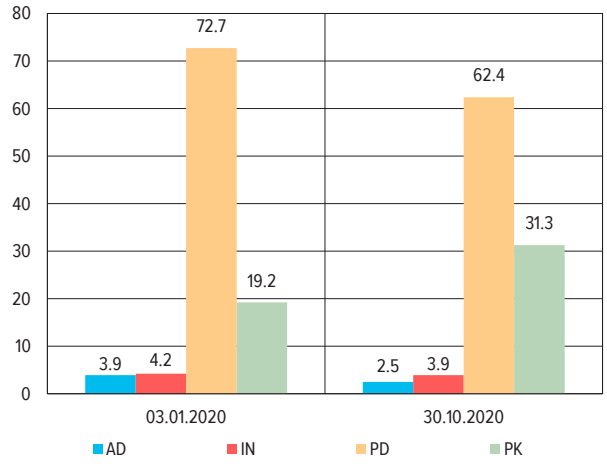
In addition to the changes in the typical structure of the OFZ market, the share of OFZ placements with medium-term maturity grew (an increase of ₽2,736.2 billion at par), leading to a twofold increase in securities with maturities ranging from 5 to 10 years. At the end of the reporting period, the share of medium-term instruments in the OFZ market increased from 29.8% to 42.2%,

OFZ PLACEMENT DYNAMICS BY TYPE OF ISSUE *Chart 10*
(₽ BILLION)



Source: MinFin.

OFZ MARKET STRUCTURE BY TYPE OF SECURITIES *Chart 11*
(%)



Source: NSD, Cbonds.ru.

while the share of the short-term segment dropped from 51.0% to 39.7%, and the share of the long-term segment dropped from 19.2% to 18.1%. Thus, the average term to maturity of OFZ market instruments has increased.

Overall, despite the increase in placement volumes, the OFZ market remains stable due to the low level of public debt, high demand from local investors and balanced growth by both the type and maturity of securities.

Box 3. Public debt in Russia and other EMEs

The stability of the Russian OFZ market in recent years is due to the low public debt and sufficient demand from domestic investors. As of the end of 2019, the ratio of total public debt to GDP in Russia was the lowest among EMEs and amounted to 12.3% (Table 6). Moreover, since the beginning of 2016, this indicator has decreased by 0.2 pp, while most other countries saw its growth (by 3.5 pp on average).

According to the IMF forecast, the strongest increase in public debt due to the pandemic will occur in advanced economies (by 20.2 pp, Table 7). For EMEs and middle-income countries, the increase will be half as much and is forecast to amount to 9.6 pp. In Russia, the ratio of total public debt to GDP by the end of

DYNAMICS OF PUBLIC DEBT TO GDP IN EMES *Table 6*

Countries/dates	01.01.2016	01.01.2017	01.01.2018	01.01.2019	01.01.2020	Change
Average for the sample of countries	45.50	46.80	47.20	48.00	49.00	3.5
Russia	12.50	13.10	12.80	11.70	12.30	-0.2
Indonesia	27.50	28.40	29.40	29.60	30.10	2.6
Turkey	27.60	28.20	28.30	30.50	32.90	5.3
Thailand	32.10	30.60	32.50	33.90	34.00	1.9
Mexico	35.00	37.00	35.20	35.30	36.40	1.4
Poland	51.30	54.30	50.70	48.90	46.00	-5.3
Colombia	44.40	47.80	50.00	50.60	49.40	5.0
Malaysia	53.60	51.90	50.10	51.20	52.50	-1.1
China	41.70	44.20	46.00	49.00	54.20	12.5
South Africa	51.60	53.60	54.90	58.80	64.10	12.5
Hungary	74.30	73.50	71.10	68.60	64.80	-9.5
India	68.30	68.80	69.70	69.50	71.80	3.5
Brazil	71.70	77.40	82.80	86.20	88.70	17.0

The indicator for Russia was calculated based on the MinFin data on the domestic and external sovereign debt; GDP data is based on Rosstat data. Indicators for other countries are based on BIS data.
Sources: MinFin, Rosstat, BIS.

2020 may grow by 6.8 pp [1] and amount to 19.1%, and by the end of 2023, to 21.4%. At the same time, even such growing figures will still be the lowest among EMEs.

FORECAST RATIO OF TOTAL PUBLIC DEBT TO GDP FOR EMES (IMF) *Table 7*

Countries/years	Actual data	Debt-to-GDP forecast				
	2019	2020	Growth in 2020	2021	2022	2023
Advanced economies	105.3	125.5	20.2	125.6	125.6	125.8
EMEs and medium-income countries	52.6	62.2	9.6	65.0	67.5	69.2
Including Russia	12.3	19.1	6.8	20.4	20.8	21.4
Low-income developing countries	43.3	48.8	5.5	49.7	49.1	48.4

Sources: IMF, MinFin.

[1] *Key Areas of the Fiscal, Tax, and Customs and Tariff Policy for 2021 and the 2022–2023 Planning Period.*

2.2. RUBLE AND FX LIQUIDITY IN THE RUSSIAN MARKET

Ruble liquidity

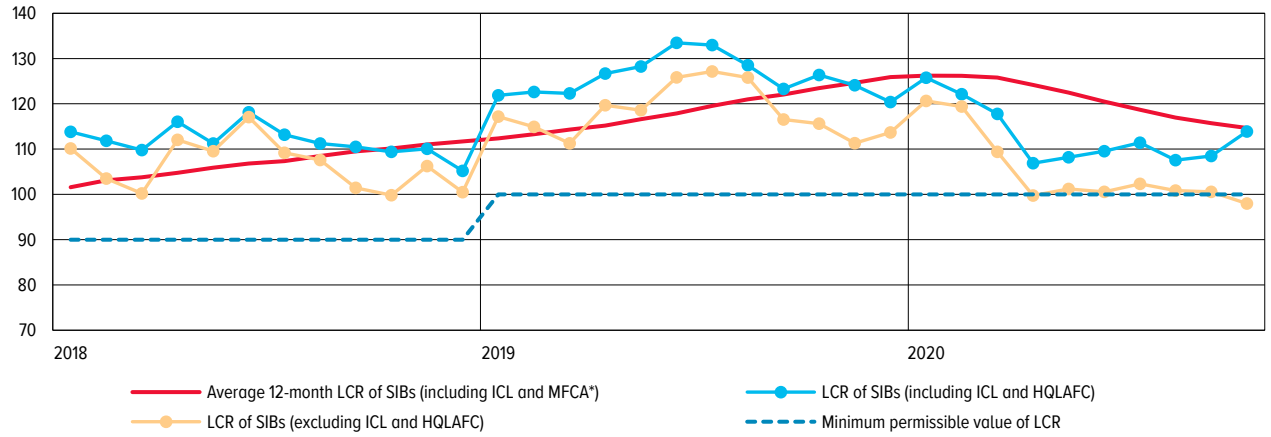
The ruble liquidity situation deteriorated somewhat at the beginning of the pandemic but remained stable thereafter. The measures taken by the Bank of Russia to enhance banks' liquidity management capabilities helped maintain stability in various segments of the domestic market and supported the dynamics of the banking sector's interest margin. To smooth out the uneven distribution of liquidity in the context of increasing government borrowing, in October, the Bank of Russia held one-month and one-year repo auctions.

At the onset of the pandemic, the situation with ruble liquidity worsened due to increased volatility in the financial market. In March–April, certain market participants experienced an additional need for ruble liquidity. In this regard, to increase the ability of credit institutions to manage liquidity, the Bank of Russia held 'fine-tuning' repo auctions for various terms of maturity and expanded the Lombard List. Under these conditions, the repo market, despite being one of the market segments most vulnerable to high volatility (due to the need to pay margin fees), did not undergo any significant changes in its structure and continued to function smoothly. Due to the absence of a fire sales effect, the participants maintained a balance of supply/demand in both on-exchange and OTC auctions.

A slight deterioration in the liquidity situation in the first phase of the pandemic was also associated with an outflow of liquidity as a result of increased demand for cash and with a reduction in the maturity of client liabilities in the banking sector. An increase in the share of short-term funding sources (in particular, due to an increase in short-term funds of legal entities) adversely affects the values of the Liquidity Coverage Ratio (LCR) since it creates demand for an increased level of high-quality liquid assets (HQLA). The weighted average value of the LCR for SIBs dropped by 19 pp in Q1 2020 to 107% (Chart 12).

Since the majority of SIBs previously met the LCR requirements with a significant margin, the decrease in their actual LCR values amid the pandemic reflected the use of liquidity reserves with the simultaneous management of the interest margin and did not pose a threat to financial stability. However, some credit institutions could face the need to urgently adjust their balance sheet, which could lead to a reduction in their loan portfolio. In this regard, the Bank of Russia has temporarily expanded the list of cases allowing the use of HQLAs under the current flexible LCR compliance regime and increased the availability of ICL. As a result, seven SIBs had increased the limit of open

DYNAMICS OF THE ACTUAL AVERAGE VALUE OF LCR FOR SIBS *Chart 12*
(%)



** HQLAFC - high quality liquid assets in foreign currency in part that exceeds the unticipated outflow in that currency.*
Sources: Reporting forms 0409805 and 0409135.

ICL[5] to ₽1.8 trillion by 1 July 2020 (by ₽1.1 trillion compared to 1 April 2020). As the liquidity situation remained generally moderate, in April–August, the majority of SIBs continued to comply with the LCR requirements without using additional assets, including ICLs, in the calculation of the LCR numerator. In Q2 2020, the Bank of Russia also launched auctions (one-month and one-year repos), but during that period they were not in demand from market participants.

In the third phase of the pandemic (Q3 2020), the liquidity situation was calm amid the stabilisation of financial markets. The outflow of liquidity through the cash channel diminished gradually (in July–September, the volume of cash in circulation increased by ₽0.4 trillion after growth of ₽1.7 trillion in the first half-year), and credit institutions' need to pay margin contributions decreased.

At the same time, the banking sector continues to accumulate vulnerability associated with a growing share of short-term funding sources. This may be partly due to the continuing high uncertainty levels related to the epidemical situation and associated risks. The low attractiveness of long-term savings is also promoted by the pricing policy of banks offering relatively low premiums on interest rates for long-term instruments. As a result, since the beginning of Q2 2020, the dynamics of the LCR for SIBs has been consistently below the levels observed in 2019 (Chart 12). Furthermore, this increases banks' exposure to interest rate risk (Section 3.3).

In the context of the stabilisation of the liquidity situation and increased supply of high-quality liquid assets in the domestic market (Section 2.1), the Bank of Russia decided that after 30 September 2020 it will not extend the anti-crisis measure which allowed SIBs to have an LCR below 100% due to an increase in the expected cash outflow caused by a change in the term structure of liabilities. Since the LCR values of certain credit institutions were below 100% during Q2-Q3 2020, the ICL limit used for the calculation of LCR numerator increased by 1 October 2020 (in September, the aggregate maximum limit of SIBs' LCR grew by ₽0.8 trillion to ₽2.6 trillion by 1 October 2020). At the same time, the preferential parameters of ICLs will be preserved until 31 March 2021. Credit institutions experiencing difficulties in complying with LCR requirements should gradually adjust their balance sheets during the flexible LCR compliance period to ensure their ability to reduce their dependence on ICLs in the future to comply with the ratio. Starting from 1 April 2021, it is planned to increase the fee for using ICLs to the previous level (from 0.15% to 0.5%) and to return to the schedule for reducing individual ICL limits.

By the end of the year, factors that impact ruble liquidity of the banking sector had multidirectional trends. Budget expenditures are seasonally located at the end of the year. That being said, Ministry

[5] *Including three SIBs that opened new ICLs.*

of Finance starts active OFZ placements in primary market in October, that leads to liquidity outflows from the banking sector. Moreover, large transfers of funds to the budget as a result of banks' clients tax payments also occurred in October. Bank of Russia one-month repo operations allow banks to compensate for liquidity distribution imbalances. At the end of the year execution of budget expenditures will result in inflow of funds to bank accounts and will allow banks to pay back the repo debts offsetting their impact on liquidity. Besides, the Bank of Russia on a daily basis takes into account budget expenditure dynamics when forecasting liquidity of the banking sector. Therefore, the Bank of Russia will absorb excessive amounts of liquidity via deposit auctions in case of earlier budget expenditure allocations or banks' excessive liquidity attracting through repo operations. This allows efficient balancing of liquidity situation in real time.

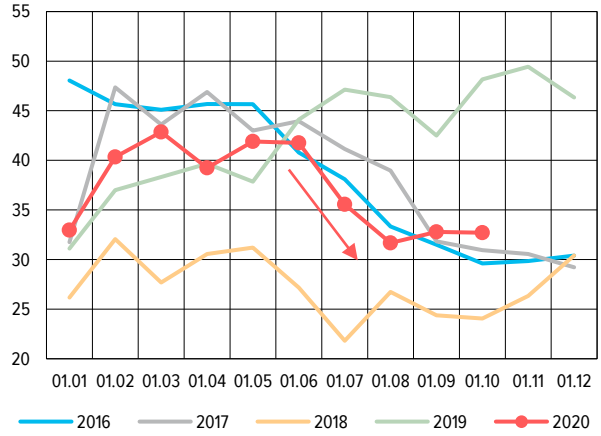
FX liquidity

The FX liquidity situation in the Russian market remained stable in April–October. Due to the significant reserve of FX liquidity and stable dynamics of FX liabilities, credit institutions did not show demand for Bank of Russia instruments for providing FX liquidity, and the cost of FX borrowings in the domestic market remained low. However, amid declining yields in foreign markets, in the reporting period, credit institutions reduced the reserve of FX liquid assets, which may increase their need for FX liquidity in the event of stress. At the same time, according to survey results, the largest banks do not expect risks of an FX liquidity shortage to materialise in the medium term.

By the beginning of the pandemic, the FX liquidity reserve of the banking sector was high as a result of growth in the liquid part of foreign assets during 2019. This helped maintain a stable FX liquidity situation in the Russian financial market during the period of increased volatility in March 2020. In June–July, amid net purchases of foreign currency by non-residents, the volume of FX assets of credit institutions dropped. At the same time, low yields in foreign markets made credit institutions redistribute part of their foreign currency liquid assets in favour of less liquid financial instruments. In the period from 1 June 2020 through 1 October 2020, banks reduced liquid FX assets by $10.2 billion, and their share in total FX assets decreased from 18% to 14%. At the same time, credit institutions increased their foreign currency lending by $6.2 billion, providing funds primarily to export-oriented companies. The largest decrease in the volume of placements with non-resident banks over the indicated period ($8.7 billion out of $9.1 billion) was made by systemically important banks[6].

BALANCES OF CORRESPONDENT AND SHORT-TERM DEPOSIT ACCOUNTS WITH NON-RESIDENT BANKS IN FOREIGN CURRENCY *Chart 13*

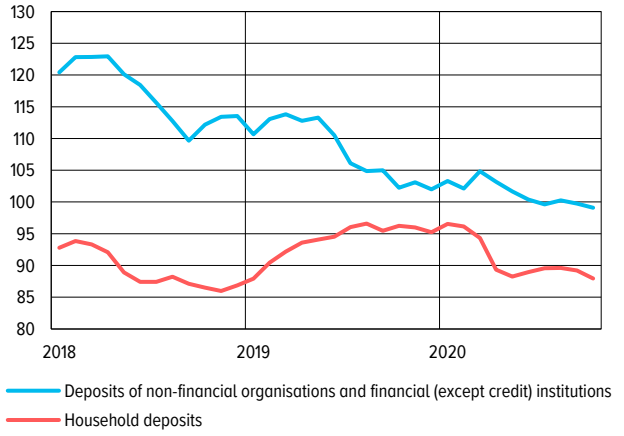
($ BILLION)



Source: Reporting form 0409101.

DYNAMICS OF FOREIGN CURRENCY-DENOMINATED DEPOSITS OF HOUSEHOLDS AND NON-FINANCIAL ORGANISATIONS *Chart 14*

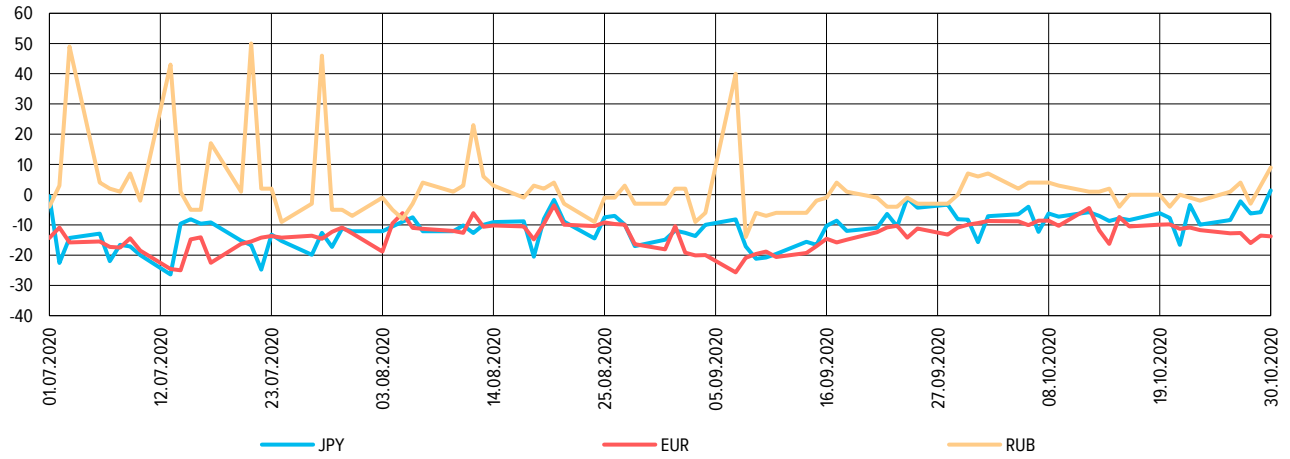
($ BILLION)



Source: Reporting form 0409101.

[6] *SIBs account for about 68% of the volume of liquid foreign currency assets of the banking sector ($30 billion as of 1 October 2020).*

SPREAD OF IMPUTED AND IBL RATES FOR THE RUBLE, EURO AND YEN FOR 1 MONTH *Chart 15*
(BP)



A decrease in the liquid foreign assets of the banking sector was also characteristic of the summer months of previous years (Chart 13)[7] and was often accompanied by a decrease in the FX liquidity buffer (FX liquidity cushion) – that is, the difference between FX liquid assets and balances on clients' FX accounts. In 2016–2018, amid the lowering of the FX liquidity cushion, the growth of the FX liquidity deficit occurred mainly as a result of the actual outflow of FX deposits of non-financial organisations and households.

In Q2–Q3 2020, in the context of stable dynamics of balances in FX accounts of clients in the banking sector (Chart 14), the reduction in FX liquidity reserves had no impact on the current situation in the financial market. In the summer months and September 2020, the cross-currency spread for the ruble did not widen by more than 50 bp, and a similar situation was observed in the European and Japanese markets (Chart 15).

To assess the situation in the medium term, the Bank of Russia conducted a survey[8] to assess the FX liquidity adequacy of the largest credit institutions. According to the survey results, the largest banks have sufficient FX liquidity to cover the expected repayment of foreign currency liabilities over a one-year horizon. In Q4 2020, the aggregate negative gap for banks with a deficit[9] in accordance with the banks' forecasts will not exceed $0.1 billion.

Thus, in the conditions of normalisation of the reserves of foreign currency assets, the FX liquidity situation remains stable. In addition, the risks of a shortage of FX banking sector liquidity are still limited as a result of the significantly decreased dollarization of bank balance sheets in recent years.

2.3. CORPORATE CREDIT RISKS

Lending dynamics

With the introduction of restrictive measures in different countries, including Russia, companies faced the disruption of production chains and decreased demand for goods and services. This led to a reduction in operating cash flows and the emergence of cash shortages, and companies required

[7] *With the exception of 2019 when the inflow of FX deposits amid a drop in foreign currency lending to non-financial organisations contributed to an increase in the FX liquidity cushion of banks and preservation of a favourable FX liquidity situation in the foreign exchange market.*

[8] *In September–October, the Bank of Russia conducted an annual survey of 21 banks. The respondents provided information on the most likely dynamics of FX claims and liabilities in accordance with their own forecasts (taking into account the adjustment of the planned terms for the expected early repayment and/or prolongation of loans and the withdrawal and/or renewal of deposits).*

[9] *The difference between liquid FX assets and liabilities to be repaid for banks for which this value is negative.*

more borrowed funds to replenish working capital, wages and other needs. The growth in demand for loans during the pandemic became a distinctive feature that was absent in either 2015 or 2009. In Q2–Q3 2020, the increase in debt for the corporate loan portfolio amounted to 6.1%[10] for ruble loans (4.3% in real terms) and 4.7% for foreign currency loans. For comparison, in Q2–Q3 2015, the increase in debt amounted to 3.8% for ruble loans (0.8% in real terms) and -0.4% for foreign currency loans.

The growth of foreign currency lending is temporary and does not contradict the general process of reducing the reducing dollarization of banks' loan portfolios. Since the beginning of 2020, indebtedness under foreign currency loans remained practically unchanged (an increase of 0.9% from 1 January through 1 October 2020). More than 80%[11] of the increase in foreign currency debt observed in Q2–Q3 2020 was accounted for by exporting companies from the oil and gas, mining and chemical industries.

An ambiguous situation has developed in lending to small- and medium-sized businesses, which turned out to be most affected by the pandemic. Although debts on loans to SMEs are growing (in Q2–Q3 by 10% net of currency revaluation), the average monthly volume of new loans is 8% lower than in 2019. Lending to SMEs was supported by the concessional lending programmes[12] developed by the Government of the Russian Federation, allowing borrowers to write off debts[13] as well as the preferential refinancing programme of the Bank of Russia. The volume of loans issued under the programme at an effective rate of 0% as of 11 November 2020 amounted to ₽75.2 billion. Loans in the amount of ₽412.3 billion were provided under the programme at an effective rate of 2% for the borrower from the beginning of April to 11 November. In general, both programmes in several months accounted for up to 16% of the volume of loans provided to SMEs. The Bank of Russia introduced a temporary mechanism to support lending to SMEs with a set aggregate limit of ₽500 billion. Under this mechanism, loans in the amount of ₽475.4 billion have been refinanced as of 1 October.

A government programme was also launched to support lending to large companies[14]. Under this programme, loans in the amount of ₽152.2 billion were provided in Q2–Q3 2020.

Lending growth was facilitated by the Bank of Russia's transition to a soft monetary policy. As a result, rates on new long-term corporate loans[15] decreased from 9.01% in April to 6.81% in September 2020. The decrease in the Bank of Russia key rate was reflected in the reduction of servicing costs and a significant part of the loan portfolio. This happened both due to the restructuring of loans with a simultaneous decrease in the interest rate (the total volume of such restructuring amounted to about ₽2.1 trillion[16] for Q2–Q3 2020) and due to a decrease in the interest rate on loans with floating interest rates[17]. Ruble loans with floating interest rates account for ₽10.9 trillion of debt[18].

Due to the fact that interest rates on loans have significantly decreased during this year, the Bank of Russia made a decision on the planned termination of a temporary support mechanism for

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[10] According to reporting form 0409101.

[11] According to reporting form 0409303.

[12] 'Loans for wages at 0%' (Resolution of the Government of the Russian Federation No. 422, dated 2 April 2020), 'Loans at an effective rate of 2%' (Resolution of the Government of the Russian Federation No. 696, dated 16 May 2020).

[13] If the company retains 90% of its employees, the loan will be written off along with the interest, and if it retains at least 80% of employees, the company will have to return only half of the loan and interest.

[14] 'Loans for replenishment of working capital' (Resolution of the Government of the Russian Federation No. 582, dated 24 April 2020).

[15] Interest rates on ruble loans provided to non-financial organisations with maturity of more than 1 year.

[16] According to reporting form 0409303.

[17] With the following types of floating/variable components: MosPrime, the Bank of Russia key rate and combinations thereof with other components (inflation, financial position of the borrower etc).

[18] Of which ₽10.3 trillion (as of 1 October 2020) is ruble loans (almost 32% of the total ruble loan portfolio), and ₽0.6 trillion is foreign currency loans (4.8% of the total foreign currency loan portfolio).

lending to SMEs with a limit of ₽500 billion. Banks' debt to the Bank of Russia under this mechanism will be gradually reduced over the next 12 months.

To support lending to companies producing medicines and medical materials and equipment, the Bank of Russia has reduced capital requirements for loans to such companies until the end of 2021. This measure is popular with banks. In nine months of this year, the debt on loans to pharmaceutical companies grew by 23.1%.

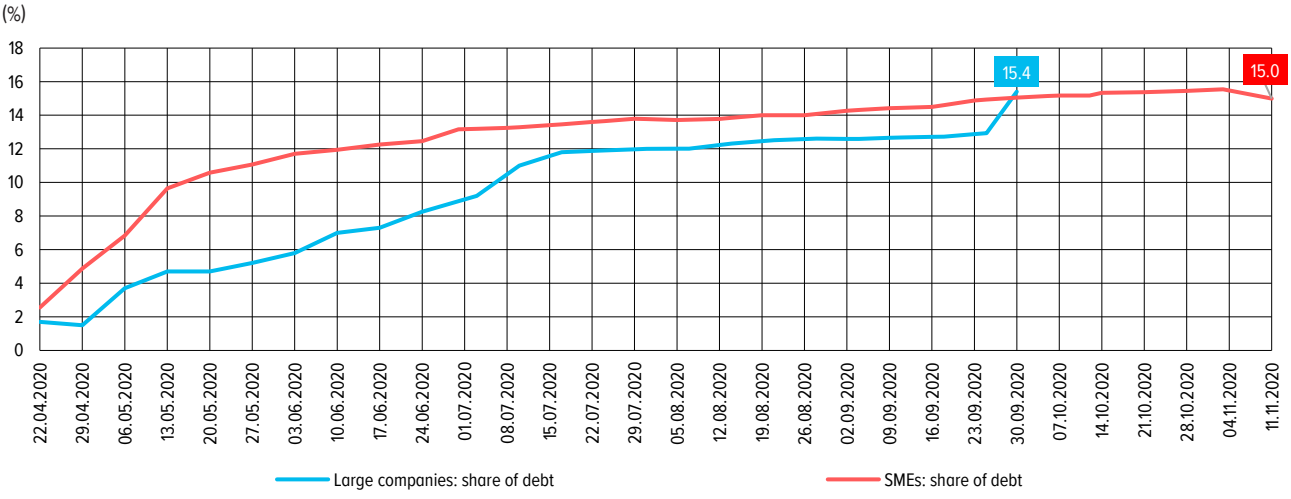
Loan restructuring

Such events as the pandemic are systemic and have a simultaneous negative impact on the financial position of a wide range of companies. Taking this into account, the Bank of Russia recommended that banks restructure loans to companies so that borrowers could overcome the acute phase of the economic slowdown and restore their financial position. This recommendation was in effect until 30 September 2020 and then was extended until 31 December 2020. Since the start of the pandemic, 15.4%[19] of debts on loans to large companies and 15.0% on loans to SMEs have been restructured (Chart 16).

The restructuring was in demand with SMEs mainly in April–May as these companies had less liquidity and were most vulnerable to reduced operating cash flows. Large companies, having a greater safety margin, turned to banks for loan restructuring in May–July. However, some of the restructurings for large companies were due to the downward revision of the interest rate.

At the same time, to reduce the pressure on bank capital and to prevent an immediate increase in loan reserves, banks were given the right to postpone the creation of loan loss provisions, including restructured loans that meet the requirements of Bank of Russia Letters. For loans to large companies, provisions should be formed by 1 April 2021, and for loans to SMEs, by 1 July 2021. In addition, until 31 December 2020, banks can classify such loans according to an assessment of the financial position of the borrower and the quality of debt service made before the start of the pandemic. These measures made it possible to postpone the growth of the share of non-performing loans. The share of quality category IV–V loans in the second–third quarters decreased by 0.4 pp to 10.7%[20]. For comparison, in H1 2015, the share of non-performing loans increased by 1.7 pp. For loans to SMEs, the share of quality category IV–V loans also decreased by 0.4 pp to 17%.

DYNAMICS OF THE SHARE OF RESTRUCTURED DEBT ON LOANS OF LARGE COMPANIES (OTHER THAN SMES) AND SMES *Chart 16*



Source: Monitoring of the Bank of Russia.

[19] *According to the monitoring of the Bank of Russia.*

[20] *According to reporting form 0409115.*

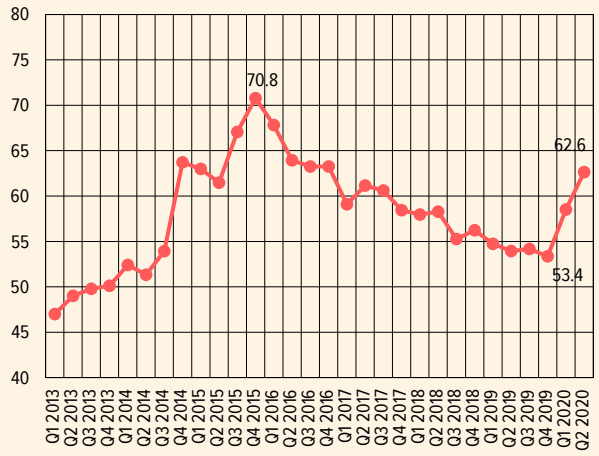
Box 4. Debt burden of the corporate sector

From 2016 to 2019, the debt burden of non-financial companies gradually decreased (debt relative to GDP for this period decreased by 16 pp); however, by the end of six months of 2020, the debt of the non-financial sector had grown both in absolute terms and relative to GDP (by 14% and by 9.3 pp, respectively, compared to the beginning of the year Chart 17).

According to Rosstat, in H1 2020, profit from sales of Russian non-financial organisations[1] dropped by 34% YoY. This decrease was mainly contributed to by hospitality and catering enterprises, which recorded a loss on sales at the end of the period under review as well as transportation and storage enterprises (sales profits fell by 69% YoY) and mining industry companies (sales profits fell by 54% YoY).

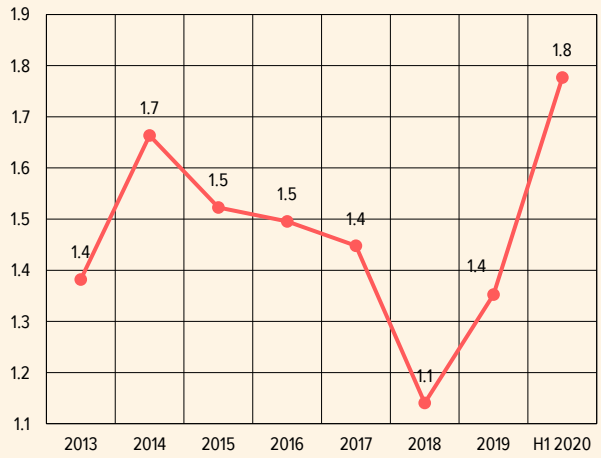
Despite the fact that the total debt burden of the non-financial sector does not differ significantly from other emerging market economies[2], the high concentration of corporate debt in a small number of the largest borrowers (about 37% of the total debt of the non-financial sector falls on the 92 largest companies, 4 pp more than as of the end of 2016) may be a source of systemic risk. At the same time, the debt burden of the above-mentioned largest companies measured by the net debt/EBITDA ratio has been growing since 2019, and in H1 2020 the pandemic led to the acceleration of this growth, and the indicator reached 1.8x (Chart 18, 12% of companies increased their debt burden by 5–25%; 16% of companies, by 26–100%; and 8% of companies, by more than 100%). Taken together, this points toward increased risks for the Russian banking sector.

DEBT OF NON-FINANCIAL COMPANIES TO GDP *Chart 17*
(%)



Sources: Rosstat, Bank of Russia.

DEBT BURDEN OF THE 92 LARGEST NON-FINANCIAL COMPANIES (NET DEBT/EBITDA AGGREGATE) *Chart 18*



Source: S&P Capital IQ.

[1] *Except for businesses with the following types of activities: financial and insurance activities, professional, scientific and technical activities, public administration and military security, education, household activities, healthcare activities and administrative activities.*

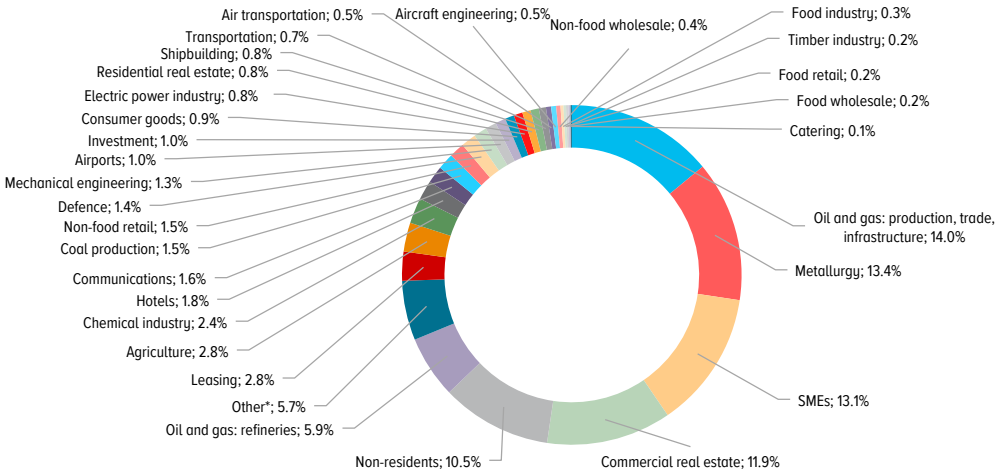
[2] *The debt burden of the non-financial sector of the Russian Federation is lower than in China and Chile by 78 and 34 pp, respectively, and higher than in Turkey and India by 12 and 35 pp, respectively. Source: BIS data.*

The total volume of restructured loans to companies, including small- and medium-sized enterprises, amounts to ₽5.8 trillion as of 1 October 2020[21]. The most significant volume of restructured loans falls on small- and medium-sized businesses as well as large companies from the following industries: oil and gas, including production of oil products, metallurgy, commercial real estate, agricultural and leasing companies (Chart 19).

In the future, the dynamics of loan portfolio quality will be primarily determined by the quality of restructured loans and the ability of borrowers to restore their financial position.

[21] *Excluding loans restructured only due to the downward revision of the interest rate.*

RESTRUCTURED DEBT ON CORPORATE LOANS *Chart 19*
(%)



** Other: loans to borrowers from other sectors in the amount less than ₽1 billion and loans to government and municipal entities.*
Source: Reporting Form 0409303 of 33 largest credit institutions in terms of assets.

Small- and medium-sized businesses

The forced suspension of SMEs' activities due to restrictive measures had a negative impact on the financial position of small businesses. According to Rosstat estimates, in H1 2020, the turnover of small companies (excluding microenterprises) decreased by 6% (YoY) and amounted to ₽11.6 trillion. The hospitality, travel and catering industries have been hit hardest.

During the pandemic, the *demand for hotel services dropped sharply*. At the beginning of Q2 2020, the occupancy rate of Moscow hotels was 12–18% versus 53% a year earlier, while in Saint Petersburg the occupancy rate was 15% instead of 66%[22]. August saw a positive trend: in Moscow, the occupancy increased by 8 pp, and in Saint Petersburg, by 10 pp compared to June; however, relative to 2019, profit per room fell by 76.6% and 82.4%, respectively.

According to the results of the second quarter, the share of travel companies that recorded a drop in demand for their services increased by 64 pp YoY, and more than 150 companies have gone bankrupt[23]. In the third quarter, the situation improved slightly due to the development of domestic travel destinations: the share of companies that noted an increase in demand for their services grew by 3 pp (YoY). However, September saw a drop in incoming payments from travel agencies and other organisations, indicating decreased demand. According to the Federal Tourism Agency, the tourism industry may recover by spring of 2021 amid the active development of domestic tourism.

According to Rosstat, the index of the physical volume of public catering turnover across Russia reached historical lows in April and May, amounting to 47.4% and 47.1% YoY, respectively. In June, the industry began to recover, and in September the index reached 86% YoY due to the partial lifting of restrictions. According to an FRH[24] forecast, the restaurant market is expected to fall by 50% in 2020. The industry will pay more attention to the safety of personnel and visitors and developing hybrid interaction formats and online technologies.

Regulatory and administrative forbearance as well as federal and regional subsidies during the pandemic restrictions for affected industries and SMEs in general prevented a deeper decline in the sector. The package of support measures included subsidies, loan repayment holidays, tax breaks, reduced insurance premiums and moratoriums on bankruptcy and penalties under government contracts. In addition to federal measures, the *Moscow Government adopted three packages of*

[22] *According to RosinvestHotel estimates.*

[23] *According to the Unified Federal Register of Tour Operators.*

[24] *Federation of Restaurateurs and Hoteliers of Russia.*

support measures (dated 24 March, 31 March and 26 May) with a total budget of about ₽85 billion[25], including a deferral of rent and additional subsidies for hotels and catering establishments.

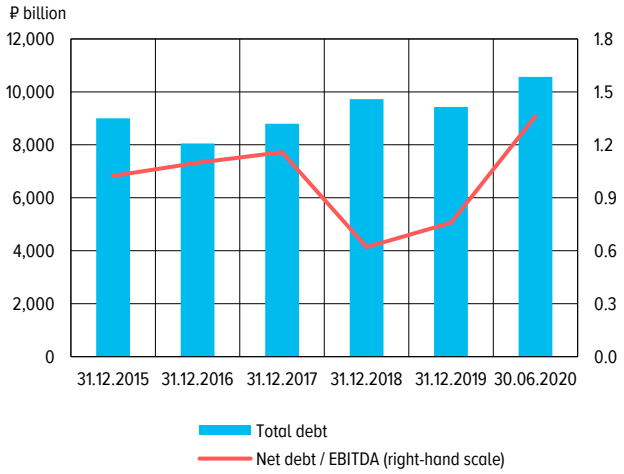
Nevertheless, according to the Unified Register of SMEs as of the beginning of September, the total number of enterprises fell by 240,000, or 3.6% YoY, to 5.6 million. Compared to the previous year, the reduction in the number of SMEs accelerated threefold. The fall in the income of enterprises makes their bankruptcy more likely, increasing the risks for banks providing loans to SMEs. The risks of the banking sector on loans to such companies are limited; the share of loans is 0.3% (the share of SMEs from hospitality, travel and catering sectors) in the total corporate loan portfolio.

Oil and gas industry

The total volume of loans to oil and gas companies restructured between 20 March and 1 October amounts to ₽860 billion. Amid the coronavirus pandemic, the situation on the oil market remains uncertain, and world oil prices are under pressure. The MOEX Russia sectoral oil and gas index showed a 33% decline since the beginning of the year (the general MOEX Russia Index declined 13% over the same period).[26] At the same time, the largest Russian oil and gas companies have a sufficient level of financial stability: despite the increase in the debt burden, calculated as the Net debt/EBITDA ratio, from 0.8x to 1.4x[27], it remains acceptable (less than 2x) (Chart 20). The level of coverage of interest with operating profit also remains acceptable (more than 2x) despite the decrease in profitability: 7x in H1 2020 (11.7x at the end of 2019) (Chart 21).[28] The resilience of the largest Russian oil and gas companies is evidenced by the unchanged ratings from international rating agencies.

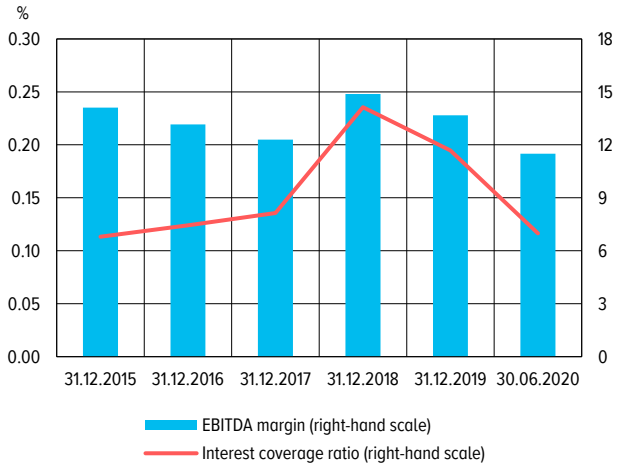
Due to the continued uncertainty in the oil market, many Russian oil and gas companies have revised their investment programmes toward lower capital expenditures. According to Bloomberg, in 2020, the largest oil and gas companies will be forced to optimise part of their capital expenditures and cut them by 11% YoY[29]. This will support the financial position of companies and allow them to service bank loans

DEBT BURDEN OF LARGEST OIL AND GAS COMPANIES *Chart 20*



Source: S&P Capital IQ.

PROFITABILITY AND INTEREST COVERAGE RATIO OF LARGEST OIL AND GAS COMPANIES *Chart 21*



Source: S&P Capital IQ.

[25] *According to reporting form 0409303.*

[26] *As of 30 October 2020.*

[27] *After H1 2020.*

[28] *According to the eight largest Russian oil and gas companies.*

[29] *According to the data of the seven largest Russian oil and gas companies.*

Box 5. The situation in the global oil market and its impact on production in Russia

Demand

According to IHS Markit, Q2 2020 saw a record drop in oil demand by 16.4 million barrels per day (YoY) due to the introduction of quarantine restrictions. At the end of Q3 2020, we saw a partial recovery in demand: global demand for oil amounted to 92.3 million barrels per day, having decreased by 9.9 million barrels per day (YoY) (Chart 21).

Supply

In Q2-Q3 2020, global oil production decreased by 8.5 and 9.5 million barrels per day (YoY) to 91.8 and 90.8 million barrels per day, respectively, as a result of the successful implementation of agreements under a new OPEC+ deal, a cut in US oil production and a natural decline in production in other countries. According to the International Energy Agency (the 'IEA'), in May, OPEC+ countries cut production under the deal by 89%; in June, by 108%; in July and August, by 89% and 98%, respectively; and in September, by 103%.

Global prices

At the end of June, global oil prices stabilised at $40–45 per barrel (Chart 22). At the same time, a slowdown in the recovery of demand for crude oil amid a new increase in the incidence rate in many countries may put pressure on oil prices in the short term.

Industry outlook

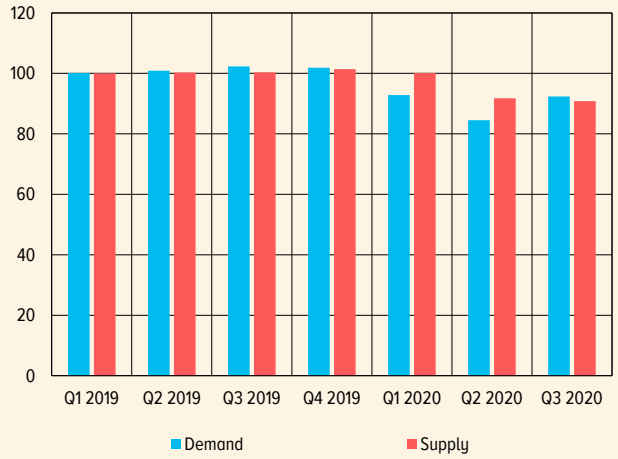
According to IHS Markit forecasts, the reduction in global demand for oil by the end of 2020 may reach a record 10.5 million barrels per day (YoY)[1] (Chart 24) due to a significant drop in consumption in the second quarter and the subsequent slower recovery of demand. The above estimate may turn out to be optimistic given the growing incidence rate of COVID-19 worldwide and the introduction of new quarantine restrictions in a number of countries.

In October, OPEC lowered its forecast for demand for oil in Q4 2020 by 218,000 barrels per day and in November by another 1.2 million barrels per day. According to IHS Markit forecasts, as a result of the OPEC+ agreement, global oil production in 2020 will decrease by 6.7 million barrels per day (YoY) with a subsequent increase by 1.8 million barrels per day (YoY) by the end of 2021.

Oil production cuts in Russia

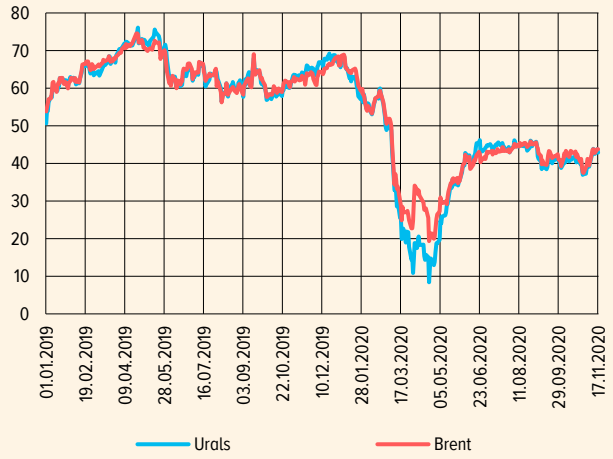
According to IHS Markit[2], in Q2 and Q3 2020 oil production in Russia decreased by 1.1 and 1.5 million barrels per day YoY respectively in connection with the agreements under the OPEC+ deal. According to the IEA, in May–September 2020, Russia fulfilled the terms of the deal by an average of 97%. In August, due to easing of production cuts, Russian companies were able to increase oil production to 9.8 million barrels per day compared to 9.3 million barrels per day in June–July. In general, by the end of 2020, oil production in Russia may decrease by 1 million barrels per day to 10.2 million barrels per day, or by 9% (YoY)[3] (Chart 22).

GLOBAL DEMAND FOR AND SUPPLY OF OIL (LIQUID HYDROCARBONS) *Chart 22*
(MILLION BARRELS PER DAY)



Source: IHS Markit.

BRENT AND URALS CRUDE OIL PRICE DYNAMICS *Chart 23*
($ PER BARREL)



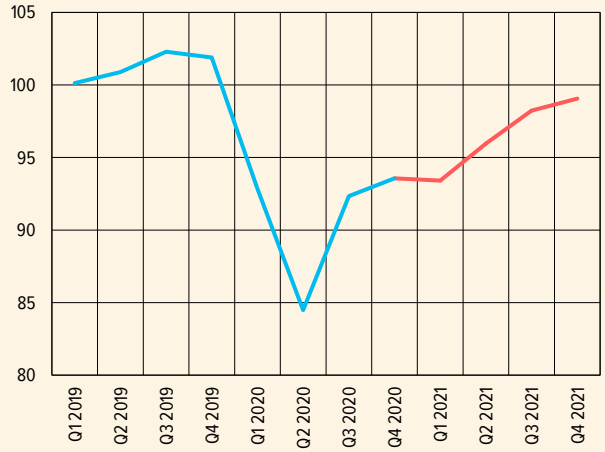
Sources: Bloomberg, Reuters.

[1] *According to IHS Markit as of 16 November 2020.*

[2] *IHS Markit data on oil production in Russia include gas condensate production.*

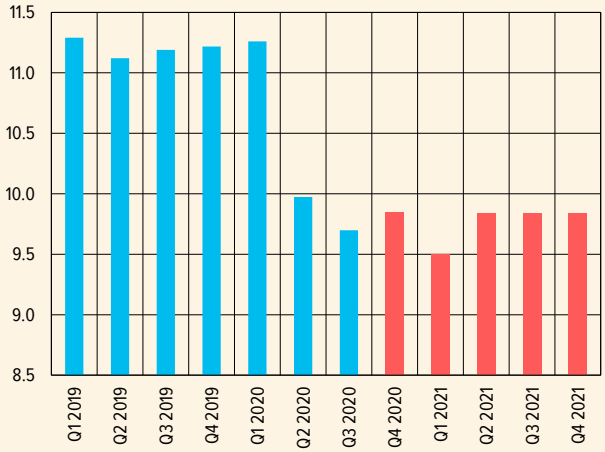
[3] *According to IHS Markit.*

FORECAST FOR RECOVERY IN OIL (LIQUID HYDROCARBONS) DEMAND UP TO 2021 *Chart 24*
(MILLION BARRELS PER DAY)



Source: IHS Markit.

OIL PRODUCTION IN RUSSIA *Chart 25*
(MILLION BARRELS PER DAY)



Source: IHS Markit.

Independent oil refineries

The volume of restructured loans to oil refineries amounted to ₽365 billion[30]. The deterioration of the financial position of oil refineries was associated with a decrease in demand for oil products in Russia amid the pandemic. According to the Ministry of Energy of the Russian Federation, in January–September 2020, the volume of primary oil refining declined by 4% YoY, and the largest drop in annual terms occurred in July–August 2020.

Moreover, a possible decrease in export prices for oil and, as a consequence, preservation of the reverse damper mechanism may also aggravate the financial position of Russian oil refining companies. According to the Ministry of Finance of the Russian Federation, from January to September 2020, oil refineries were forced to make contributions to the budget under the damper mechanism in the amount of ₽265 billion (Table 8), which may have a negative impact on the marginality of oil refining. This increases the risks of banks on loans to oil refining companies.

Commercial real estate

Commercial real estate companies account for a significant share of restructured loans (₽730 billion[31]). In addition to the risks associated with an increase in the vacancy rate, the industry also faces currency risks since about 25% of the debt is denominated in foreign currency.

In the office real estate segment, the situation is more favourable in the short term: despite many companies arranging for employees to work from home, most large companies continue to rent Class A offices, and in general, the vacancy rate remains significantly below the 2015–2016 level.

AMOUNTS OF DAMPER CHARGES (DEDUCTIONS) FOR INDEPENDENT OIL REFINERIES (IN 2020) *Table 8*
(₽ BILLION)

	January	February	March	April	May	June	July	August	September
Damper coefficient (Cdamp)	20.7	2.3	(10.5)	(34.2)	(41.1)	(96.5)	(42.6)	(34.2)	(29.3)

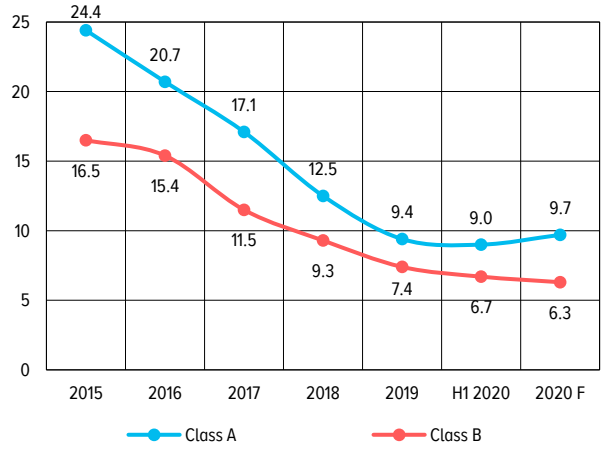
Source: MinFin.

[30] *According to reporting form 0409303.*

[31] *According to reporting form 0409303.*

SHARE OF VACANT PREMISES IN CLASS A AND B OFFICES (MOSCOW) *Chart 26*

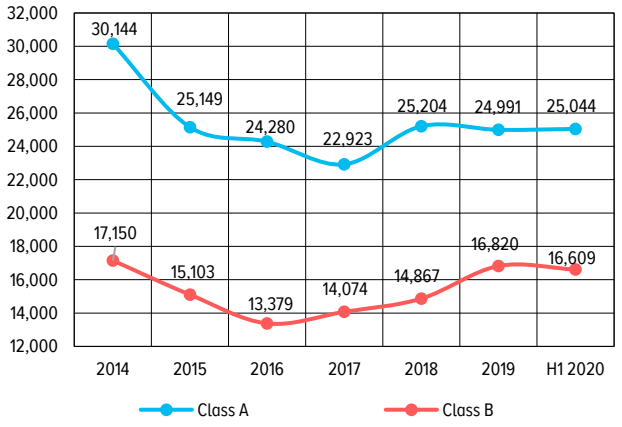
(%)



** Excluding operating expenses and VAT.*
Source: Knight Frank.

DYNAMICS OF THE WEIGHTED AVERAGE ASKING RENTAL RATES FOR CLASS A AND B OFFICES, DENOMINATED IN RUSSIAN RUBLES *Chart 27*

(₽/M²/Y, MOSCOW)



** Excluding operating expenses and VAT.*
Source: Knight Frank.

In H1 2020, asking rental rates remained stable. For class A offices, they were about ₽25,1/m²/y, 0.4% higher than at the end of 2019. For class B, they were 1.2% lower at ₽16,600/m²/y. Current rates are expected to decline moderately due to reduced demand. The trend for optimising office maintenance costs will grow. We expect an increase in the number of transactions aimed at renegotiating the terms of agreements and vacating part of the occupied premises, rotation of tenants to lower class buildings and an increase in sublease supply.

According to analysts' forecasts, a slight increase in vacancy rates is expected by the end of 2020, but, given the current epidemical situation in Moscow, this growth is likely to accelerate.[32] In the medium term, the consequences of the coronavirus spread will lead to structural changes in the industry: the quarantine measures introduced during the pandemic has forced many organisations to rethink the concept of office work. Currently, in accordance with the decision of the Moscow authorities, companies are transitioning a significant part of their employees to work from home until the end of 2020. If the concept of working from home is preserved, companies will begin to revise their approaches to determining the required office space, leading to an increase in vacancy rates.

The retail real estate segment is experiencing a negative impact of the pandemic to a greater extent: significant growth in the share of vacant premises and a decrease in rental rates are predicted. The vacancy rates in Moscow shopping centres did not change significantly in H1 2020 and amounted to 10.2%, 1.1 pp higher than at the end of 2019. Popular shopping centres remain occupied, while in facilities that experienced difficulties even before the pandemic the vacancy rates may grow by 25–30 pp, especially if the epidemical situation deteriorates.

During the acute phase of the pandemic, the Government of the Russian Federation adopted a number of measures[33] to support tenants and landlords in shopping and entertainment centres. In particular, property owners were granted a deferral of property and land taxes for 2020 if they, in turn, provided tenants with a deferral of rent payments.

In the long term, the change in rental rates will be significantly influenced by the volume of turnover that forms the basis for most rental rates in shopping centres, and turnover, in turn,

[32] *According to consulting company Knight Frank, by the end of 2020, the share of vacant class A offices in Moscow is expected to rise to 9.7% (at the end of 2019, it was 9.0%), and the share of vacant class B premises is expected to decrease moderately to about 6.3% (at the end of 2019, it was 7.4%).*

[33] *Federal Law No. 98-FZ, dated 1 April 2020, and Decree of the Government of the Russian Federation No. 439, dated 3 April 2020; Decree of the Government of the Russian Federation No. 409, dated 2 April 2020, and No. 699, dated 16 May 2020.*

will be adjusted by the decreased purchasing power of households. Another negative factor will be changing consumer preferences: the growth of online sales and the emergence of new trade formats (for example, dark stores[34]). Like in previous crisis periods, one can expect a revision of rental conditions and a decrease in rental rates, primarily, in lower-quality shopping centres. This points toward the persistent level of credit risks for banks' claims on retail real estate companies.

Air transport

The air transport industry is being severely impacted by the pandemic. At the same time, companies associated with the air transportation of passengers and airports account for a relatively small share of restructured loans (₽94.3 billion[35]). This can be explained by the small volume[36] of direct lending from the banking sector as the majority of airlines' debt is formed by liabilities to lessors (as of 1 July 2020, the share of the leasing portfolio for air transport in the total leasing portfolio was 17.1%[37]; an assessment of the impact of the pandemic on leasing companies is given in Section 2.5). However, the impact on banks may be significant due to lending to leasing companies, including those in the same financial groups as banks.

The lowest volume of transported passengers was recorded in April at 739 thousand people (13 times less than in April 2019, Chart 28). Starting in May 2020, when quarantine measures began to be lifted in a number of regions, the dynamics of transported passengers started to recover. In nine months of 2020, a total of 52.7 million passengers were transported in Russia, 47% fewer YoY. At the same time, the volume of domestic air transportation (8.6 million people) by Russian companies in August 2020 grew by 3.8% YoY[38], making the Russian market the first in the world[39] to record growth since the beginning of the pandemic (for comparison, in China, in August 2020 domestic air transportation decreased by 19.1% YoY[40]). In September, the positive dynamics of domestic air transportation continued, and the number of passengers carried on domestic routes increased by 6.2% YoY. Lower airfare prices together with the growth of domestic tourism (the share of domestic air travel in Russia is significantly less than in other countries, indicating potential for growth, especially when external borders are closed) were the main factors contributing to the positive dynamics. However, the end of the vacation season and the increase in the coronavirus incidence rate at the end of September may slow down the growth in domestic air transportation.

The spread of the new coronavirus infection and, as a result, the suspension of most of the world's flights led to the number of parked aircraft across the world reaching a record high in March–April.

The almost complete absence of international air traffic in H1 2020 as well as the quarantine measures greatly affected the volume of air traffic at the largest airports in the Russian Federation. At the end of September 2020, the decline in passenger traffic amounted to 25% YoY, in addition to a significant drop in transportation volumes recorded in spring and summer of this year[41]. The decline in transportation volumes and passenger traffic, which are key factors in generating revenue for airports, greatly affects their financial position.

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[34] *Dark store refers to premises where goods are stored and orders for online stores are put together.*

[35] *According to reporting form 0409303.*

[36] *As of 1 August 2020, airlines (scheduled and non-scheduled air transport) accounted for 0.5% of the corporate loan portfolio (according to aggregated banking reporting form 0409303).*

[37] *According to Expert RA.*

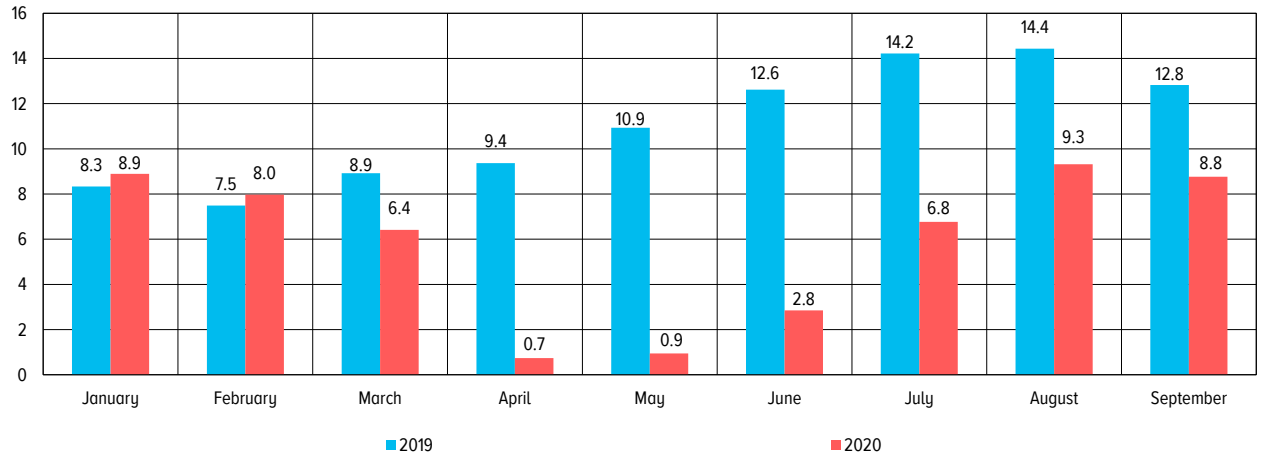
[38] *According to Rosaviation.*

[39] *According to IATA.*

[40] *According to IATA.*

[41] *According to the International Airports Association, the drop in passenger traffic at the largest Russian airports in April amounted to 91% YoY, and in May, to 90% YoY. In June, after the lifting of quarantine restrictions in the Russian regions, the decrease in passenger traffic amounted to 75% YoY; in July, 45% YoY; and in August, 28% YoY.*

NUMBER OF PASSENGERS CARRIED IN THE RUSSIAN FEDERATION FOR 9 MONTHS OF 2019 AND 2020 *Chart 28*



Source: Federal Air Transport Agency.

Russia has introduced a number of measures to support domestic airlines and airports. The Federal Air Transport Agency (Rosaviation) approved subsidies for airlines to cover the costs of commercial flights[42] performed from February to June 2020 in the total amount of ₽11.7 billion as well as subsidies for Russian airports in the amount of ₽8.67 billion for partial compensation of expenses due to a decrease in their income associated with the drop in passenger traffic for the period from April to July 2020[43]. Rosaviation has prepared proposals to increase the duration of the subsidy program until the end of September 2020 and sent them for interdepartmental approval. Additionally, major Russian airlines listed as systemic enterprises can count on concessional loans to replenish working capital in the amount of up to ₽3 billion for up to 12 months.[44] At the end of October, the Association of Air Transport Operators applied to the Government of the Russian Federation with a request for additional subsidies in the amount of ₽50 billion.

The main problems of the industry in 2020–2021 will be a surplus in the fleet, a significant increase in the debt burden, a change in the maturities on leasing and debt obligations and additional measures related to epidemical safety. All of the above factors will affect the financial position of air carriers and, as a result, increase the credit risks of banks. Amid all the major current problems of the industry, the future financial stability of airlines will largely be determined by the volume of government support.

Thus, the situation with the quality of restructured loans differs significantly by the types of activities of borrowers. Companies from the affected industries will be the slowest to recover, especially the companies with business models hit hardest by the pandemic: commercial real estate, air transport, hospitality, tourism, and small and medium businesses. The volume of restructured loans to this group of companies accounts for 5.7%[45] of the total corporate loan portfolio (including 2.2% for loans to SMEs) and, if necessary, can be covered by banks both at the expense of the profit in 2020 and at the expense of accumulated capital reserves, which exceed ₽5.9 trillion (14.0% of the corporate loan portfolio[46]). Commodity companies will be able to weather the impact of the pandemic more easily, in part due to a rebound in commodity prices (assuming no negative trends

[42] *Resolution of the Government of the Russian Federation No. 661, dated 13 May 2020.*

[43] *Resolution of the Government of the Russian Federation No. 813, dated 3 June 2020.*

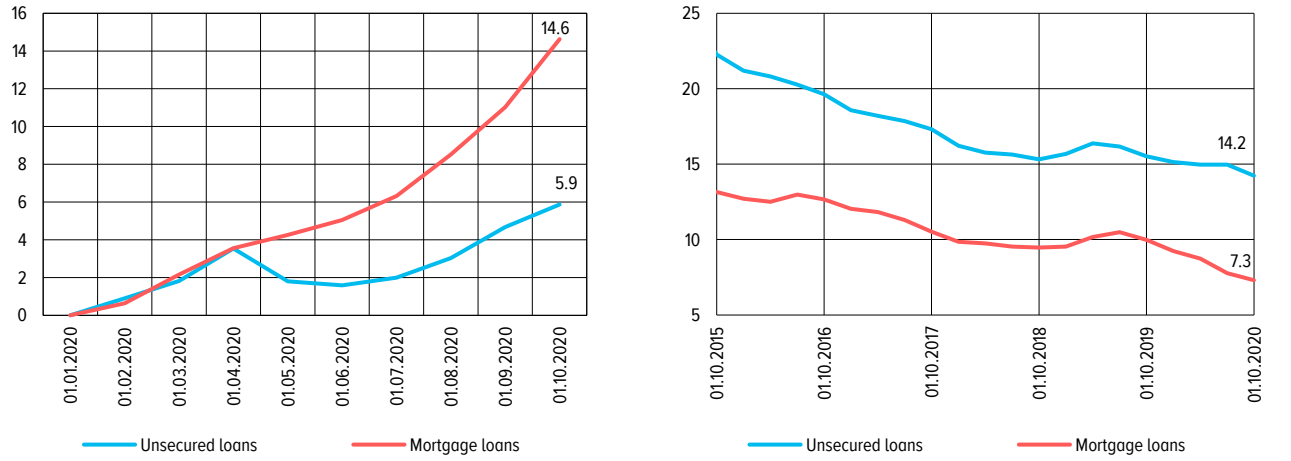
[44] *Resolution of the Government of the Russian Federation No. 582, dated 24 April 2020.*

[45] *According to the monitoring of the Bank of Russia.*

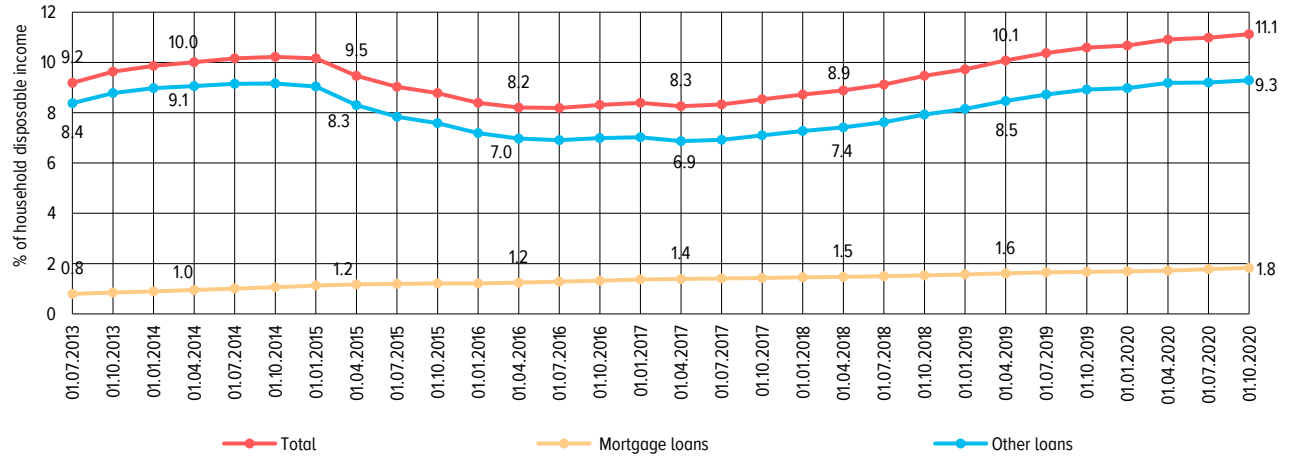
[46] *According to reporting form 0409115.*

DYNAMICS OF THE ACCUMULATED GROWTH RATES OF HOUSEHOLD DEBT IN 2020 AND WEIGHTED AVERAGE RATES OF HOUSEHOLD LOANS *Chart 29*

(%)



PAYMENT-TO-INCOME (PTI) INDICATOR *Chart 30*



emerge in Q4 2020). Therefore, no significant increase in the share of non-performing loans is expected for restructured loans to this group of companies.

In general, banks have sufficient capital reserves to absorb loan losses. A significant part of the temporary forbearance introduced by the Bank of Russia to support borrowers and lending is effective until the end of 2020 or mid-2021. However, it is important to recognise losses on non-performing loans without extended delays as these delays can lead to the emergence of 'zombie borrowers' and hinder lending to efficient companies.

2.4. RETAIL LENDING RISKS

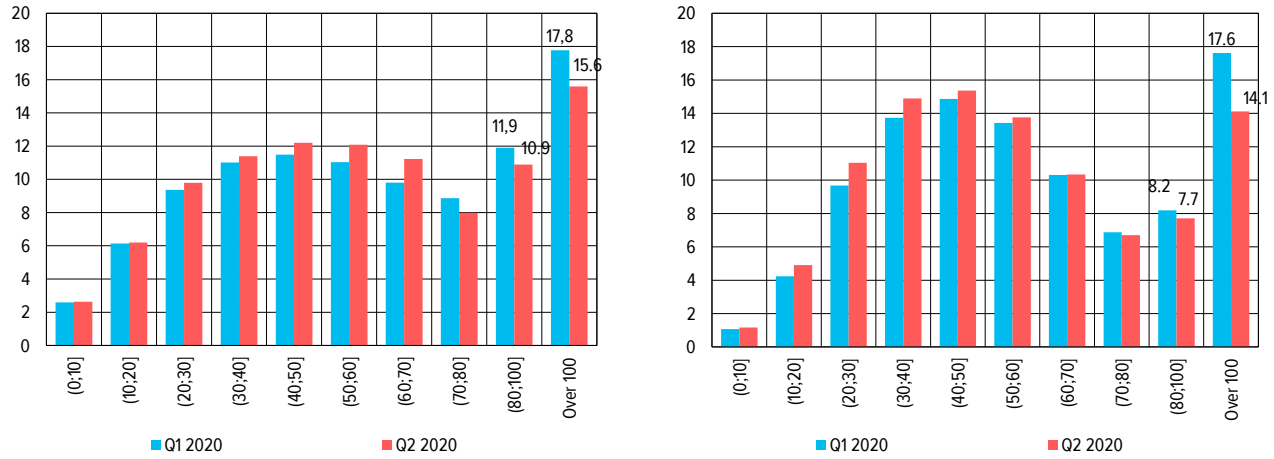
Lending dynamics and household debt burden dynamics

The pandemic and the subsequent introduction of restrictive measures in the second quarter had a negative impact on the retail lending segment. The demand for unsecured consumer loans dropped, which was reflected in a 14% decrease QoQ in the number of loan applications in the second quarter.[47] At the same time, the government mortgage rate subsidy programme supported demand

[47] *According to the quarterly survey of the Bank of Russia.*

DISTRIBUTION OF THE VOLUME OF UNSECURED LOANS (LEFT) AND MORTGAGES (RIGHT) PROVIDED IN Q2 2020 BY PTI LEVEL *Chart 31*

(%)



for mortgages, and the number of mortgage applications in the second quarter increased by 19% QoQ. Lending activity in the retail segment had already recovered in Q3 2020, and mortgages were the driving force behind this lending recovery. The lending recovery was facilitated by a government interest rate subsidy programme aimed at lowering the rates to 6.5% per annum, which accounted for about a third of all mortgage loans granted in the third quarter; the transition to a loose monetary policy, making it possible to reduce the interest rates on mortgages by 1.3 pp to 7.3% in Q2–Q3 and by 0.7 pp to 14.2% on unsecured consumer loans; and the lifting of quarantine measures and a gradual recovery of economic activity.

Regardless of the slowdown in retail lending due to comparatively slower growth of disposable income, in Q2-Q3 household debt burden at the macro level continued to grow: payments on loans reached 11.1% of household income.

The decrease in the volume of loans was accompanied the lending standards being maintained at the level of early 2020 in the context of the macroeconomic shock. The average level of debt burden of borrowers for newly granted mortgage loans in the second quarter amounted to 57%; in the largest segment of unsecured consumer lending, cash loans, it amounted to 59%. The significant share of loans provided to borrowers with a debt burden of more than 80% (26.3% for cash loans and 21.8% for mortgage loans granted in Q2 2020) is explained by the existence of shadow income, which cannot be confirmed by borrowers and banks for the calculation of the PTI, and the fact that banks have not yet fully perfected the technical process of calculating the PTI, for example, through the use of borrower income certificates issued by the Pension Fund of Russia (PFR) or digital citizen profiles. However, the potential growth of household debt burden continues to be a key source of vulnerability in the banking sector, and the Bank of Russia's macroprudential policy continues to be aimed at preventing such excess growth.

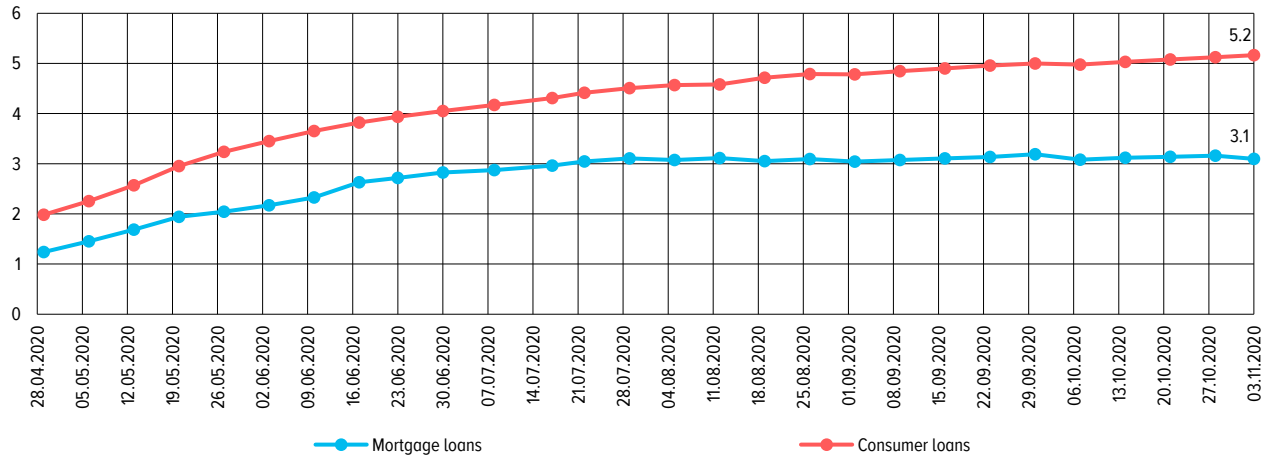
Restructuring and credit risks

The credit quality of the restructured household debt portfolio is currently a key risk factor for retail banks and a significant risk factor for the financial condition of universal banks. In general, in the banking sector, the volume of the restructured loans portfolio reached ₽801 billion as of 3 November 2020, corresponding to 4.1% of household loan debt. 3.1% of mortgage loans and 5.2% of unsecured consumer loans have been restructured.

Despite the continuing uncertainty concerning the quality of the restructured portfolio, a number of leading indicators point to a moderate level of losses for credit institutions at the end of the programmes introducing loan repayment holidays. So, starting from the second half of June, there

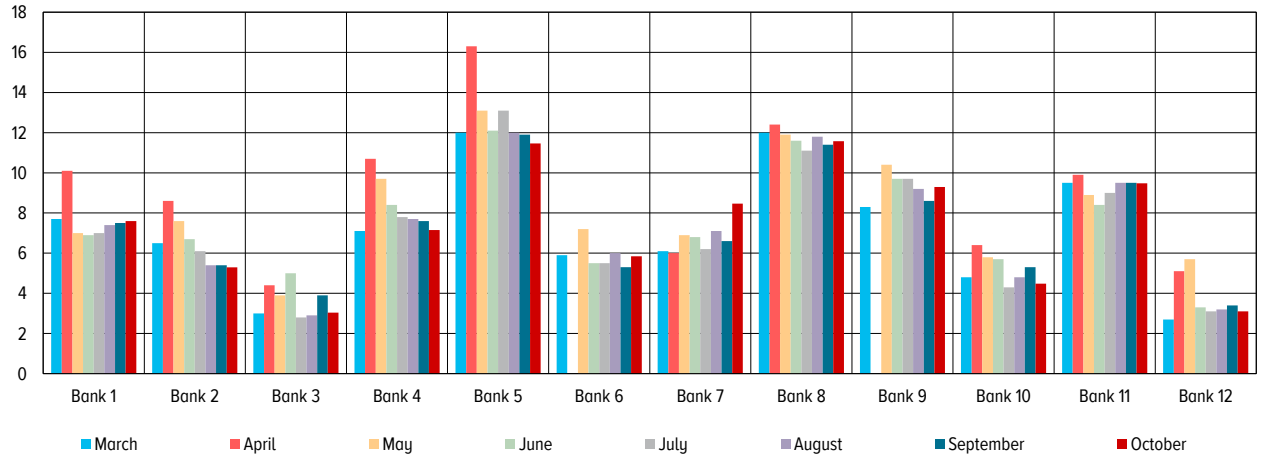
DYNAMICS OF THE SHARE OF RESTRUCTURED HOUSEHOLD DEBT
(% OF THE PORTFOLIO)

Chart 32



DYNAMICS OF FIRST TIME OVERDUE* LOAN COEFFICIENT FOR UNSECURED HOUSEHOLD LOANS
(%)

Chart 33



** Share of loans with first overdue payment during the reporting period.*

has been a decline in the number of newly received applications for household loan restructuring both under the law and under the credit institutions' own programmes. The weekly number of applications dropped to 27,000 by November compared to 150,000 in May.

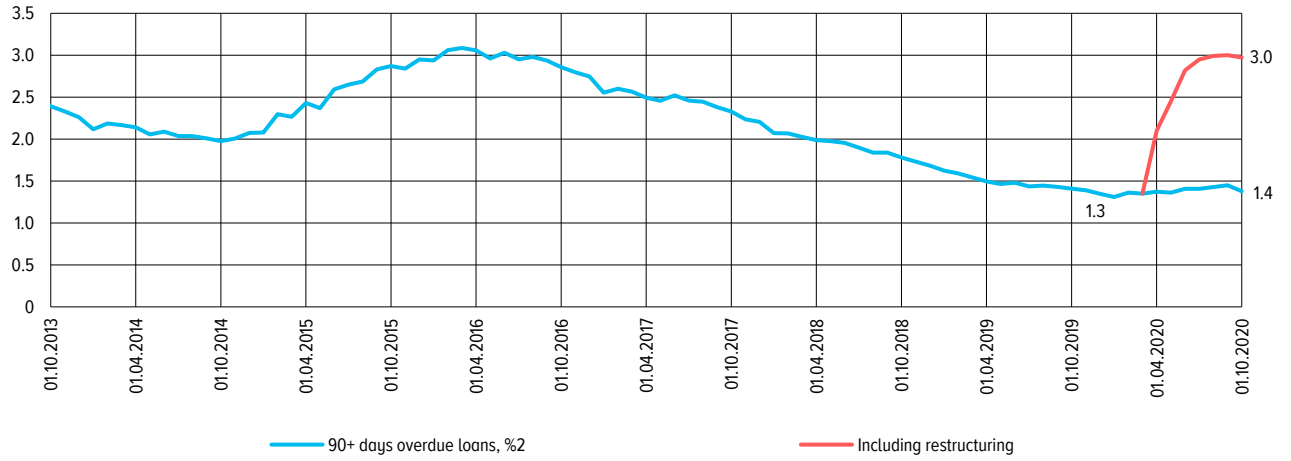
The decrease in demand for restructuring was caused by an overall improvement in the macroeconomic background during June–September 2020, which also increased the payment discipline of borrowers. Starting from July 2020, most of the largest retail banks recorded a decrease in the frequency of borrowers inclusion in the group of borrowers with first overdue payment to the values observed before the pandemic (Chart 33).

Macroprudential measures of the Bank of Russia

During the period of materialisation of risks on retail loans, the Bank of Russia extensively used the available instruments of macroprudential policy to mitigate the risks to financial stability. To prevent the growth of loan provisions above the long-term level from negatively affecting the capital adequacy ratios of banks, accumulated capital buffers were released. For mortgage loans, the accumulated macroprudential capital buffer in the amount of ₽126 billion (1.6% of the total portfolio at the date of the release of the buffer) was completely released. In contrast to the mortgage

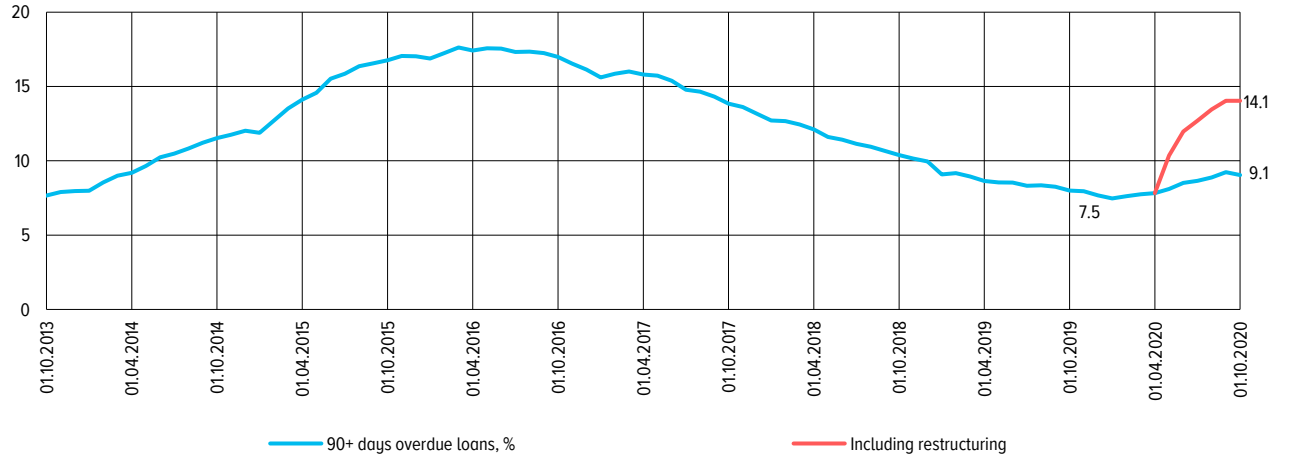
DYNAMICS OF SHARE OF NON-PERFORMING MORTGAGE LOANS, INCLUDING DEFAULT ON 50% OF RESTRUCTURED LOANS *Chart 34*

(%)



DYNAMICS OF SHARE OF NON-PERFORMING UNSECURED CONSUMER LOANS, INCLUDING DEFAULT ON ALL RESTRUCTURED LOANS *Chart 35*

(%)



segment, in unsecured consumer lending, the accumulated macroprudential buffer was only partially released as banks recognised loan losses. This measure came into effect on 1 September 2020 and made it possible to free up capital of credit institutions in the amount of ₽168 billion (1.8% of the total portfolio as of 1 September 2020).

In addition, in Q2–Q3, the Bank of Russia carried out countercyclical easing of capital requirements for banks on new mortgage and unsecured consumer loans, reducing macroprudential add-ons on risk weights. These measures were taken to compensate for the decline in household incomes during the use of restrictive measures, leading to a temporary increase in the payment-to-income (PTI) of borrowers and higher capital requirements for banks. The premiums on mortgage loans with a low down payment were reduced starting 1 April and now depend on the values of the PTI of borrowers. Also, in September, the amendments to Bank of Russia Instruction No. 199-I came into force, providing for the use of lower risk weights for mortgage loans depending on the value of the PTI and LTV. This made it possible to reduce the aggregate risk weights for new mortgage loans from 127% to 76%[48] for banks that use a standardised approach to capital adequacy requirements.

[48] *The assessment used data on mortgage loans granted in Q1–Q2 2020.*

These measures are intended to stimulate the growth of mortgage lending using loans to borrowers with a low level of debt burden.

The add-ons on new unsecured consumer loans have been reduced since 1 September. The largest reduction affected loans with a PTI of less than 50%. This will facilitate the recovery of consumer lending using loans to borrowers with a low level of debt burden.

The macroprudential buffer for unsecured consumer loans accumulated in 2016–2019 in the period of cyclically low credit risks is sufficient to cover losses even if borrowers default on all restructured loans. For mortgages, the macroprudential capital buffer covers the default of half of the borrowers with restructured loans.

In general, the experience of using the macroprudential buffers in 2020 was positive and confirmed the importance of the strategy implemented in 2016–2019 aimed at accumulating capital buffers by credit institutions. In the future, the Bank of Russia plans to continue adhering to the countercyclical macroprudential policy in the retail lending segment and to gradually release capital buffers should the cost of credit risk continue to rise.

2.5. RISKS OF NON-BANK FINANCIAL INSTITUTIONS IN THE PANDEMIC

Impact of the pandemic on the position of insurance companies, NPFs and brokers

During the pandemic, the position of insurance companies, NPFs and brokers remained stable. The threat of credit risk materialisation for NBFIs is not systemic due to the maintenance of the credit quality of assets at a sufficiently high level. Market risk that can materialise if periods of market volatility in the stock market repeat is a significant risk for non-bank financial organisations.

After nine months of 2020, the profit of the insurance sector (before tax) increased by a quarter (+24.6% to ₽230.4 billion). The changes in the financial result structure were mixed. In particular, the loss from life insurance operations increased by a factor of 4.6 YoY to ₽-89.6 billion after nine months of 2020 as compared to 2019 (largely due to payments under old life insurance contracts); the result of insurance operations other than life insurance, on the contrary, after nine months of 2020 showed growth of 1.1% to ₽161.4 billion. The increase in net profit was largely due to the income of insurers from investment activities (significantly higher income from FX operations), which grew 84.5% to ₽243.7 billion (Chart 36).

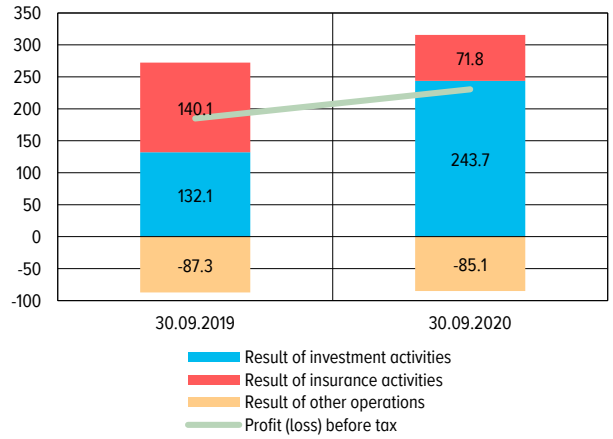
The structure of the income-generating assets of insurers has undergone minor changes. In particular, after nine months of 2020, insurers reduced the share of investments in deposits (-4.0 pp) while increasing investments in corporate bonds (+1.3 pp) and shares (+0.5 pp) as well as increasing the balance of funds (+1.0 pp) (Chart 37). About 60% of the insurance market's assets are consistently placed in high credit quality instruments (with a sovereign or higher rating according to Moody's). The share of assets rated within two levels below the sovereign rating exceeded 82%.

The capital provision of the insurance sector increased over nine months of 2020. There was an increase in the actual solvency margin both for life insurers and non-life insurers (Chart 38).

The NPF market has also confidently overcome the period of increased volatility. Significant price fluctuations in the stock market and negative effects of the pandemic did not lead to the materialisation of systemic risks in the industry. At the same time, the impact of a significant increase in financial market volatility on the portfolios of pension savings and pension reserves of NPFs was limited due to the significant share of debt instruments in the structure of assets and the reduction of the Bank of Russia key rate. A slight decrease in the value of portfolios of NPF pension funds observed in Q1 2020 was offset in Q2-Q3 2020 by a 4.5% increase in the value of pension funds of NPFs to ₽4,397 billion. The pension savings portfolio increased by 3.9% to ₽2,934 billion, and the pension reserves portfolio by 5.6% to ₽1,463 billion. The weighted average profitability of NPFs investing the funds of the pension savings portfolio and placing the funds of the pension reserves portfolio at the end of H1 2020 returned to positive values, amounting to 6.4% per annum and 6.4% per annum, respectively.

FORMATION OF PROFIT OF INSURANCE COMPANIES FOR THE PERIOD FROM 30 SEPTEMBER 2019 TO 30 SEPTEMBER 2020 *Chart 36*

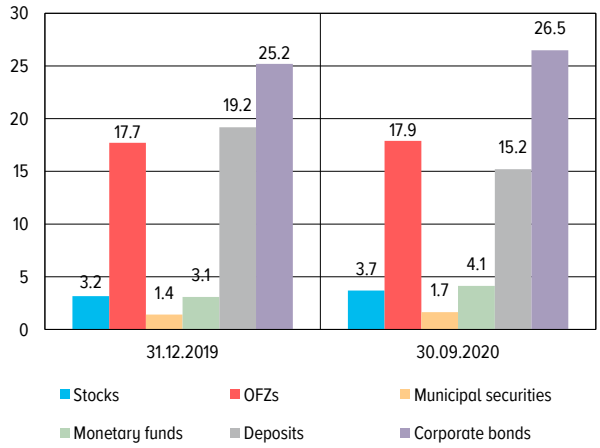
(₽ BILLION)



Source: insurance companies' accounting (financial) statements (Reporting form 0420126).

STRUCTURE OF INSURANCE COMPANIES' PORTFOLIO BY ASSETS *Chart 37*

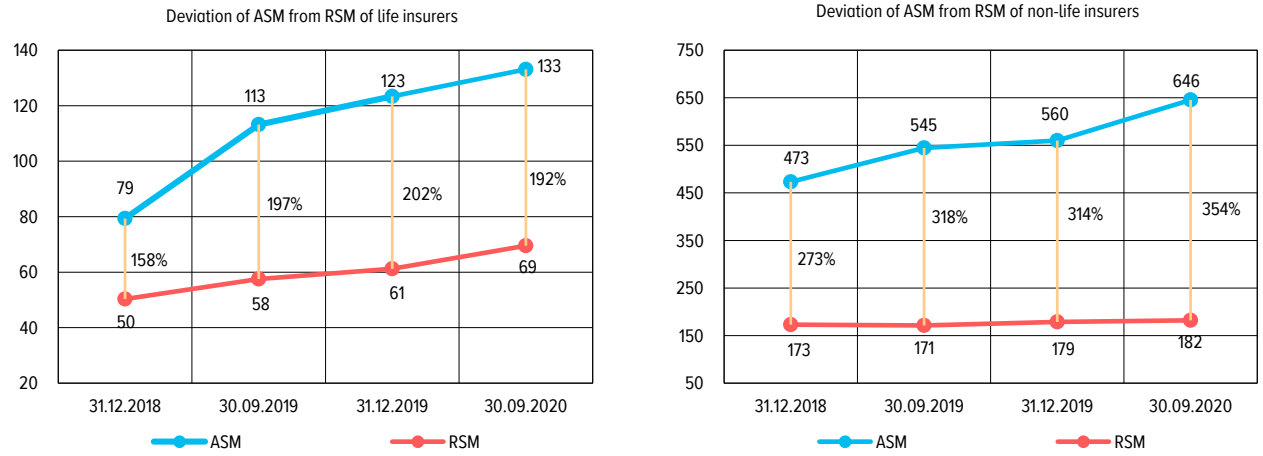
(%)



Source: insurance companies' supervisory reporting (Reporting form 0420154).

DEVIATION OF ASM FROM RSM OF LIFE INSURERS AND NON-LIFE INSURERS *Chart 38*

(₽ BILLION)



Note: ASM - Actual Solvency Margin; RSM - Regulatory Solvency Margin.
Source: insurance companies' supervisory reporting (Reporting form 0420156).

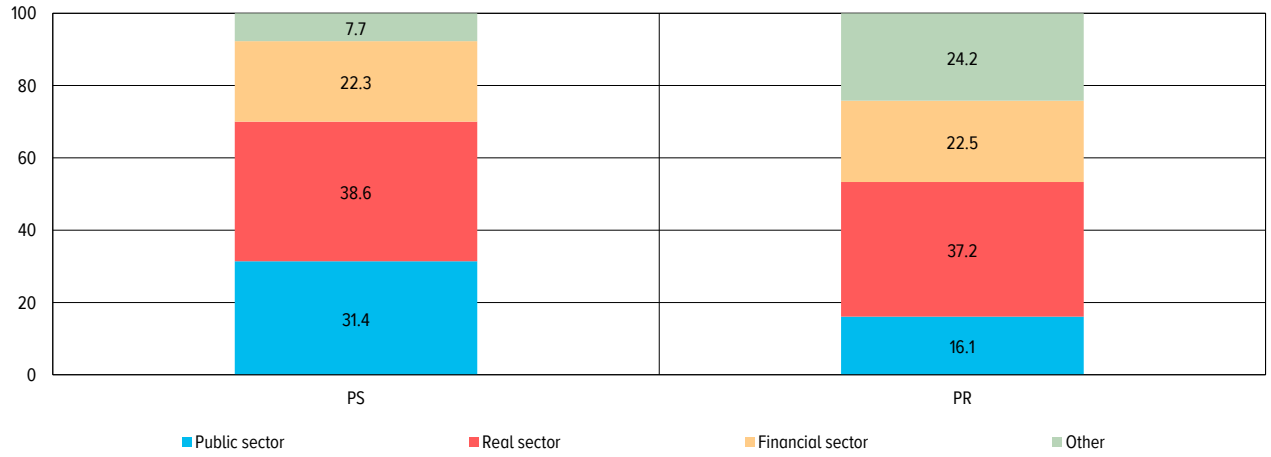
Despite the period of increased volatility, NPFs continue to adhere to a conservative investment strategy: the main share of NPF investments falls on corporate bonds (54.4% and 47.8% in pension savings and pension reserves portfolios, respectively), mainly medium-term bonds of leading Russian corporations in the real sector (Chart 39). Amid the positive dynamics of the stock market in Q2-Q3 2020, the increase in the value of investments in this type of instruments amounted to 2.4 pp and 1.3 pp in pension savings and pension reserves, respectively. The trend toward improving the credit quality of NPF pension fund portfolios remains: the share of assets with a sovereign rating or higher (Baa3 and higher on the Moody's scale[49]) in the third quarter amounted to more than 78.4% and 58.7%[50] of the pension savings and pension reserves portfolios, respectively. Thus, at the moment, credit risk does not pose any systemic threat to the NPF market.

In the context of declining interest rates for life insurers and NPFs, the liabilities of which are long-term in nature, the risk of 'reinvestment' (mismatch between income on assets reinvested at lower interest rates and existing liabilities) increases. As of 30 September 2020, the return on the

[49] *Moody's Investors Service, Standard and Poor's, Fitchratings, Expert RA and AKRA ratings converted to Moody's scale are used.*

[50] *Excluding investment shares of unit investment funds.*

STRUCTURE OF NPFS' PS AND PR PORTFOLIOS BY SECTOR *Chart 39*
(%)



Source: specialised depositories' supervisory reporting (Reporting forms 0420864, 0420865).

portfolio of debt instruments of insurance organisations and NPFs decreased (compared to the return on the portfolios as of 31 December 2019)[51]. In addition, insurers may experience pressure on their own funds, and NPFs, on the profitability of pension savings and pension reserves as a result of a maturity mismatch between assets and liabilities since the maturity of insurance and pension liabilities, as a rule, is longer than the maturity of investment assets acquired by insurance companies and NPFs[52]. To minimize these risks, insurers and NPFs adapt their investment portfolios by managing the maturity of assets. As of 30 September 2020, insurers and NPFs were trying to maintain profitability through a slight increase in the maturity of the bond portfolio (compared to the maturity as of 31 December 2019).

Low interest rates had the opposite effect on the brokerage services market (in part of non-bank financial institutions). Since the beginning of 2020, there has been an active inflow of new clients preferring higher yields on alternative financial instruments in comparison with current deposit rates (for more details, see Section 3.2). The volume of client funds of brokerage companies increased by 20% to ₽6.2 trillion from the beginning of the year to 1 October 2020. Due to more active client behaviour, the aggregate income of brokerage companies for the same period amounted to ₽16 billion, which is 4% higher than in previous year. The main income items were revenue from the provision of services and commission income as well as investment income of brokers.

Impact of the pandemic on leasing companies

The slowdown in business activity caused by the novel coronavirus pandemic has had a significant impact on the leasing industry. A significant part of the clients of leasing companies are companies from the most affected sectors (air carriers, cargo services and small business in general). As of the end of Q2 2020, the annual growth rates of the market after several years of growth slowed down significantly to 9% (versus 23% a year earlier). [53]

[51] *The yield to maturity (to offer) of the ruble bonds portfolio of insurance companies as of 30 September 2020 amounted to 5.4% (6.6% as of 31 December 2019), and the yield to maturity (to offer) of the ruble bonds of pension savings and pension reserves as of 30 September 2020 amounted to 6.1% and 5.9%, respectively (6.8% and 6.7% as of 31 December 2019).*

[52] *For example, the maturity of the pension savings and pension reserves debt portfolios takes on the value of 3.2 and 2.9 (as of 30 September 2020), and the peak of payments on pension savings liabilities under the modelling by the Bank of Russia (FSR for Q2–Q3 2019) falls on 2040–2050.*

[53] *According to the quarterly survey of the leasing sector conducted by the Bank of Russia.*

To assess the current impact of the COVID-19 pandemic on the leasing sector, in September 2020, the Bank of Russia collected information on the largest leasing companies (LCs)[54]. However, the survey did not cover the aviation leasing segment, considering the declared individual support measures on the part of the Russian Government for airlines. According to the survey, from April to August 2020, 23% of the leasing portfolio was restructured, and 88% of the applications were satisfied.

Decreased inflow of funds from lessors, including as a result of the restructuring, creates difficulties in servicing debt on borrowed funds, which account for up to 60% of the gross expenses of LCs (₽68 billion from April to August 2020). However, given that 53% of bank loans fall on lessors affiliated with credit institutions, the risks of difficulties in the repayment of loans by leasing companies are assessed as insignificant. In turn, the total volume of bonds in the leasing sector in circulation as of 30 September 2020 amounted to ₽713 billion, of which only 12% are to be redeemed within 1–2 years, [55] and half of them are accounted for by leasing companies affiliated with the government and credit institutions, which allows us to conclude that the liquidity risk of leasing companies is low.

In April 2020, to support leasing companies and their clients, the Bank of Russia temporarily entitled banks not to form additional provisions for possible losses for restructured loans of lessors, not to downgrade their financial standing and not to worsen their debt service quality. Restructured loans issued to leasing companies by 14 major banks at the end of September 2020 totalled ₽108 billion, or 7% of their total volume. According to the largest LCs, their demand for restructuring was ₽123 billion, while the actual restructuring reached ₽114 billion (93% of applications were satisfied). Another measure taken by the Bank of Russia during the pandemic was the inclusion in May 2020 of leasing companies in the list of borrowers whose loans may be refinanced by banks within the scope of providing concessional loans (at 2.25% per annum).

Given the deteriorating epidemical situation in Q4 2020, according to the estimates of some leasing companies, restructured lease agreements may account for about a third of the leasing portfolio by the end of the year. In this context, the problem of transparency and the availability of objective industry statistics on leasing and risk assessments that are reflected in the financial statements of lessors becomes even more urgent. The solution to these problems will be facilitated by leasing market reform; a draft federal law on this matter is being considered by the State Duma.

[54] Feedback was received from 29 leasing companies accounting for two-thirds of the market leasing portfolio. This was the third stage of data collection – the first two took place in May and June 2020.

[55] According to Cbonds news agency.

3. POTENTIAL NEW VULNERABILITIES IN THE FINANCIAL SECTOR OVER THE MEDIUM AND LONG TERMS

3.1. RISKS OF A BOOM IN THE REAL ESTATE MARKET

Mortgage lending in Russia has significant growth potential. As of 1 April 2020, only 7.9 million people[1] had mortgage loans. Mortgage arrears account for only 7.4% of GDP, which is lower than in the G20 and Eastern Europe.[2] The quality of the mortgage loan portfolio of Russian banks is historically high (as of 1 October 2020, the share of bad loans was 1.4%). Mortgage lending has become one of the drivers for the implementation of the national goal of improving the living conditions of Russian citizens. However, it is crucial that lending growth be balanced, supported by growth in household incomes, and not lead to the formation of price 'bubbles' on the residential real estate market or overindebtedness of the population. In the medium term, these risks seem unlikely. If need be, the Bank of Russia can use macroprudential instruments to mitigate the risks of unbalanced growth in mortgage lending in the future.

Price growth on the real estate market in 2020

In Q3 2020, the price index on the primary real estate market increased by 9.4% YoY[3], while the price growth rate factoring in the changes in the supply structure was 21% over the same period. The growth in real estate prices on the secondary market totalled 4.8% in the third quarter YoY (Table 9). A similar situation (higher-than-anticipated growth in prices on the primary market at a level above inflation) was typical in 2018–2019 both across Russia and for the Moscow market (Table 9), however during that period it more likely reflected the recovery growth after the price drop in 2015-2016.

Currently, there are three key factors in the growth of prices on the real estate market: increased affordability of mortgages, increasing investment attractiveness of housing and an insufficient supply on the primary market.

Increase in mortgage affordability

The reduction in the mortgage rate (by 1.7 pp between 1 January 2020 and 1 October 2020, to 7.3%), which was due both to the launch of the programme of state subsidies for interest rates on the

PRIMARY AND SECONDARY HOUSING PRICE INDEX
(YOY) *Table 9*

	Housing market	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020
Russian Federation	Primary market	102.4	103.4	105.3	106.3	107.0	107.2	107.9	108.0	106.7	108.3	109.4
	Secondary market	99.5	100.6	102.1	104.1	104.4	104.0	105.0	103.8	102.7	103.6	104.8
Moscow	Primary market	100.5	102.4	106.8	106.1	107.2	107.6	108.1	113.3	108.2	104.1	106.6
	Secondary market	94.6	97.8	99.0	102.7	103.5	101.6	107.9	100.1	95.7	101.7	105.0

Source: Rosstat.

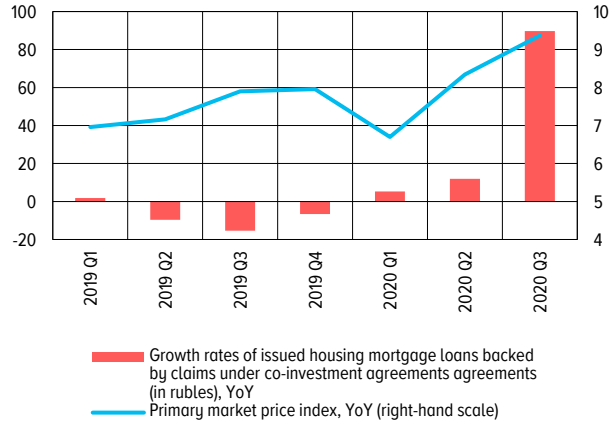
[1] *Including loan co-borrowers, according to the 3 largest credit bureaus.*

[2] *For example, 20% in Poland and 24% in the Czech Republic.*

[3] *According to Rosstat, the consumer price index amounted to 3.5% in Q3 2020, 4.3% in Q3 2019 and 2.98% in Q3 2018.*

DYNAMICS OF PRICES AND NUMBER OF ISSUED HOUSING MORTGAGE LOANS IN THE PRIMARY HOUSING MARKET IN RUSSIA *Chart 40*

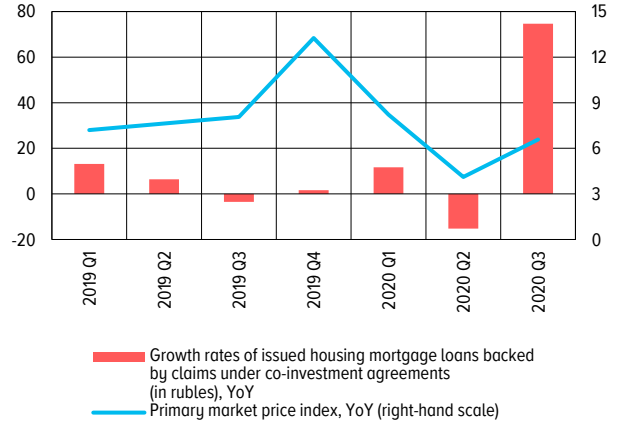
(%)



Sources: Rosstat, Bank of Russia.

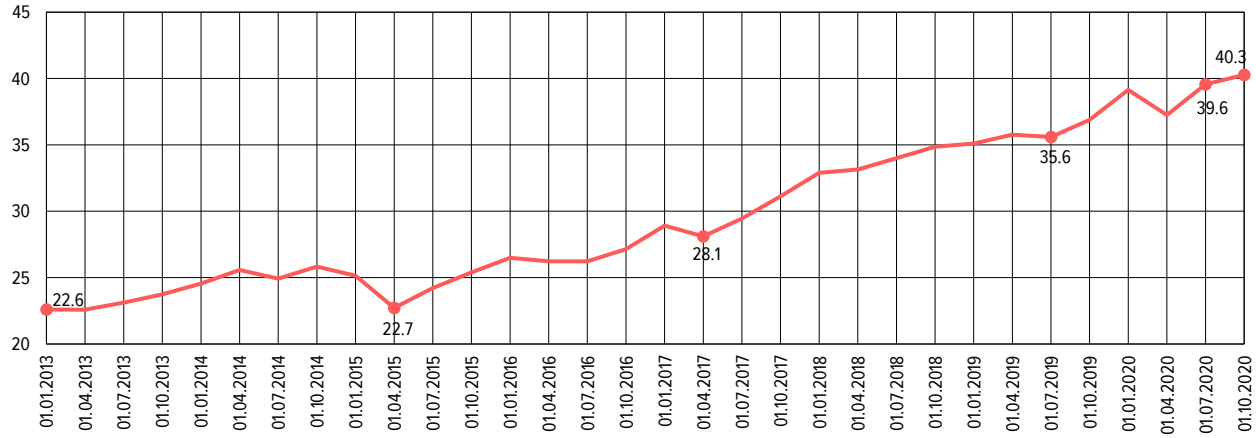
DYNAMICS OF PRICES AND NUMBER OF ISSUED HOUSING MORTGAGE LOANS IN THE PRIMARY HOUSING MARKET IN MOSCOW *Chart 41*

(%)



Sources: Rosstat, Bank of Russia.

DYNAMICS OF HOUSING AFFORDABILITY INDEX IN 2013–2020 *Chart 42*



Source: Bank of Russia.

primary housing market [4]and the Bank of Russia's transitioning to a loose monetary policy, increases the affordability of real estate and stimulates demand.

The share of mortgage loans issued under government programmes[5] in June–August 2020 exceeded 30%. In the third quarter 2020, the volume of issued housing mortgage loans secured by rights of claim under co-investment agreements ('CIA') increased almost twofold YoY.

In Russia, the affordability of real estate with a mortgage in H1 2020 continued to increase overall. The real estate affordability index[6] as of 1 October 2020 reached 40.3 m², which is 1.2 m² higher than as of the beginning of the year.

[4] *The programme was launched in April 2020 and allowed borrowers buying a home on the primary market to receive a mortgage loan at the rate of 6.5% for the entire lending period. Initially, the programme covered housing loans of up to ₽8 million in Moscow, the Moscow Region, Saint Petersburg and the Leningrad Region and up to ₽3 million in other regions of the country with a minimum down payment of 20%. Later, the programme terms were expanded: now the loan amount may be as large as ₽6 million in the regions (and ₽12 million in Moscow, the Moscow Region, Saint Petersburg and the Leningrad Region), with a down payment of at least 15%. The initial programme period was planned to last until 1 November 2020; later, it was extended until 1 July 2021.*

[5] *6.5% Programme, Family Mortgage.*

[6] *Assessed as the number of square meters of living space that can be bought on a mortgage by spending half of the average monthly nominal wage on loan servicing.*

At the same time, it should be noted that the accelerated growth in real estate prices on the primary market since the beginning of 2020 largely neutralises the positive effect of lower interest rates on mortgage loans and limits the growth of housing affordability for the population. For example, if prices had risen in 2020 at the level of household nominal income, the affordability index for residential real estate with a mortgage would be 45 metres as of 1 October. In the Krasnodar Territory and Moscow, the increase in the affordability of mortgage lending caused by the decrease in the loan interest rate was fully compensated by the increase in the value of real estate.

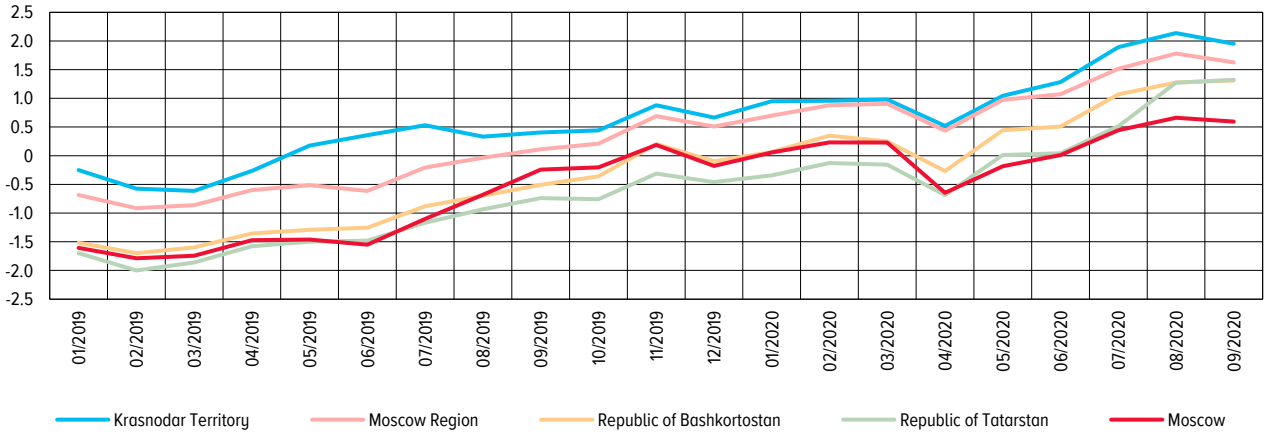
Growth of the investment attractiveness of housing

Considering the increase in the positive spread between rental yields and the weighted average rate on retail deposits (both across Russia and in the largest regions of the country[7]) (Chart 43), the attractiveness of investing equity in real estate is increasing, which might cause a certain outflow of household funds from bank deposits to the real estate market.

As of the end of September 2020, rental yields (after taxes and utility expenses) on the housing market in Russia amounted to 6.5%[8], which exceeds the weighted average rate on retail deposits with maturities of up to 1 year [9]. As for the ten largest regions in terms of commissioned housing, the largest difference between rental yields and the weighted average rate on retail deposits is observed in the Sverdlovsk Region and Krasnodar Territory.

According to the Bank of Russia's estimates[10], since the beginning of 2020, the actual growth rates in prices on the primary residential real estate market in Russia have exceeded the 'imputed' rates

DIFFERENCE BETWEEN RENTAL INCOME AND WEIGHTED AVERAGE INTEREST RATE ON HOUSEHOLD DEPOSITS IN FIVE MAJOR REGIONS BY HOUSING PROPERTY COMMISSIONING IN JANUARY-SEPTEMBER 2020 *Chart 43*
(PP)



Sources: domofond.ru, Rosstat, Bank of Russia calculations.

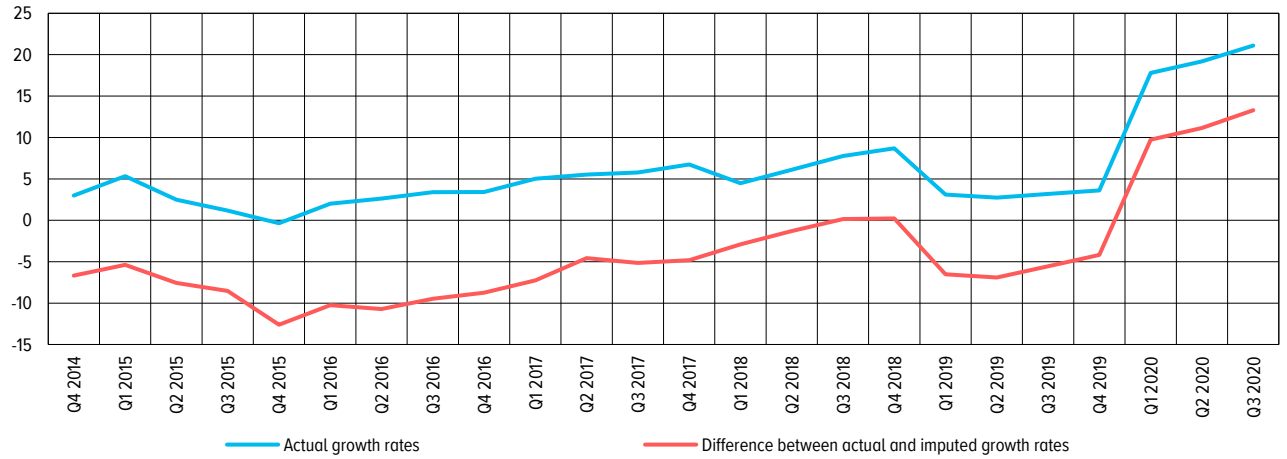
[7] *By the volume of housing commissioned in January–September 2020.*

[8] *According to Bank of Russia estimates, based on data from Domofond.ru. It should be noted that normalised rental yields may be overestimated due to the fact that the data used in the calculation reflect the prices indicated in advertisements and do not take into account changes at the time of the actual transactions.*

[9] *Including 'on-demand'.*

[10] *To assess the growth potential of investment demand using borrowed (mortgage) funds (and, accordingly, the risk of overheating) on the primary residential real estate market in Russia, the 'imputed' growth rates in real estate prices required for the investor to gain profit were analysed. These growth rates were estimated using the required yield calculated in relation to the value of the entire investment object on the primary housing market and defined as the weighted average mortgage rate increased by the risk spread equal to the difference between the yield on corporate bonds of the largest housing developers and federal government bonds. It should be noted that this risk premium takes into account only the risks of the entire industry and does not factor in the risks of individual projects (which can be partially mitigated by using escrow accounts). Based on the required profitability for each period analysed, the future value of 1 m² on the primary residential real estate market in three years (this period, according to the Bank of Russia estimates, corresponds to the average period from the start of sales to commissioning) was determined, which made it possible to calculate the potential annual growth rates of prices ('imputed').*

ACTUAL AND IMPUTED PRICE GROWTH RATES IN THE PRIMARY HOUSING MARKET IN RUSSIA *Chart 44*
(YOY, %)



Sources: Rosstat, Bloomberg, Bank of Russia.

(Chart 44), which is an additional incentive for the growth of investment demand using borrowed funds and an early sign of possible overheating of the primary residential real estate market.

Insufficient level of supply on the primary market

A significant factor that determined the rise in prices on the housing market in the Q2–Q3 2020 was insufficient supply against increased demand. In Q2 2020, the volume of housing commissioned decreased by 22% YoY, which can be primarily attributed to the imposition of a self-isolation regime in April–May 2020 as well as the effect of the high base of 2019. In the third quarter, the previous year's level was exceeded slightly (by 0.5%).

At the same time, the rise in prices on the housing market could not be caused by a significant increase in construction costs. According to Rosstat, in Q2 2020, the average actual cost of construction of 1 m^2 decreased by 1% (YoY), and in the third quarter there was a slight increase, by 2.9% (YoY). On the back of growing demand in H1 2020, the proceeds of largest developers increased (by 16.2% YoY[11]), which, amid insignificant changes of cost prices, positively affected their profitability. By the end of H1, return on equity of largest developers significantly exceeded that indicator of commercial banks (26% and 17% respectively). On the background of continued growth of prices on the primary market in Q3 and increasing sales volumes[12], profitability of developers is expected to grow further.

Risks associated with a possible boom on the real estate market

First, a boom in prices on the real estate market can lead to a decrease in the affordability of housing for the population and an excessive increase in the debt burden of citizens, if the growth of mortgage lending is not accompanied by a simultaneous increase in household income.

The debt burden on mortgage loans currently remains moderate. Loan payments under mortgage agreements do not exceed 2% of household disposable income[13]. On average, borrowers and joint obligors spend 57% of their income on servicing a mortgage loan and other loans.

Mortgage borrowers are unevenly distributed across income groups; most (57%) mortgage loans are accounted for by households with a relatively high level of income (average monthly per capita income of over ₽45,000). Around 30% of households in this income group have a mortgage, which is lower than the level of mortgage penetration in the United States, where *about 40% of households*

[11] *Calculations based on financial reporting of six largest developers.*

[12] *According to DOM.RF data, Q3 2020 saw growth in the amount of sold apartments on the primary market by 28%.*

[13] *Including those people who have no mortgage debt.*

ESTIMATED PENETRATION OF MORTGAGE LENDING BY HOUSEHOLD INCOME GROUPS *Table 10*

Income group	Share of households	Household income per capita, ₽ thousand	Share of mortgage loans[1] (%)	Share of mortgage debt (%)	Share of household income[2] (%)	Share of households with mortgage loans
1	20.0	Less than 14	2.6	1.1	5.7	1.0
2	20.0	14–22	7.2	4.1	10.4	4.0
3	20.0	22–30	11.2	7.3	15.4	6.0
4	20.0	30–45	22.1	17.3	22.7	11.0
5	20.0	More than 45	56.8	70.1	45.8	29.0
Total	54.5 mln	₽32.8 thousand	5.5 mln	₽8,316 billion	₽54,844 billion	10.10%

[1] *According to data provided by largest banks for stress testing in 2019.*
[2] *According to Rosstat 'Distribution of personal income by average per capita household income'.*

have an outstanding mortgage[14]. Among borrowers who are entitled to receive a subsidised loan (down payment is from 15% to 20%), more than 80% have income of over ₽40,000. Thus, banks are maintaining the borrowers' solvency requirements and average PTI is not growing.

However, a significant increase in mortgages at a rate of about 20% per year is only possible by increasing the affordability of mortgages for lower-income groups of households (with average per capita income of ₽22,000 to ₽30,000 and of ₽30,000 to ₽45,000 per family member). At the same time, an increase in debt in this segment without a corresponding increase in income may increase the household debt burden and, as a result, reduce the quality of mortgage portfolios.

Second, real estate market boom may lead to lower lending standards: growth of high LTV loans makes banks vulnerable to subsequent drop in real estate prices. Certain deterioration in lending standards could be observed in recent months, since, in the context of lending subsidy program, borrowers are interested in attracting larger loans with lower down payments. The share of mortgages backed by CIAs with down payment of 15% to 20% increased from 5.5% in Q2 to 11.3% in Q3 of the total mortgage portfolio (the program limits the minimum down payment at 15%). Overall, in Q3 the share of mortgages with LTV from 80% to 90% returned to its level before the pandemic and amounted to 32% which is, however, significantly lower than in 2019 (33-44%).

Mortgage loans, where the down payment was made with the unsecured consumer loan, also did not grow. The share of such loans in Q3 amounted to 4.8% (in Q2 – 4.8%, Q1 – 5.5%)[15].

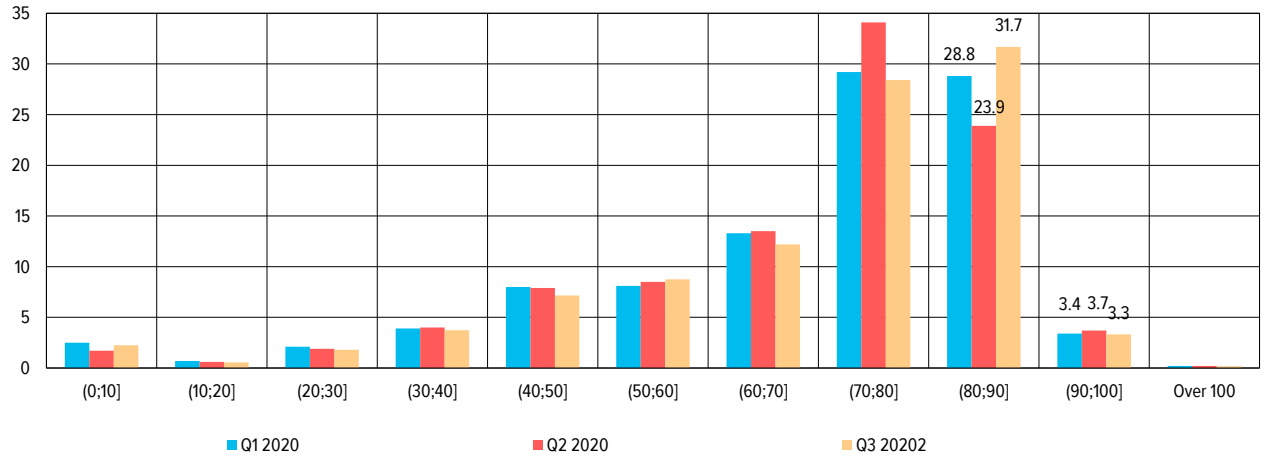
Faster growth in prices on the primary market when the cost per square meter of primary housing exceeds that of secondary housing[16] also poses a number of risks. This situation may limit the possibilities of households to improve their living conditions. Part of the population, when improving their housing conditions, sell the existing apartment on the secondary market and, using the funds received and a mortgage loan, buy a new, more expensive apartment. If the price differential between the primary and secondary markets increases, then to purchase a new apartment on the primary market, borrowers will have to either increase the size of the mortgage loan, which will increase their debt burden, or give up the idea of improving their living conditions. In addition, a significant deviation of the prices on the primary market from those on the secondary market may exacerbate the risks of revaluation of collateral under mortgage loans over the medium term. The collateral

[14] *Renting an apartment is very popular in the US. If this factor is taken into account, the amount of borrowers could be higher.*

[15] *Consumer loan could be used as a mortgage down payment if its amount was higher than ₽100,000 and it was granted to any of the coborrowers not earlier than three months prior to obtaining a mortgage loan.*

[16] *The difference in the cost per square meter of real estate on the primary and secondary markets in Q3 2020 amounted to 19.1%.*

DISTRIBUTION OF THE VOLUME OF MORTGAGE LOANS PROVIDED IN Q2 2020 BY LTV LEVEL *Chart 45*
(%)



received by banks under mortgage loans in the form of real estate on the primary market will be sold on the secondary market at lower prices in the event of the borrower's default.

The state programme for subsidising interest rates involves the issuance of mortgage loans for the amount of ₽1.85 trillion until mid 2021, of which as of 29 October 2020 ₽0.7 trillion had already been issued in loans. This may lead to a change in the structure of lending in favour of the primary housing market. The share of such loans in disbursements may increase from the current 33% to 40–60%, which will further reduce the demand for secondary housing. For these reasons, the Bank of Russia supports the limited term of the government mortgage interest rate subsidy program.

Possible measures of the Bank of Russia

The current situation on the residential real estate market is not characterised by systemic risks yet. In the short term, the risks of a price 'bubble' forming on the mortgage market are unlikely. For balanced growth of the residential real estate market which will not lead to the formation of a price 'bubble', the rate of commissioning of new residential properties must correspond to the growth in demand for housing. The gradual termination of the state programme for subsidising mortgage rates will ensure a balanced increase in prices. The programme has proved effective as a temporary anti-crisis tool, but its extension for long periods after 1 July 2021 could lead to imbalances on the market.

In international practice, to prevent the formation of a price 'bubble' on the real estate market, regulators generally limit the level of LTV and PTI on mortgage loans, and many countries use quantitative restrictions[17]. In order for banks not to relax the requirements for the debt burden of mortgage borrowers and the down payment, the Bank of Russia uses PTI and LTV in regulation. Requirements for banks' capital and macroprudential add-ons are established depending on the PTI and LTV values.

Thus, the Russian mortgage lending market has significant growth potential; however, a precondition for its balance is the simultaneous growth of household income and an increase in supply on the real estate market.

[17] *In particular, regulators in New Zealand and the Czech Republic limited the issuance of loans with an LTV above a certain limit, and the regulators in Hong Kong and Singapore temporarily prohibited them.*

Box 6. Crises on the real estate markets in Spain and Ireland

Spain

Before the start of the global financial crisis in 2007, Spain, like the rest of the world, experienced strong economic growth (the country's average annual GDP growth rate from 2000 to 2007 was 3.8%).

However, its economic growth was accompanied by the accumulation of imbalances: the average annual growth rate of household loans for the purchase of real estate in the period from 2000 to 2007 was about 20% (the peak was in December 2005 and amounted to 25%). The demand for real estate was supported, in particular, by the affordability of mortgage lending (due to low interest rates and longer loan maturities) and the rapid pace of population growth. Moreover, the tax policy encouraged employers to acquire residential premises to provide to their employees for free use.

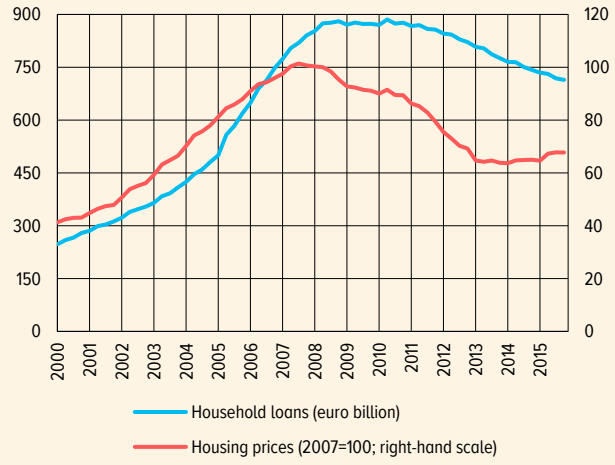
Loans to developers also grew at a high rate, by 29% on average (the peak was in December 2007 and reached 44%). This pace of industry financing led to an excessive increase in construction volumes. Despite this, the prices for real estate in the period from 2000 to 2007 increased by 100%.

Prices were rising faster, which entailed a decrease in the affordability of housing and an increase in the debt burden of citizens in the period from 2000 to 2007. The increase in the debt burden of made households more vulnerable to subsequent adjustments in real estate prices and the tightening of financial conditions. The vulnerabilities of financial institutions due to growth in lending for construction and real estate purchases also increased significantly; in the late 1990s, these loans accounted for 47% of banks' loan portfolio, while in 2007 the figure was 62.5%.

Starting from mid-2007, even before the onset of the financial crisis on international financial markets, the Spanish economy began to slow down. A slowdown in the growth of the population's welfare and an increase in interest rates reduced the demand for real estate. As a result, tightened financial conditions on the global markets, a drop in the value of real estate and other assets and a decline in exports led to a deep recession. Starting from mid-2008 to the end of 2009, the country's GDP contracted by 4.5%, domestic demand fell by 7% and over 1.5 million people lost their jobs, increasing unemployment by 8 pp to 18.7%. Spain became one of the problematic countries in the euro area after the global financial crisis and was forced to seek help from the Troika of lenders[1].

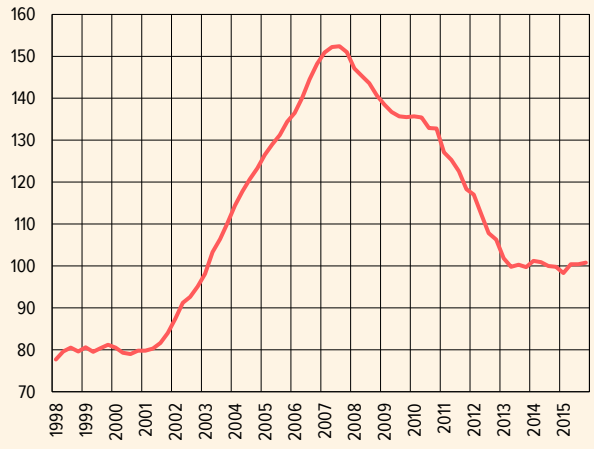
Banking sector regulation in the years preceding the crisis used a microprudential approach to risk assessment, so the accumulation of systemic vulnerabilities largely went unnoticed. Though the innovative policy of countercyclical provisions introduced by the Bank of Spain in the mid 2000s mitigated the impact of the crisis, it was insufficient to fully cope with the recession that started in 2008 (the measure was calibrated on previous, much milder episodes of economic recession). In the period leading up to the crisis, the Bank of Spain issued a number of recommendations for banks. In particular, it recommended observing an LTV limit of 80% for mortgage lending, taking the uncertainty of interest rates in the long term into account when lending at a floating rate and taking the concentration of risks in the housing sector into

HOUSEHOLD LOANS AND HOUSING PRICES IN SPAIN *Chart 46*



Sources: ECB, OECD.

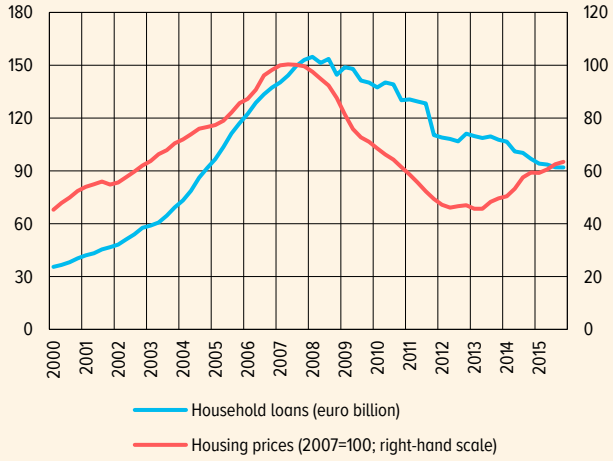
HOUSING PRICES TO ANNUAL INCOME OF HOUSEHOLDS RATIO (2015=100): SPAIN *Chart 47*



Sources: ECB, OECD.

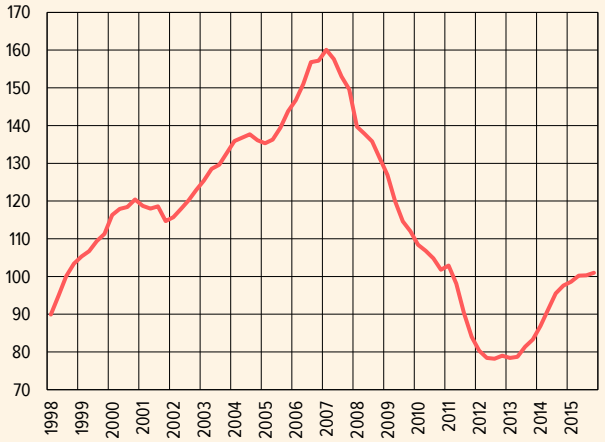
[1] *European Central Bank, European Commission and IMF.*

HOUSEHOLD LOANS AND HOUSING PRICES IN IRELAND *Chart 48*



Sources: ECB, OECD.

HOUSING PRICES TO ANNUAL INCOME OF HOUSEHOLDS RATIO (2015=100): IRELAND *Chart 49*



Sources: ECB, OECD.

account (there were no strict restrictions on sectoral concentration at that time). However, the international regulatory practice of those years did not involve strict restrictions in this area, so the recommendations were generally ignored.

Ireland

The Irish economy grew rapidly in the late 1990s and 2000s. Ireland's accession to the euro area in 1999 helped lower its interest rates. Banks expanded access to foreign market financing, and securitisation markets were actively developing. At the same time, competition on the Irish banking market increased significantly, and banks were forced to introduce new risky products (for example, mortgage loans with 100% LTV) and to lower lending standards. As a result, the real estate market became the main lending segment (the share of loans to this sector increased from 45% in 2002 to over 60% in 2008).

A significant contribution to the rapid growth of the real estate market was made by tax benefits for investments in the construction industry and tax deductions on interest on mortgage loans; income from the sale of real estate was not taxed either. Moreover, there was no property tax on real estate, and the duty on real estate transactions (Stamp Duty) was reduced consistently until 2007.

All this combined with population growth, income growth and low real and expected interest rates significantly increased the incentives for housing purchases and led to a threefold increase in real estate value from 1994 to 2006.

In 2007, real estate prices in Ireland reached their peak and then began to decline amid the global financial crisis. An additional factor that significantly contributed to the crisis on the real estate market in Ireland was the slump in the global interbank market in 2007–2008, which was a significant source of financing for Irish banks. Lending volumes started to decline, resulting in reduced demand for real estate and a faster drop in real estate prices. The shock from the drop of prices for real estate reinforced the negative effects on Ireland's economy and budget, which depended heavily on construction. The fall in construction volumes accounted for 27.3% of the decline in the gross national product in the period from 2007 to 2009, and layoffs in the construction sector accounted for two thirds of the total increase in the country's unemployment. Ireland also turned out to be among the worst-hit countries in the euro area and had to turn to the Troika of lenders for help.

To a large extent, the crisis was caused by the absence of a macroprudential component in the then-current policy of regulators – that is, the Central Bank of Ireland and the Financial Regulator of Ireland, which was an independent authority at that time. The systematic underestimation of risks and the belief in a 'soft landing' in the event of price adjustments (this position was expressed in the financial stability reviews published by the central bank) explained the inaction of regulators in respect of the concentration of risks on the housing market. After the crisis, the Bank of Ireland started using macroprudential instruments extensively[2].

[2] *Including LTV and LTI (loan-to-income ratio) for mortgages.*

3.2. RISKS ASSOCIATED WITH THE OUTFLOW OF SAVINGS FROM DEPOSITS TO THE STOCK MARKET

In recent years, people have been increasingly active in searching for alternative and more profitable ways of placing their savings in comparison with deposits. The interest of citizens in stock market instruments such as shares and bonds (including structured bonds), collective investment market instruments and products associated with investment and universal life insurance has increased. In 2020, this trend grew even stronger. At the same time, household investments in foreign currency did not show significant growth, and the attractiveness of foreign currency deposits for the population has decreased substantially because of low interest rates since the beginning of 2020.

Changes in people's preferences may lead to a decrease in the share of banking instruments on the financial market, which is a natural stage in the market's development. However, a number of risks need to be monitored. First, the risk of misselling (misleading the buyer in respect of essential investment terms) may increase. Second, the outflow of household funds into instruments of the foreign financial market may have similar risks to the economy as the growth of foreign currency in cash. Third, the systemic importance of the stock market and the risks of non-bank financial institutions is increasing. At the same time, considering the increase in household investments in securities, when shocks are materialised on financial markets, the procyclicality of price movements may increase.

Investments in traditional savings instruments

One of the significant trends in recent years has been increased interest among the population in savings instruments other than bank deposits. A fundamental factor contributing to the change in the population's preferences is the stabilisation and maintenance of inflation target values, which formed the macroeconomic conditions for lowering interest rates in the Russian economy.

Given the decrease in interest rates on bank deposits, people have become more active in the field of alternative investments using stock market instruments. As of 1 October 2020, the growth rate of household ruble deposits is 11%. At the same time, few structural features should be mentioned.

First, households still prefer short-term instruments which is reflected by their growing share in overall volume of ruble denominated deposits (see section 2.2). Thus, households' funds on bank accounts are becoming more transferable, therefore, in the future, a large amount of funds can be transferred from bank accounts to alternative instruments without significant losses.

Second, it is important to mention, that in 2020, operations with escrow accounts for the purpose of buying real estate, which are currently statistically accounted within natural persons' deposit category, have grown. In 2019, growth of funds on escrow accounts amounted to ₽136 billion, whereas nine months of 2020 saw growth of ₽540 billion[18] which is nearly half of all of the growth of ruble deposits of households (₽1,126 billion).

Escrow accounts are used for depositing of funds that are used to purchase real estate before the construction is completed, these funds become available only after the house is commissioned. Such deposits are not a form of saving funds on bank accounts but rather an investment in real estate, which in turn can also serve as a form of personal savings. At the same time, it should be mentioned that funds for these operations can be borrowed from financial institutions therefore could not be definitively equalled to personal savings.

Foreign currency deposits, on the contrary, were in low demand among households in 2020 against the background of lower interest rates on key currencies. For the first eight months of 2020, their volume decreased by ₽635 billion, which generally contributes to the reduced dollarization of banks' funding sources. Purchases of foreign currency in cash by households also demonstrate no

[18] *Balance on accounts 40824 and 40826 according to reporting form 0409101.*

signs of increased public interest in this form of savings. For the first eight months of 2020, the net purchase of foreign currency by households amounted to 36% of the volume of purchases in 2019.

Thus, from among traditional savings instruments, citizens retain their interest in ruble deposits, the dynamics of which still remain at high levels despite the growth in households' investments in alternative instruments.

Investments in stock market instruments[19]

Investments in bonds

The growth in households' investments in bonds was the largest among all alternative instruments. According to the depository reports of non-bank organisations and credit institutions, from the beginning of 2019 through 1 October 2020, household investments[20] in bonds increased by ₽958 billion[21] (Table 11), of which the bonds issued by Russian issuers account for 70% (₽673 billion). Based on the currency structure of growth in household investments, ruble bonds constitute 57% (₽543 billion), and the increments in foreign currency bonds are distributed between Russian issuers and issuers from other countries with shares of 18% and 26% (₽168 and ₽247 billion), respectively.

The main increase in investments in ruble-denominated bonds of Russian issuers over the period in question was in 2019: ₽419 billion out of the total increase of ₽4505 billion for the period from 1 January 2019 through 1 October 2020. In terms of the sectoral structure of issuers, the largest portion (38% or ₽360 billion) of the increase in bonds in all currencies for 2019–2020 was in bonds

DYNAMICS OF HOUSEHOLD INVESTMENT BY INSTRUMENT *Table 11*

Change in household investment by instrument, ₽ billion	2019	H1 2020	1 July – 1 October 2020	Total for 9 months of 2020
Investment in traditional instruments				
Ruble deposits	2,221	856	271	1,126
Foreign currency deposits	635	-515	-120	-635
Net foreign currency purchase in banking sector (ruble equivalent)	1,026	196	177	373
Subtotal (less cash)	2,856	341	151	491
Investments in stock market instruments				
Corporate bonds, including:	562	174	126	300
Bonds of credit institutions	*300*	*15*	*45*	*59*
in foreign currency	*151*	*104*	*50*	*155*
Foreign bonds	*133*	*73*	*37*	*109*
Sovereign bonds, including:	106	-14	4	-10
in foreign currency	*87*	*28*	*-6*	*22*
Foreign bonds	*21*	*13*	*8*	*21*
Shares, including:	38	176	106	282
Shares of credit institutions	-63	56	35	91
Subtotal	706	336	236	572
Total investment amount and structure				
Total volume of investments, including:	3,562	677	387	1,063
Investments in bank instruments	*3,093*	*412*	*231*	*641*
investments in foreign currency instruments	*873*	*-383*	*-76*	*-458*
investments in foreign securities	*154*	*86*	*45*	*131*

Sources: Reporting forms 0420711 and 0420415.

[19] *Presented figures are estimations and can be adjusted in the process of calculation methodology development.*

[20] *The investor category 'Individuals and non-profit organisations serving individuals' from sub-section 1.2 of reports 0409711 and 0420415, accounts of securities holders.*

[21] *The same exchange rate as of 1 September 2020 was used for foreign currency bonds as of different reporting dates to exclude foreign currency revaluation, and the bond price at par was used.*

of Russian credit institutions (primarily several SIBs) and 27% (₽259 billion) in corporate bonds of Russian non-financial organisations. The main increase in bonds of foreign issuers over the same period was in corporate bonds (20% or ₽192 billion).

Structured bonds of banks[22]

Structured products are financial instruments that can combine elements of bonds, shares, financial indices and financial derivatives and may either have capital protection (investment bonds) or not have capital protection (structured bonds). Financial intermediaries have been increasingly offering their clients such structured products, promising higher returns due to a more flexible formation structure. At the same time, high returns are associated with higher risks – the complexity of assessing the real value of financial instruments (investment strategy) included in the product for investors and, as a consequence, the difficulty predicting future profits or losses.

In 2019–2020, the share of households' participation in structured products increased from 55.8% as of 1 December 2018 [23] to 61.1% as of 1 October 2020 (in absolute terms, the increase was ₽216.2 billion to ₽251.9 billion). Overall, since 1 December 2018, the market volume has increased from ₽63.9 billion to ₽412.5 billion.

The growth of this market may be accompanied by the intensification of a number of risks; in particular, there is a growing interconnection between the Russian and foreign securities markets (when issuing structured products, issuers often have to create portfolios dependent on foreign financial instruments to secure the fulfilment of obligations on instruments issued), which, in turn, intensifies network effects and shock transmission channels in the securities markets. Also, due to the more 'complex' nature of these instruments, misselling risks arise: a rather large number of new clients have entered the securities market during the year whose financial literacy may be insufficient to adequately assess the risks and returns on such instruments. Considering that, for the most part, the liquidity of structured products is not at high levels (the circulation of such instruments is to a large extent ensured by organisations that belong to the same group of companies with the issuer), the materialisation of negative shocks on the market can lead to a significant decrease in the cost of instruments and losses for their holders.

Investments in shares

Overall, household investments in shares for the period from 1 January 2019 through 1 October 2020 increased by ₽320 billion. The highest increase occurred in investments in blue-chips shares (by ₽131 billion) and shares that are not included in the calculation of the Moscow Exchange index (by ₽104 billion) (Chart 50). The growth of investments in blue chips is associated with a steady increase in household investments in shares of the oil and gas and banking sectors.

Overall, the volume of household investments in bonds and shares versus deposits in the period from 1 January through 1 October 2020 increased by 1.8 pp to 16.3%. Overall, the increase of household investments in shares and bonds does not narrow the volume of resources for the Russian economy since citizens invest most of their funds in securities of Russian issuers. Household investments in foreign securities in 2020 are limited (₽130 billion) and do not exceed the amount of funds withdrawn from foreign currency deposits in Russian banks (₽635 billion). Thus, there are no significant risks of capital outflow due to the growth of household investments in foreign securities.

Moreover, it should be noted that a significant part of household funds is attracted by the banks themselves, both directly through the issuance of their own bonds and structured products and indirectly through the attraction of funds from legal entities selling their securities to individuals.

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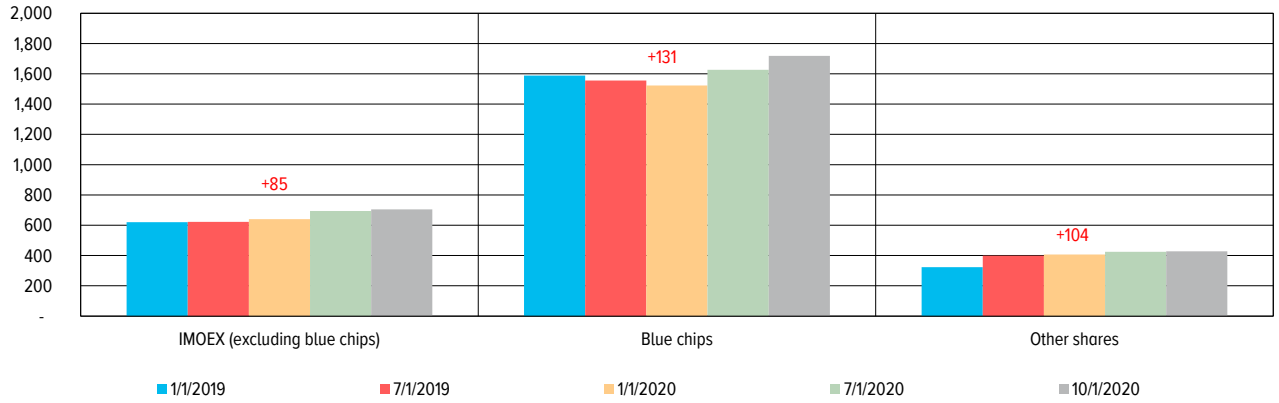
[22] *Investments in structured bonds on accounts of non-bank financial institutions and credit institutions were taken into account in investments in bonds in the previous section.*

[23] *Since December 2018, there has been rapid growth in household investments in structured products due to changes in legislation.*

HOUSEHOLD INVESTMENT IN MOSCOW EXCHANGE-TRADED SHARES*
(₽ BILLION)

Chart 50



** Share prices is calculated based on average price of shares that were traded on Moscow Exchange in August. Overall, 262 shares of Russian companies were accepted to trade (common and preferred shares), 24 shares of foreign issuers and 10 depositary receipts.*
Note: figures in red show growth from 1 January 2019 to 1 October 2020.
Sources: Reporting Forms 0420711 and 0420415.

Placement of bonds by corporate borrowers may, in turn, reduce the cost of their funding and makes it possible to allocate households' savings to finance the real sector.

Channels of household investments in the stock market

People invest their savings in stock market instruments through financial intermediaries who offer direct investments using brokerage accounts, including individual investment accounts (IIA)[24] as well as various financial products. Such products may include investment life insurance (ILI), universal life insurance (ULI) and unit investment funds (UIF) implementing a certain investment strategy on the stock market.

If we consider the services of non-bank financial institutions, the most popular ones among the population are standard brokerage services, under which individual clients of non-bank financial organisations increased funds by ₽471 billion to ₽1.5 trillion from 1 January through 1 October.

For the first nine months of 2020, the instruments of the collective investment market were in growing demand among the households. The aggregate volume of household investments in the units of OUIFs, EUIFs and IUIFs[25] increased by ₽154 billion to ₽590 billion, which is more than 2.5 times higher than the same indicator of the previous year (Chart 51). At the same time, the highest increase (over 80%) was demonstrated by OUIFs, the investment structure of which is mainly represented by corporate bonds (39%) and shares (20%) of Russian organisations.

The growth in household assets on IIAs amounted to about ₽89 billion in the first three quarters of 2020, up to ₽286 billion, which is two times more than for the same period of 2019 (Chart 52). At the same time, the largest increase in funds under IIAs was at the expense of credit institutions (₽52 billion); the main share of the IIA portfolio is constituted by shares (30%), investment units (25%) and corporate bonds (23%).

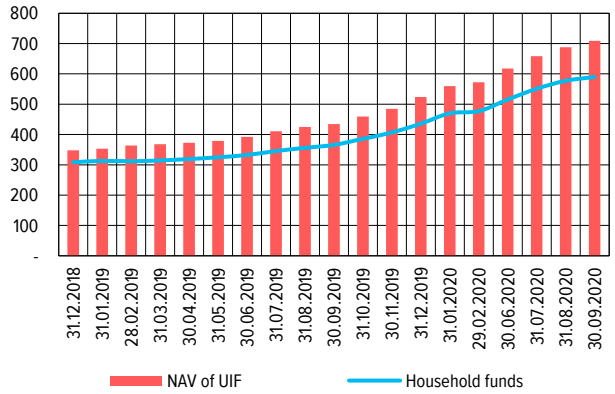
The volume of investments in investment and universal life insurance products versus the same period of the previous year has remained practically unchanged. However, there has been a redistribution of consumer interest from ILI in favour of ULI.

For the first nine months of 2020, ILI demonstrated a decrease in fees by 7.1% year-over-year from ₽142.3 to ₽132.2 billion. The annual profitability of 3-year ILI agreements with a one-time premium payment in rubles maturing in the first half of 2020 amounted to 3.6%, 3.1% for 5-year

[24] *Household investments on broker accounts and IIAs in securities were included in the volume of household investments in shares and bonds in the previous sub-section.*

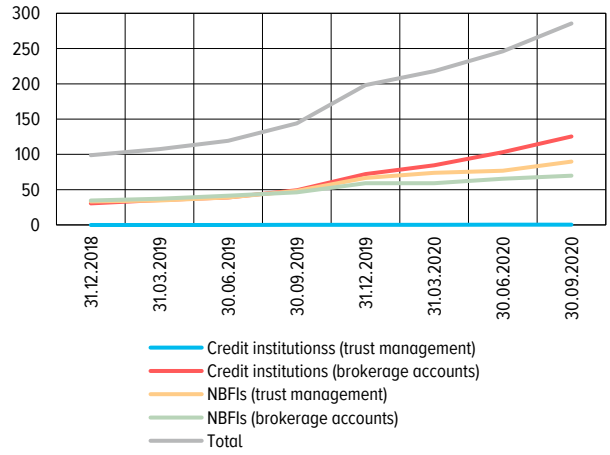
[25] *Open-end unit investment fund (OUIF), exchange-traded unit investment fund (EUIF) and interval unit investment fund (IUIF).*

HOUSEHOLD INVESTMENT IN UNITS OF OPEN-END UIFS, EXCHANGE-TRADED UIFS AND INTERVAL UIFS* *Chart 51*
(₽ BILLION)



** Data for March–May 2020 are absent due to the Bank of Russia's measures taken in response to the coronavirus infection, including, in particular, an extension of deadlines for the submission of certain reporting forms.*
Sources: Reporting forms 0420504 and 0420502.

TOTAL ASSETS IN IIA PORTFOLIOS (NBFIS + CREDIT INSTITUTIONS) *Chart 52*
(₽ BILLION)



Sources: Reporting forms 0409712 and 0420427.

DYNAMICS OF HOUSEHOLD INVESTMENT IN NBFI INSTRUMENTS *Table 12*

Change in household investment by NBFI instrument, ₽ billion	2019	H1 2020	1 July – 1 October 2020	Total for 9 months of 2020
ILI + ULI	310	139	88	227
Assets in brokerage accounts with NBFIs	-	219	252	471
Assets in IIA	98	49	40	89
UIF[1]	128	80	74	154
Subtotal	536	487	454	941

[1] Includes open-ended UIFs, exchange-traded UIFs and interval UIFs.
Source: Bank of Russia data, including supervisory reporting (reporting forms 0420418, 0409712, 0420427, 0420504).

agreements and 1.0% for 7-year agreements. Along with the dissatisfaction of policyholders with the results of their expired agreements, the decline in the popularity of ILI is caused by the campaign to prevent misselling, which started in 2019 and was accompanied by the toughening of requirements for information disclosure on the part of intermediaries selling such products. ULI, on the contrary, showed an increase in premiums by 29.2% from ₽73.6 to ₽95.1 billion. A standard ULI policy does not require a lump sum payment but involves regular payments on a convenient schedule for the insured and at the same time includes an insurance component (for risks associated with premature death, critical and other diseases, injuries, disability or incapacitation).

As a result of the growing importance of the market of alternative instruments offered by non-bank financial institutions, the degree of integration of NBFIs into the Russian financial system is growing. Currently, the risks from household investments in alternative instruments are limited. The Bank of Russia is monitoring potential risks and consulting the market regarding investment opportunities for various categories of investors, primarily non-professional participants, in complex products, including structured bonds. Taking into account the specifics of alternative investment instruments, the Bank of Russia considers it important to control the risks of misselling on the market for such services.

Box 7. Structure of households' financial investments in other countries

After the global financial crisis of 2008–2009, the central banks in most developed countries reduced interest rates to record lows to overcome the consequences of the crisis, stimulate economic growth and prevent deflation. In some countries, such as Denmark, Japan and Switzerland as well as in the euro area, interest rates went into negative territory. Currently, ongoing monetary easing can be observed in connection with the spread of the COVID-19 pandemic. *In many OECD countries (14 out of 37), central banks reduced interest rates during 2020*.

On the one hand, the environment of low interest rates helps reduce the cost of financing raised by borrowers and increase consumption; on the other hand, at the same time, the risks for investors who begin to acquire riskier assets in search of high yields also increase.

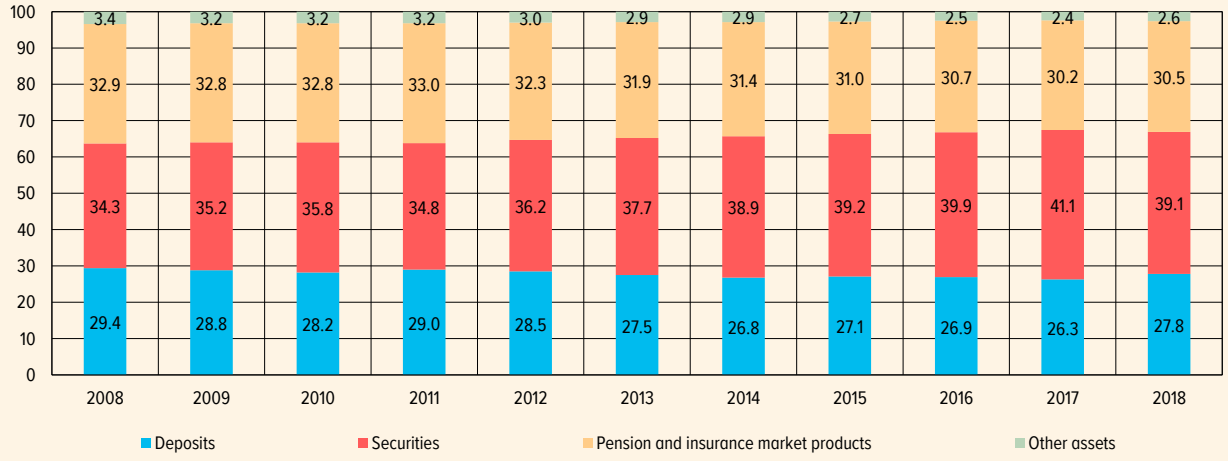
If we analyse the dynamics of the structure[1] of the savings of the world's population (Chart 53) over a decade, we can see that the share of household savings in securities is growing (about 39% at the end of 2018), while the share of other areas is decreasing. At the same time, the second most popular products are those of the pension and insurance market (31% at the end of 2018), and deposits account for 28%.

At the same time, North America is characterised by the prevalence of investments in the securities market (51%), pension funds and insurance organisations (32%), while deposits account for only 14%. The bulk of household investments in Western Europe is concentrated in pension funds and insurance organisations (39%), deposits (31%) and securities (27%). The structure of household savings in Eastern Europe is, on the contrary, characterised by a high share of investments in deposits (55%), the securities market accounts for 27% and the market of insurance and pension services holds 11%.

The decline in the attractiveness of pension products is associated with a decrease in their profitability following a drop in the profitability of bonds, which is the main underlying assets of these institutions, after the global financial crisis. The decline in bond yields is pushing pension fund management companies to invest in riskier assets, such as shares and real estate. Considering the increase in life expectancy, this leads to growing deficits of funds and the inability to fulfil obligations toward pensioners. Given the significant role of the pension fund[2] market in developed countries, this may pose a potential threat of increased systemic risks in these countries.

In this situation, a recovery of the population's interest in the securities market and an increase of investments in investment funds have been observed. The role of the investment fund industry in the global economy is increasing year by year. As of the end of 2019, global investment fund assets stood at $55[3] trillion (64% of global GDP) versus $24 trillion (38% of global GDP) at the end of 2008. Currently, one of the most important systemic risks of the investment fund market is liquidity risk. To support the market

DYNAMICS OF GLOBAL HOUSEHOLD SAVINGS BY TYPE OF ASSETS *Chart 53*
(%)



Source: Allianz Global Wealth Report 2019.

[1] *Allianz Global Wealth Report 2019.*

[2] *The average indicator of the volume of total assets of pension funds against the GDP in OECD countries was over 130% in 2018. In some countries, such as Denmark, this share is over 200%, more than 180% in the Netherlands and over 160% in Iceland.*

[3] *ICI Global.*

during the pandemic, leading central banks expanded their repo mechanisms. To increase the liquidity of stock market instruments, central banks also expanded their asset purchase programmes, and this measure, among other things, had a positive effect on the liquidity of instruments that make up the asset portfolio of investment funds. Due to the growing vulnerabilities associated with the risks of the sector of non-bank financial institutions, strengthening their regulation has become one of the priority issues for the Financial Stability Board[4].

[4] *Global Financial Stability Report, October 2020.*

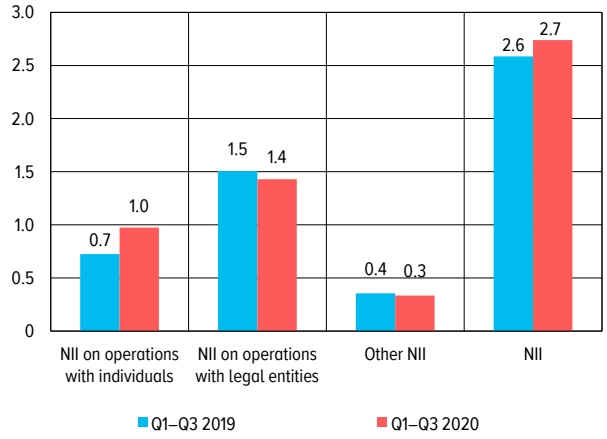
3.3. INTEREST RATE RISK OF THE BANKING SECTOR

With interest rates falling to historically low levels in Russia, the interest rate risk of the banking portfolio is growing in significance. The episode of early 2015 showed that by the level of losses interest rate risk can be comparable to and even exceed credit risk. During that period, the large-scale realisation of interest rate risk was caused by an extraordinary surge in rates. Currently, banks' vulnerability to interest rate risk is growing against the background of a decrease in the maturity of liabilities and an increase in the share of long-term assets (in particular, mortgages) as well as in the context of traditionally widespread 'built-in optionality' in banking products. The growing share of investments in federal government bonds with variable coupons and the transition to corporate lending at floating rates help limit interest rate risk. To reduce exposure to interest rate risk, banks can be advised to increase the maturity of funds raised and to promote lending at floating rates. However, floating rates should be offered to such customers and on such terms so as to make sure the growth of interest rates does not lead to the materialisation of credit risks. Special care should be taken when dealing with retail lending at floating rates.

Current situation, increased gap risk and basis risk

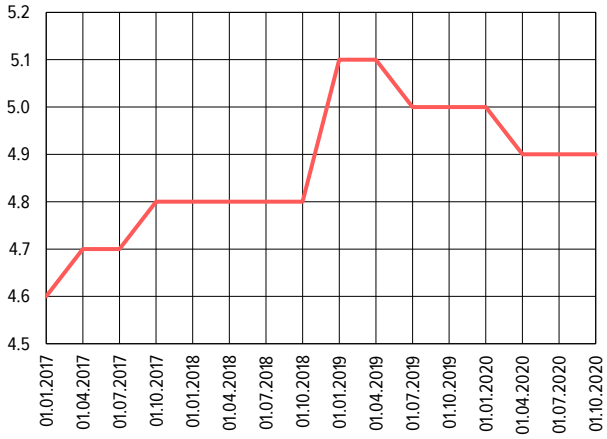
Despite the pandemic, in the period from January to September 2020, the banking sector's net interest income (NII) grew to ₽2.7 trillion (against ₽2.6 trillion in Q1–Q3 2019) (Chart 54). As a result, the net interest margin (NIM) slightly decreased, but stayed close to 5% (4.9% as of 1 October 2020)[26] (Chart 55).[27] The NII on transactions with individuals remained the main source of growth

NII OF THE BANKING SECTOR *Chart 54*
(₽ TRILLION)



Source: Reporting form 0409102.

NIM ON LOAN AND DEPOSIT OPERATIONS *Chart 55*
(%)



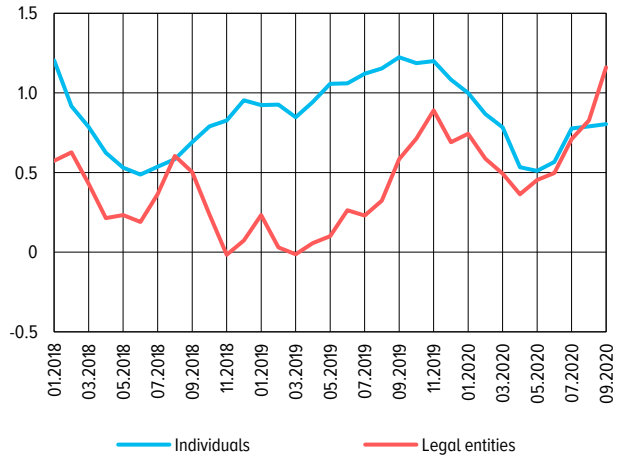
Source: Reporting form 0409101, 0409102.

[26] *For active banks (excluding non-bank credit institutions).*

[27] *Values are different from those presented in the Russian Banking Sector Review and previous issues of the Financial Stability Review due to changes in aggregation methodology for reporting form 0409102 as well as exclusion of IFRS 9 effect. It is planned to use this methodology in the Banking Sector Review starting from Q4 2020.*

DIFFERENCE BETWEEN RUBLE DEPOSIT RATES FOR MORE THAN 1 YEAR AND UP TO 1 YEAR *Chart 56*

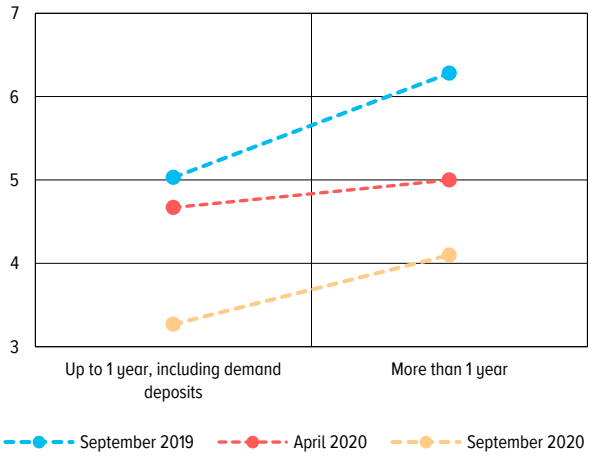
(PP)



Source: data posted on the Bank of Russia website.

HOUSEHOLD RUBLE DEPOSIT PROFITABILITY *Chart 57*

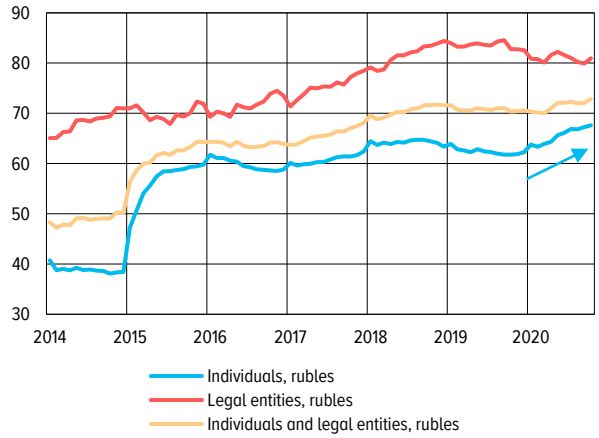
(%)



Source: data posted on the Bank of Russia website.

SHARE OF RUBLE DEPOSITS WITH A MATURITY OF UP TO ONE 1 YEAR IN TOTAL DEPOSITS *Chart 58*

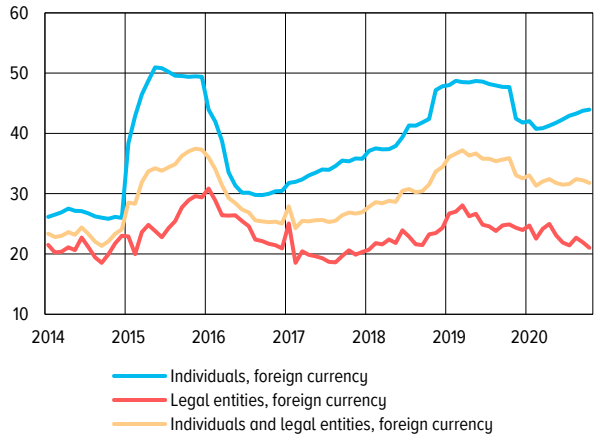
(%)



** Data on households include account balances.*
Source: Reporting form 0409101.

SHARE OF FOREIGN CURRENCY DEPOSITS WITH A MATURITY OF UP TO ONE 1 YEAR IN TOTAL DEPOSITS *Chart 59*

(%)



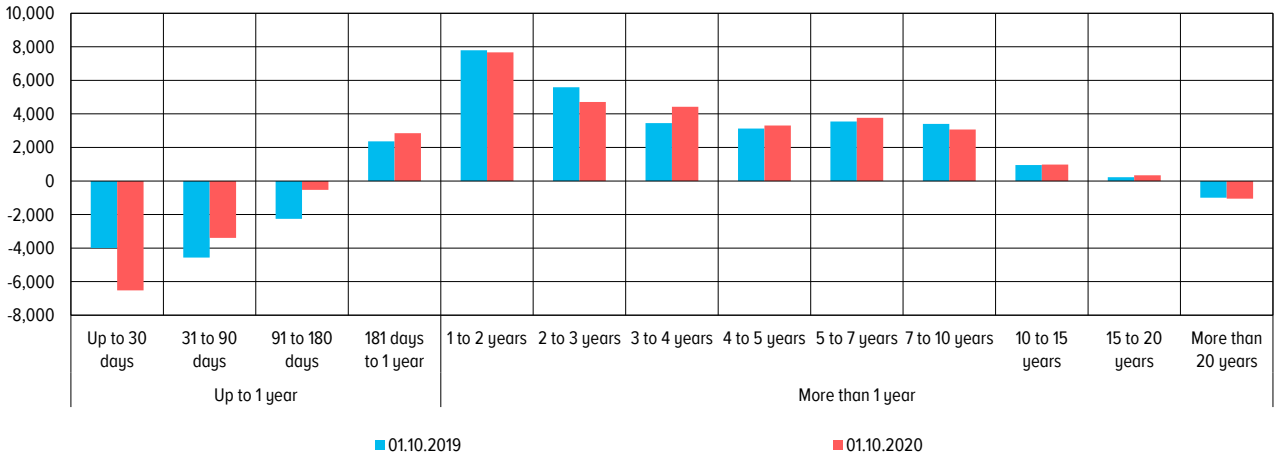
Source: Reporting form 0409101.

(an increase of about ₽251 billion for the first nine months of 2020 as compared to the same period in 2019). However, the NII on transactions with legal entities and other NII decreased slightly.

However, such an increase in income was achieved by banks due to a greater assumption of interest rate risk: decreased maturity of liabilities and increased maturity of assets. Expecting a decrease in interest rates credit institutions built their deposit interest rate policies in such a way as to attract more short-term funds (mainly funds on current accounts); the maturity premium on households' deposits in H1 2020 was minimal. In Q3 2020, the maturity premium on the deposit market increased slightly as compared to the beginning of 2020 (Chart 56) but in retail segment remained below the levels of 2019 (Chart 57). As a result, the share of households' short-term deposits in the retail segment increased by 3.0 pp since the beginning of the year to 62.5% by 1 October 2020 (from 64% to 68% on deposits in rubles (Chart 58) and from 42% to 44% on deposits in foreign currency (Chart 59). In the corporate segment, the maturity of borrowed funds also decreased: there was an increase in deposits for up to 30 days and a reduction in other short-term deposits for up to 1 year.

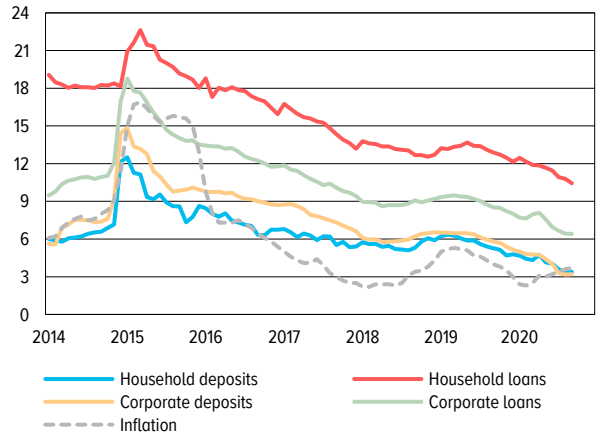
Considering the increased imbalance of assets and liabilities in terms of maturity, credit institutions became more exposed to interest rate risk (gap risk) (Chart 60). For the period from

DYNAMICS OF INTEREST RATE GAP OF BANKS' RUBLE-DENOMINATED OPERATIONS PORTFOLIO *Chart 60*
(₽ BILLION)



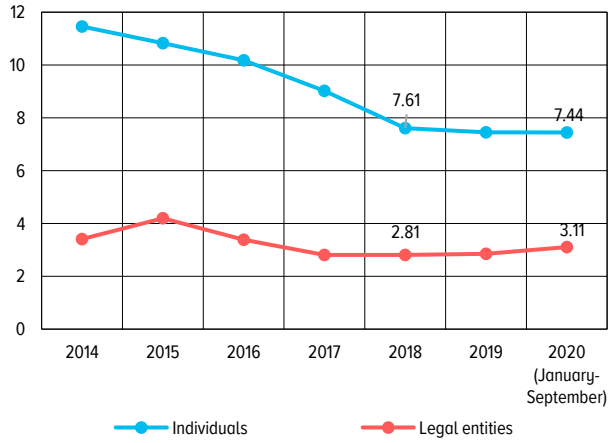
Source: Reporting form 0409127.

INTEREST RATES ON NEW LOANS AND ATTRACTED DEPOSITS IN RUBLES *Chart 61*
(%)



Source: data posted on the Bank of Russia website.

INTEREST RATE SPREAD IN THE RUBLE SEGMENT *Chart 62*
(PP)



Source: data posted on the Bank of Russia website.

1 October 2019 through 1 October 2020, the gap risk estimate over the horizon of 1 year (with a rate shock of 400 bp[28]) increased from ₽338 billion to ₽348 billion, which is equivalent to 3.1% of the banking sector's capital.

Thus, the formation of liabilities at the expense of shorter-term funds promotes the growth of net interest income in conditions of the decreasing key rate, but at the same time increases banks' vulnerability to interest rate risk in the long term.

Moreover, against the background of a decrease in interest rates to minimum levels, there is heightened interest among the households in alternative savings instruments (for more details, see Section 3.2), which may increase competition on the deposit market and prevent a reduction in deposit rates following the key rate. In part, such behaviour of depositors can be explained by the actions of banks themselves expanding their product line in the field of alternative investments in order to generate additional commission income and transfer the market risk to customers.

[28] *400 bp – is a level of shock on ruble rates recommended by the Basel Committee on Banking Supervision (BCBS) for assessment of interest rate risk in accordance with standardised approach on changing NII method (BCBS standard "Interest rate risk in the banking book", 2016.*

Against the background of a decrease in interest rates on the Russian financial market, the interest spread between the cost of raising and offering[29] was narrowing until 2018, but in the last two years the spread value has remained fairly stable (Chart 62). However, if loan interest rates decrease further, given the limited potential for a further decrease in deposit rates, we can expect a decrease in banks' net interest margin. The absence of a complete positive correlation of interest rates on loans and deposits can be viewed as one of the manifestations of basis interest rate risk.

Thus, in business planning, banks should take into account the growing importance of interest rate risk, given low rates, and take measures to increase the maturity of funds raised.

Transition to floating interest rates

Despite the fact that the transformation of short-term liabilities into long-term assets is a key function of the banking system, the resulting interest rate risk may increase the vulnerability of the Russian banking system in the future. At the same time, banks in many countries are actively reducing their exposure to interest rate risk through floating rates (see Box 8 on international practice).

Box 8. Risks and benefits of using floating interest rates. International practices.

Floating rate lending is a fairly common phenomenon both in developed economies and in emerging markets. However, floating rates generally prevail in corporate lending. For example, in the euro area, the share of floating-rate loans issued to individuals and non-financial companies in August 2020 totalled 57%, while the share of floating rates in mortgages is only 15.7% (Chart 63). However, this indicator underestimates the share of loans with a variable rate as in Europe, in addition to purely floating rates, loans with a 'combined' rate are widespread, where the rate is fixed for a certain period after the loan is issued (for example, for 5 years), after which it is revised. For example, in Austria, the share of such mortgages is 57%; in the Czech Republic, 46%; in Greece, 93%; in Italy, 67%; and in the United Kingdom, 91%. Thus, the interest rate risk in a mortgage is shared between the bank and the borrower.

In the euro area, there is a general trend toward a decrease in the share of floating-rate loans (Chart 64). For the last ten years, the share of floating-rate lending to the non-financial sector decreased from 81% (in August 2010) to 57% (in August 2020), and the share of mortgage loans with a floating rate decreased from 33% to 16%.

In many emerging market economies with high inflation rates, floating rates prevailed. In South Africa, the share of mortgages with floating rates reaches 95% (the average inflation rate in 2010–2020 was 5.16%). In Brazil, in 2020 alone, the major bank Caixa Economica Federal announced its intention to start issuing mortgage loans at a fixed rate, prior to which all loans were issued at floating rates (the average inflation rate was 5.82%).

Lending and other forms of borrowings at floating interest rates have advantages for both lenders and borrowers as compared to lending at fixed rates; however, they also pose additional risks.

The main **advantages** of lending at floating rates include the transfer of the interest rate risk from banks to borrowers, which allows banks to increase lending even in conditions of short liabilities and, other things being equal, set a lower rate than the fixed rate. Moreover, the transaction costs of lenders and borrowers are reduced as loans do not need to be refinanced at a lower rate in the event of a rate cut. Customers automatically get a decrease in payments due as the market rates decrease.

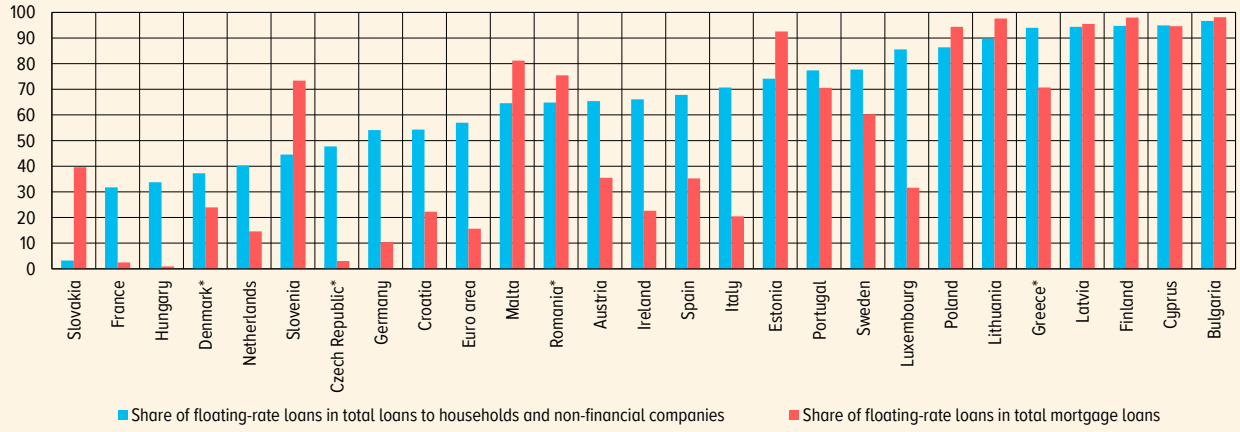
Lending and other forms of borrowings at floating rates also pose certain **risks** for its parties. In the event of a significant increase in rates, the borrower's ability to service debt may deteriorate, and risks to financial stability may materialise with negative social and macroeconomic consequences. This scenario is probable in the event of stress. Under normal circumstances, there is a 'natural hedge': the central bank usually raises the rates in conditions of high inflation, when the nominal incomes of business and households are likely to grow. A large share of loans with floating rates in banks' assets will complicate the implementation of the central bank's monetary policy: if the key rate needs to be raised, this may cause accelerated growth in the debt burden of borrowers from the real sector.

In theory and in practice, the question persists as to the extent to which such a transfer of risks from the bank to the borrower may contribute to a more efficient allocation of risks in the system. The BIS[1] notes

[1] *BIS. Toward better reference rate practices: a central bank perspective. March 2013.*

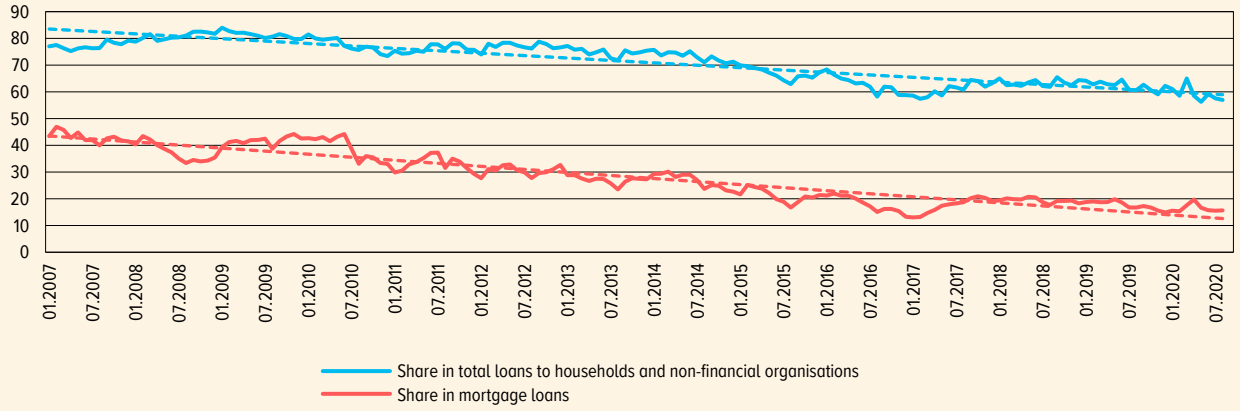
[29] *Calculated on the basis of data published on the Bank of Russia website.*

SHARE OF FLOATING-RATE LOANS IN TOTAL LOANS TO NON-FINANCIAL SECTOR AND MORTGAGE LOANS *Chart 63*
(% AS OF 31 AUGUST 2020)



** Data as of the last available date in 2020.*
Source: ECB statistics.

SHARE OF FLOATING-RATE LOANS IN TOTAL LOANS TO NON-FINANCIAL SECTOR AND MORTGAGE LOANS IN THE EURO AREA IN 2007–2020 *Chart 64*
(%)



Source: ECB statistics.

that a bank's transfer of its funding risk to borrowing companies that are better equipped to manage such risks should increase financial stability. The risk of rising interest rates is potentially less hazardous for companies (as compared to households).

The analysis of international practices allows us to conclude that specific regulation of floating-rate lending concerns primarily retail lending since households, unlike companies, have limited opportunities to manage interest rate risk. Such measures involve an assessment of the borrower's solvency in the event of an increase in the lending rate, macroprudential restrictions, lending rate regulation and requirements to convert a floating rate loan into a fixed-rate loan.

The main approach to the regulation of mortgage lending at floating rates is the requirement for banks to verify the ability of their borrowers to service loans in the event of a rate increase. Such requirements apply in the UK, Canada, Czech Republic, Poland, Finland, Norway and Australia. Regulators in some countries prescribe the level of the rate at which borrowers should be verified for debt servicing (6% in Finland), while in other countries a add-on on the lending rate is stipulated for testing borrowers (in particular, + 2.5% in Australia and + 2% in the Czech Republic).

Israel and Hungary apply special quantitative restrictions to lending at floating rates. In Hungary, the requirements for the payment-to-income (PTI) ratio are differentiated depending on the level of the

borrower's income and the period for fixing the interest rate: the longer the period during which the rate is fixed, the higher the permissible PTI (the minimum PTI level corresponds to a fixing period of 5 years).

A number of countries impose requirements for the lending rate, which makes it possible to limit the range of its fluctuations. For example, the National Bank of Romania has introduced a mandatory indicator for floating rates for all types of loans (IRCC)[2], to which the bank can add a fixed interest rate that remains unchanged for the entire term of the loan agreement. To mitigate the risks of loans with floating interest rates both for the borrower (in the event of a rate increase) and for the lender (in the event of a rate decrease), the regulator can set limits on the maximum and minimum possible values of the interest rate. According to US law, in the case of mortgage lending at a floating rate, banks are required to make sure that the agreement specifies the maximum level to which the rate can increase; the decision on this level is at the bank's discretion.

In a number of countries, regulators set requirements intended to provide additional protection of borrowers against interest rate risk, in particular, the obligation for banks to convert floating-rate loans into fixed-rate loans at the borrower's request (Poland, Hungary).

In addition to using a floating interest rate to manage interest rate risk, banks extensively use fees for early repayment of loans. This type of fee is most often used for loans with a fixed rate, while loans with a floating rate have either a low fee or no fee at all. For example, in the United States, it is prohibited to charge early repayment fees for mortgage loans with a floating rate or for loans with a fixed rate three years after issuance. In Russia, commission fees for early repayment of household loans are prohibited by law.

[2] Calculated as the arithmetic mean of daily rates on interbank transactions during a quarter, and daily rates are calculated as the average of the rates during the day weighted by the number of transactions.

As was mentioned above, in August 2020, the Ministry of Finance increased the placement of instruments with a variable coupon linked to RUONIA. The main buyers at auctions of federal loan bonds with variable coupon yield were SIBs. High demand for federal loan bonds with variable coupon income among resident banks is partly due to the use of these securities as a tool for managing interest rate risk. Nevertheless, currently, the total volume of federal loan bonds with floating rates is not very significant relative to the banking sector's assets[30].

As for lending to legal entities and individual entrepreneurs, the share of loans at floating rates is 40.1% of all loans to these borrowers[31] (Chart 65). The most rapid growth in the share of such loans was observed in 2018–2019. For example, at the beginning of 2018[32], the share of ruble loans to legal entities and individual entrepreneurs at floating rates was 13.7%, and loans in foreign currency accounted for 38.7%, while at the beginning of 2020 the share of ruble loans at floating rates was already 36.3%, and that of foreign currency loans was 51.0%. For the period from 1 January 2020 through 1 August 2020, the share of the debt of legal entities and individual entrepreneurs on ruble loans with floating rates continued to grow and reached 38.8%, while the share of such loans in foreign currency decreased to 43.9%.

Currently, banks offer a lower rate on floating rate loans than on fixed-rate loans. The difference between the fixed and floating rates on loans to legal entities upon issuance averaged 0.7 pp in H1 2020. Given that ruble rates have reached their historical minimum, borrowers are likely to display a growing interest in fixed-rate loans, which may lead to the stabilisation of the share of loans at floating rates.

As of 1 October 2020, the total volume of circulating corporate bonds with a floating interest rate was ₽4.7 trillion,[33] amounting to 32.0% of total corporate bonds.

It is important for the bank to correctly assess the borrower's creditworthiness in the scenario of rate growth and to find a balance between the transfer of interest rate risk to the end borrower and

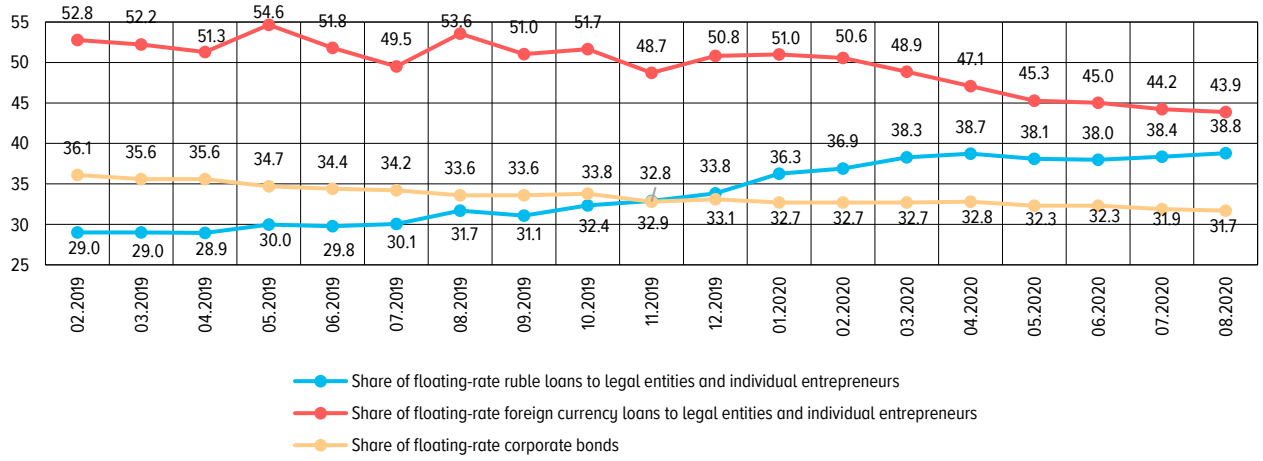
[30] As of 1 October 2020, the share of federal loan bonds with variable coupon income in banks' assets was 1.89%.

[31] According to reporting form 0409303 as of 1 August 2020.

[32] According to reporting form 0409303 as of 1 February 2018.

[33] Issues with floating rate include bonds with coupon rate linked to any reference rate (RUONIA and others).

SHARE OF CORPORATE LOANS AND FLOATING-RATE BONDS *Chart 65*
(%)



Sources: Bank of Russia, Cbonds.

a possible increase in its credit risk. Moreover, with lending at floating rates, banks can be advised to impose restrictions on the maximum value of rate increases (caps[34]).

For retail lending, the threat of credit risk materialisation if interest rate risk is transferred to the borrower is potentially stronger than for corporate lending. Currently, floating rates are practically not used for lending to households in Russia (the share of debt on loans at floating rates in the portfolio of housing mortgage loans is less than 0.1%), although they are not prohibited by law. As the rates in Russia reach their minimum levels, banks may be interested in promoting mortgages at floating rates.

In order to reduce the risks of the banking sector effectively, floating rates should only be offered to the borrowers whose debt burden will remain acceptable even if the rates rise. To correctly assess a borrower's solvency, the Bank of Russia is willing to take the special features of loans with floating rates into account in the PTI calculation methodology. The widespread use of floating rates can potentially have systemic effects that may cause a greater deterioration in the financial standing of borrowers than an individual lender can expect; therefore, in this case, the Bank of Russia will assess the rationale for using macroprudential instruments.

3.4. CLIMATE RISKS

Recently, the importance of climate risks on the international regulatory agenda has been growing, which is associated with awareness of the financial and reputational consequences of their materialisation as well as pressure from investors and the public. The COVID-19 pandemic and the imposition of quarantine measures (the closure of a number of businesses, restrictions on air, rail and road services) have had a short-term positive effect on the environment due to reduced air emissions. However, there is a negative effect in the long term as the pandemic has reduced the capacity of companies to finance the transition to a low-carbon economy.

Climate risks may have a significant impact on the real and financial sectors of the economy and affect overall financial stability; therefore, it is crucial to understand through which channels the two main types of climate risks – physical and transitional – are spreading in the economy. Physical risk is understood as the risk of financial losses as a result of natural disasters and gradual climate change (for example, changes in temperature, precipitation, sea level, etc). Transitional risk is the risk of financial losses during the transition to a low-carbon economy.

[34] *Upper limit / rate ceiling.*

Physical risk transmission channels

Through the real sector of the economy, climate risks affect the financial sector and intensify the following risks:

1) Credit risk: the likelihood of default for companies and households increasing due to property depreciation, loss of income and changes in market conditions

2) Market risk: the revaluation of assets (including shares) of institutions in the event of natural disasters or due to changes in the preferences of consumers and investors

3) Operational risk: disruptions in supply chains and temporary closure of companies for repair or process work

4) Liquidity risk: materialised mainly owing to a decrease in the value of assets, growing demand for liquid funds and the intensification of refinancing risk

Physical climate risks have a direct impact on the real sector at macro and micro levels. Their materialisation entails property depreciation, changes in cost structure, restriction of activities and loss of income, which leads to a decrease in supply, price growth and bankruptcies. Significant losses from the materialisation of physical risk may result in a decline in GDP. With simultaneous materialisation of climate risks, many economic agents can expect the materialisation of market, credit and operational risks as well as liquidity risk in the financial sector.

The materialisation of market and credit risks may lead to a decrease in investments and cause a rise in the cost of loans to households and the corporate sector and a reduction in lending. It should be separately noted that market and credit risks associated with the materialisation of physical risks can be concentrated in certain sectors of the economy (for example, in capital-intensive sectors).

Large-scale materialisation of climate risks may lead to an increase in liquidity risks for financial institutions, in particular, because of a drop in the value of assets and an increase in demand for liquid funds due to increased risks.

The materialisation of operational risks can lead to disruptions in the provision of services to the real economy sector, which, in turn, may intensify risks to financial stability.

An increase in the frequency of natural disasters could increase the cost of insurance or become the reason for the exit of insurance companies from certain high-risk segments of the insurance market, which, in turn, will increase the share of uninsured objects and may affect the value of assets.

Transitional risk transmission channels

Transitional climate risks have a direct impact on the real sector income. Because of changes in consumer and investor preferences as well as legislative regulation (for example, the introduction of a carbon tax), investments in environmental projects are growing in various countries at the expense of a decrease in investments in 'brown' industries. The asset value of companies in carbon-intensive industries is decreasing, and the cost structure of global trade is changing.

Credit institutions may face an increase in credit risks as a result of lower incomes of borrowers from vulnerable sectors and because of a decrease in the value of collateral for transactions. The cumulative impact of these factors on the economy will depend on the scale of investments by financial institutions in vulnerable sectors.

The increasing number of litigations involving companies from carbon-intensive industries may lead to an increase in financial and reputational costs for both the companies themselves and the financial institutions that provide services to such companies.

Approaches to mitigating climate risks

Reducing the exposure to climate risks requires both action from the private sector and regulatory and oversight measures.

Financial institutions can take the following steps to minimise their exposure to climate risks: develop indicators to assess climate risks; verify borrowers, investors and clients for vulnerability

to climate risks, including accounting for climatic risks when assessing the credit risk of borrowers; include a climate risk management system into the corporate governance system, strategy and risk management; use scenario analysis and stress testing to identify and assess potential climate change impacts.

In terms of regulation and supervision, foreign regulators are now starting to take steps in the field of microprudential (in the form of supervisory expectations and guidelines for companies) and macroprudential policies (for example, taking climate risks into account in financial stability monitoring and stress testing). International approaches to climate risk assessment are discussed in more detail in Appendix 1.

Foreign legislation on the limitation of carbon emissions and potential consequences for the Russian corporate sector

To sustain the rise in global average temperatures, many countries have introduced or are considering the introduction of carbon regulation in the form of carbon emission quotas or a carbon tax. Such measures may potentially affect the Russian corporate sector. For Russia, the plans to introduce a carbon tax in the European Union are of the highest significance.

In December 2019, the EU announced the European green deal, which is intended to make the EU economy climate neutral by 2050. To that end, carbon emissions need to be radically reduced. One of the measures in this course will be the introduction of a carbon tax on imports to the EU (EU carbon border tax). Its calculation method has not yet been exactly determined, but theoretically its size will depend on the amount of emissions in the manufacture of a particular product.

The mechanism and timelines for the introduction of the carbon tax in the EU are under consideration. Imported goods are expected to be subject to a 'carbon pricing' mechanism (imposition of VAT on the companies' carbon footprint). It is believed that the tax may be introduced by early 2022[35].

Due to the fact that EU countries account for 41.7%[36] of all Russia's export turnover, the carbon tax on imports might become a significant challenge for Russian exporters. According to the OECD, Russia is ranked second after China in terms of carbon-intensive exports to the EU, which is about 150–200 million tonnes of all goods annually[37].

According to BCG estimates,[38] excluding goods and services that are not yet included in the Emission trading scheme (ETS), the taxation base for the new tax will be approximately 100–160 million tonnes of carbon-intensive exports. According to the research, this may lead to additional costs for Russian exporters in the amount of about $3.0–4.8 billion annually (if all emissions are taxed). However, it may be decided that only the emissions in excess of the permissible value will be taxed, in which case the burden on Russian exporters will be lower.

The introduction of a carbon tax will entail an increase in the cost of goods of Russian exporting companies in a number of industries, which may adversely affect their profitability and lead to increased competition among Russian suppliers of goods to the EU. Such consequences are especially typical of the oil, gas and mining industries. For example, if rising costs lead to higher prices for Russian oil, EU countries will begin to increase oil supplies from countries where production has a lower carbon footprint. The fertilizers, pulp and paper and glass industries may also experience significant pressures, depending on the type of tax imposed[39]. For exporters of nitrogen fertilizers,

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[35] *This date has not been changed because of the coronavirus infection. The European Union believes that it is best to introduce the tax in the period of global economic recovery.*

[36] *According to the Federal Customs Service for 2019.*

[37] *OECD 'Carbon emissions embodied in international trade'.*

[38] *BCG. Carbon challenge to Russian exporters, 29 July 2020.*

[39] *If the tax is imposed on the difference between actual emissions and reference emissions, these industries will not be taxed as they comply with the EU regulations; however, if the tax is imposed on all emissions, the fee will be more than 40% of the export price due to the high carbon intensity of these industries as compared to other countries.*

the carbon tax may be as high as 40–65% of the current export value, which could cause Russian manufacturers to lose their market share in the EU, yielding positions to countries with lower carbon intensity. At the same time, the introduction of a carbon tax in the EU could open up opportunities for Russian exporters whose carbon footprint is lower than that of their main foreign competitors.

As of 1 August 2020, the share of debt from companies whose activities have a high carbon footprint[40] in the total corporate portfolio was 15.1%, with a share of overdue debt of 7.3%, which indicates potentially significant risks for the banking system.

It should be noted that in order to reduce the consequences of the introduction of a carbon tax in the EU for Russian companies action is required both at the state level (development of a regulatory framework and standards for reporting and disclosure of information on carbon emissions, creation of emission regulation mechanisms, support for industries that have to adapt to the transition economy by providing targeted tax incentives and preferences) and at the micro-level (companies should implement mechanisms for measuring their carbon footprint, include carbon footprint management in their corporate strategies and explore opportunities to minimise carbon emissions by modernising production).

Presently, in Russia, due to the formation of a new legislative and regulatory framework ensuring the use of modern technologies, conditions are being created for increasing GDP while simultaneously reducing carbon emissions. However, the transition to green technologies is rather costly, so to facilitate this process, the Russian Government and the Bank of Russia are developing a number of incentive instruments (see Appendix 2 for more detail).

[40] *Companies engaged in the production of fuel and energy materials, pulp and paper, coke, petroleum products and nuclear materials as well as metallurgical production.*

ANNEXES

APPENDIX 1. DEVELOPMENT OF INTERNATIONAL APPROACHES TO CLIMATE RISK ASSESSMENT

Being aware of the potential impact of climate risks on financial stability, regulators worldwide are developing approaches to addressing climate risks in regulation and oversight.

International standards in this respect are under development. At the end of 2019, the **Basel Committee on Banking Supervision** instituted a Task Force on Climate-related Financial Risks (TFCR), the purpose of which is to take climate risks into account in Basel standards and further develop efficient supervision practices intended to mitigate climate risks. The Task Force will prepare a series of reports on the financial risks associated with climate change.

To facilitate the integration of climate-related and environment risks into regulation and oversight, in May 2020, the **Network of Central Banks and Supervisors for Greening the Financial System (NGFS)** published its **Guide for Supervisors: Integrating climate-related and environmental risks into prudential supervision**[1]. The document is based on a survey of 34 NGFS member jurisdictions and contains five guidelines for supervisory authorities:

1. It is recommended to determine in what way climate and environmental risks affect the financial sector and the economy, and how significant such risks may be for the supervised entities.

2. A clear strategy should be developed, and resources should be adequately allocated to address climate and environmental risks.

3. It is necessary to assess potential risks for the supervised financial institutions vulnerable to climate and environmental risks as well as their potential losses should these risks materialise.

4. It is recommended to develop a transparent prudential approach to climate and environmental risks.

5. It is essential to ensure proper management of climate and environmental risks on the part of the supervised financial institutions and, if necessary, take actions to eliminate such risks.

Active work on analysing the impact of climate risks is being carried out at the level of countries, and interbank and interdepartmental committees and task forces are being created[2].

Currently, regulation and supervision are mainly focused on three aspects: 1) disclosure of information on climate risks; 2) guidelines for financial institutions on taking climate risks into account in their operations; and 3) assessment of the exposure of supervised institutions to climate risks within the scope of stress testing.

1. Disclosure of information on climate risks

The regulators' guidelines for disclosure of information on climate risks can be divided into two areas: guidelines for a wide range of issuers (including non-financial institutions) and guidelines for supervised financial institutions.

[1] *Guide for Supervisors: Integrating climate-related and environmental risks into prudential supervision, May 2020*.

[2] *For example, such working bodies are operating in the Bank of France, the Bank of Italy, the Bank of Spain, the Monetary Authority of Singapore, the Dubai Financial Services Authority, the Bank of Thailand, the Central Bank of Malaysia, the European Banking Authority and the European Insurance and Occupational Pensions Authority.*

1.1. Disclosure of information by issuers/borrowers

At the end of 2015, with the support of the Financial Stability Board, the Task Force on Climate-Related Financial Disclosures (TCFD)[3] was established. In 2017, the TCFD presented its disclosure guidelines in four areas:

1. Governance – disclosure of information about the organization's governance around climate-related risks and opportunities associated with climate change
2. Strategy – disclosure of information about the actual and potential impact of climate risks and opportunities on the strategy and financial planning of companies
3. Risk management – disclosure of information about the processes for identifying, assessing and managing climate risks in companies
4. Metrics & targets — disclosure of information (metrics) used by a company to quantify and manage its climate risks

In its reports on monitoring the implementation of its guidelines, the TCFD points out that the volume of disclosure of information on climate-related risks is still significantly lower compared to other areas.

Leading countries (Japan, the EU, Australia, Canada, China and other) have developed recommendations/guidelines/guiding principles for the disclosure of information on environmental impacts.

For example, back in 2010, France adopted the Grenelle II Act, according to which companies whose securities are listed on the French stock exchanges are to disclose information in their annual reports on the social and environmental impacts of their activities or provide a reason for the lack of such information in the public domain.

In 2006, the **People's Bank of China** established a *centralised credit reporting system* to allow organisations to disclose information on loans, administrative fines and company compliance. The China Banking Regulatory Commission monitors commercial banks to restrict lending to non-compliant organisations.

In March 2020, **Hong Kong Exchanges and Clearing Limited** (HKEX) published updated reporting guidelines for ESG[4] factors. The updates aimed at familiarising the issuers with changes in ESG reporting include:

- rules in six areas (new HKEX ESG requirements, board governance, reporting principles, setting targets, social KPIs[5] and climate change)
- new rules for board and directors, which must play a key role in implementing the new ESG principles
- updated Step-by-step ESG Reporting Guidance, including amendments to the methods for calculating KPIs.

1.2. Requirements for information disclosure by financial companies

The requirements for financial companies to disclose information on their climate risk exposure are currently in place only in a few number of jurisdictions.

In 2013, the **China Banking Regulatory Commission** launched its Green Credit Statistics System (GCSS)[6], which requires banks to classify green loans into two categories: (1) lending for green energy development; and (2) lending for projects and services related to environmental protection and energy-saving (this category of loans is also divided into 12 sub-groups). In 2014, *Key Performance Indicators of Green Credit Implementation* were introduced. All banking institutions are to evaluate

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[3] *The TCFD is chaired by Michael Bloomberg; TCFD members are representatives of the largest companies of the private sector.*

[4] *ESG – environmental, social, governance.*

[5] *KPI – key performance indicators.*

[6] *Analysis of the Problems and Countermeasures of China's Green Credit, June 2018.*

their projects on a regular basis for the above key indicators and submit the results to the Banking Regulatory Commission.

In 2019, the **Securities and Futures Commission of Hong Kong** issued a circular for management companies of unit investment funds on detailed disclosures related to green finance products (investment objectives and description of investment strategies, risks etc).

In September 2020, it became known that in 2023 **New Zealand** plans to introduce mandatory disclosure of information on governance, risk management and the application of strategies to mitigate the impact of climate change within the scope of implementation of the TCFD guidelines[7]. These requirements will apply to banks, asset managers and insurance companies.

Also, in September 2020, the **Central Bank of Brazi**l published its sustainable development agenda[8] to prepare the central bank for the new economic realities amid climate change. The agenda contains five sections, one of which concerns the adaptation of regulation: it is planned to improve the Regulations on social and environmental responsibility for financial institutions, develop regulation to increase the transparency of information on climate risks, create a 'green' rural credit bureau and stimulate the provision of 'green' rural loans.

2. Recommendations for financial institutions to take climate risks into account in their activities

In the absence of international standards for climate risk regulation, national regulators have so far mostly limited themselves to developing recommendations in terms of risk management and organisation of the credit process.

In May 2019, the **Hong Kong Monetary Authority** (HKMA) introduced a three-step approach to green and sustainable banking[9]:

1. Development of an approach for assessing the baseline environmental level of individual banks. HKMA will also work with certain global organisations to provide technical support to banks in Hong Kong to better implement environmental principles.
2. Involvement of industry representatives and other stakeholders in consultations on regulatory expectations or supervisory requirements.
3. Implementation of requirements, tracking and assessment of the banks' progress.

In December 2019, the German Federal Financial Supervision Authority (BaFin) published its Guidance Notice on Dealing with Sustainability Risks[10]. The document provides an overview of the best practices in sustainable risk management. The Guidance addresses:

- Possible strategies for integrating climate risk into the overall business strategy. The Guidance emphasises the need to revise the business strategy taking into account the sustainable development risks.
- The need for responsible corporate governance of sustainable development risks.
- Approaches to integrating climate risks into risk management procedures, including stress tests based on scenario analysis.
- Climate risk assessment in the terms of contracts with third parties (outsourcing) as well as within financial groups.
- The possibility of including ESG factors in credit ratings and compilation of individual ESG ratings.

In May 2020, the **European Banking Authority** (EBA) published its Guidelines on loan origination and monitoring[11] that was developed based on the best practice and combining prudential standards,

[7] *New Zealand makes climate reporting compulsory, September 2020*.

[8] *BC Sustainability, September 2020*.

[9] *HKMA introduces key measures on sustainable banking and green finance*.

[10] *Sustainability risks: BaFin publishes Guidance Notice*.

[11] *EBA seeks to future proof loan origination standards taking into consideration significant transition periods to facilitate implementation, May 2020*.

consumer protection requirements, anti-money laundering and environmental principles, social responsibility and governance (ESG).

The document prescribes mechanisms for internal governance of the processes of granting and administering loans throughout their life cycle, including the process of making decisions on granting a loan based on automated models (scoring) in accordance with EBA requirements. The document also contains requirements for assessing the creditworthiness of borrowers and associated data processing. The Guidelines will become effective for new loans starting from 30 June 2021 (for loans already issued, if it is necessary to amend loan agreements, from 30 June 2022). Also, credit institutions will be able to eliminate existing shortcomings in the mechanisms until 30 June 2024.

At the moment, **regulators in leading countries do not use macroprudential instruments** to stimulate green investments by banks or discourage brown investments, although such approaches are examined in some works.

For example, in 2017, the UN Environment Inquiry published a research paper On the Role of Central Banks in Enhancing Green Finance[12], which listed possible macroprudential instruments that could influence investment decisions and lending to increase the environmental friendliness of the financial system. Differentiated capital requirements and restrictions on the concentration of investments in sectors with higher hydrocarbon emissions are proposed as possible instruments.

At the end of 2018, the results of the analysis by Italian economists (Fostering green investments and tackling climate-related financial risks: Which role for macroprudential policies?) were published[13]. The paper examines in detail the theoretical application of macroprudential instruments to facilitate the transition to a low-carbon economy while maintaining financial stability.

Reduced reserve requirements are named as one of the possible tools for stimulating green projects. For example, the Central Bank of Lebanon applies reduced reserve requirements if the bank can confirm that the loan provided is conducive to energy savings. Another possible instrument is a countercyclical capital buffer: the buffer increases during periods of growth in lending contributing to hydrocarbon emissions. Difficulties are observed with correct and timely calibration of this instrument. The authors propose establishing a sectoral leverage limit, where the denominator will take into account investments in hydrocarbon emitting industries.

3. Assessment of exposure of supervised organisations to climate risks within the scope of stress testing

One of the most rapidly developing areas in supervision is the consideration of climate risks in stress testing. Such stress tests are intended to help improve the understanding of the impact of climate risks on other types of risk, including credit, market, business and reputational risks. In terms of stress testing, two areas can be distinguished: top-down stress tests conducted by the central banks themselves and bottom-up stress tests, which should be implemented by financial institutions in accordance with the supervisor's instructions.

To facilitate the integration of climate risks into financial stability monitoring and supervision, in the middle of 2020, the NGFS developed the NGFS Climate Scenarios[14] and a related Guide to climate scenario analysis for central banks and supervisors[15], which provides practical guidance on using scenario analysis to assess the impact of climate risks on the economy and financial system. The NGFS's scenarios with quantitative parameters are available on its *website*, which makes it possible to build the necessary model for further analysis based on the embedded data. Thanks to the developed tool, stakeholders will not have to conduct a time-consuming and costly analysis to predict temperature changes in the coming decades, the growth in carbon emissions into the

[12] *On the Role of Central Banks in Enhancing Green Finance, February 2017*.

[13] *Fostering green investments and tackling climate-related financial risks: which role for macroprudential policies?, November 2018*.

[14] *NGFS Climate Scenarios for central banks and supervisors, July 2020*.

[15] *Guide to climate scenario analysis for central banks and supervisors, June 2020*.

atmosphere, the impact of climate policies on GDP and other economic consequences of climate change.

3.1. Top-down stress tests

Several years ago, financial regulators started conducting their own top-down stress tests to analyse macroeconomic and financial risks. For example, in 2018, **the Central Bank of the Netherlands** analysed the impact of unregulated transition to new energy sources on the assets of Dutch banks, insurers and pension funds (resilience to transitional risk) under four scenarios, depending on measures for reducing emissions and using renewable energy[16].

In 2019, the European Central Bank analysed exposure to financial system risk by assessing the major counterparty risks of European banks, insurers, investment funds and pension funds in relation to climate-sensitive sectors[17]. Top-down stress tests were also conducted by the Bank of Norway[18], the Bank of France[19], the National Bank of Denmark,[20] the Bank of Canada[21] and others.

3.2. Bottom-up stress tests

Financial regulators in the UK and France were among the first to develop requirements for financial institutions to conduct stress tests with regard to climate risks.

In December 2019, **the Bank of England** published an advisory document on the basics of bottom-up[22] stress testing for major banks and insurance companies to assess the resilience of their business models to physical and transitional risks associated with climate change[23]. The purpose of the stress test is to assess the resilience of the financial system. Based on the stress test results, the Bank of England will prepare guidance for identifying and closing data gaps and developing best practices for risk management. This stress test has been postponed because of the pandemic at least until the middle of 2021[24].

The scenarios developed by the NGFS formed the basis for the models described in the **Bank of France** document entitled Climate-Related Scenarios for Financial Stability Assessment: An Application to France[25], which provides principles for quantifying the impact of climate policy and the transition period on the economic and financial variables required to assess financial risks. The document primarily focuses specifically on transitional risks. The four scenarios described include unexpected increases in carbon prices and drastic changes in productivity reflecting unregulated transitional processes. This bottom-up stress test will be conducted on a voluntary basis by banks and insurers to assess their resilience to climate risks.

4. Implementation of 'green' principles by regulators

A growing number of regulators have started to develop strategies to address climate risks in their activities, including in order to lead by example.

Thus, in March 2019, the **Bank of France** formed a responsible investment strategy that applies to assets for which the Bank of France is fully or partially responsible (the Bank of France's asset

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[16] *The stress test results are published on the official website of the Central Bank of the Netherlands.*

[17] *The analysis results are published in the financial stability review.*

[18] *Technological advances and climate measures can influence banks' credit risk, 2018.*

[19] *Climate change: what are the risks for the French financial sector?, October 2019.*

[20] *Climate Change Can Have a Spillover Effect on Financial Stability, December 2019.*

[21] *Scenario Analysis and the Economic and Financial Risks from Climate Change, May 2020.*

[22] *That is, by the financial institutions themselves, using scenarios developed by the Bank of England.*

[23] *Discussion Paper 'The 2021 biennial exploratory scenario on the financial risks from climate change', December 2019.*

[24] *PRA postpones insurance & climate stress tests due to COVID-19 pressures, May 2020.*

[25] *Climate-Related Scenarios for Financial Stability Assessment: an Application to France, July 2020.*

portfolio as of 31 December 2019 was about €22 billion). In April 2019, the French regulator published an annual report on responsible investing, which is now published on an annual basis[26].

In October 2019, the **Reserve Bank of New Zealand**[27] developed a climate strategy that aims to promote a sustainable, productive and inclusive economy. The strategy includes the following steps: (1) monitoring and managing the impact of the Reserve Bank on climate; (2) understanding and taking into account the impact of climate change on the primary functions of the Reserve Bank (including the consideration of climate risks in the bank's monetary policy); and (3) helping other stakeholders develop appropriate policies.

In June 2020, the **Bank of England** published a report[28] describing its own approach to disclosing climate risks and developing a climate strategy, managing the implementation of its climate strategy and the structure of management of its own financial risks related to climate change (including the Bank of England's goals and monitored indicators).

In September 2020, the **Central Bank of Brazil** launched a sustainable development agenda[29] to prepare the central bank for the new economic realities amid climate change. The agenda contains five sections, for which the planned actions of the central bank are described:

- *Social and environmental responsibility*: raising awareness about sustainable development among staff, reducing the negative impact of the cash production cycle on the environment, revising the social and environmental responsibility policy.
- *Partnerships*: joining the NGFS, signing a memorandum of understanding with a non-profit organisation for green finance (Climate Bonds Initiative).
- *Policies*: creation of a mechanism for refinancing loans issued by financial institutions for the implementation of environmental projects (Green liquidity facility), introduction of a sustainability criterion in forming gold and foreign exchange reserves.
- *Supervision*: improving the collection of information on social and environmental risks, monitoring climate risk and conducting stress testing.
- *Regulation*: improving the Regulations on social and environmental responsibility for financial institutions, developing regulation to increase the transparency of information on climate risks, creating a 'green' rural credit bureau, stimulating the provision of 'green' rural loans.

The implementation of these initiatives is planned for 2020–2023; some of them, such as joining the NGFS and signing a memorandum of understanding with the Climate Bonds Initiative, have already been implemented.

[26] *The report for 2019 was published on 26 June 2020 on the Bank of France website.*

[27] *Reserve Bank Climate Change Strategy.*

[28] *The Bank of England's climate-related financial disclosure 2020, June 2020.*

[29] *BC Sustainability, September 2020.*

APPENDIX 2. MEASURES OF THE GOVERNMENT OF THE RUSSIAN FEDERATION AND THE BANK OF RUSSIA FOR PROMOTING THE IMPLEMENTATION AND FINANCING OF SUSTAINABLE DEVELOPMENT GOALS

To date, the **Government of the Russian Federation** has carried out large-scale work to **determine the nationally targeted sustainable development goals** (SDGs) and climate goals, their adaptation and integration into the national development goals of Russia for the period up to 2030; target indicators for national projects and other strategic planning documents. The most significant approved and developed documents in this area are:

- *Ordinance of the Government of the Russian Federation No. 3183-r, dated 25 December 2019*, approving the **National Plan for Adaptation to Climate Change for the Period up to 2022**
- Draft *Strategy for the long-term development of the Russian Federation with a low level of greenhouse gas emissions until 2050* presented by the Ministry of Economic Development of Russia in March this year (currently, the department is processing the comments received to take them into account in the new draft version)
- *Decree of the President of the Russian Federation No. 474, dated 21 July 2020, 'On the National Development Goals of the Russian Federation for the Period up to 2030'*, which enshrines five national development goals taking the SDGs into account
- *Decree of the President of the Russian Federation No. 666, dated 4 November 2020, 'On the Reduction of Greenhouse Gas Emissions'*, according to which the Russian Government is to develop a Strategy for the socio-economic development of the Russian Federation with a low level of greenhouse gas emissions until 2050.

Along with the integration of SDGs into the strategic benchmarks of national policy, a number of steps have been taken to **promote the financing of SDGs**. For example, in pursuance of *Decree of the President of the Russian Federation No. 204, dated 7 May 2018, 'On National Goals and Strategic Objectives for the Development of the Russian Federation until 2024'*, passports of national projects were approved providing for a number of measures to facilitate the achievement of SDGs and the goals on the climate agenda of the Paris Agreement.

In May 2019, the *Ministry of Industry and Trade of Russia, as part of the national Ecology project*, **launched a programme to subsidise coupon payments on bonds issued within the scope of the implementation of investment projects to introduce the best available technologies.**[1].

The Ministry of Economic Development of Russia has developed a Concept of the Green Bond Market. A draft federal law 'On Public Non-financial Reporting' is under consideration, which provides for the disclosure of non-financial information related to the consideration of ESG factors in the activities of companies in the corporate sector. The draft law establishes general requirements for the preparation, approval and disclosure of public non-financial reporting as well as the approaches to its independent external assessment.

The Bank of Russia also places high importance on promoting sustainable development. For example, within the framework of the *Main Areas for the Development of the Russian Financial Market for 2019–2021*, a national system of financial instruments for sustainable development and organisation of a methodological and verification system for responsible financing instruments are to be created.

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[1] *In pursuance of Resolution of the Government of the Russian Federation No. 541, dated 30 April 2019, 'On the Approval of the Rules for the Provision of Subsidies from the Federal Budget to Russian Organisations to Reimburse for the Expenses for Paying Coupon Yield on Bonds Issued as Part of the Implementation of Investment Projects to Introduce the Best Available Technologies'. The best available technology is a technology for manufacturing products (goods), performing work or rendering services, which is determined on the basis of modern scientific and technological achievements and the best combination of criteria for achieving environmental protection goals, provided that its application is technically feasible.*

In September 2019, the Expert Council on the Long-term Investment Market at the Bank of Russia published a *Concept for the Organisation of a Methodological System in Russia for the Development of Green Financial Instruments and Responsible Investment Projects*, which, based on the analysis of international practices, brings together the main elements required to form a methodological system of responsible investments and green financial instruments in Russia.

By promoting sustainable development, the Bank of Russia is continuously improving regulation. For example, at the end of 2019, the Bank of Russia updated *its Regulation No. 706-P 'On Securities Issue Standards'*, which provides for the specifics of issuing 'green' and 'social' bonds. The Regulation entitles the issuers to 'mark' a bond issue or programme appropriately, if the issuance decision or programme meets certain conditions, including the intended use of funds and disclosure of information on the use of borrowed funds.

On 1 October 2021, an updated procedure for disclosing information by issuers of equity securities comes into force[2], which provides for additional information to be disclosed by issuers of 'green' and 'social' bonds for each project specified in the prospectus.

In July 2020, the Bank of Russia published its Guidelines for Responsible Investment for Institutional Investors.[3] The purpose of the document is to clarify issues related to the functions of the owner of the investee company, taking into account the interests of all stakeholders and subject to the ESG factors when choosing and managing investments.

Moreover, the Bank of Russia is working to increase the availability of information for market participants: on the basis of the Russian National Reinsurance Company, it is planned to create a national risk office for natural disasters whose functions will include development and maintenance of a unified database of recorded natural disasters and their consequences, as well as maps of areas prone to natural disasters.

Bank of Russia experts took part in shaping approaches to the creation of a Sustainable Development Sector at PJSC Moscow Exchange to finance projects in the field of ecology, environmental protection and socially significant projects. The work was carried out within the scope of approving the new version of the Moscow Exchange Listing Rules.[4] The sector consists of three independent segments: the 'green' bonds segment, the 'social' bonds segment and the national projects segment. At the end of October this year, the segment of green bonds of the Sustainable Development Sector already included five bond issues, and the segment of social bonds contained two[5].

In addition to the creation of the Sustainable Development Sector, on 1 April 2019, the Moscow Exchange in cooperation with the Russian Union of Industrialists and Entrepreneurs (RUIE)[6] developed and launched the calculation of two indices in the field of sustainable development: Responsibility and Transparency and Sustainable Development Vector. Moreover, to take into account all international trends in the field of sustainable development in its activities, it joined Sustainable Stock Exchanges (SSE), a UN Global initiative that already unites 85 stock exchanges globally.

In July 2020, the Ministry of Economic Development of Russia introduced to the Government the draft ordinance[7], which prescribes the coordination role for the development of investment activities

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[2] *Regulation of the Bank of Russia No. 714-P, dated 27 March 2020, 'On Disclosure of Information by Issuers of Equity Securities'.*

[3] *Institutional investors include banks, non-governmental pension funds, insurance companies, joint-stock investment funds as well as managers of their assets.*

[4] *The new version of the Moscow Exchange Listing Rules was registered by the Bank of Russia on 31 July 2019.*

[5] *List of securities included in the Sustainable Development Sector.*

[6] *Since 2000, RUIE has been maintaining the National Register and administering the Library of corporate non-financial reports, which includes company reports on taking environmental, social and corporate governance factors into account in their activities.*

[7] *The documents are available in Green Finance section at the official VEB.RF website.*

and raising extra-budgetary funds for sustainable finance projects (including 'green' finance) to the Ministry of Economic Development, and establishes an Inter-departmental Task Force (ITF) for sustainable financing, which includes representatives of federal executive authorities, the Bank of Russia, VEB.RF and representatives of self-regulatory organisations and business. The purpose of ITF is to consolidate the efforts of various ministries and departments when launching a system of sustainable development financing in Russia and to implement a systematic approach to providing methodological support in this area.

The Bank of Russia cooperates closely (both directly and through interdepartmental task forces) with the state development corporation VEB.RF, which in summer of 2020 presented the first version of the Guidelines for the Development of Investment Activities in the Field of Green Finance in the Russian Federation and the Main Areas for the Implementation of Green Projects in the Russian Federation (Taxonomy)[7] for public consultation. The comments received will be taken into account in the second version of the guidelines, which is planned to be issued by the end of this year. On the basis of the methodology issued, Expert RA has already certified the first financial instrument – 'perpetual' (that is, without maturity) bonds of Russian Railways intended to finance green projects.

Thanks to the efforts of the Russian Government, the Bank of Russia, development institutions and other stakeholders, a number of important measures have been achieved in recent years to provide the basis for launching a sustainable development financing system in Russia.

LIST OF CHARTS

LIST OF TABLES