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The Central Bank of the Russian Federation



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REVIEW**

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All statistical data and calculations in this Review are provided as of 1 October 2018.

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SUMMARY

1. Risks of the global economy and global financial markets

In Q2-Q3 2018, against the background of escalating trade tensions, heightening of policy rates in the US and appreciation of US dollar, market conditions in emerging market economies (EMEs) worsened. EMEs faced capital outflows, rise of bond yields, widening of credit spreads and significant weakening of local currencies. Countries with internal imbalances (current account deficit, budget deficit, considerable external debt) turned out to be most vulnerable. Many EMEs had to increase policy rates, some of them significantly (Argentina, Turkey) and use massive currency interventions (Argentina, Brazil, Indonesia). According to the IMF forecast, global growth will stabilize in 2018-2020 at the level of 3.7% (although the gap between growth rates of EMEs and developed countries will narrow from 3.7 p.p. in 2013 to 2.3 p.p. in 2018).

At the same time, high uncertainty about the development of the global economy persists. In short and medium term perspective, global markets may face risks of volatility growth. First, volatility growth could attribute to accelerated normalisation of monetary policy by major central banks (primarily US Federal Reserve). Risks caused by heightened funding costs grow due to increasing debt burden of different sectors of economy in developed countries as well as in EMEs. Against the background of rising US dollar rates, the increasing value of US dollar also accelerates the susceptibility to currency risk in other countries, especially in EMEs. Second, risks of escalated trade tensions between the US and China and other countries remain unresolved. In the worst-case scenario, significant surges of market volatility may be observed as well as capital market decline, aggravation of currency wars and decrease in the volumes of trade. Third, risks of slowing down the growth rate of Chinese economy due to, inter alia, trade tensions between China and the US. Finally, economic policy risks remain high (Brexit, Italy, some EMEs). Important risk factor for Russia is the remaining uncertainty about the possibility of imposing new sanctions by the US.

2. Risks of the Russian financial market

Market conditions aggravated in August, but second half of September saw the relief of tension. The worsening of perception of risks in Russia by investors happened due to overall rise of EME market volatility and also due to publication of several draft laws on sanctions against Russia in the US. Non-residents noticeably reduced their exposure to OFZ: share of OFZ in the accounts of foreign depositories in NSD in the total volume of the OFZ market contracted from 33.7% on 1 April to 24.4% on 1 November 2018. The most intensive exit was observed in April after the sanctions were announced and foreign investors curtailed their carry-trade strategies in June.

The analysis of OFZ yield curve sensitivity to net sales of non-residents for Q2-Q3 2018 shows that disregarding the stress episodes, daily contraction of non-residents exposure to OFZ by 1 billion rubles leads to the 0.64 bps increase of yields on average for the period. Stress episodes cause additional rise of yield, which fluctuated from 0.19 bps in April to 0.58 in June and 0.85 in August. Nevertheless, after initial strong market reaction on sanction discussions, the correction followed in September causing the said stress yield add-on to lower to 0.52 bps. October did not see stress episodes of non-resident sales of OFZ.

Regardless to episodic volatility hikes, Russian financial markets demonstrated resilience to external risks with the measures conducted by the Bank of Russia having stabilising effect. Stabilisation of Russian financial market after period of heightened volatility was aided by the general normalisation of EME markets which started in the second half of September, and the decision of the Bank

of Russia to increase the key rate by 25 bps to 7.5% and also temporal (till the end of 2018) stay on foreign currency purchase according to budget rule. These allowed currency market to preserve the adequate level of liquidity and stabilise ruble exchange rate in September. The increase of FX repo rates and FX swaps, observed in the first half of September 2018, was short-term and was not backed by fundamental currency liquidity factors. The results of annual survey of 24 largest credit organisations show that the level of currency liquidity of large banks is enough to cover their FX liabilities (the stock of liquid assets¹ nominated in foreign currency on 1 September 2018 amounted to \$43.9 billion).

3. Systemic risks of the banking sector

The quality of loan portfolios issued to the non-financial organisations remained unchanged: in Q2-Q3 2018, the share of loans of quality categories IV and V in the banking sector remained at 12.4%. Excluding the banks under rehabilitation measures, the decline in the share of bad loans was negligible (by 0.1 p.p. points to 8.3%). In the banking sector, the credit quality of loans nominated in rubles was maintained (the share of bad loans equals 13.5%), while the quality of loans nominated in foreign currency continued to deteriorate (an increase of 0.2 p.p. to 10.0%). This is due to the realization of risks accumulated until 2015, when FX loans were granted to borrowers from the construction and commercial sectors which do not have FX earnings.

Accelerated growth of consumer lending continues. In the segment of unsecured consumer lending, the annual growth rate of outstanding loan debt was 20.7% as of 1 October 2018, and for ruble-denominated mortgages – 25.6%. Accelerated growth in outstanding loan debt has not yet led to an increase in the debt burden of the population, since it was compensated by a decrease in the level of interest rates in the economy. The quality of new generations of unsecured consumer loans in 2017 remained above the level of loans issued in 2016, and coupled with the growth of the portfolio it resulted in the decrease in the share of loans with arrears of over 90 days down to 10.4% as of 1 October 2018 (13.9% a year earlier). Overdue debt under the housing mortgage loans nominated in rubles remains at a historically minimum level of 1.0%. However, in the face of increasing inflation risks the current growth rate of the retail portfolio not compensated by lower interest rates can lead to a significant increase in the debt burden of the population, similar to the period of 2011–2014.

The liquidity risks of the banking sector in Q2-Q3 2018 remained at an acceptable level against the background of a structural liquidity surplus. Most credit institutions comply with H2 and H3 liquidity ratios with a large margin. These are mainly systemically important banks (SIBs) which demonstrate positive momentum, and as for other banks the values of the N2 and N3 liquidity ratios in the last six months decreased, but remained significantly higher than the minimum requirement. In order to comply with the Liquidity Coverage Ratio, N26 (N27), certain SIBs continue to use contractual committed liquidity facility (CLF). At the level of the Russian financial market as a whole, the volume of assets that meet the criteria of Basel III has gradually increased since the beginning of 2015. In order to reduce the dependence of banks on CLF, the Bank of Russia is considering the possibility of revising the parameters for the provision of this instrument in 2019. In this regard, banks that are experiencing a deficit of high-quality liquid assets (HQLAs) due to the peculiarities of their business model should take the necessary measures to reduce their dependence on CLF.

The significance of the interest rate risk is growing. In Q3 2018 the downward trend in interest rates in the Russian financial sector ended, followed by the beginning of their growth for certain types of assets and liabilities (first of all, the growth affected bond yields and interest rates on loans and deposits of non-financial organisations). Despite the reduction in the interest spread on newly issued loans/deposits, in Q3 2018 banks still did not experience a decline in net interest income on transactions with legal entities and individuals. At the same time, characterized by the growing prevalence of long-term assets and short-term liabilities in the structure of assets and liabilities of banks, the imbalance of the maturity of assets and

¹ Currency, funds deposited in accounts and securities for sale.

liabilities of banks increased (for example in the banking system as a whole the ratio of assets and liabilities denominated in rubles with residual maturity to 1 year decreased from 63% as of 1 January 2018 to 61% as of 1 October 2018). This indicates an increase in banks' exposure to interest rate risk in the future. At the same time, analyzing the sensitivity of banks to a shift in the interest rate curve, it was found that even with a significant increase in interest rates (up to 500 bps) during the year, none of the top 30 banks would be unable to fulfill the requirements of N1.0 capital adequacy ratio minimum level.

Currently, the Bank of Russia is developing draft regulations and recommendations on the management of the interest rate risk of a banking portfolio in order to improve the methods and procedures for assessing and managing the interest rate risk of a banking portfolio in credit institutions.

4. Systemic risks of non-credit financial organisations

A broad supply of investment life insurance (ILI) products in banks leads to an increase in the importance of risks in this segment. As of 30 September 2018 reserves for life insurance contracts reached 816.7 billion rubles, or 46.6% of the total amount of insurers' reserves. At the same time, the average annual yield on the first wave of completed ILI contracts did not exceed the deposit rates. In order to combat unfair sales practices, basic standards for the provision of financial services by members of a self-regulating organisation were established, which defined requirements for the procedure for concluding insurance contracts. In addition, the Bank of Russia developed a concept to improve the regulation of the ILI segment and also plans to use the "mystery shopping" to control the ILI products sales by intermediaries, including banks.

The compulsory motor third party liabilities insurance (OSAGO) market is being transformed. The financial results of market participants in insurance other than life insurance sector improved following the decline in the loss ratio of the OSAGO segment. At the same time, the change in market indicators of OSAGO may be unsustainable due to the nature of accounting for the settlement of in-kind compensation losses. To eliminate the imbalance in the segment a reform is under development aimed at the gradual individualization of tariffs.

In the first half of 2018, there was a sharp decrease in the pension savings (PS) yield — up to 4.3% in annual terms, which was caused by the realization of credit risk on the assets of a number of non-government pension funds (NPFs). The average weighted return of NPFs, with the exception of funds that wrote off and revalued low-quality assets was 8.3%. At the same time the average credit quality of PS portfolios has increased, including through the continuing increase in the share of investments in the public sector (for 9 months of 2018 from 24.3 to 37.5%), which was due to the attractive return of the OFZs, as well as the necessity of passing stress testing for NPFs. The introduction of mandatory stress-testing of pension reserves portfolios from 2019 will contribute to the growth of NPFs investments in OFZs and further improvement of the credit quality of pension funds.

Currently, the leasing market demonstrates a recovery trend after a recession. As of 30 June 2018, the annual growth rates of financial and operational leasing were 18.1 and 68.9%, respectively. The increase in operating leasing may also be attributed to the lease of some of the objects seized from lessees that were previously in financial leasing (mainly railway and air transport), which indicates possible problems with customers' creditworthiness. Given the lack of industry statistics and low transparency of leasing companies, the reform of the leasing market is becoming more important, which will make it possible to track the quality of its growth and will strengthen confidence in companies and reduce the risk premium in the long run.

5. Bank of Russia macroprudential policy

A new macroprudential regulation mechanism has entered into force. Bank of Russia Ordinance No. 4892-U, dated 31 August 2018 defines the characteristics and types of assets for which risk-based capital buffers may be set. In the framework of the new approach, the Bank of Russia establishes buffers

to risk ratios in order to calculate the capital adequacy of credit institutions by a decision of the Board of Directors².

In Q2-Q3 2018 the Bank of Russia implemented a series of macroprudential measures

Against the background of advancing growth in unsecured consumer lending relative to household income, risk factors for such loans were raised twice. The first increase was implemented starting from 1 May 2018 but it did not have a significant impact on the lending dynamics. In this regard from 1 September 2018 the scale of risk weights was adjusted again. Increased risk weights are applied to almost all new loans. The first data indicate a stabilization of growth rates, while the impact of measures may be stretched over time, given that some banks did not revise their loan issuance plans for 2018.

In the area of mortgage lending the Bank of Russia was not much concerned about the high growth rates, but rather about the weakening of lending standards. Mortgage loans with a small down payment are characterized by higher level of credit risk, thus growth in the share of such loans in banks' portfolios can increase their sensitivity to shocks. In many countries cap has been imposed on the provision of loans with LTV above a certain level or the share of such loans is limited. Since the beginning of 2018 the Bank of Russia increased risk ratios for loans with LTV above 80%, but the share of such loans continued to grow (up to 42.6% in Q2 2018). In such circumstances the Bank of Russia decided to increase from 1 January 2019 buffers to risk weights from 0.5 to 1.0 (which corresponds to risk weight of 200%) for mortgage loans in rubles and loans under equity participation agreements in construction with a down payment from 10 to 20%. Introduction of compulsory calculation of the debt burden ratio from 1 October 2019 will contribute to limiting the risks of unsecured and mortgage lending in the future.

Against the background of slight recovery in foreign currency lending in Q1 2018 the Bank of Russia decided to continue the policy of reducing dollarization and increased the risk weights for foreign currency loans (including for exporters) from 1 July 2018. The effect of these measures contributed to the reduction of outstanding loan debt by 1.3% for the period from 1 April to 1 October 2018.

The value of the national countercyclical capital buffer remained at the level of zero percent against the background of heterogeneous recovery in lending activity (ruble denominated debt claims on non-financial companies increased over 12 months by 9.2%, while the overall debt of companies including foreign borrowing and debt securities grew only by 1.2%³) and the use of buffers to risk ratios in some fast-growing segments.

6. Development institutions risks

Financial indicators of development institutions are currently under pressure for various reasons. Group-wide financial results of JSC "DOM.RF" were significantly adjusted in connection with the merger of JSCB "Russian Capital" (PJSC). Another challenge for JSC "DOM.RF" may be the expansion of the risk profile in connection with the planned participation in the new housing construction financing mechanism, which foresees issuance of a new guarantee type. Against this background in October 2018 the National Council for Financial Stability recommended to establish prudential ratios for JSC "Dom.RF" in the legislation. Unprofitability of another development institution JSC "Corporation "SME" in the first half of 2018 was associated with a reduction in the profitability of financial investments (they account for the bulk of assets), as well as an increase in the provisions due to guarantee portfolio growth. Subsidiary business model is typical for JSC "Corporation "SME": stimulating lending to small and medium-sized enterprises by guarantees with a minimum commission rate and covering losses at the expense of the government. Dependence on budget support is also typical for Vnesheconombank, which continues the process of restoring its activity and optimizing business processes according to the new development strategy until 2021.

² On setting buffers to risk ratios for calculating capital adequacy requirements by credit institutions.

³ Excluding currency revaluation.

RISK MAP

Figure 1

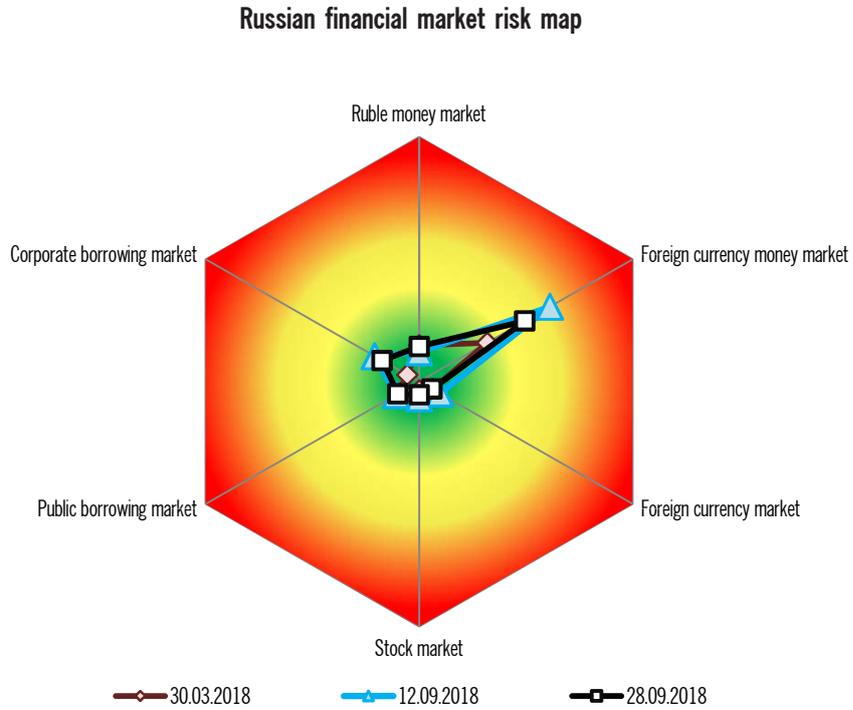


Figure 2

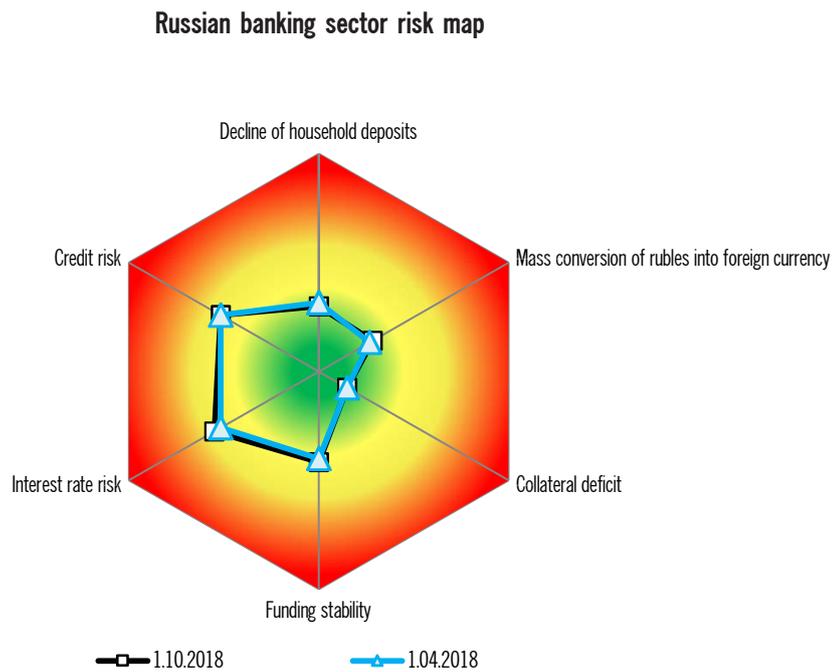
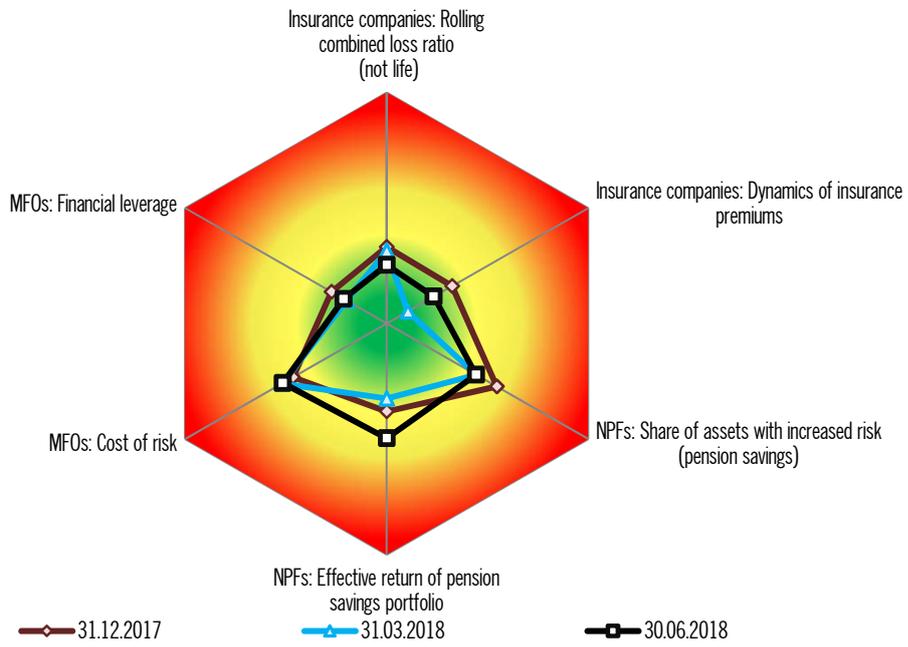


Figure 3

Non-bank financial institutions' risks map



1. RISKS OF THE GLOBAL ECONOMY AND GLOBAL FINANCIAL MARKETS

In the reporting period, the situation on the global financial markets was characterised by deteriorating market conditions in the emerging market economies (EMEs), while the markets of developed countries remained fairly stable. A significant capital outflow from EMEs was related to the increase of interest rates in the US and the strengthening of the US dollar as well as the aggravation of risks in the trade sector. EMEs with accumulated structural imbalances, in particular a deficit on the current account of the balance of payments, budget problems, and significant needs for external debt refinancing, experienced the highest pressure. In October 2018, the International Monetary Fund (IMF) lowered its forecast for the growth rates of the global economy. In 2018 and 2019, global growth will stabilise at 3.7% as in 2017 (0.2 p.p. less than the estimate as of April 2018). The GDP growth rates in developed economies will decrease to 2.1% in 2019 from 2.4% in 2018, while developing countries and emerging market economies will maintain their GDP growth rates at the level of 4.7% (Table 1).

In the reporting period, the situation on the market was characterised by reduced risk appetite among global investors, which was primarily caused by two factors.

- First, the financial conditions on the global markets tightened significantly due to the further normalisation of the US Federal Reserve's policy (the policy rate range was increased twice, in June and in September, to 2%–2.25%). As a result, since 1 April 2018, the yield on 10-year US Treasuries has gone up 44 b.p. to 3.17% (as of 12 November 2018), and the yield on 2-year Treasuries has gone up 64 b.p. to 2.90%. The Federal Reserve's plans regarding the future path of the base rate remain in place (another increase in December 2018, three increases in 2019, and one increase in 2020). However, for now, the market expects slower rate growth, which increases the likelihood of higher

volatility in the global financial markets if market expectations change. Policy normalisation also continued in the Eurozone. The ECB plans to end its bond purchasing programme in December 2018.

- Second, tension has intensified in trade relations, especially between the US and China. In July 2018, the US imposed import duties on products from China for the amount of \$34 billion a year and in the amount of \$16 billion a year in August (China took tit-for-tat measures). In September, the US announced the introduction of duties of \$200 billion a year, and China responded by imposing duties of \$60 billion a year. Thus, the US imposed duties on almost half of imports from China, amounting to about \$500 billion. The US also introduced duties on the import of steel and aluminium from the EU, Canada, and Mexico starting from June 1.

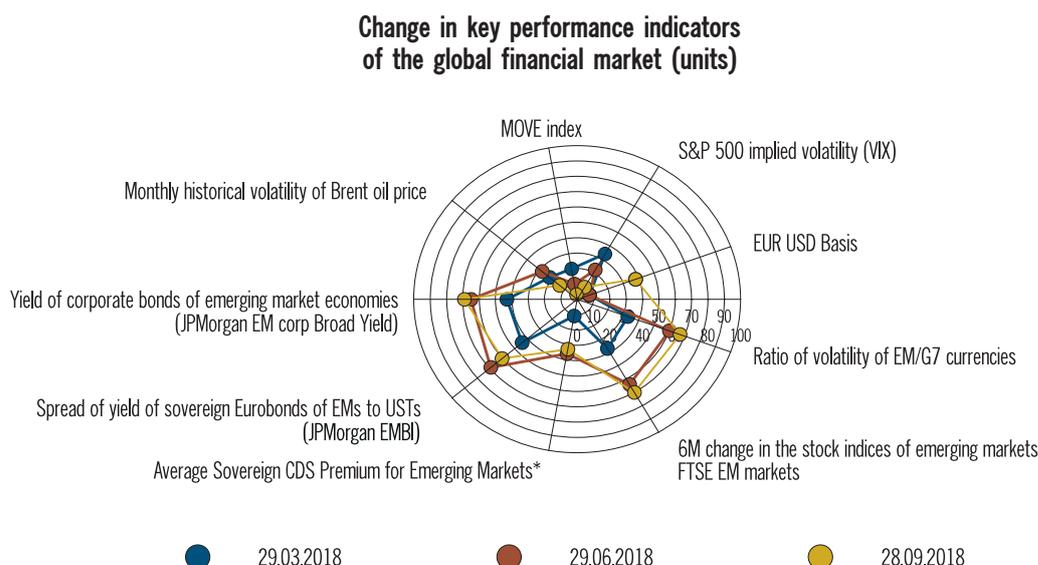
As a result of reduced risk appetite, investors started to demonstrate different tendencies in the dynamics of market indicators in developed countries and EMEs. For example, there was a misalignment in the dynamics of share indexes

Table 1
GDP growth rates, IMF forecast for October 2018

	GDP growth rates, %			Deviation from April 2018 forecast (p.p.)	
	2017	October 2018 forecast		2018	2019
		2018	2019		
<i>World</i>	3.7	3.7	3.7	-0.2	-0.2
<i>Developed countries</i>	2.3	2.4	2.1	-0.1	-0.1
USA	2.2	2.9	2.5	0.0	-0.2
United Kingdom	1.7	1.4	1.5	-0.2	0.0
Eurozone	2.4	2.0	1.9	-0.4	-0.1
Japan	1.7	1.1	0.9	-0.1	0.0
<i>Emerging markets and developing countries</i>	4.7	4.7	4.7	-0.2	-0.4
China	6.9	6.6	6.2	0.0	-0.2
India	6.7	7.3	7.4	-0.1	-0.4
Russia	1.5	1.7	1.8	0.0	0.3
Brazil	1.0	1.4	2.4	-0.9	-0.1
South Africa	1.3	0.8	1.4	-0.7	-0.3
Mexico	2.0	2.2	2.5	-0.1	-0.5

Source: IMF.

Figure 4



* Country sampling: China, Brazil, South Africa, Indonesia, Philippines, Malaysia, Mexico, Peru, Chile, Turkey.

The 0 to 100 scale reflects the minimum and maximum values of indicators in the period from 1 January 2012 to 28 September 2018.

From the centre to the edge: decline in stock indices, volatility growth (VIX, Brent), ratio of the volatility of currencies of EMEs to G7 currencies, growth of yield on government and corporate bonds, and increase in sovereign CDS premiums.

Source: Bloomberg.

in developed countries and EMEs (Figure 5), though on certain days both of them showed a decrease following news of the aggravation of trade disputes. Since the beginning of April 2018, China's Shanghai Composite has gone down 16.8% (as of 12 November 2018) as a result of the trade conflict with the US, and the EME share index (FTSE EM) has gone down 16.7%. However, the American S&P 500 went up 3.2% over the same period (despite a drop in October caused by a sell-off of USTs), which was due to favourable tendencies in economy and good corporate reports.

Perception of the risks of EMEs deteriorated because of the materialisation of structural imbalances and political risks in individual economies. EMEs faced a significant capital outflow and weakening of national currencies. According to EPFR, in May–June 2018, the net capital outflow from EME bonds was \$19.5 billion, and in August–September 2018 the outflow amounted to \$8.8 billion. EME currencies depreciated against the US dollar much more than the currencies of developed countries, although in September–October the situation started to gradually improve (Figure 6). Since April 2018, the index of the exchange rates of EME currencies against the US dollar (MSCI EM Currency Index) has gone down 7.7% (as of 12 November 2018). EMEs also faced significant growth of bond yields and the expansion of credit

spreads. The consolidated index of sovereign CDSs for 10 EMEs over the same period grew by 39 b.p. to 145 b.p.

Overall, the adverse effects on emerging markets in the periods of stress in 2018 are comparable in scale to past volatility surges, though from the perspective of contamination risks there is more substantial differentiation by countries (for more information about the situation in EMEs, see Box 1). However, in the present conditions, many EMEs have tightened their monetary policies (with the exception of China), and some countries have commenced massive foreign exchange interventions to support their national currencies.

Against the background of the overall tendency of capital outflows from EMEs and the possibility of the expansion of anti-Russia sanctions by the US, the Russian financial market demonstrated some deterioration. The risks intensified mostly in August 2018, but in September the situation started to gradually improve (for more details, see Section 2). The premium on sovereign CDSs of Russia remained at a comparable level with other countries having a similar rating (158 b.p. as of 12 November).

The situation in the Russian financial market after the period of increased volatility stabilised due to the following factors: the overall stabilisation of emerging markets starting from the second half of

Figure 5

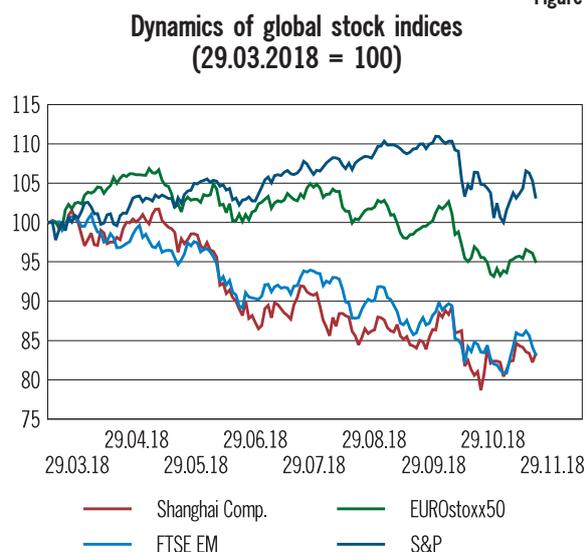
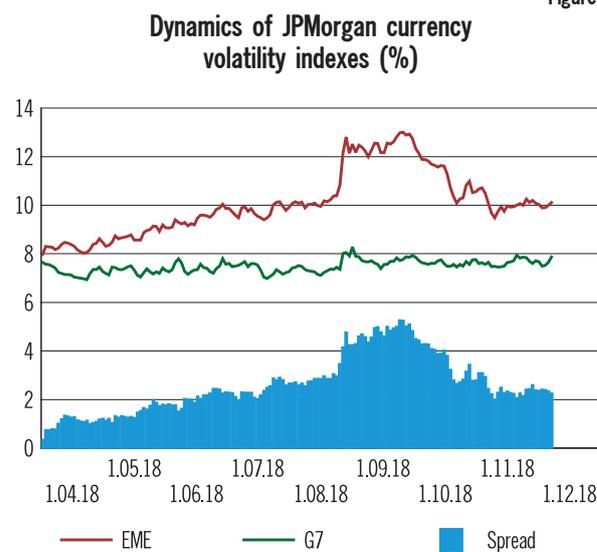


Figure 6



September as well as the Bank of Russia's decisions to increase the key interest rate by 25 b.p. to 7.5% and to suspend the buying of foreign currency on the market as per the budget rule. Moreover, unlike other EMEs, the Russian economy is characterised by relatively good fundamental indicators; in particular, it has a surplus on the current account

of the balance of payments (3.7% of GDP as of the end of Q2 2018), a high level of international reserves (27.9% of GDP as of the end of Q2 2018), a low level of total government debt (12.3% as of the end of Q2 2018), and a federal budget surplus (according to the Ministry of Finance of Russia, 2.1% of GDP in 2018).

Box 1. The situation in emerging market economies

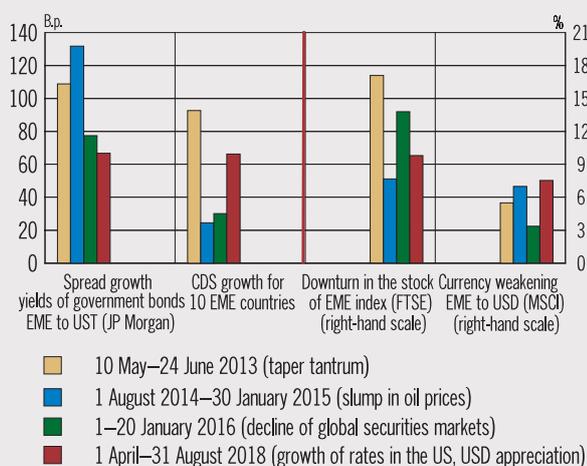
EMEs have been experiencing a noticeable capital outflow and turbulence on the local financial markets since April 2018 as a result of the rise in the cost of borrowings from the US, reduced risk appetite among the global investors, and the aggravation of internal problems (including economic policy risks).

At the same time, the dynamics of key market indicators (returns on government bonds, risk premiums, stock and currency markets) show that the volatility bursts in 2018 in EMEs did not exceed the changes observed in past stress periods (Figure 7). For example, the changes in the said indicators were less than during the taper tantrum period in May–June 2013, when the US announced the tapering of its quantitative easing. The sovereign risk premium (CDS) for 10 key emerging economies grew by 93 b.p. in the taper tantrum period and by 66 b.p. in April–August 2018. The yield spread between EME sovereign bonds and US Treasuries increased by 109 b.p. and 67 b.p., respectively. However, in April–August 2018, there was a more substantial decline in EME currencies than in the past stress episodes.

Moreover, the tendencies of the latter period were distinguished by a greater differentiation by the scale of volatility surges among emerging economies (Figure 8). Argentina and Turkey were the most vulnerable to the growth of US interest rates. The yields on government bonds varied in Argentina from 16.5% to 22.4% (for 9-year bonds), and in Turkey, from 12.2% to 21.5% (for 10-year bonds). 5-year CDSs in Argentina changed within the range of 300–800 b.p., and in Turkey, within the range of 200–600 b.p. The volatility of exchange rates over 1 month grew to a maximum of 58% in Argentina and to 70% in Turkey. From the beginning of April 2018 to 12 November 2018, the Argentine peso depreciated by 43% against the US dollar, while the Turkish lira depreciated by 28%.

The vulnerability of EMEs to risks of the deterioration of external conditions is due to the fact that the macroeconomic indicators in many countries are not stable enough. Many EMEs have a growing deficit on the current account of the balance of payments, including Turkey, Argentina, South Africa, Indonesia, and India (Figure 9). In Q2 2018, the current account deficit amounted to 6.5% of GDP in Turkey and 5.3% of GDP in Argentina. Some countries have a very high external debt, while the safety buffer in the form of international reserves is in many cases insufficient, especially in Argentina, Turkey, and South Africa (Figure 10). In Q2 2018, Argentina's cumulative external debt amounted to

Change in EME market indicators in various stress periods



Source: Bloomberg.

Figure 7

41% of GDP, and that of Turkey was 54%; one-third of Turkey's external debt is short-term debt. Many EMEs are also characterised by a growing state budget deficit (Brazil, South Africa). In both Turkey and in Argentina, high inflation and high inflation expectations aggravated the negative tendencies on the financial markets (in 2018, inflation reached 45.9% YoY in Argentina and 25.2% YoY in Turkey).

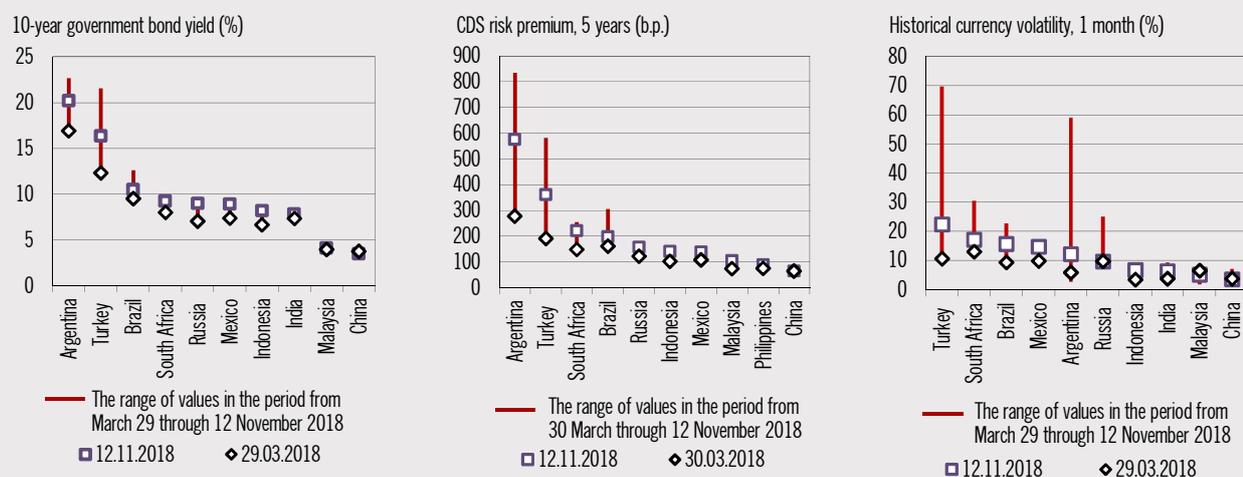
Besides the accumulated imbalances in Argentina and Turkey, one of the reasons for the upswing in market volatility and even its trigger was the intensification of the market's doubts about the independence of central banks. Doubts about the independence of central banks were caused by reports of pressure exerted on them by other governmental authorities. Furthermore, in the context of continuing capital outflow and the weakening of currencies, doubts arose about the effectiveness of the policy being pursued. In Turkey, there was an episode when the markets' confidence in the policy pursued by

the central bank weakened because of the late and inadequate response of the government in taking measures to stabilise inflation and inflation expectations.

The need to restrain the risks of weakening of the national currencies and inflation required a significant increase in the key interest rates in Argentina (from 27.25% in April to 65% in September) and Turkey (from 8% to 24%, respectively). The considerable interventions, for example in Argentina, only temporarily restrained the weakening of the peso and provoked new speculative attacks. In September, the central bank of Argentina established a non-intervention zone (a currency corridor of 34–44 pesos to one US dollar). Argentina also had to apply to the IMF for help (a stand-by stabilisation loan for a total amount of \$56.3 billion was approved). The IMF's terms for obtaining support include, in particular, the tightening of the fiscal policy.

In conditions of continuing pressure, the central banks of other EMEs have also started to increase their rates and conduct foreign exchange interventions. Indonesia, Mexico, and the Philippines increased the key rates by more than the market expected. Foreign exchange interventions were conducted on the Indonesian spot market and on the derivatives market in Brazil and India. However, China, unlike most EMEs, is implementing accommodative measures against the background of the continuing economic slowdown. To support economic growth, the country's government

Figure 8
Government bond yields, CDS risk premium, and currency volatility in selected EMEs during the last period of stress



Source: Bloomberg, Thomson Reuters.

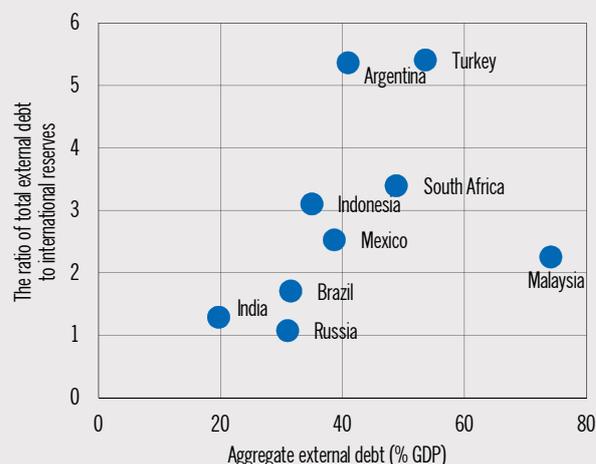
uses both monetary instruments (in 2018 to support liquidity on the internal market, reserve requirement ratios were reduced twice: for major banks: from 17% to 14.5%, for other banks: from 15% to 12.5%) and fiscal incentives. China is striving to loosen credit terms to support business amid increasing market volatility and trade tension with the US.

Figure 9
Current external balance in EMEs
(% of GDP)



Source: Bloomberg.

Figure 10
Aggregate external debt
as of 30 June 2018



Source: Bloomberg.

Changes in expectations toward a faster tightening of monetary policy by leading central banks (the US, Europe, and Japan) remain the most important factor in volatility growth in the short and medium term. Among key potential risk sources, including for Russia, are the following.

1. *Further growth of borrowing costs in the global markets.* Leading central banks have started to gradually shift away from the anti-crisis stimulation policy. However, despite the growth of rates, the global financial market conditions remain fairly mild by historical standards, in particular as compared to the pre-crisis level of interest rates in 2007. Though the real and nominal rates have decreased over the last decade, their growth potential is still high. In conditions of further rate growth, the risks for financial stability may intensify first of all in economies with a high debt burden, and especially in the case of further accumulation of debt. For developed economies, the high debt of the public sector, non-financial companies, and households may become a vulnerability factor. In EMEs, the debt burden is high in the corporate segment. The interest costs of many companies in EMEs exceed their profits, and in the banking sector the share of bad loans is increasing.

2. *Accumulation of debt burden in foreign currency.* Dollar borrowing costs are increasing along with the strengthening of the US dollar, which heightens countries' foreign currency exposure. This primarily concerns EMEs that continue to accumulate foreign currency debt, especially in the non-financial sector. In Turkey, the foreign currency component of the debt of non-financial companies grew from 21% of GDP in 2008 to 41% of GDP in Q1 2018, in Mexico, from 9% to 20% of GDP, and in Brazil, from 12% to 16% of GDP, respectively. In Russia, the foreign currency debt of non-financial companies, on the contrary, decreased from 24% of GDP in 2008 to 15% of GDP in Q2 2018. Moreover, the financial systems in a number of EMEs are characterised by a high level of dollarisation. In Q2 2018, the predominance of foreign currency loans and liabilities in the banking sector was 35.1% and 56.9% in Turkey, 22.9% and 28.9% in Argentina, 22.5% and 24% in Russia, and 13.2% and 17.1% in Mexico, respectively.

3. *Intensification of risks of economic policy and trade tensions.* The intensification of political uncertainty may undermine the trust of market participants in the stability of financial systems. Political risks have increased in the eurozone

(Italy is continuing to resolve its budget issues). The process of the UK exit from the EU (negotiation of the terms of operation of financial market participants) remains a significant risk factor. Derivatives in the amount of £41 trillion (\$53.5 trillion) expiring after Brexit may be at risk if the parties fail to agree. Recently, many EMEs have been experiencing aggravation of political risks (South Africa, Brazil). At the same time, one cannot rule out the further escalation of trade disputes (not only between the US and China). The introduction of protectionist barriers by a number of countries may adversely affect global trade and pose a threat to stable global growth. As noted, trade disputes have already led to a significant decrease in stock value in China. For Russia, the uncertainty regarding the imposition of new sanctions on the part of the US remains a potential risk factor.

4. *Growing interrelatedness of markets and risks of contamination.* Recent episodes of volatility bursts in 2018 demonstrated the growing sensitivity of EMEs (including Russia) to adverse foreign economic events, including a sharp deterioration in individual developing economies (Argentina and Turkey). So far, the increasing uncertainty has had only a short-term effect on market prices; however, the consequences may be more considerable if the overall risk aversion grows. A further decrease in the risk appetite of investors may cause adverse effects in a larger number of EMEs and the selling off of a wider range of assets.
5. *Risks of oil prices downturn.* At the end of November 2018, the price of Brent crude dropped below \$60 per barrel, which is the lowest level since the end of October 2017. The downturn in oil prices continued as a result of an active increase in shale oil production

on the part of the US, enhanced expectations regarding the overabundance of oil on the global market in 2019, and the uncertainty as to the further actions of OPEC+ (new agreements on the reduction of oil production). Oil prices may further decline if the demand for oil weakens on the part of key importer countries.

The possible materialisation of any combination of risk factors will, first of all, pose a threat to the financial stability of emerging markets. EMEs may potentially face more significant capital outflows and accompanied adverse effects on the local markets than in 2018. Especially vulnerable among EMEs are the economies with a considerable external debt, a high need for debt refinancing, and limited room for maneuvering when implementing support measures.

Thanks to its balanced macroeconomic indicators, the Russian economy is fairly resistant to potential risks of any further deterioration in investors' attitude toward EMEs and to geopolitical (sanction) risks.

Russia's lower vulnerability to external shocks is also due to the consistent policy pursued by the Bank of Russia to ensure financial stability. The Bank of Russia continues to implement measures to improve the resilience of the financial system to potential shocks, including macroprudential policy measures (for more details, see Section 5, The Bank of Russia's macroprudential policy). At the same time, to limit risks to financial stability, the Bank of Russia may make use of a set of anti-crisis regulation instruments, including operations on the OFZ market and on the currency market. One of the ways to support the OFZ market may be allowing financial companies not to revalue these securities (inclusion in the portfolio of securities held to maturity).

2. RISKS OF THE RUSSIAN FINANCIAL MARKET UNDER SANCTIONS

2.1. Financial market conditions in an environment of increased volatility

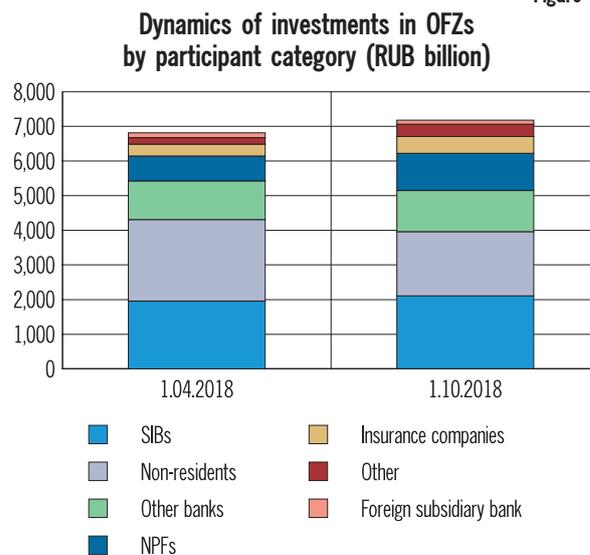
The situation in the Russian financial market in Q2–Q3 2018 was characterised by periodic volatility surges¹ caused by both the worsening of market conditions in EMEs and the publication by the US of a series of draft laws on anti-Russian sanctions. The aggregate effect of such circumstances in April and August led to a sharp decrease in the national currency exchange rate, the growth of bond yields, and the accelerated exit of residents from Russian assets.

After the introduction of a package of sanctions in April,² non-residents and the foreign subsidiary banks that serve them started to leave the OFZ market: the share of OFZ balances on the accounts of foreign depositories with the NSD in the total volume of the OFZ market decreased over Q2–Q3 2018 from 33.7% to 25.2%, which in terms of investments at par corresponds to a decrease from ₺2,297 billion to ₺1,810 billion (Table 2). The highest intensity of withdrawal was observed in response to the April sanctions and the curtailing of the carry trade strategy by foreign investors in June. The structure of investments for OFZ issues did not change substantially; international investors evenly reduced their positions for each of the issues. The OFZs sold by non-residents and foreign

subsidiary banks were mainly bought by NPFs and insurance companies (Figure 11) (for more details, see Section 3.3). OFZ sales by non-residents in September–October dropped in September–October and amounted to ₺56 billion and 44 billion, respectively. From 1 April to 1 October 2018, equity investments in OFZs by foreign subsidiary banks that are SIBs remained stable.

After the exit of non-residents from OFZs, yields on these securities increased by 139 b.p. on average³. The highest growth was in the yields on OFZs with a maturity of 5–7 years (Figure 12).

Figure 11



Source: data from the reporting form 0409711.

Table 2

Dynamics of the volume of federal loan bond investments in Euroclear and Clearstream accounts at the National Settlement Depository

Indicator	1.04.18	1.05.18	1.06.18	1.07.18	1.08.18	1.09.18	1.10.18	1.11.18
Volume of federal loan bonds in Euroclear and Clearstream at the National Settlement Depository, RUB billion	2,297	2,160	2,080	1,942	1,957	1,866	1,810	1,766
Share of non-residents in the market, %	33.70	31.40	29.90	27.60	27.30	26.00	25.19	24.43
Absolute change against the previous date, RUB billion	–	-137	-80	-138	15	-91	-56	-44

Source: NCO JSC NSD.

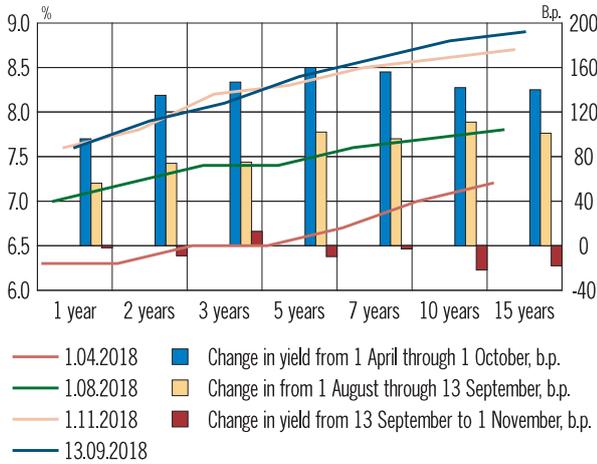
¹ In April and in the period from August to the beginning of September 2018.

² For more details about the consequences of sanctions and the following changes in the financial markets, see the Overview of Financial Risks for Q4 2017–Q1 2018.

³ Over the period from 1 April 2018 to 13 September 2018 (the period of the greatest exit of non-residents).

Figure 12

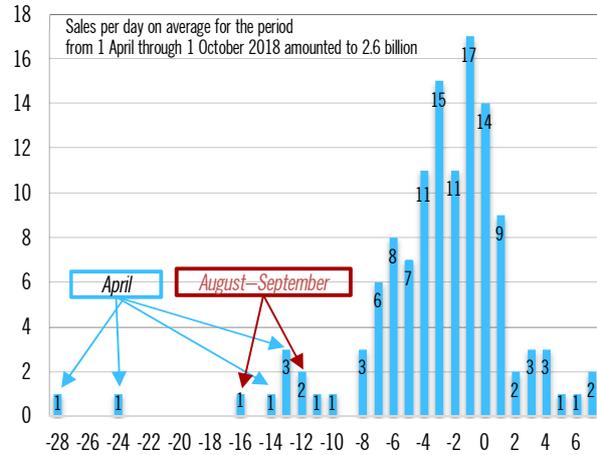
Dynamics of the yield curve in the OFZ market



Source: Bloomberg.

Figure 13

Distribution of the number of days by intervals of OFZ sales volume by non-residents (RUB billion)



Sources: PJSC Moscow Exchange, Bank of Russia calculations.

An analysis was made of the OFZ market's sensitivity during Q2–Q3 2018 to assess the dependence of changes in OFZ yield on the volumes of their sales by non-residents. Special attention was given to the periods of high volatility in April and August–September as well as to the June period of curtailing of the carry trade by non-residents (stress episodes). For the whole period, the average daily sales amounted to ₴2.6 billion, and on individual days of stress episodes sales reached ₴28 billion (Figure 13, Table 3).

Table 3

The volume of OFZ sales by non-residents and the size of changes in yield during periods of yield surge

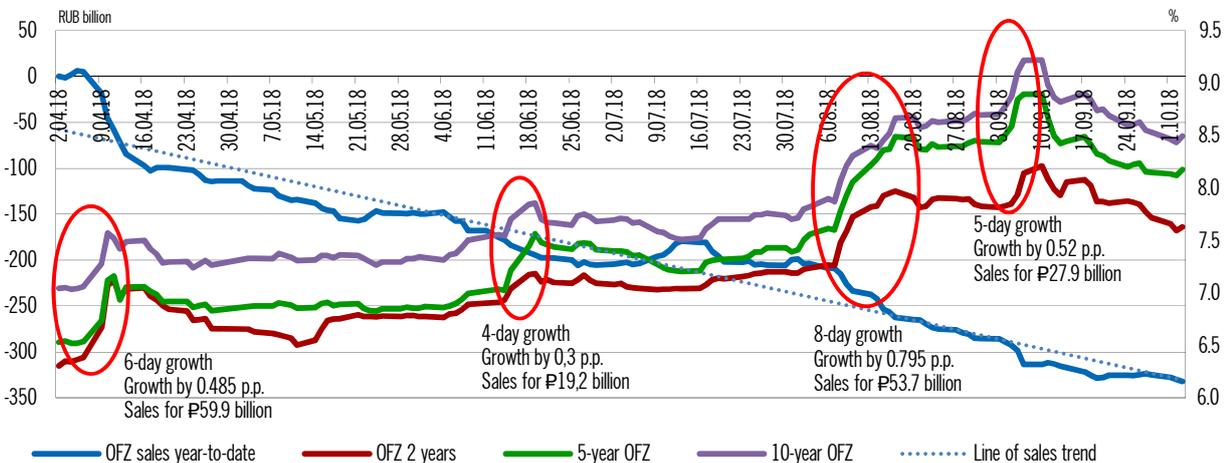
Indicator/Period	April	June	August	September
Duration of the period of yield growth, days	6	4	8	5
Yield change during the period of yield growth, p.p.	0.49	0.30	0.80	0.52
average daily, p.p.	0.08	0.08	0.10	0.10
OFZ sales during the period of yield growth, RUB billion	59.9	19.2	53.7	27.9
average daily, RUB billion	10	4.8	6.7	5.6

A regressive analysis was conducted to assess the effect of sales volumes, the additional effect of stress, the duration of yield changes

(autoregression), and the lag of the influence of sales by non-residents on yields.

Figure 14

Dynamics of net OFZ sales by non-residents and subsidiaries of foreign banks on the Moscow Exchange and OFZ yields with various maturities



Sources: PJSC Moscow Exchange, Bloomberg, Bank of Russia calculations.

According to the results obtained⁴, exclusive of stress episodes, a daily ₴1 billion reduction of OFZ investments by non-residents lead to growth of yields by 0.64 b.p. Stress episodes provide an additional increase in yields; this increase grew from 0.19 b.p. in April and 0.58 b.p. in June to 0.85 b.p. in August. The increase during the stress period in September was less and amounted to 0.52 b.p. (Figure 14). Thus, the growth of the increase reflects greater sensitivity of the OFZ yield curve to new withdrawals of non-residents. In October, there were no stress episodes of OFZ sales by non-residents.

In the second half of September, following the improvement of market conditions in EMEs, the situation on the secondary market of Russian government debt stabilised: net exchange sales of OFZs by non-residents decreased fourfold (from ₴31.8 billion in the first half to ₴7.9 billion in the second half of September), and yields decreased by 28 b.p. on average, falling to 7.21%–8.59% as of 1 October (depending on the maturity). In October, the volume of OFZ sales by non-residents declined further and amounted to only ₴16.2 billion. However, the yields on OFZs, mostly short-term, grew negligibly (by 18 b.p. on average).

Primary OFZ market

Due to the abrupt volatility upswing on the financial markets, the Ministry of Finance of Russia could not fully meet the established plan of initial OFZ placements in August and September⁵. Part of the placements were either incompletely placed or cancelled. Market participants, having included additional risk premiums on yields in

Figure 15
OFZ purchases at the auctions of the Ministry of Finance of Russia by subsidiary foreign banks and non-residents and their share in the total volume of placement

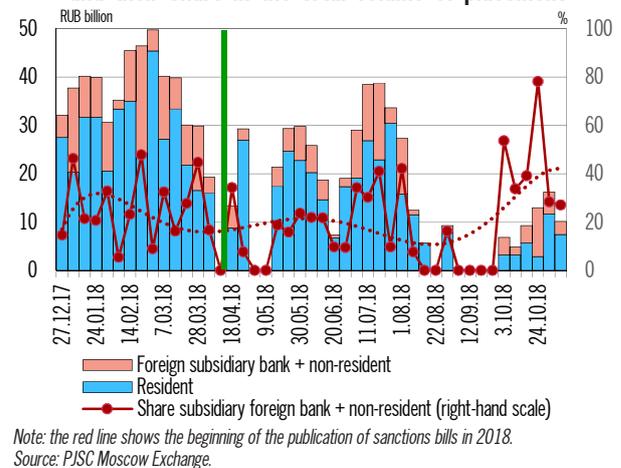
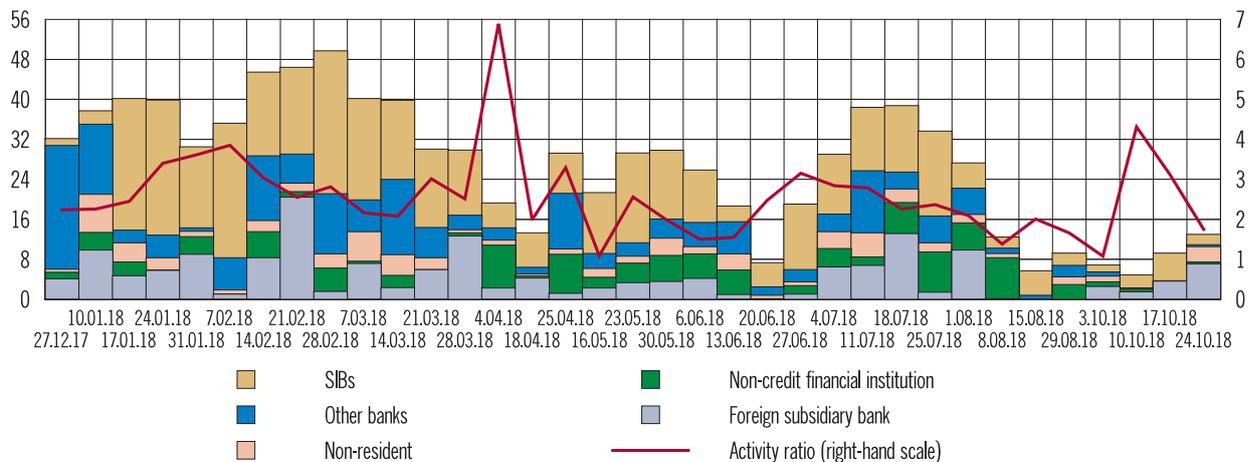


Figure 16
Dynamics and structure of OFZ placement at auctions



⁴ For the equation with the highest value of explanatory power.

⁵ As of the beginning of October, the expected volume of placements by the Ministry of Finance of Russia for 2018 was attained by only 53% (OFZs were placed in the amount of ₴552 billion against the target of ₴1,044 billion).

their applications, expected yields exceeding the maximum acceptable level established by the Ministry of Finance of Russia. In the light of this, in September, the Ministry of Finance of Russia made a decision to suspend new placements of securities and curtail the program of fund-raising through OFZs for Q4 by 31%. In October, the Ministry of Finance of Russia placed several OFZ issues in small amounts (₽5–₽10 billion) with a maturity of 5.5 years. Investor interest gradually started to recover: on 10 October an issue of ₽5 billion was placed for about 3 years, and on 17 and 24 October issues of ₽10 billion were placed for 5.4 years.

It should be noted that in the periods of the highest volatility in April and August, the share of non-residents and foreign subsidiary banks in the structure of placements at OFZ auctions decreased.

The situation in the stock market and corporate bond market

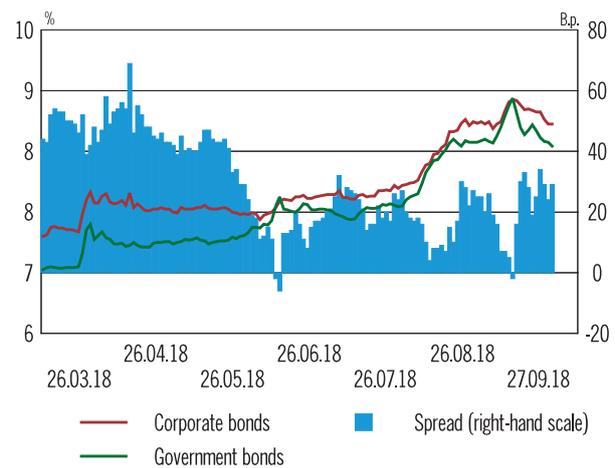
From April to the beginning of September, foreign subsidiary banks and non-residents continued reducing their investments in the bonds of corporate issuers. The greatest volumes of securities being sold on the exchange before July 2018 were bought by NFOs and then by SIBs and other Russian banks (Figure 17). In September, the corporate bond market stabilised. By 1 October, the spread between the returns on government and corporate bonds decreased almost twofold (from 52 b.p. to 30 b.p., see Figure 18) as compared to the May values. Such spread dynamics may be due

to a large lag in the growth of corporate bond yields caused by the lower volumes and liquidity of this market.

After the August decline in Russian stock quotations, beginning from the middle of September 2018, the indices of RTS and MOEX indices started to grow again. The MOEX index, having exceeded the level of 2,430 points, rose against its value as of the beginning of April 2018 (Figure 19). The increase in quotations was facilitated by the growth of oil quotations and stabilisation of emerging markets. At the same time, since June 2018, there has been a tendency toward the gradual exit of non-residents, and credit institutions have become the main buyers of listed shares.

Figure 18

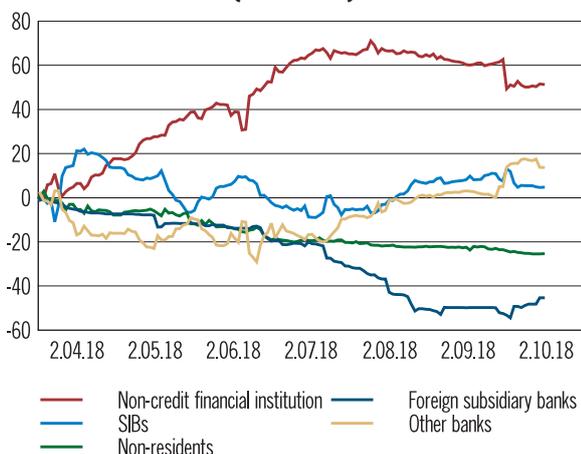
Dynamics of indices of corporate and government bonds



Source: PJSC Moscow Exchange.

Figure 17

Cumulative net purchases of the main categories of participants in the corporate bond market (RUB billion)



Source: PJSC Moscow Exchange.

Figure 19

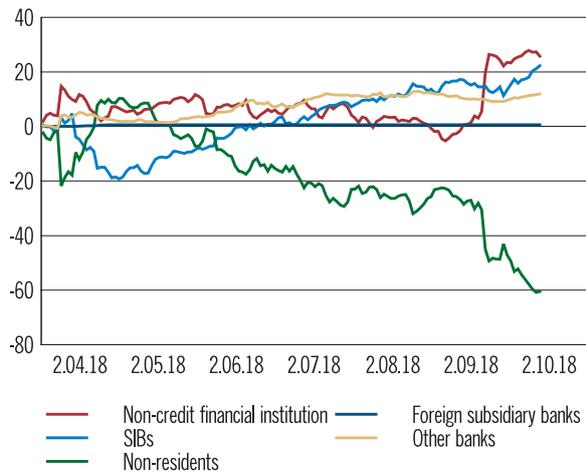
Dynamics of the RTS and Moscow Exchange stock indices



Source: PJSC Moscow Exchange.

Figure 20

Cumulative net purchases of the main categories of participants in the stock market (RUB billion)



Source: PJSC Moscow Exchange.

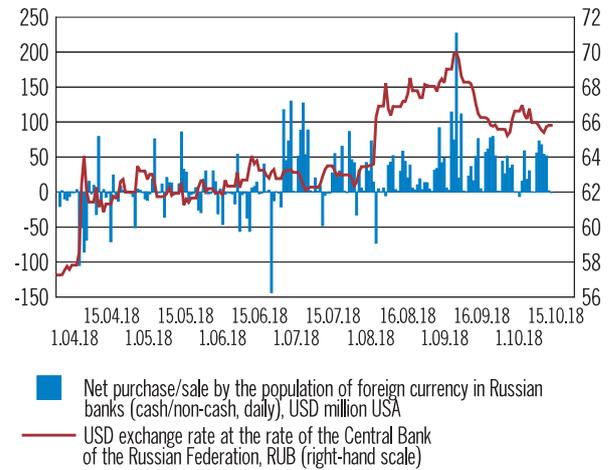
In the last two weeks of September, there was a peak in the sales of shares by non-residents—about ₴20 billion (45.9% of which are shares of fuel and energy companies, 9.9% are bank shares, 22.1% are consumer sector shares), all of which were bought by NFOs (Figure 20). In October, stock sales by non-residents continued; however, the main buyers were SIBs.

Foreign currency market

With the funds released from the sale of market assets (shares, bonds) in the stress periods (April, August–early September), non-resident investors mostly bought currency on the spot market. The net volume of currency bought (during the week after the announcement of draft laws on sanctions) in August was less than the April figures (₴118.7 billion and ₴146.6 billion, respectively). This fact as well as the curtailing of the carry trade strategy by non-residents in June contributed to a significant growth in demand for foreign currency by the middle of Q3 2018. The growing demand led to the weakening of the ruble exchange rate for the period from 1 April to 15 September by 19.2% against the US dollar and by 13.3% against the euro. Other emerging markets also demonstrated a tendency toward the weakening of the national currency (the greatest decrease in the exchange rate of the national currency to the US dollar was observed in Argentina, Turkey, Brazil, and South Africa, by 49.4%, 35.9%, 20.8%, and 20.7%, respectively).

Figure 21

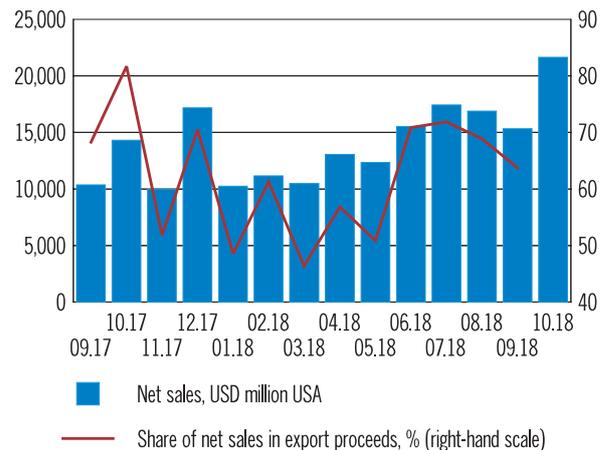
Volume of net acquisitions of foreign currency by individuals (USD million)



Source: data from a survey of banks.

Figure 22

Dynamics of net sales of currency receipts by exporters

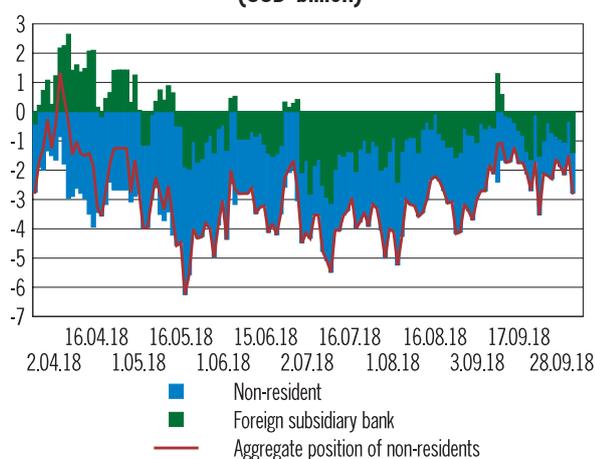


Source: Bank of Russia.

The fundamental factor for preserving the balance on the foreign exchange market even in conditions of net purchases by non-residents was the offering of foreign currency by exporters. The law adopted in July 2018 on softening the regime for the repatriation of currency proceeds for exporters affected by sanction restrictions does not have a significant effect on the sales of export proceeds and the environment of the domestic foreign exchange market. Most exporters have operating costs and capital expenditures denominated predominantly in rubles. Growth in the prices for oil and oil products leads to the increase of export proceeds but at the same time entails the growth of

Figure 23

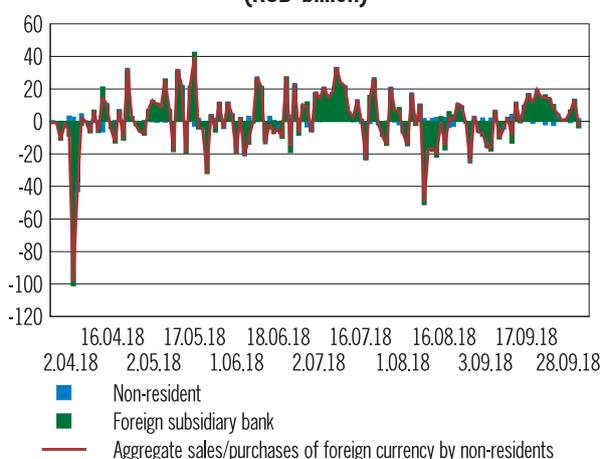
Positions of non-residents and subsidiaries of foreign banks on currency swaps with a maturity of up to a week (USD billion)



Sources: PJSC Moscow Exchange, JSC NCO NSD.

Figure 24

Sales/purchases of foreign currency by non-residents and subsidiary foreign banks (RUB billion)



Source: PJSC Moscow Exchange.

taxes and duties payable in rubles. In this respect, exporter companies need to sell a significant part of their export proceeds.

The growth of oil prices in 2018 contributed to an increase in the net sales of currency proceeds by 30 major exporters. The net sales of export proceeds in August–October 2018 grew by half year on year. The average prices for Urals oil in the period in question demonstrated an almost comparable increase (by 45% YoY). For the last 12 months (October 2017–September 2018), sales on the foreign exchange market amounted on average to 62% of total export proceeds⁶. After the enactment of the law on cancelling repatriation, the sales of export proceeds did not drop below 64% (Figure 22). The remaining currency proceeds are placed by the exporters mainly on accounts with Russian banks⁷, which also contributes to maintaining a favourable currency liquidity situation.

In the first week of September, there was an increase in demand for currency liquidity, and market players raised currency by swaps with the Bank of Russia. This was caused by short-term factors related to individual operations of major participating banks. The long-term factor affecting

the situation with currency liquidity in the banking sector is the gradual reduction of foreign currency funds on customer accounts (both individual and corporate) (Figures 25 and 26). The gradual reduction of foreign currency bank deposits is generally a favourable trend, which is caused, among other things, by the Bank of Russia's measures to reduce dollarization.

During Q2–Q3 2018, household deposits in foreign currency decreased by \$5.6 billion (or -6.1%), and corporate foreign currency deposits decreased by \$10.7 billion (or -8.6%). In addition to the sanction declamation from the United States, a certain acceleration of the outflow of foreign currency in the period under review was also due to the seasonal increase in dividend payments in the summer months. However, by September, the balances in the foreign currency accounts of legal entities had increased. The structure of foreign exchange liabilities to legal entities for groups of credit institutions as a whole remained stable.

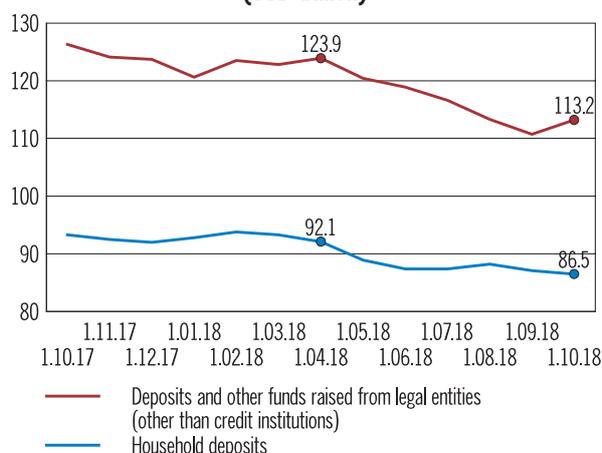
In September, the Bank of Russia conducted a survey of 24 major credit institutions during which the respondents provided information about the dynamics of claims and liabilities in foreign currency in accordance with contractual terms and about the most probable dynamics in accordance with their own forecasts (subject to adjustment of the planned dates of expected early repayment and/or extension of loans and withdrawal and/or extension of deposits).

⁶ The minimum value of 46% was recorded in March when a number of major exporters repaid their public borrowings, and the maximum value of 71.5% was recorded in June of the current year (the peak of dividend payments by companies for the 2017 financial year).

⁷ As of 1 October 2018, 10 major non-financial companies reporting to the Bank of Russia about their currency assets hold 90% of their total funds on accounts with non-resident banks.

Figure 25

Dynamics of deposits of legal entities and household deposits in foreign currency (USD billion)



Source: data from the reporting form 0409101.

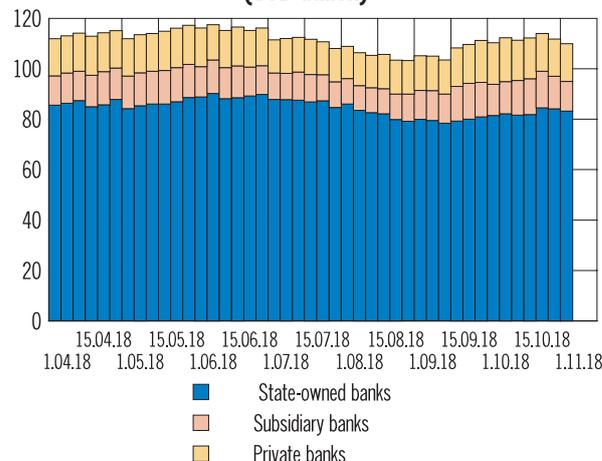
According to the results of the interview, the largest banks have enough FX liquidity to cover expected repayments of foreign currency liabilities. In accordance with the forecasts of the banks, the cumulative negative gap⁸ at banks with a deficit during Q4 2018 will not exceed \$2.1 billion (\$1.2 billion in state-owned banks, \$0.8 billion in private banks, and \$0.1 billion in subsidiary banks). At the same time, the FX liquidity cushion (cash on hand, cash in accounts, and securities for sale) as of 1 September 2018 amounted to \$43.9 billion (compared to \$39.7 billion a year ago).

Decisions made by the Bank of Russia on 14 September to raise the key rate by 0.25 p.p. to 7.50% per annum and suspend the purchase of foreign currency in the domestic market within the framework of the budget rule until the end of the year and the increase in foreign currency inflows from exporters due to rising oil prices and improvements in the economies of EME countries have favourably affected Russian financial markets, including the currency market. At the same time, from the second half of September, non-residents resumed selling currency in the spot market and, having fully sold the volume acquired during the stress period (August–early September), began to reopen long positions in currency swaps, and the volume of net FX cash purchases by the population began to decline. All this contributed to the improvement of the liquidity situation in the foreign exchange market and also

⁸ The difference between liquid foreign currency assets and liabilities to be repaid for banks for which this value is negative.

Figure 26

Dynamics of liabilities in foreign currency to legal entities by groups of banks (USD billion)



Source: data from the reporting form 0409301.

led to the adjustment of the national currency exchange rate. For example, over the second half of September, the exchange rate of the ruble to the US dollar increased by almost 4%, while the exchange rate of the ruble to the euro increased by 4.6%.

Thus, in Q2–Q3, the foreign exchange market as a whole showed sufficient resilience to external shocks. The measures undertaken by the Bank of Russia were favourably received by the market and made it possible to stabilise the situation quickly.

2.2. Analysis of structural changes in the repo exchange market in 2014–2018

In recent years, both in Russia and in other countries, the preferences of money market participants have shifted to the conclusion of transactions with collateral. This trend is reflected in Russia in a more active increase in the volume of operations and the number of participants in the repo market compared to the interbank lending market. The Bank of Russia analysed the structural changes in the repo exchange market in 2014–2018. The study showed that, compared to 2014, the exchange-traded repo market has undergone significant changes not only in the volume of open positions but also in the structure of transactions. Growth in the number of transactions with the central counterparty (CCP) and improved quality of collateral have helped to reduce the risks in

the market. At the same time, the concentration in almost all market segments increased with differing dynamics of changes in the number of net lenders and net borrowers (+48% and -12%, respectively).

The structure of the repo exchange market by type of participants

In early October 2018, the volume of all open positions in the market of ruble exchange-traded repos amounted to ₴2.4 trillion, which is more than five times higher than the same indicator in 2014 (Table 4). 95.5% of repo deals were made with the CCP, of which 17.8% used clearing certificates of participation⁹ (CCoPs) as collateral. The volume of the open position on transactions with the CCP using CCoPs exceeded the analogous inter-dealer repo rate by about four times. Repo operations with the CCP started to be carried out in the beginning of 2013, and the share of inter-dealer repos in the market from early April 2014 to October 2018 dropped from 85% to 4.5%. The volume of repos with the CCP using CCoP over the past two years (since their introduction in 2016) has also been growing.

The growth of demand for this instrument is partly due to the options available when creating CCoPs for market participants: to retain title to securities contributed to the asset pool, to enter into securities transactions where corporate events take place before the execution of the second part of the repo transaction, to effectively manage collateral, and to execute a repo with a basket of securities. Furthermore, the mechanism by which the risks of individual assets forming part of a CCoP are taken into account by the CCP during the creation of the CCoP through the setting of appropriate discounts is transparent and universal for all market participants. Thus, a repo with the CCP using CCoPs, due to the existence of the performance guarantee from JSC NCO National Clearing Centre (NCC) and additional opportunities provided to participants as well as assessment of the quality of collateral through discounts on repos with the CCP, is perceived by market participants as less risky than a standard inter-dealer repo.

In April 2014, amid increased currency risks, the amount of foreign currency exchange-traded

Table 4

Open positions of the players in the market of exchange-traded ruble repo for all maturities (RUB billion)

Date	Repo with the CCP using CCoPs	Inter-dealer repo	Repo with the CCP without CCoPs	Total
1.04.2014	0.0	337.9	62.4	400.3
1.10.2014	0.0	420.3	146.3	566.6
1.04.2015	0.0	302.6	235.5	538.1
1.10.2015	0.0	236.0	398.6	634.6
4.04.2016	1.2	286.9	644.8	932.8
3.10.2016	1.3	298.8	1,014.3	1,314.5
3.04.2017	5.5	323.2	1,325.0	1,653.6
2.10.2017	65.9	218.5	1,656.6	1,941.1
2.04.2018	179.7	184.1	1,893.8	2,257.6
1.10.2018	404.7	107.8	1,885.3	2,397.8

Source: Bank of Russia's calculations.

repo transactions was insignificant. The volume of open positions on these transactions both in the inter-dealer repo sector and in the sector of repos with the CCP began to grow starting in the second half of 2015 and in early October 2018 amounted to ₴136 billion and ₴559 billion (in ruble terms), respectively. The share of repo transactions in US dollars over the past four years ranged from 97% to 99.8%. According to the data as of early October 2018, 70% of foreign currency repo transactions were concluded with the CPP, while the volume of transactions using CCoPs in US dollars is growing this year and has already reached ₴86 billion in ruble terms.

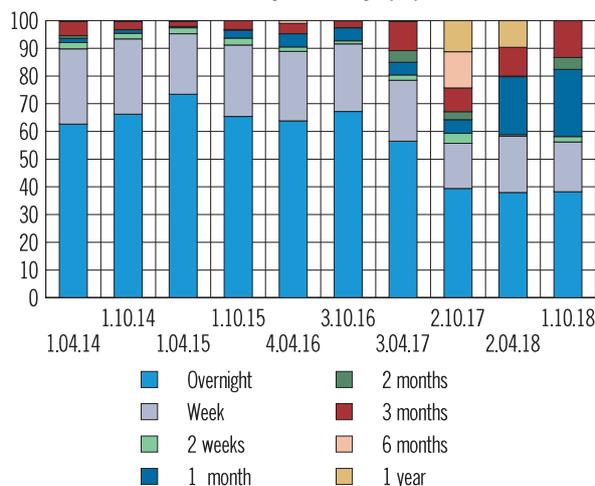
Without regard to the breakdown by currencies, the share of repo transactions with the CCP from April 2014 to April 2018 for borrowers increased from 46% to 90.6% of all exchange-traded repo transactions, while for creditors it increased from 49.0% to 98.4%.

Repo market structure by maturity

For the period from April 2014 to October 2018, the total share of exchange-traded ruble repo transactions for a period of overnight and 'up to a week' decreased from 89.7% to 56.1% (Figure 27). A significant increase in transaction volumes for longer periods occurred simultaneously with the development of the market of repos with the CCP, including with the increase of the possible term of a transaction on the market, first up to 3 months in mid-2017 and then, for some securities, up to 1 year. The appearance of the instrument of repos

⁹ A repo with the CCP using CCoPs is a special type of repo transaction the subject of which is a standardised set of high-quality securities.

Structure of the ruble repo market by maturity (%)



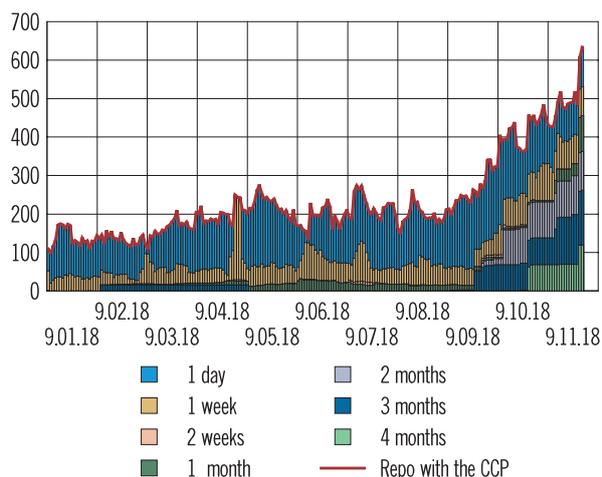
Source: Bank of Russia's calculations.

Figure 27

the background of growing concentration of transactions of the largest market participants. For example, as of 1 October 2018, one, three, and five of the largest net creditors accounted for 26%, 38%, and 47% of the volume of transactions, respectively, and one, three, and five largest net borrowers accounted for 27%, 48%, and 57%. For reference, in 2014, the shares of the five largest net creditors and net borrowers were approximately equal and made up 37% and 35%, respectively.

Changes in market concentration can be viewed in the context of assessing the dynamics of market completeness: the stability and breadth of interaction of the average market participant. The completeness ratio, which shows the share of market participants that interact with the average participant in the market, was used for this purpose (Figures 29, 30). The numerator of this ratio reflects the actual number of counterparties of the participant, while the denominator reflects the potential maximum number of counterparties of the participant (all possible parties to a transaction of any average participant). For the market of exchange-traded ruble repo as a whole, the ratio is 4%. This means that the average participant borrows from or lends to 4% of market participants. For the separate market segments of repo with the CCP and repo without the CCP, taking into account the number of their participants, the ratio is 4.2% and 4.3%, respectively.

Segment structure: market of ruble repo with the CCP using CCoPs by maturity for 2018 (RUB billion)



Source: Bank of Russia's calculations.

Figure 28

with the CCP using CCoPs served as an additional impetus for the growth of maturity (Figure 28). The structure of foreign currency repo transactions is dominated by transactions for a period of overnight and 'up to a week'; their aggregate share in the total volume of transactions during the period under review decreased from 95.8% to 87.6%.

Repo market concentration

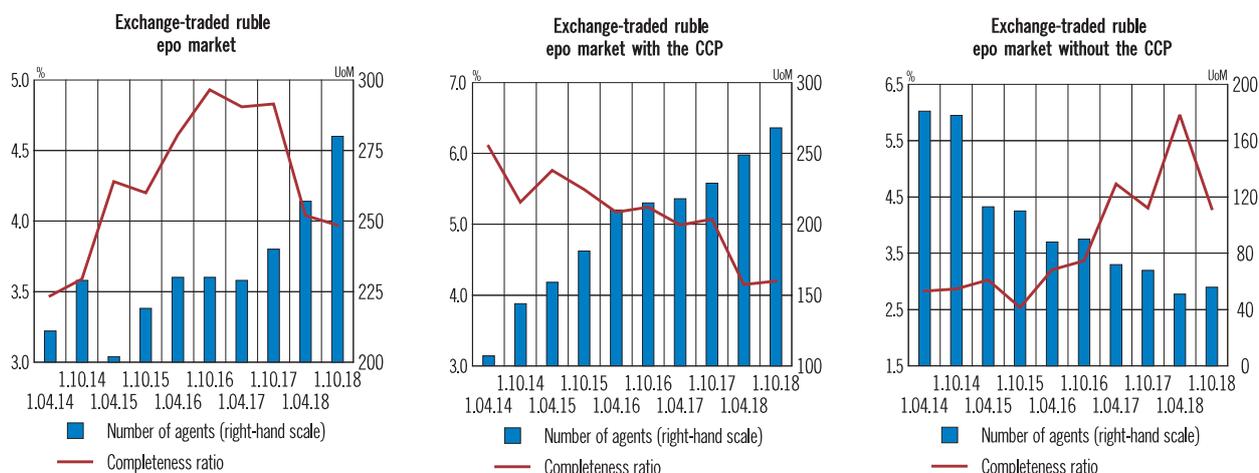
Over the past four years, the number of net creditors in the ruble and foreign currency markets of exchange-traded repos has increased from 171 to 253, while the number of net borrowers has decreased from 169 to 149. The change in the number of participants occurred against

the foreign currency repo market as a whole, the value of the completeness ratio is 3.9%. For the separate market segments of repo with the CCP and repo without the CCP, taking into account the number of participants in them, the coefficient is 3.8% and 11.0%, respectively. The higher values in the inter-dealer segment are stable, despite fluctuations in the number of participants, and in the last three years reflect the conservatism of participants in the choice of transaction counterparties as well as the overall gradual trend of reduction of the number of participants of this segment compared to repo with the CCP.

The active growth of the number of participants in exchange-traded repo, especially in the segment of repo with the CCP, leads to a decrease in the completeness ratio. Essentially, the number of participants is growing faster than the number of counterparties of each of the participants. Thus, the entry of the CCP into the repo market, taking into

Figure 29

Dynamics of the density of the exchange-traded ruble repo market



Source: Bank of Russia's calculations.

account the lower risks of transactions with it, led to an increase in the number of participants. At the same time, the decrease in the completeness ratio is evidence of the narrowness of the primary circle of counterparties of a new participant after its entry into the market.

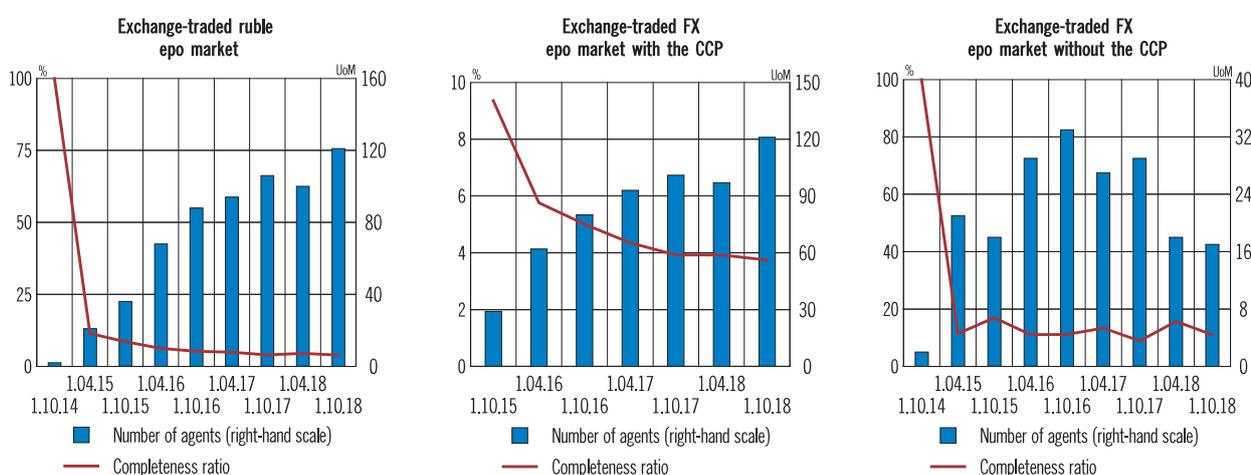
Additionally, the Bank of Russia assessed the degree of concentration of the exchange-traded repo market over time using the Herfindahl index. This index enables segmentation of the market by level of concentration into a highly concentrated market (type I concentration, index value from 1,800 to 10,000), a market with average concentration (type II concentration, index value from 1,000 to 1,800), or a market with weak concentration (type

III concentration, index value less than 1,000). The concentration index showed different dynamics for the ruble and foreign exchange segments of the exchange-traded repo market; however, in 2018, neither segment is categorised as a highly concentrated market in terms of either borrowers or creditors (Figures 31, 32). The growth of the degree of concentration of the ruble exchange-traded repo market occurred both in terms of inter-dealer transactions and, to a lesser extent, in transactions with the CCP. Accelerated growth of concentration in inter-dealer repo is largely due to the general decline in the number of its participants.

In the segment of foreign currency exchange-traded repo, with a significant increase in the

Figure 30

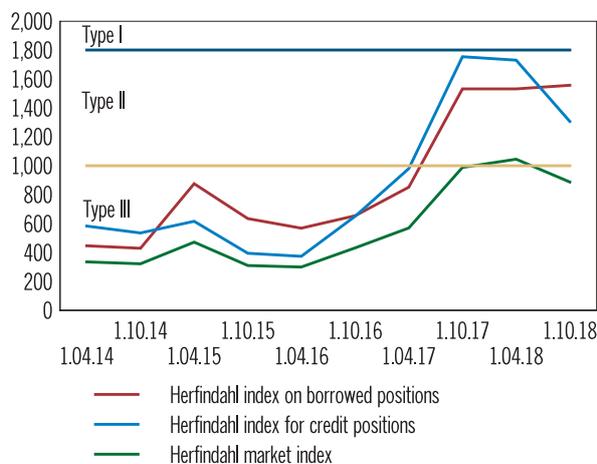
Dynamics of the density of the exchange-traded FX repo market



Source: Bank of Russia's calculations.

Figure 31

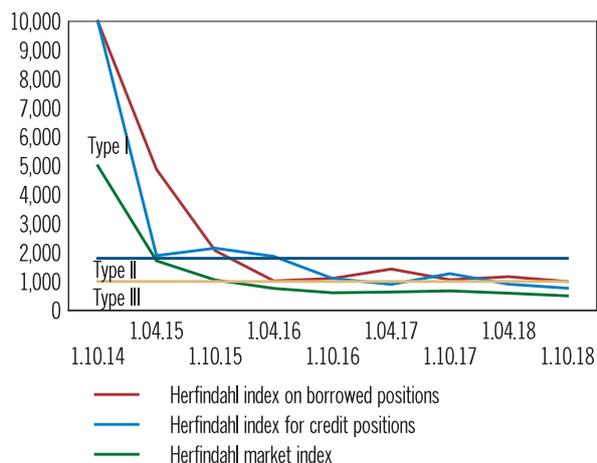
Dynamics of the concentration of the exchange-traded ruble repo market



Source: Bank of Russia's calculations.

Figure 32

Dynamics of the concentration of the exchange-traded FX repo market



Source: Bank of Russia's calculations.

number of repo transactions with the CCP, there was a significant reduction in the degree of concentration. However, the study showed that the segment of inter-dealer foreign currency repo taken separately was highly concentrated in 2018 both in terms of borrowers and creditors (the values of the Herfindahl index for borrowers and creditors exceeded 1,800 as of 1 October 2018).

Thus, the increase in concentration in the repo market is uneven. The development of the institution of the CCP in the period under review had a positive effect on the degree of concentration of the participants in the foreign currency segment; however, the concentration of ruble repo both for borrowers and creditors increased.

Structure of collateral in the repo market

The quality of collateral as a whole in the exchange-traded repo market for the period from April 2014 to October 2018 has improved. The volume of open positions in repo transactions with the CCP using bonds as collateral grew from ₴37 billion to ₴2.2 trillion. The share of bonds in the collateral for all repo transactions with the CCP increased from 60% to 94% (excluding securities in CCoPs). In inter-dealer repo, the share of transactions with bonds in the collateral also increased (from 62% to 75%), but the volume of open positions in inter-dealer repo is significantly lower than in the market with the CCP and decreased from ₴207 billion to ₴169 billion during the period. The volume of the open position in repo transactions with the CCP using CCoPs in early October 2018 was double the volume of inter-dealer repo with various collateral (₴490 billion against ₴244 billion) (Figure 33).

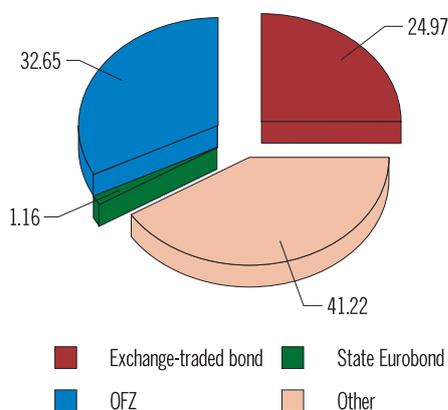
Along with the growth in the share of bonds after 2014, the structure of bonds in the collateral has also changed (Figure 34). The share of corporate exchange-traded bonds increased from 25% to 43%. Other (ordinary corporate) bonds, on the contrary, were no longer of interest to participants; their share decreased from 41% to 6%. The growing popularity of exchange-traded bonds indicates the high confidence of participants in the quality of this instrument. Despite the reduction of the share of OFZs in transactions from 33.6% to 23.5%, the share of public Eurobonds in early October 2018 was 8.5%, which compensated for the decline in the share of OFZs. In 2018, participants also used KOBRs as collateral for transactions (3.8%). Thus, the share of public sector bonds in the collateral remained almost unchanged, while exchange-traded bonds became more attractive to participants compared to ordinary corporate bonds.

For the period from April 2014 through August 2018, the volume and number of participants in the repo market grew, the market structure changed, and the maturity of transactions and the quality of collateral increased. In the ruble repo market, concentration increased, while in the foreign currency repo market concentration decreased.

The prevailing share in exchange-traded repo (95.5% in early October 2018) of repo transactions with the CCP shows a high level of confidence of

Figure 33

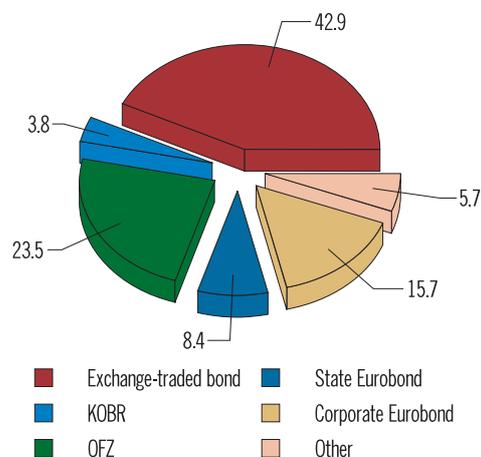
Structure of collateral under exchange-traded repo transactions in 2014 (%)



Source: Bank of Russia's calculations.

Figure 34

Structure of collateral under exchange-traded repo transactions in 2018 (%)



Source: Bank of Russia's calculations.

market participants in the institution of the CCP (due to the liquidity of the offered instruments and the availability of a transaction performance guarantee). This reduces the overall risk of the repo market but increases the systemic significance of the CCP itself and determines high requirements

for its risk management system. The active development of the market of repo with the CCP using CCoPs indicates a high level of interest of market participants in the ability to attract or place repo funds under asset packages weighted subject to discounts set by the CCP.

3. ASSESSMENT OF SYSTEMIC RISKS OF THE BANKING SECTOR

3.1. Quality of portfolios of bank loans to the corporate sector

The period from 1 April through 1 October 2018 was characterised by the growth of the ruble loan portfolio to non-financial institutions and the ongoing process of devaluation of the aggregate loan portfolio. The credit quality of the portfolio during the specified period did not significantly change for the banking sector as a whole or for the group of banks that are not undergoing a financial rehabilitation procedure. The preservation of the share of non-performing ruble loans was offset by an increase in the share of foreign currency NPLs to companies from the construction and trade sectors. Against the background of the general decline of interest rates in the economy, there was a decrease in interest yield of the loan portfolio compared to the same period of the previous year, which was partially offset by the decrease in the cost of risk. The profitability of the corporate loan portfolio in the period under review decreased compared to the previous year.

Overall, the portfolio of loans to non-financial organisations for the period from 1 April through 1 October 2018 showed an increase in annual growth rates of outstanding loans by 0.2 p.p., to 6.3%¹. For the portfolio of loans issued in rubles, the growth rate increased by 1.2 p.p. to 9.2%, while for the portfolio of FX loans, taking into account adjustment for the exchange rate, the outstanding loan debt decreased by 0.8% over 12 months.

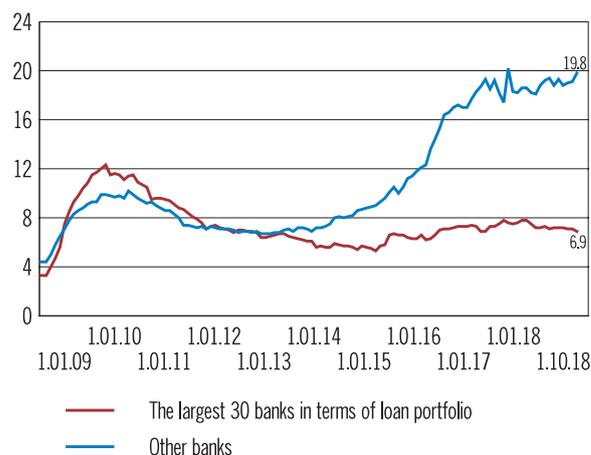
The quality of the corporate loan portfolio of the banking sector remained stable. The share of quality category IV–V loans stayed at the level of 12.4%². With the exception of the portfolios of banks undergoing financial rehabilitation procedures, the share of quality category IV–V loans decreased by 0.1 p.p., to 8.3%. For the 30 largest banks in terms of the size of the loan portfolio, the share

of quality category IV–V loans declined, while for the remaining banks it grew due to the decrease in outstanding debt on the loan portfolio. Overall for the banking sector, the annualised cost of risk³ for Q2–Q3 2018 decreased by 0.4 p.p., to 1.6%, compared to the same period of 2017. At the same time, interest yield⁴ also declined (by 1.6 p.p. to 10.2%) against the background of a general decline in interest rates in the economy. This led to a decrease in the profitability of banks' portfolios of loans to the corporate sector as compared to 2017.

For certain types of economic activity, there are various trends in the quality of the loan portfolio. For ruble loans to companies in agriculture, manufacturing, transportation and storage, wholesale and retail, the quality of loan portfolios has improved.

The highest concentration of quality category IV–V loans in the portfolio is in the construction industry and related real estate operations. With

Figure 35
Dynamics of the share of quality category IV–V loans by groups of banks (with the exception of banks undergoing financial rehabilitation) (%)



¹ Adjusted for currency revaluation.

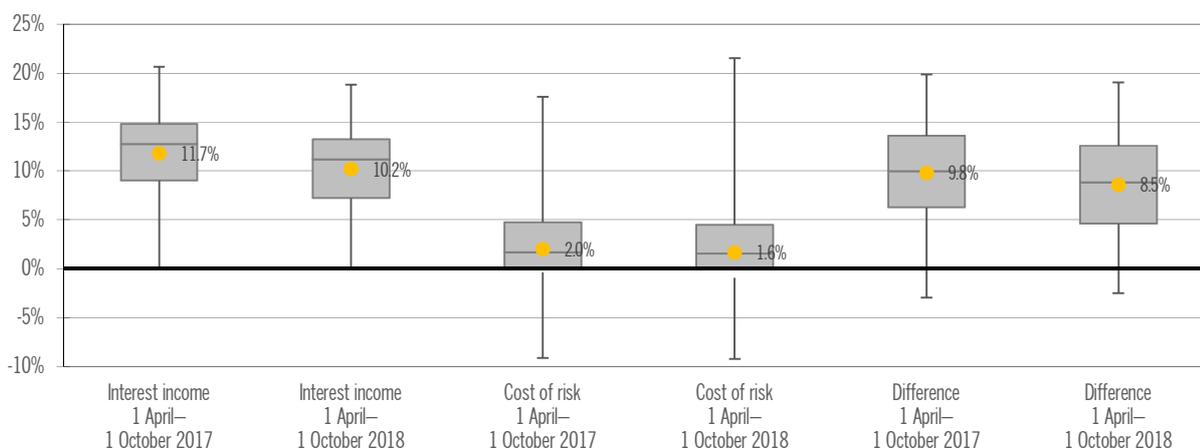
² Source: Reporting form 0409303 'Information on loans granted to legal entities'.

³ The cost of risk is calculated as the ratio of the increase in provisions for the period to the average portfolio for the same period less the amount of provisions for possible losses on loans. Then it is annualised for 12 months.

⁴ Interest yield is calculated as the ratio of the paid amount of interest on the portfolio for the period to the average portfolio over the same period less the amount of provisions for possible losses on loans. Then it is annualised for 12 months.

Figure 36

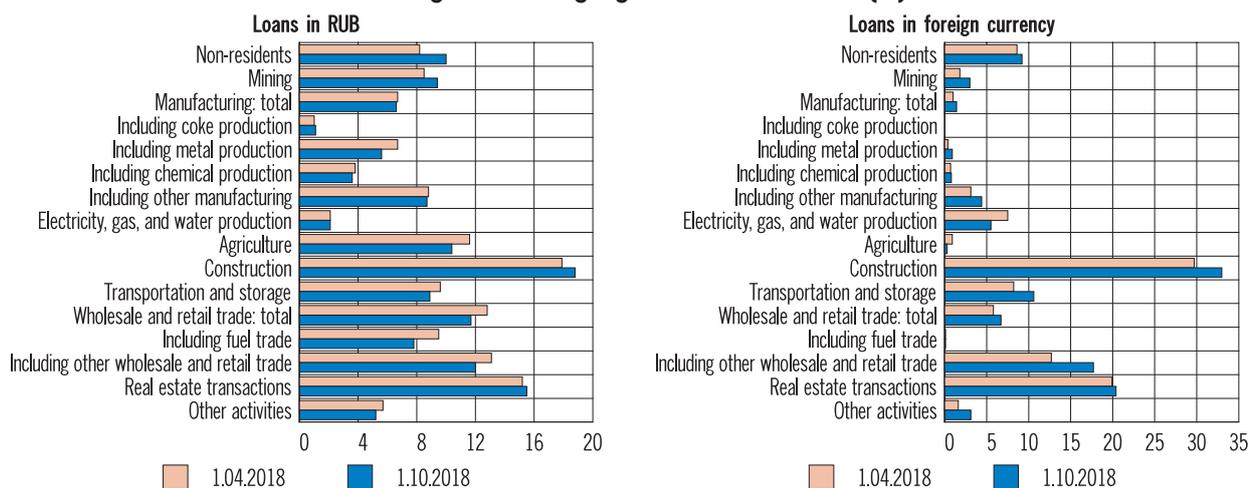
**Distribution by banks of annualised interest income and risk value of corporate loan portfolios
(for the period from 1 April to 1 October)* (%)**



* For banks that are not undergoing the procedure of financial rehabilitation and that have outstanding debt under the corporate loan portfolio of more than RUB 1 billion.
Source: Bloomberg.

Figure 37

**Share of quality category IV and V loans by types of economic activity,
excluding banks undergoing financial rehabilitation (%)**



the exception of banks undergoing financial rehabilitation procedures, the share of such loans for construction companies has increased by 1.0 p.p., to 18.8%, in the portfolio of ruble loans and by 3.1 p.p., up to 32.8%, in the portfolio of foreign currency loans. The increase in the share of 'bad' loans in the ruble portfolio was caused by continuing defaults of companies in the construction industry. The deterioration of the financial condition of most construction companies, loans to which moved to quality category IV–V, is associated with large volumes of lawsuits against such companies from their suppliers and contractors. The main reasons for the worsening of the payment history of real estate developers were the misuse of funds

intended for construction and a decrease in revenue due to the decline of real estate sales. In the foreign currency portfolio, the increase in the share of 'bad' loans was technical in nature and was due to a reduction in the size of the portfolio due to the process of reducing dollarization.

For the majority of construction companies (83%) whose loans have moved to quality category IV–V, the main activity is listed as 'Construction of residential and non-residential buildings'. The analysis of company data, news background, arbitration cases, issued licenses, and concluded contracts makes it possible to establish that approximately 49% of these companies are engaged in the construction of non-residential

premises, and 18% are engaged in installation works and laying of communication lines for non-residential premises. About 30% of the companies are engaged in the construction of residential real estate, and about 4% of the companies produce construction materials. At the same time, some of the companies are simultaneously engaged in the construction of both residential and non-residential buildings.

A significant increase in the share of quality category IV–V loans was also observed in foreign currency loans to wholesale and retail companies (excluding the fuel trade). The proportion of ‘bad’ FX loans increased by 6.0 p.p., to 18.7%, due to the deterioration of the quality category of an individual large borrower.

3.2. Credit risks in the consumer lending segment

Risks of the unsecured consumer lending market

The market for unsecured consumer lending in Q2–Q3 2018 was characterised by the growth of payments and a steady decline in the share of nonperforming loans as well as a gradual slowdown in the trend of reduction of effective interest rate. Annual growth rates of outstanding loan debt in the banking sector as a whole as of 1 October 2018 reached 20.7%⁵. The accelerating growth of the loan portfolio creates prerequisites for an excessive increase in the debt burden of the population for unsecured loans, which currently makes up 11.4% (debt/annual income); this is lower than the 2014 values (13.4%) but is relatively high compared to other countries. Since Q1 2017, the debt under unsecured loans increased from 6.6% to 7.3% of GDP.

The high growth rates of cumulative indebtedness were primarily the result of the growth of loans issued in cash: ₺1,147 billion per quarter, which is twice as high as in 2015–2017. However, even with the rapid growth of loan portfolios, market participants maintained underwriting standards: the weighted average of the debt burden of customers (PTI) was 41% (against 42% in 2017, Figure 39).

⁵ For credit institutions operating as of the last reporting date, including previously reorganised banks.

Figure 38

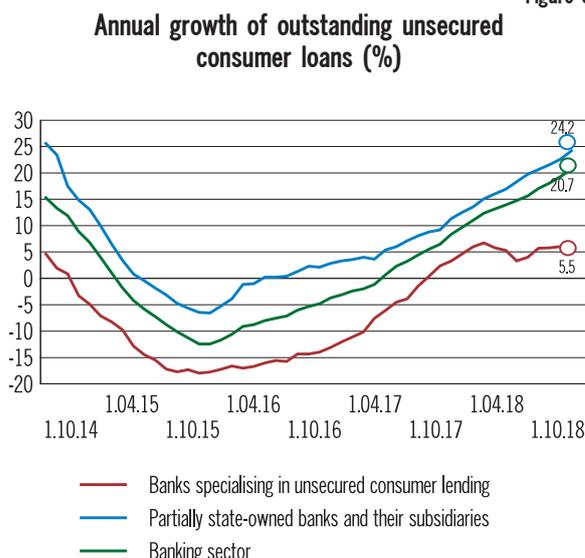
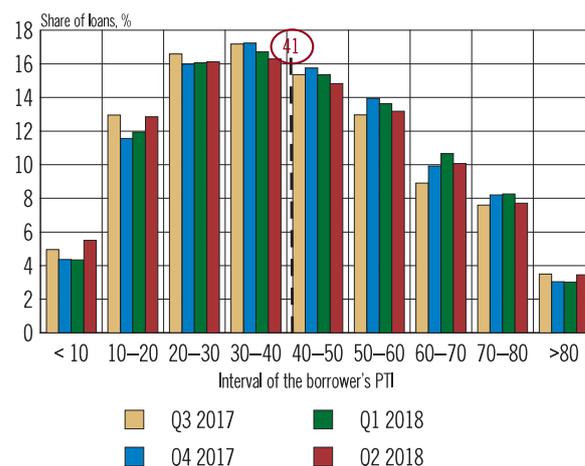


Figure 39

Distribution of loans in cash by the value of customers' PTI (%)



PTI⁶ could be maintained at the same level due to lower rates, but the value of this factor has significantly weakened compared to 2017–Q1 2018. For example, on loans issued in cash, the decrease in effective interest rate for Q2–Q3 2018 was 0.4 p.p., and on credit cards the average value of effective interest rate practically did not change (Figure 40).

Against the background of high rates of outstanding debt growth, Q2–Q3 2018 were also characterised by a gradual improvement in the credit quality of the portfolios. The share of loans

⁶ PTI (payment to income) is the ratio of the amount of payments established for all loans issued to a borrower by a credit institution to the borrower's income per quarter.

Figure 40

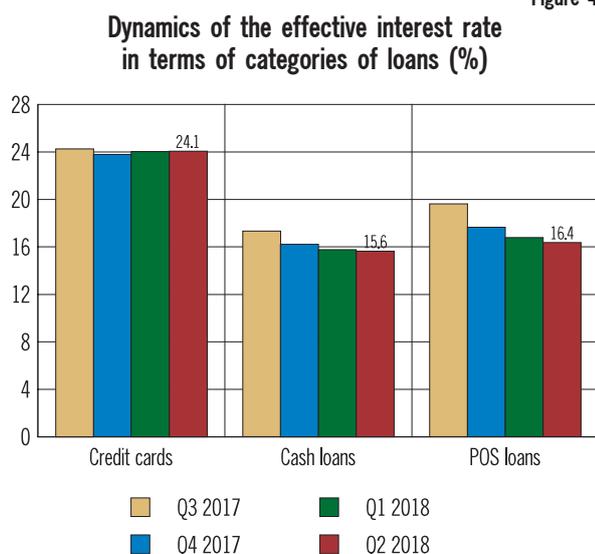


Figure 42

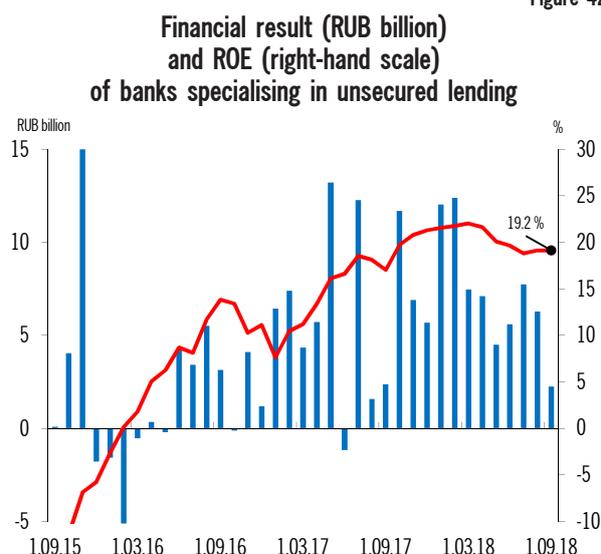


Figure 41

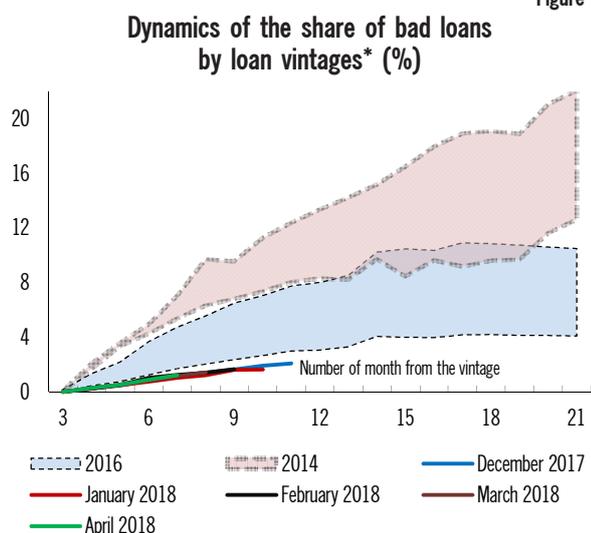
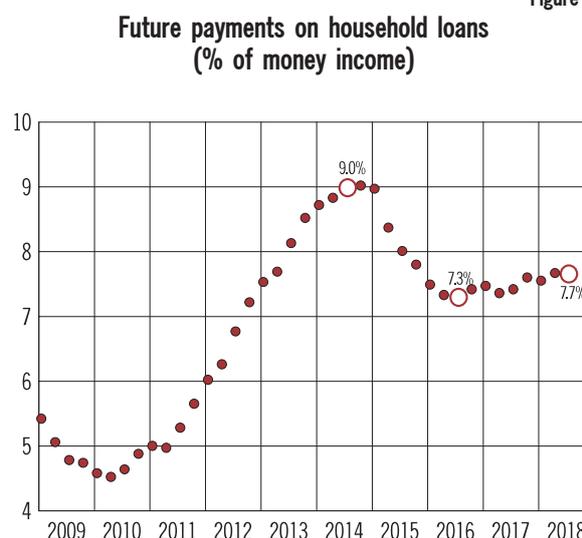


Figure 43



* Based on NBCH data. Covers more than 50% of the market.

with arrears of over 90 days has been decreasing steadily for over two years and amounted to 10.4% as of 1 October 2018 (vs 13.9% as of 1 October 2017). For the group of banks specialising in unsecured consumer lending, the decrease is even more significant: from 27.8% to 21.6%⁷. This decline is partially due to the high growth rate of the aggregate portfolio (contribution to the decline in the share of 'bad' loans of up to 1.2 p.p. for retail banks), but the vintage analysis also demonstrates high quality of disbursements. For example, for

loans issued in H1 2018, the expected share of 'bad' loans is less than 4.0% as of the 12 th month from the issue date (vs 4–5% in 2016 and 10–12% in 2014).

The reduction of the level of risk of the loan portfolio contributed to maintaining the return on equity of retail banks, which as of 1 September 2018 was of 19.2% (with 17% a year earlier). The revenue received by these credit institutions from March 1 to 1 September 2018 amounted to ₴33.5 billion (Figure 42).

In general, the unsecured lending market is at an ascending stage of the credit cycle: high demand against the background of historically minimal rates and low risk on loans in 2017–H1 2018 ensures

⁷ Data from the reports of credit institutions on Form 0409115 (Section 3, debt under other consumer loans grouped in a portfolio of homogeneous loans). For credit institutions operating as of the last reporting date, including previously reorganised banks.

rapid portfolio growth and high return on equity for market participants. Under these conditions, the maintenance by banks of a balanced portfolio structure in terms of debt burden of the borrowers will pay a key role in maintaining financial stability. The exhaustion of opportunities for further reduction of rates will cease to exert a compensating effect on the level of debt burden of households, which was observed in 2015–2018 (Figure 43). Combined with double-digit debt growth rates, this could lead to the growth of the share of payments on loans in the expenses of individuals.

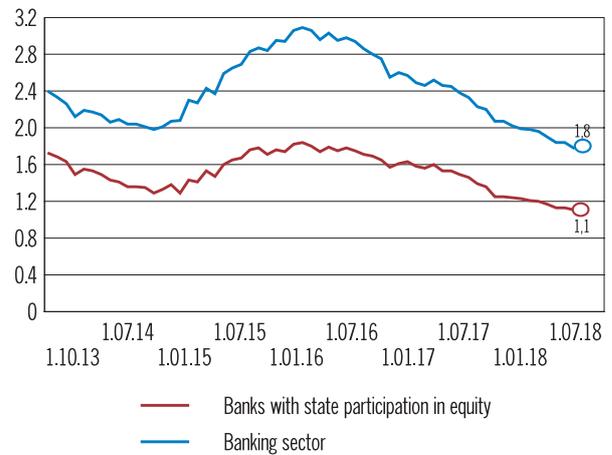
Risks of housing (including mortgage) lending

The mortgage lending segment in Q2 and Q3 2018 was characterised by accelerated rates of the growth of aggregate debt against the background of improvement of the credit quality of the portfolios of the majority of participants. The annual growth rate of outstanding loan debt on loans in rubles as of 1 October 2018 reached 25.6% (which accounted for 0.29 p.p. of the 0.35 p.p. decrease in the share of non-performing loans from 1 October 2017 to 1 October 2018), and the volume of disbursements in Q3 exceeded ₹761 billion. The volume of new lending reached its highest value for all time of observations (3% of quarterly GDP against 1.2% in 2015) but it was partly caused by the refinancing of previously issued loans at lower rates.

The observed portfolio growth was due to the cumulative effect of two groups of factors:

Share of mortgage loans non-performing over 90 days (%)

Figure 45

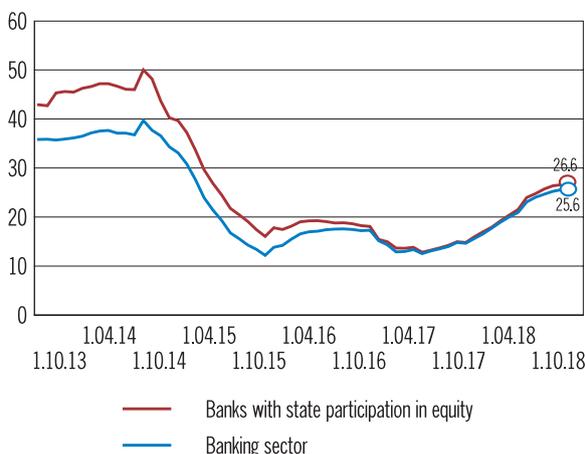


affordability of mortgage lending and a decrease in banks' requirements in terms of the down payment.

Since 2015, the affordability index for mortgage lending has increased from 22 to 34 (see Box 2), which has become a key factor that defined the growth of the mortgage market during the period under review (Figure 49). However, an increase in the volume of new lending was achieved primarily due to lower interest rates (reduction from 14% to 9.5%) and an increase in the term of mortgage loans (the average term increased from 174 months in Q3 2015 to 195 in Q3 2018). Nominal wages and the cost of residential real estate grew at similar rates (Figures 47, 48). In this regard, the potential

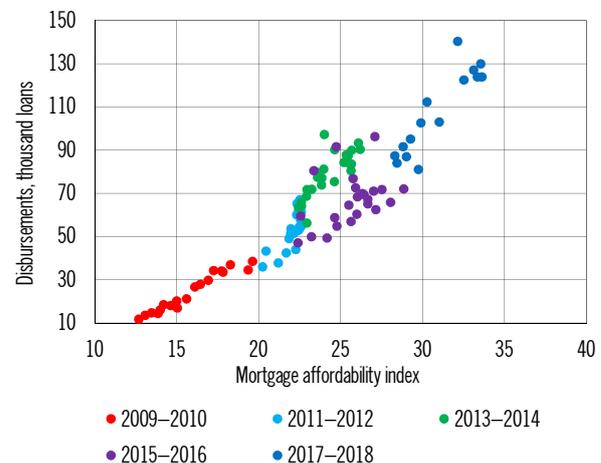
Annual growth rates of outstanding mortgage loans (%)

Figure 44



Dependence of the number of loans issued on the level of mortgage affordability

Figure 49



Box 2. Mortgage lending affordability index

Dynamics of the mortgage lending affordability index

Figure 46



The index reflects the area of a residential property that can be bought under a mortgage with an average effective interest rate for the market and an average loan maturity by spending half of the average nominal wage on the servicing of the loan:

$$Index = \frac{0,5 \cdot I}{A} = 0,5 * \frac{12 \cdot I * (1 - (1 + \frac{R}{12})^{-T})}{R \cdot P},$$

where I – is the average monthly nominal wage in the economy,

A – is the equal monthly instalment for the purchase of 1 square meter of residential real estate,

P – is the price of 1 square meter of residential real estate in the primary market,

R – is the weighted average rate for mortgage loans issued in this period,

T – is the average loan term.

Against the background of contradictory dynamics of debt burden factors, the index acts as an integral indicator that ensures the comparability of mortgage lending affordability over time.

Dynamics of the components of the mortgage lending affordability index: interest rate (price of 1 sq. m in the primary market)

Figure 47



Dynamics of the components of the mortgage lending affordability index: average loan term, nominal wage

Figure 48



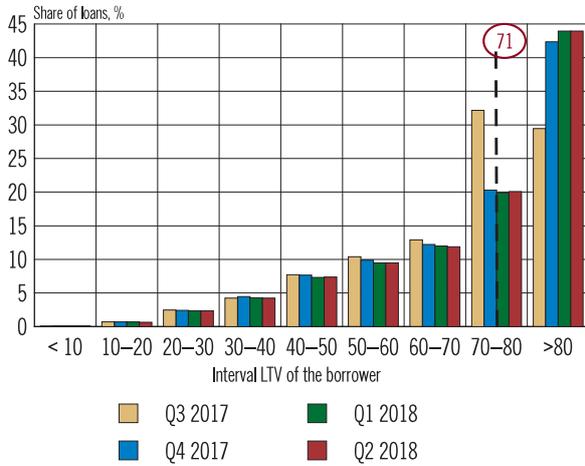
for further growth of disbursements against the background of the increase of interest rates by individual credit institutions is limited. Interest rate increases by individual banks will not affect the creditworthiness of the borrowers who already have a loan since mortgage rates are fixed.

An additional factor that stimulated the growth of disbursements in 2018 was the lowering of the requirements of credit institutions for potential borrowers regarding the amount of the down

payment. Mortgage loans with LTV of more than 90% account for less than 1.5% of loans. However, since Q3 2017, the share of new mortgage loans with LTV from 80% to 90% has increased from 28.2% to 42.6% (Figure 50). This segment is characterised by an increased level of credit risk (for more details, see section 5.1); therefore, given the easing of lending conditions by the Bank of Russia, measures were taken to increase the buffers to the risk ratio for the relevant loans (for more details, see

Distribution of loans granted by LTV level in 2017–2018

Figure 50



Section 5, The Bank of Russia’s macroprudential policy).

The possible expansion of the practice of granting consumer loans to finance the down payment carries a potential risk. Currently, this category of borrowers does not have a significant impact on the mortgage lending market and does not bear risks of financial stability. For example, according to Bank of Russia estimates derived from NBCH data and the data of the United Credit Bureau (UCB) in H1 2018, the share of borrowers who took a consumer loan three months before a mortgage loan was less than 3.0% in the total volume of new mortgage loans. However, the Bank of Russia will continue to monitor the mortgage market for the use by the borrowers of unsecured consumer lending.

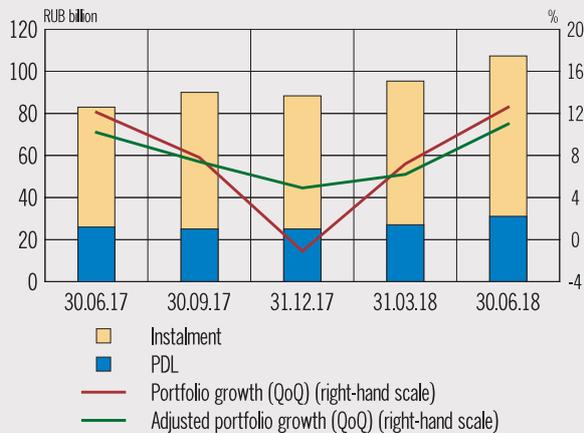
Box 3. Main trends in the consumer microfinance market

The portfolio of consumer microloans showed quite high growth rates during H1 2018, growing by 20.7% (or 28.7% annually), to ₱107 billion (Figure 51). At the same time, the high volatility of consumer microloan growth rates is due to the influence of two large microfinance organisations (market share of 36.5%; the dynamics without taking them into account are additionally presented below), the cumulative growth rate of which for H1 2018 amounted to 25.9% (or 22.0% annually).

The main driver of portfolio growth (+33.5% over the year) was the segment of instalment microloans, including owing to a large market participant associated with a retail bank. The Instalment segment also maintains high growth rates of the volumes of quarterly disbursements of microloans at the level of 64.7% (Q2 2018/Q2 2017), which may be due to the activation of deferred demand. At the same time, the segment of payday loans (PDLs) as of 30 June 2018 for the first time showed negative growth of -0.2% compared to 30 June 2017. The small contraction in the PDL

Figure 51

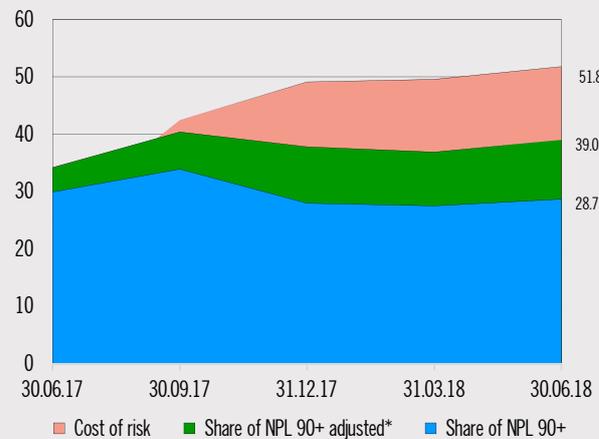
Consumer microloan portfolio dynamics



* Adjusted dynamics of indicators, excluding the two MFOs mentioned earlier, due to the high volatility of their indicators.
Source: Bank of Russia.

Figure 52

Consumer microloan portfolio quality (%)



* Adjusted dynamics of indicators, excluding the two MFOs mentioned earlier, due to the high volatility of their indicators.
Source: Bank of Russia.

segment may be due to the implementation of previously established restrictions on the number of extensions and disbursements¹.

Amid growth of the consumer microfinance market, there is stable depreciation of the portfolio, which remained unchanged in the first six months of 2018 at 79%², as well as a relatively low share of microloans with payments overdue for more than 90 days (not more than 33% for the period under review; Figure 52). At the same time, there has been an increase in the cost of risk ratio³ in the market (taking into account microloans assigned at a discount and written off of the balance sheet) from 24.5% as of 30 June 2017 to 51.8% on 30 June 2018, which is largely due to the assignment of microloans under cession before the end of the grace period for the formation of provisions in late 2017.

Thus, the planned limitations in terms of the gradual lowering of the borrower's interest debt ceiling (to 1.5X of the initial amount of the microloan after 1 July 2020) become even more relevant⁴. The reduction in interest income may encourage MFOs to revise their business models toward the reduction of their risk appetite.

¹ In accordance with the Core Standard for the protection of the rights and interests of individuals and legal entities receiving financial services provided by the members of self-regulatory organisations in the financial market uniting microfinance organizations approved by the Bank of Russia on 22 June 2017.

² The ratio of principal repayments on microloans to disbursements for the relevant period.

³ The cost of risk is the ratio of the portion of a portfolio that has moved from the category of debt with payments overdue for less than 90 days to the category of debt with payments overdue for more than 90 days, taking into account written off and assigned microloans at a discount for the year to the average non-overdue portfolio for the period.

⁴ Draft federal law No. 237568-7 'On Amending the Federal Law «On Consumer Loans» and the Federal Law «On Microfinance Activities and Microfinance Organisations»' adopted by the State Duma of the Federal Assembly of the Russian Federation in the first reading of 8 November 2017.

3.3. Banking sector liquidity risks

Against the background of a structural liquidity surplus, banking sector liquidity risks in Q2 and Q3 2018 remained moderate. Most credit institutions comply with N2 and N3 ratios with a large margin. As of 1 October 2018, the average value of the quick liquidity ratio N2 for systemically important banks ('SIBs') amounted to 130%, for other banks, to 96% (with the minimum allowable value of 15%); the average value of the current liquidity ratio N3 amounted to 178% for SIBs, for other banks, 152% (with the minimum allowable value of 50%). In SIBs, there was a positive trend in the values of the quick liquidity ratio; the current liquidity ratio remained virtually unchanged. In other banks, the values of the N2 and N3 ratios for the period under review decreased by 16 p.p. but remained significantly above the minimum acceptable level.

In addition to the above standards, since the beginning of 2016, the SIBs meet the requirements of the Bank of Russia on compliance with the liquidity coverage ratio N26 (N27) ('LCR')⁸ in

accordance with Basel III. In 2018, the minimum allowable numerical value of the ratio is 90%, and starting from 1 January 2019 it is increasing by 10 p.p., to 100%. As of 1 October 2018, the actual LCR values of SIBs were from 95% to 189%; the average value was 109% (Figure 53).

Due to the lack of high-quality liquid assets ('HQLA') that meet Basel III criteria, upon the introduction of LCR, the Bank of Russia decided to use alternative elements of calculation of the LCR numerator, including committed credit lines (the 'CCL') opened by the Bank of Russia⁹. Currently, some SIBs continue to include CCLs in their calculation to comply with the ratio. For example, from 1 April 2018 to 1 October 2018, out of six banks that have entered into an agreement to open a CCL with the Bank of Russia, three banks included the CCL in the calculation of the ratio as of the reporting date. The volume of CCLs included in the calculation of LCR over the past six months increased by ₴299 billion and amounted to ₴574 billion as of 1 October 2018. As a result, the share of CCLs in the LCR numerator of these banks increased from 10.3% to 18.3%.

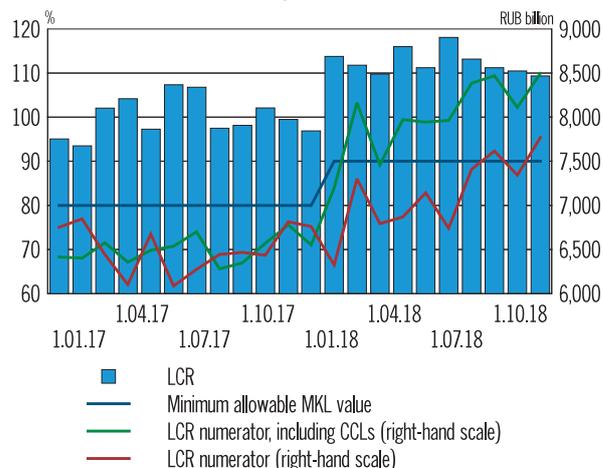
⁸ Systemically important banks must comply with LCR in accordance with Bank of Russia Regulation No. 510-P, dated 3 December 2015, 'On the Procedure for Calculation of the Liquidity Coverage Ratio ('Basel III') by Systemically Important Banks'.

⁹ For more details, see 'Analysis of the need for high-quality liquid assets in the Russian banking sector'.

The growth of the share of CCLs in the numerator of the ratio occurs against the background of an insignificant increase in investments of SIBs in HQLA. The most significant source of formation of HQLA is traditionally investment in debt securities of the Government of the Russian Federation denominated in rubles – that is, OFZs. However, from 1 April 2018 through 1 October 2018, the volume of investments of SIBs in OFZs grew insignificantly (+₽149 billion) compared to the growth of investments by NPFs, insurance companies, and other domestic investors (+₽665 billion) (Figure 11). The growth of the investments in question among SIBs was ensured by the banks that did not include CCLs in the calculation of LCR (+₽235.6 billion). Banks which included CCLs in the calculation of LCR in the specified period, on the contrary, reduced the amount of investments by ₽84.6 billion. As a result, the share of investments in debt securities denominated in rubles issued by the Government of the Russian Federation and the Bank of Russia in the HQLA of the banks that included CCLs in the calculation of LCR has decreased over the past six months from 34% to 21%.

At the level of the Russian financial market as a whole, the volume of assets that meet the criteria of Basel III has been gradually increasing since the beginning of 2015. In the period preceding the implementation of LCR, the banking sector faced a structural liquidity deficit, but in January 2017 the banking sector moved to a structural liquidity surplus. In the future, it is expected that the amount of assets available to the banks that meet the criteria of Basel III will grow. When using the assumption that the acquisition of currency in the domestic foreign exchange market under the budget rule postponed in 2018 will be carried out evenly over 2019 through 2021, the amount of funds of credit institutions placed on correspondent accounts, deposits, and bonds of the Bank of Russia (OBRs) by the end of this period may amount to ₽5.9–₽6.6 trillion. These funds, in the amounts of balances in SIBs' accounts (except for deposits in the Bank of Russia for more than 1 day), will be included in HQLA. At the same time, deposits in the Bank of Russia for more than 1 day are included in expected cash inflows and thus also contribute to the improvement of the

Figure 53
Dynamics of the actual average value of LCR and its components for SIBs



actual value of CCL. The supply on the OFZ market will also increase. For example, in accordance with the data of the Ministry of Finance regarding the issue of OFZs, the volume of the OFZ market in early 2021 may amount to about ₽11.1 trillion (the growth compared with the volume as of 1 January 2015 will amount to ₽6.7 trillion).

If the financial system, in the perspective in question, experiences no lack of HQLA, there will be no reason to preserve alternative elements of calculation of the numerator of LCR set by Basel III. In view of this, individual banks that are experiencing a shortage of HQLA due to the peculiarities of their business model should undertake the necessary measures to reduce their dependence on CCLs.

To reduce dependence on CCLs, the Bank of Russia is considering a revision of the parameters of this instrument in 2019:

1) From 1 January 2020, a differentiated scale of fees for the ability to use CCLs may be set. Upon the introduction of the CCL mechanism, the fee was set at 0.15% of the maximum possible limit of the CCL, regardless of its amount. From 1 January 2020, the fee may be increased for the part of the maximum allowable limit of the CCL above the threshold set by the Bank of Russia (as a ratio of the maximum allowable limit of the CCL to the average amount of net expected net cash outflows from ruble operations for the last three months preceding the date of application for the CCL).

2) The matter of a gradual decrease in the volume of CCLs used, which is planned to be carried out evenly over three years, may be considered.

3.4. Interest rate risk of the banking sector

In Q3 2018, interest rates rose in the Russian financial market, following which the rates for certain types of loans and deposits in the banking sector also began to increase.

Over the past six months, the weighted average rates for all currencies on new loans and deposits of legal entities increased: on loans to legal entities by 0.3 p.p., on deposits of legal entities by 0.5 p.p. The dynamics of rates on new loans and deposits of individuals over the past six months do not yet show rate growth: the weighted average rates for all currencies on household loans decreased from 1 April 2018 through 1 October 2018 by 0.8 p.p., on household deposits, by 0.3 p.p. However, for the month from 1 September 2018 through 1 October 2018, the rates on funds raised from individuals increased by 0.12 p.p.

The beginning of an upward trend of rates on the funds of individuals is also indicated by the dynamics of the maximum interest rate on household deposits (Figure 54). In addition, the increase in the rates on household deposits in foreign currency observed during the last six months (+1.1 p.p. for new household deposits in US dollars from 1 April 2018 through 1 October 2018) is noticeable.

Currently, the net interest margin on new loans and deposits of banks is decreasing; a potential intensification of this trend presents a risk for the banking sector. Overall in the banking sector, the difference between the rates on household funds placed and attracted during the month from 1 April 2018 through 1 October 2018 decreased by 0.45 p.p. (Figure 56); for new loans and deposits of legal entities this figure decreased by 0.22 p.p. primarily owing to banks not included in the top 30. The maturity mismatch of the assets and liabilities of the banking sector – a high share of short-term liabilities and long-term assets – can exacerbate this problem in the case of an increase in market rates because, due to the greater maturity of the assets, the average rates on the asset portfolio are

Figure 54
Dynamics of the maximum interest rate (on ruble deposits) for the 10 credit institutions that raised the greatest amount of household deposits (%)

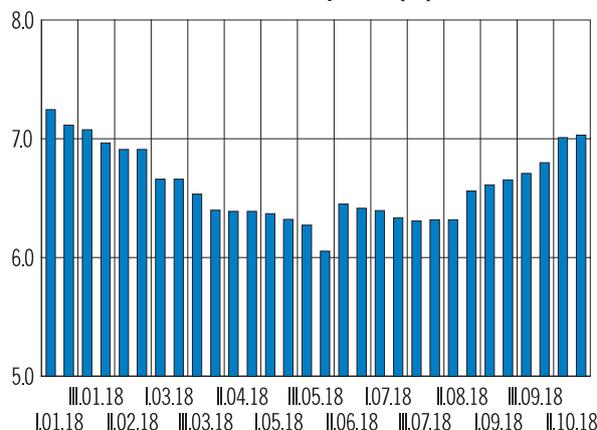
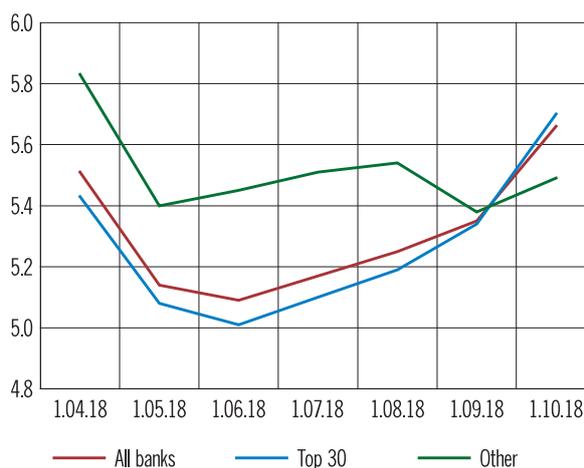


Figure 55
Dynamics of the rate on corporate funds attracted during the month (weighted average rate for all currencies, %)

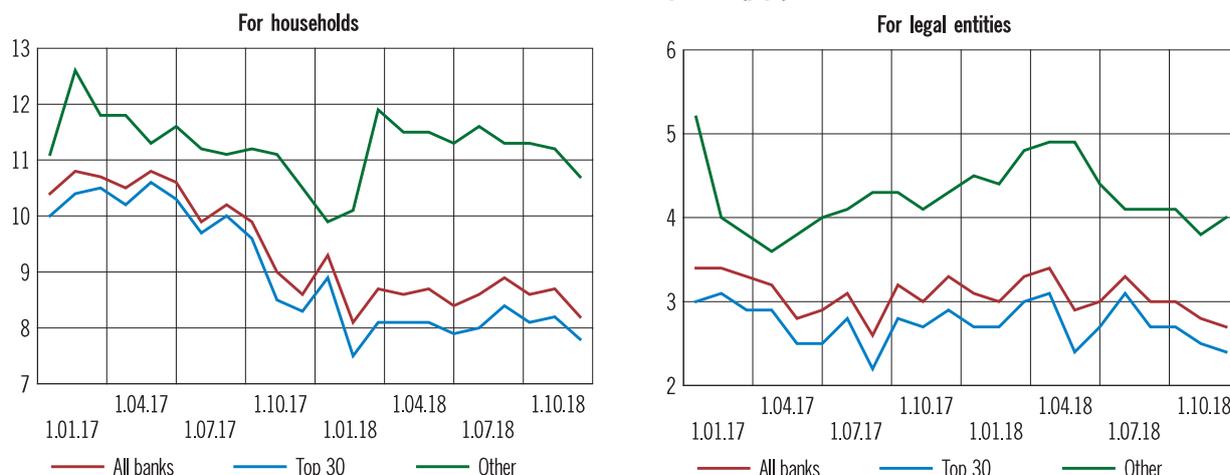


more inert with regard to rate changes in the market compared with the average rates for liabilities, which react much faster due to faster portfolio rotation. The share of deposits of both individuals and legal entities with a contract period of up to 1 year in the total volume of deposits has been steadily increasing over the past two years and as of 1 October 2018 made up 59.8% for individuals and 61.5% for legal entities.

Despite this, in Q3 2018, banks still did not experience a decrease in net interest income (NII) on transactions with legal entities, individuals and on transactions with securities; moreover, the growth of NII continues (Figure 57).

Figure 56

Trend of the difference between the rates on new loans and deposits (p.p.)



To analyse the effect of interest rate risk on the stability of the banking sector, a sensitivity analysis of the net interest income of the banking portfolio¹⁰ on 1-year horizon as of 1 October 2018 was conducted, assuming a (one-time) parallel increase in ruble interest rates by 100 to 500 b.p. The results of the analysis show that a rate increase in the specified interval will lead to a decrease in the net interest income of banks by ₴93–₴465 billion, or by 0.9%–4.7% of the capital of the banking sector, on a 1-year horizon. According to the results of a similar analysis as of 1 January 2018, the interest rate shock could lead to a reduction in NII by ₴77–₴385 billion, or by 0.9%–4.6% of the capital.

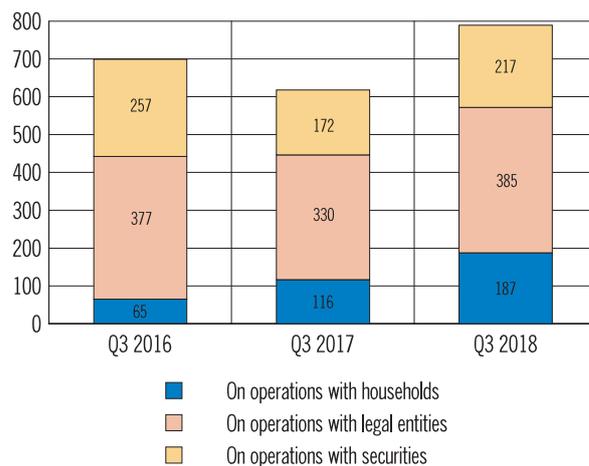
The main reason for the growth of banks' exposure to interest rate risk is the growing mismatch of assets and liabilities of banks by maturity characterised by the growing prevalence of long-term assets and short-term liabilities in the structure of assets and liabilities (Table 6). For example, in the banking system as a whole, the ratio between ruble-denominated assets and liabilities with a remaining maturity of up to 1 year

from 1 January 2018 through 1 October 2018 decreased from 63% to 61%.

At the same time, an interest rate increase by (100–500) b.p. does not lead to a decrease in the N1.0 ratio in the top 30 banks below the minimum allowable value of 8%. The maximum reduction

Figure 57

Dynamics of the net interest income of the banking sector (RUB billion)



¹⁰ In this sensitivity analysis, only net interest income of banks in the banking portfolio is modelled (that is, for assets and liabilities of banks, including off-balance ones, that are sensitive to changes in interest rates, without the trading portfolio) based on the data of reporting form 0409127. In contrast to the trading portfolio, in relation to the revaluation of which, in case of crisis, a temporary moratorium on revaluation may be applied by decision of the Bank of Russia for the purpose of calculation of the capital adequacy ratio, the change in the net interest income of a bank portfolio will affect the amount of bank capital in any case.

Table 5

Change in the net interest income of banks in the case of parallel growth of ruble rates on assets and liabilities as of 1 October 2018

Bank group	Interest rate growth, b.p.				
	+100	+200	+300	+400	+500
All banks, RUB billion	-93	-186	-279	-372	-465
Top 30, RUB billion	-89	-179	-268	-357	-447

Table 6

**Dynamics of the aggregate gap for ruble assets and liabilities sensitive
to the change of the interest rate (RUB billion)**

	Up to 30 days	From 31 to 90 days	From 91 to 180 days	More than 181 days up to 1 year	More than 1 year up to 2 years	From 2 to 3 years	Over 3 years
All banks							
1.01.2018	-5,084	-3,794	-1,621	1,684	5,411	4,781	11,129
1.10.2018	-5,854	-3,730	-1,735	1,981	6,321	5,656	11,363
Top 30							
1.01.2018	-4,928	-2,344	-1,109	1,659	4,472	3,948	10,528
1.10.2018	-5,977	-3,376	-1,583	2,389	5,865	5,317	12,571

of the N1.0 ratio for top 30 banks in the case of a 500 b.p. rate shock according to the results of the stress test may amount to 1.4 p.p. for one of the banks (for most banks it does not exceed 1 p.p.). Due to the maturity structure of the interest rate gap, the increase in the interest rate leads to a certain increase in net interest income for some banks.

Thus, in the six months under review, the interest rate risk of the banking sector remained moderate, but the increased maturity mismatch of assets and liabilities as well as the risks associated with the widespread use of the built-in optionality of liabilities and assets in the Russian banking sector¹¹ requires highly effective interest rate risk management from the banks.

The measures for improving the efficiency of interest rate risk management may include measures related to proper structuring by the banks of customer transactions and product pricing as well as measures for improving interest rate risk

management tools. Currently, the Bank of Russia is drafting new regulations and recommendations in the area of management of the interest rate risk of the banking portfolio, including the Bank of Russia Regulation 'On the Procedure for Calculation of Interest Rate Risk on Assets (Claims) and Liabilities for Which Market Risk Is not Calculated', changes to Bank of Russia Ordinance No. 3624 U 'On Requirements for the System of Management of the Risks and Capital of a Credit Institution and a Banking Group' in terms of internal procedures for the management of interest rate risk of the banking portfolio, and the Bank of Russia letter 'On Recommendations for the Management of the Interest Rate Risk of the Banking Portfolio, Including in the Framework of Mortgage Lending'. In these documents, a lot of attention is paid, in particular, to the question of consideration of built-in optionalities in the assessment of the interest rate risk of the banking portfolio.

¹¹ For more details about optionality risks, see *Financial Stability Review for Q4 2017–Q1 2018*.

4. SYSTEMIC RISKS OF NON-BANK FINANCIAL INSTITUTIONS

4.1. Insurance companies

Life insurers have shown high values of return on equity and growth of insurance premiums. The average annual return on the first wave of completed investment insurance contracts (3.3% for 3 years, 2.4% for 5 years) did not exceed deposit rates. To reduce misconduct in life insurance sales practices, the Bank of Russia has developed a concept for improving the regulation of investment life insurance and also plans to use ‘mystery shoppers’ to monitor the correctness of sales of investment life insurance by intermediaries, including banks. The results of the insurers specialising in insurance, other than life insurance, have improved (the rolling combined loss ratio in Q3 2018 was of 86.7%, decreasing by 9.4 p.p. compared to the same period in 2017); however, the situation in the OSAGO segment is under the special control of the Bank of Russia.

Life insurers

In the first 9 months of 2018, the growth rate of life insurance premiums remained the highest among the main types of insurance (+40.7% compared to 9 months of 2017)¹. The share of the segment in aggregate premiums reached 29.7% due to continued growth in sales of investment products (investment life insurance). Among the top 20 insurers in terms of insurance premiums, 9 companies specialised in life insurance. As of 30 September 2018, provisions for life insurance contracts reached ₹816.7 billion, or 46.6% of insurers’ total provisions. Thus, the active buildup by insurers of the investment life insurance portfolio is leading to an increase in the significance of the risks of this segment.

According to the results of Q3 2018, the rolling return on equity of life insurers² decreased;

¹ The values of the indicators as of 30 September 2018 (9 months of 2018) are based on preliminary surveillance data as of 2 November 2018.

² For the purposes of calculation of coefficients, life insurers mean companies whose share of life insurance exceeds 85% of insurance premiums.

however, it remained at a high level compared to credit institutions (41.3% against 16.9% for credit institutions³).

Life insurers on average are characterised by a moderate level of equity; the aggregate ratio of the actual and required solvency margin⁴ in Q3 2018 was 160.6% (for insurers carrying out insurance, other than life insurance, it was 279.2%), which is why legislative changes concerning the increase in the minimum authorised capital are more relevant to them⁵. As of 30 September 2018, the authorised capital of a significant number of insurers was below the level being established starting in 2022 (27 out of 34 companies, which account for 77.4% of premiums on life insurance, did not meet the requirements for the minimum authorised capital as of 1 January 2022). A three-year transition period will be set for existing companies.

Due to the predominance of investment life insurance in the portfolio of life insurers, they are more exposed not to insurance risk but to credit and market risks for the investment portfolio. The impact of the market risk, in turn, can be reduced due to the possibility of holding securities to maturity. In addition, these risks are limited for insurers due to the lack of guarantees of return on investment life insurance as well as maturities of investment life insurance contracts of 3 to 5 years.

In Q2–Q3 2018, life insurers continued to increase investments in government stock, which serve as the base for investment life insurance products (Figure 58): in late September 2018 their share in total assets reached 35.0% (24.7% at the end of 2017), while there was a decrease in the

³ With the exception of credit institutions undergoing reorganisation as of 1 October 2018.

⁴ The regulatory requirement for the ratio of the actual solvency margin to the required solvency margin is 100%.

⁵ According to Federal Law No. 251 FZ, dated 29 July 2018, ‘On Amending the Law of the Russian Federation «On the Organisation of Insurance in the Russian Federation»’, from 1 January 2019 to 1 January 2022, the minimum authorised capital for universal insurers is gradually increasing to ₹300 million, and for life insurers and reinsurers, to ₹450 million and ₹600 million, respectively.

Figure 58

Assets of life insurers by type of investment (%)

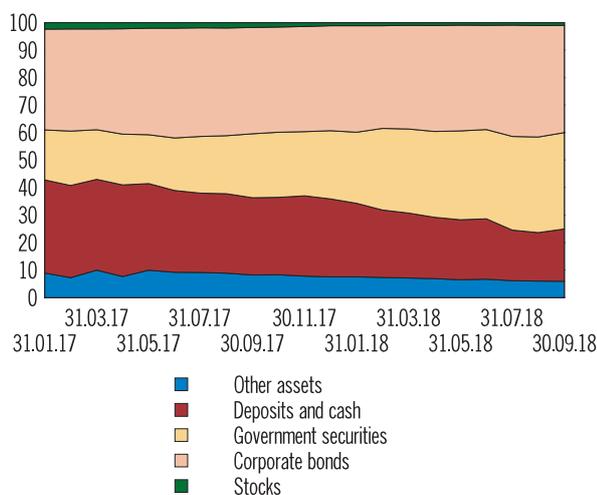
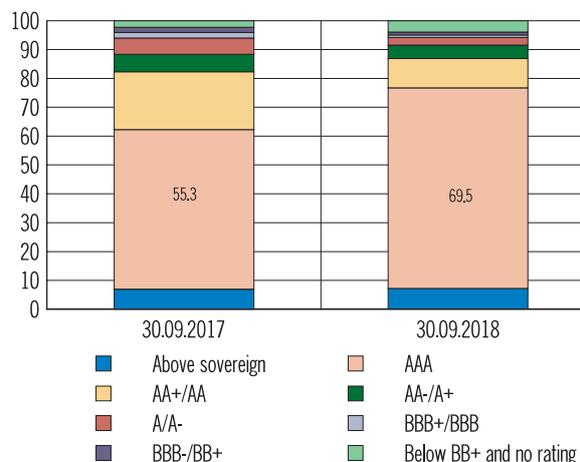


Figure 59

Credit quality of life insurers' assets* (%)



* Ratings are given according to the comparison table for the scales of the credit rating agencies JSC ACRA and JSC Expert RA.

share of deposits and funds in banks (19.1% in late September 2018 and 28.3% at the end of 2017). The weighted average duration of the government stock portfolio to the offer as of 30 September 2018 made up 2.7 years, which is close to the minimum standard duration of investment life insurance contracts. For a number of companies (7.9% of total assets of life insurers as of 30 September 2018), the share of government stock in the portfolio exceeded 50%. Consequently, the credit quality of the assets has improved, and the share of investments with a sovereign rating has increased as of 30 September 2018 to 69.5% (55.3% as of 30 September 2017). The group of assets with a rating within two steps of sovereign accounted for 91.6% (88.4% as of 30 September 2017), while assets without a rating did not exceed 4% of their total value (Figure 59).

Foreign currency liabilities of life insurers (15.7% of total liabilities as of 30 September 2018) were mainly covered by foreign securities purchased for specific investment life insurance strategies and thus are sufficiently secured by foreign exchange assets (22.6% of total assets).

The average annual yield on investment life insurance contracts which ended in 2017 and H1 2018 did not exceed the rates on bank deposits: for three-year contracts its value was 3.3%, and for five-year contracts it was 2.4%⁶. For most five-

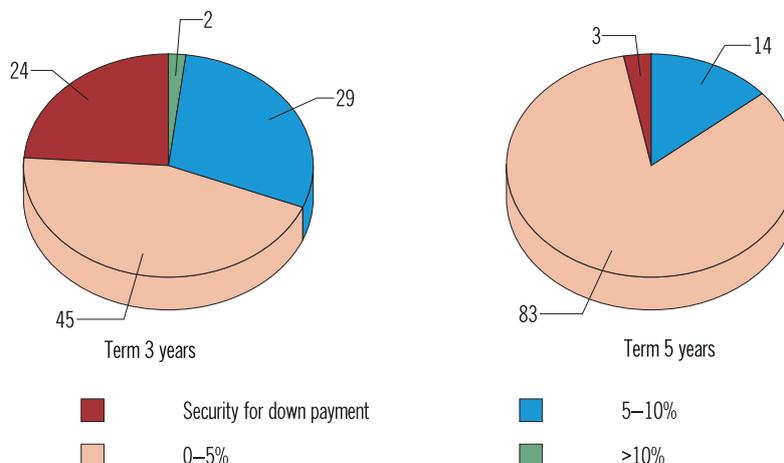
year contracts (83% of insurance premiums), the return was in the range from 0% to 5% (Figure 60). For individual insurers, the average annual return on five-year contracts reached 4%–7%. For a substantial part of three-year contracts (24% of insurance premiums), there was a lack of investment income (Figure 60). These results are due to a drop in the value of the underlying assets for the popular strategies of the contracting period (in particular, such assets for five-year contracts were gold and the RTS index; for three-year contracts, a decrease was recorded for a wide range of assets. Among other things, the negative dynamics of the securities of foreign pharmaceutical companies had a significant impact). At the same time, these results refer to a relatively small pool of contracts (20,000 contracts that were ended in 2017 and H1 2018 were studied) concluded before the stage of active development of the investment life insurance segment, during which investment strategies changed and other ways of structuring products appeared.

The interest of credit institutions that are life insurance agents remained at a high level; this sales channel accounted for 90.1% of premiums for the first 9 months of 2018. Due to the close relationship between insurers and banks amid a significant increase in the number of complaints received by the Bank of Russia about sales of investment life insurance compared to the previous year, fighting unfair sales practices is an area of special attention of the Bank of Russia. As a result of joint work

⁶ According to a supervisory request to the insurers of investment life insurance. Three-year and five-year investment life insurance contracts in rubles with a lump sum payment of premiums which ended in 2017 and H1 2018 are included in the calculation of yield.

Figure 60

Distribution of average annual yield under investment life insurance contracts (%)



with the All-Russian Union of Insurers (VSS), in August 2018, the core standards of insurance⁷, mandatory starting 7 May 2019, were approved. The Core Standards, among other things, establish the obligation of the insurer to provide information about the features and risks of the investment life insurance contract, the absence of guaranteed income, and the procedure for calculation of the redemption amount. To fight misconduct in investment life insurance practices, the Bank of Russia has developed a concept for improving the regulation of this segment⁸ and also plans to use ‘mystery shoppers’ to monitor the correctness of sales of investment life insurance by intermediaries, including banks.

Insurers specialising in insurance, other than life insurance

In the first 9 months of 2018, the increase in insurance premiums was 4.9%; after an extended decline, there was a recovery in the auto hull market (+2.9% against 9 months of 2017). Positive dynamics of income were also recorded in other largest types of insurance, with the exception of OSAGO (-0.5% of insurance premiums against

an increase in the number of contracts by 2.3% compared to 9 months of 2017).

The rolling return on equity ratio of insurance companies engaged in insurance other than life insurance in Q3 2018 increased to 26.4% (10.7% in Q3 2017) due to the improvement of the results of insurance activities as well as the stabilisation of the financial situation of PJSC IC Rosgosstrakh, which is in the perimeter of resolution of Otkritie FC bank. At the same time, the market maintains a high concentration of profits among the largest players (Figure 61): average return on equity of the five largest insurers in terms of fees was 40.6%, while for insurers of the second size group (positions 6 to 20 in the ranking of insurance premiums) the indicator was 1.7 times lower; for the insurers of the third size group (positions 21–50), 1.5 times; and for insurers who are not included in the top 50, 2.8 times lower. Small insurers will also be affected by increased requirements for the size of the authorised capital: as of 30 September 2018 the authorised capital of 84 out of 159 companies with licenses for insurance other than life insurance was lower than the value to be established starting in 2022. The risks associated with the need to replenish the capital of these companies are mitigated by their relatively small markets shares (4.1% of insurance premiums on insurance other than life insurance) and the availability of a transition period.

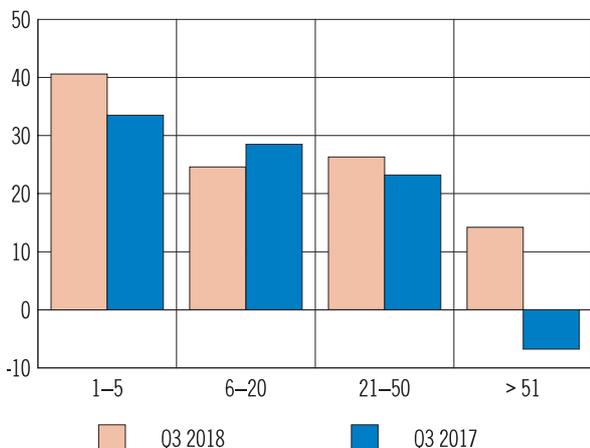
The rolling combined loss ratio (CLR) for insurance, other than life insurance (including management expenses), in Q3 2018 amounted to

⁷ The Core Standard for protection of the rights and interests of individuals and legal entities that are recipients of financial services provided by the members of self-regulatory organisations that unite insurance companies; Core Standard for performance of operations in the financial market by insurance companies.

⁸ Concept for improving the regulation of investment life insurance.

Figure 61

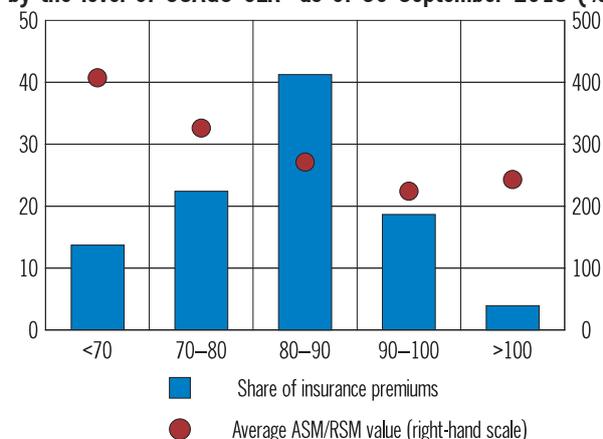
Dynamics of return on equity by groups of insurers* (%)



* The scale shows the position in the ranking by insurance premiums in the corresponding period. Return on equity was indicated without the transactions of PJSC IS Rosgosstrakh.

Figure 63

The total share of OSAGO insurance premiums and the average ratio of ASM and RSM of insurers by the level of OSAGO CLR* as of 30 September 2018 (%)



* ASM/RSM: the ratio of the actual solvency margin to the required solvency margin.

86.7% (96.1% in Q3 2017). The decline in CLR was associated primarily with the results in OSAGO; positive dynamics were also recorded in voluntary medical insurance (Figure 62).

During 2018, the OSAGO market underwent significant transformations. As a result of the modification of the business model of PJSC IC Rosgosstrakh and the proliferation of the practice of compensation of damages in kind in OSAGO (restoration of a damaged vehicle) as well as measures of insurance companies aimed at improving the quality of interaction with consumers, the market has recorded a sharp decrease in rolling CLR indicators (79.2% in Q3 2018 compared to 119.9% in Q3 2017) and the average payment under OSAGO (-14.4% compared to 9 months

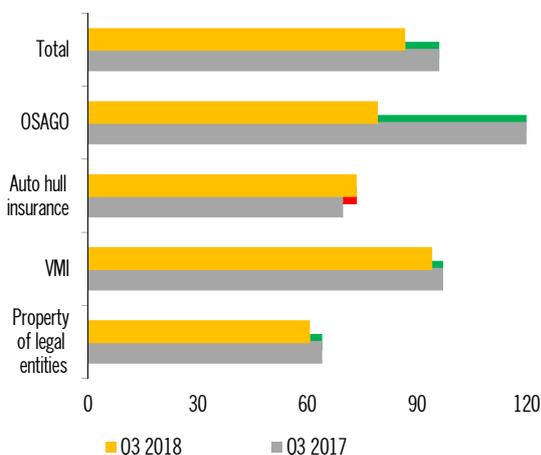
of 2017). Changes in market indicators may be unsustainable due to the accounting peculiarities: loss adjustment in kind is reflected in reporting with a time lag. A CLR for OSAGO of over 90% was typical of the insurers that accumulated 22.7% of insurance premiums (Figure 63).

Insurers demonstrated various levels of interest in the building of a CLR portfolio, including their commitment to ensure uninterrupted sales. Among the top 20 OSAGO insurers (they accumulate 91.9% of insurance premiums), the range of portfolio growth indicators was from -46.7% to 190.0%. Of the total number of participants in the OSAGO market, 7 companies (5.3% of insurance premiums for OSAGO) were at risk from the point of view of compliance with regulatory requirements on capital adequacy⁹.

To correct market imbalances in the OSAGO market, a large-scale reform was initiated during which approaches to pricing will be globally revised toward tariff customisation. The next stage of the reform should be the expansion of the corridor of the base fee¹⁰, with additional research planned to find out the reasons for the reduction in unprofitability in 2018.

Figure 62

Dynamics of the rolling combined loss ratio for key accounting groups



⁹ The ratio of the actual and required solvency margins is less than 130%.

¹⁰ Draft Bank of Russia Ordinance 'On the Limits of the Basic Rates of Insurance Tariffs (Their Minimum and Maximum Values Denominated in Rubles), Insurance Tariff Ratios, Requirements for the Structure of Insurance Tariffs, and the Procedure for Their Use by Insurers in Determining Insurance Premiums under a Compulsory Third-Party Liability Insurance Contract for Vehicle Owners'.

4.2. NPFs

NPFs are actively increasing their pension savings investments in government stock, whose yield looks attractive compared to corporate bonds. The increase in the share of OFZs was affected by the reduction in spreads between the yields of corporate and government bonds, mandatory stress testing of NPFs, the transitional campaign in 2018, and changes in NPF regulation. The credit quality of pension portfolios is improving: the weighted average rating of the pension savings portfolio ranged from AA(RU) to AA-(RU) on the ACRA (JSC) scale, while that of the pension reserve portfolio ranged from A(RU) to A (RU) on the ACRA (JSC) scale. At the same time, revaluation and writing off of low-quality assets of individual NPFs had a negative impact on their overall profitability (4.3% for the pension savings portfolio for H1 2018).

In 2018, the trend of growth in the share of NPF investments in the public sector¹¹ remained, which is mainly associated with a reduction in the spreads between corporate and government bond yields¹². As of 30 September 2018, the yield spread was 30 b.p., and as of 30 September 2017 it was 145 b.p. These dynamics are associated with the sale of OFZs by foreign investors and significantly lower liquidity of corporate bonds. The growing demand for government stock is also due to the need for the funds to undergo stress testing¹³.

In addition, in 2018, the decline in the share of investments in the banking sector continued (by 9 p.p. in the pension savings portfolio as of 30 September 2018 compared to 31 December 2017). The reduction of investments in the banking sector is affected by the regulatory requirements of

the Bank of Russia¹⁴ as well as relatively low rates on deposits. At the same time, a seasonal factor was added in Q2 2018 – completion of the transitional campaign of 2018 (the inflow of funds from the Pension Fund of Russia¹⁵ to NPFs amounted to ₹158.9 billion). Before investing in other assets, funds were transferred to the settlement accounts of the banks, which led to the subsequent reduction of bank assets.

As a result of the above-mentioned trends, for the first time ever, the share of pension savings investments in the public sector¹⁶ exceeded the share of investments in the financial sector (as of 30 September 2018 the share of investments in the public sector amounted to 37.5%, and in the financial sector, 27.4%).

There are no significant sectoral changes in the pension reserves portfolios, which is associated with less stringent regulation of the activities of NPFs for the non-government pension system vs mandatory pension insurance. However, in Q4 2018, growth of the share of OFZ in the portfolios of pension reserves is possible, with the introduction of mandatory stress testing of pension reserves in 2019.

Structural changes in pension savings portfolios have led to a decrease in their credit risk. Furthermore, the improvement in the credit quality of pension savings and pension reserves portfolios was affected by the reduction of the share of investments in non-rated assets, writing-off of default assets, and the receipt of ratings by individual companies. As a result, as of 30 September 2018, the weighted average portfolio rating of pension savings was in the range of AA(RU) to AA-(RU) on the ACRA (JSC) scale. The weighted average rating of the pension reserves portfolio is in the range from A(RU) to A-(RU) on the ACRA (JSC) scale.

¹¹ Ministry of Finance, subfederal and municipal organisations.

¹² Spread between the RGBITR government bond index and the MICEXCBITR corporate bond index.

¹³ In accordance with Bank of Russia Ordinance No. 4060 U, dated 4 July 2016, 'On Requirements for the Organisation of the Risk Management System of a Non-Governmental Pension Fund', an NPF should conduct stress testing for the sufficiency of assets for the fulfilment of their obligations. Starting 1 July 2018, the size of the fund's assets is deemed sufficient to meet its obligations if sufficiency of assets is discovered in at least 35% of Monte Carlo tests carried out in each scenario (for pension savings); after 1 January 2019, at least 50% (for pension savings); and after 1 July 2019, at least 75% (for pension savings).

¹⁴ In accordance with Regulation No. 580 P dated 1 March 2017, the share of investments in credit institutions should be not more than 35% of pension savings after 1 July 2018 and not more than 30% of pension savings after 1 January 2019).

¹⁵ As of 30 June 2018, in the pension savings portfolio of the Pension Fund of Russia, government stock of the Russian Federation accounted for 39.5%, bonds accounted for 39.1%, deposits accounted for 11.2%, and funds on current accounts accounted for 5.3%.

¹⁶ The assets of the financial sector in pensions savings/pension reserves portfolios included assets of banks, MCs, SPVs, leasing companies, JSC 'DOM.RF', VEB, insurance companies, broker organisations, and international financial institutions (the list is compiled in descending order).

Figure 64

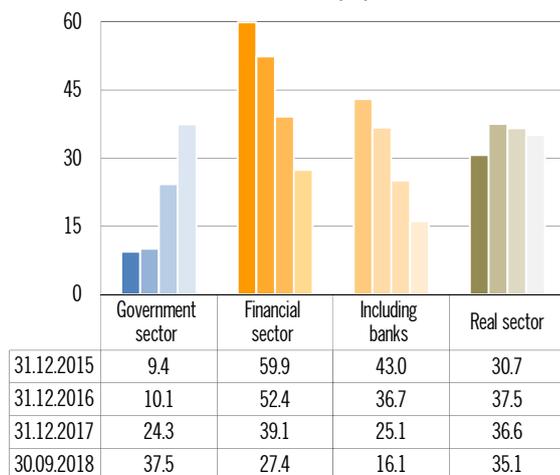
Sectoral distribution of investments
and PS (%)

Figure 65

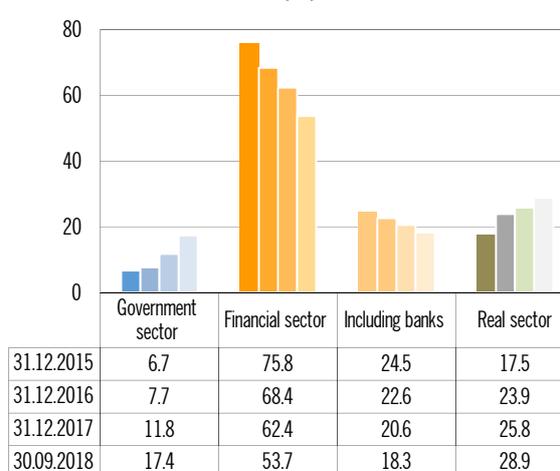
Sectoral distribution of investments,
PR (%)

Table 7

Average credit quality range

	31.12.2015	31.12.2016	31.12.2017	30.09.2018
Pension savings	A-(RU) – BBB+(RU)	A(RU) – A-(RU) ↑	A+(RU) – A(RU) ↑	AA(RU) – AA-(RU) ↑
Pension reserves	BBB-(RU) – BB+(RU)	BBB(RU) – BBB-(RU) ↑	BBB+(RU) – BBB(RU) ↑	A(RU) – A-(RU) ↑

However, despite the positive trend, the portfolios of pension savings and pension reserves of individual funds continue to hold low-quality assets. In particular, as of 30 September 2018, the share of non-rated assets and assets with increased risk¹⁷ in the pension savings portfolio was 9%, and in the pension reserves portfolio it was 28%. Materialisation of credit risks on low-quality assets in pension savings and pension reserves portfolios affects their return negatively¹⁸. In H1 2018, the weighted average yield of all NPFs amounted to 4.3% per annum for the pension savings portfolio and to 5.4% per annum for the pension reserves portfolio, while the figure for the three-year zero-coupon yield curve¹⁹ at the end of six months was equal to 7.25% per annum.

The weighted average profitability of NPFs, with the exception of funds that have written off and

revalued low-quality assets, amounted to 8.3% per annum for the pension savings portfolio and 6.5% per annum for the pension reserves portfolio.

The level of industry consolidation continues to increase due to the merger of a number of the largest NPFs. From 31 December 2017 to 30 September 2018, in the market of mandatory pension insurance (MPI), the Herfindahl-Hirschman Index (HHI)²⁰ increased by 47% and amounted to 1454. For the period since 2016, the HHI index increased by 370%, reflecting a significant increase in industry concentration. For example, in the first six months, three NPFs, part of Otkritie FC group, were merged on the base of NPF Lukoil-Garant²¹.

The market of non-government pension schemes (NPS) is characterised by a greater concentration than the market of MPI. From 31 December 2017

¹⁷ The assets with increased risk in this review include assets with a rating of ruBB and below on the scale of 'Expert RA' or BB (RU) and lower on the ACRA scale.

¹⁸ Hereinafter, the profitability of NPFs is considered before deduction of remuneration to management companies, the specialised depository, and the fund.

¹⁹ The choice of a three-year zero-coupon yield curve as a benchmark is due to the average duration of portfolios of pension savings bonds (3.5 years) and pension reserves bonds (2.7 years).

²⁰ The Herfindahl-Hirschman index reflects the level of industry concentration. The following three groups can be distinguished by degree of concentration:

Group I: markets with high level of concentration (monopolistic markets): $1,800 < HHI < 10,000$

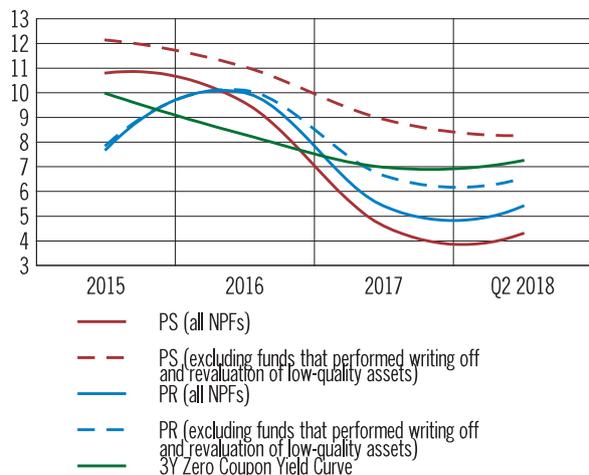
Group II: markets with a strong concentration level (oligopolistic markets): $1,000 < HHI < 1,800$

Group III: low concentration markets (competitive markets): $HHI < 1,000$.

²¹ The merger was completed on 17 August 2018.

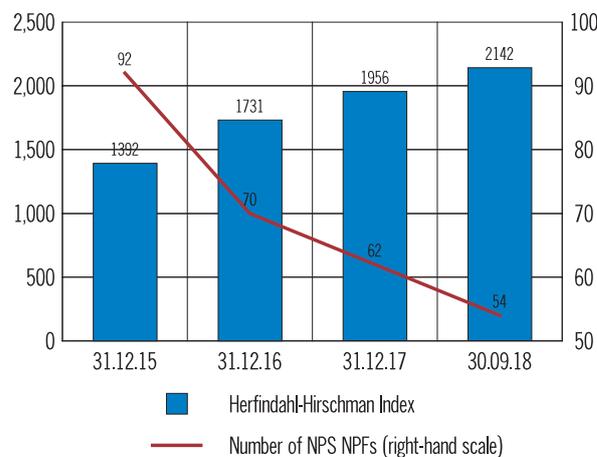
NPF yield (% per annum)

Figure 66



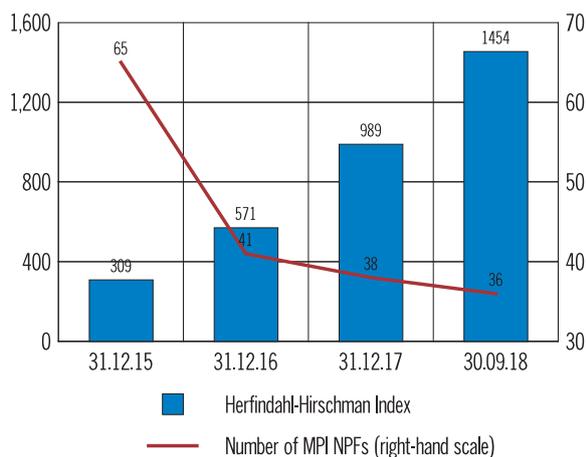
Industry concentration, PR

Figure 68



Industry concentration, PS

Figure 67



to 30 September 2018, the HHI increased by 9.5% and amounted to 2142, and since 2016, by 54%.

On the one hand, the consolidation of NPFs makes it possible to cover the high fixed costs of corporate governance of the funds; on the other hand, the financial stability of the industry is increasingly dependent on the financial strength of its individual major players.

The Bank of Russia pays special attention to minimising the risks of loss of investment income. In H1 2018, a federal law²² came into force which defines the rules for changing a non-state pension fund, according to which citizens should be notified

²² Federal Law No. 269 FZ, dated 29 July 2018, 'On Amending Certain Laws of the Russian Federation to Ensure the Right of Citizens to Receive Information about the Consequences of Termination of Mandatory Pension Insurance Contracts'.

of the possible consequences of the termination of the contract for mandatory pension insurance, which will help to protect insured persons from loss of income in the case of change of the NPF before the termination of the five-year period.

4.3. Leasing companies

According to the definition of the Financial Stability Board, non-bank financial intermediation²³ is a special type of intermediation beyond the perimeter of traditional financial regulation and oversight. Compared to banks, their regulation is much more liberal, although they are subject to the same financial risks: credit risk, liquidity risk, and excess financial leverage.

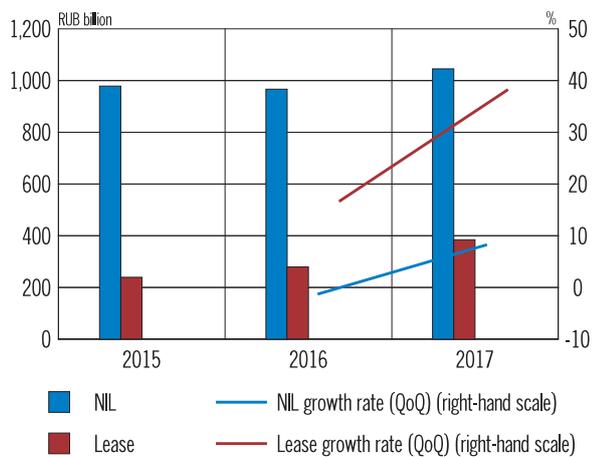
In the Russian financial system, as of 31 December 2017, non-banking financial intermediaries make up about 5% of GDP; the leasing sector accounts for at least 80% of this.

Due to the active growth of the leasing market and its high importance, the Bank of Russia

²³ According to the Financial Stability Board methodology, non-bank financial intermediaries are categorised according to five economic functions: EF-1: collective investment schemes that invest in debt instruments and are subject to the risk of a sharp outflow of capital (mutual funds, hedge funds, etc.); EF-2: financial companies that provide loans based on short-term funding (leasing, factoring companies, MFOs, CCCs, and pawnshops); EF-3: organisations engaged in intermediary activities in financial markets through short-term funding or funding by customer funds (broker and dealer organizations); EF-4: organisations specialising in providing financial guarantees; EF-5: entities engaged in lending and funding of financial companies through the mechanism of securitisation of various kinds of assets.

Leasing portfolio dynamics

Figure 69



Source: Bank of Russia based on a survey.

continuously monitors the activities of the largest leasing companies. It is worth noting that the largest participants are companies a significant share in capital of which belongs to the state, including banks associated with the state.

According to the results of the analysis of IFRS financial statements of 20 lessors (the 'analysed companies'), which account for approximately 70% of the aggregate assets of leasing companies, financial leasing (56% of the total assets of the analysed companies as of the beginning of 2018 account for net investments in leasing²⁴) over the past year increased by 8% to ₺1.0 trillion (Figure 69), breaking the negative dynamics of previous years. The next largest in the structure of assets was rental, called operating leasing²⁵ (21% of total assets), which recorded higher growth rates (+38.1% per year), amounting to ₺0.4 trillion. These trends indicate, on the one hand, the recovery of the activities of the analysed companies after a prolonged recession. On the other hand, they evidence a change in the business model of a number of companies and problems with the sale of property acquired for leasing. As of 30 June 2018, the positive trend continued, and annual growth rates of financial leasing and rental amounted to 18.1% and 68.9%, respectively²⁶.

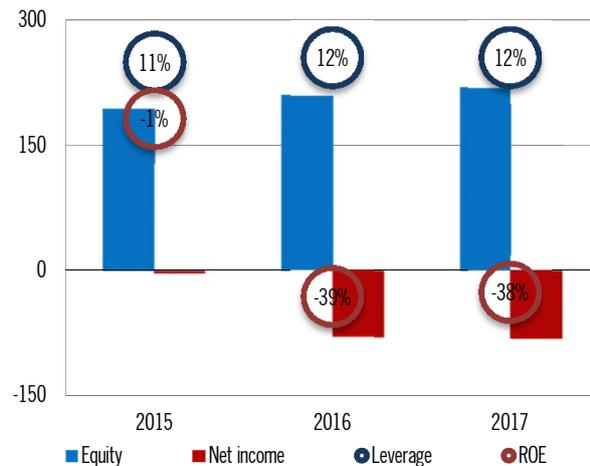
²⁴ The value of leased property.

²⁵ Reflected as leased property.

²⁶ According to a survey of the largest leasing companies based on IFRS for H1 2018.

Dynamics of financial performance and equity (RUB billion)

Figure 70



Source: Bank of Russia based on a survey.

The growth of the rental business can be explained, among other things, by the handing over for temporary use of a part of the objects seized from lessees that were previously leased under financial leasing (mainly railway and air transport, which as of 30 June 2018 account for about 32% and 28% of leasing property under new contracts, respectively), which indicates possible hidden problems in terms of customer creditworthiness. Apparently, the balance sheet of the analysed companies still holds potentially 'toxic' assets, the losses on which are gradually written off, but due to the lack of complete industry statistics and low informational transparency of the leasing companies a real assessment of the quality of the leasing portfolio cannot be performed at the moment.

Along with the increase in rental volumes, an increase in administrative expenses is observed (by 28%), which, in turn, influenced the increase in 2017 losses (₺80.6 billion, or +2.5% for the year, Figure 70). At the same time, the main losses were attributed to companies directly or indirectly associated with the state. These losses were mainly covered by the infusion of budgetary funds into the capital.

According to Bank of Russia estimates, as the size of the leasing market increases, the potential systemic risk of this sector associated both with the accumulation of hidden credit risk losses and with liquidity risk also increases. In 2016, the National Council for Financial Stability came to the

conclusion that reform is necessary and initiated the development of legislative changes. For the development of the main provisions of the reform, an interdepartmental working group was formed, including interested federal executive bodies. According to the results of operation of this group, a draft law²⁷ on market regulation was developed, designed to ensure fair practice and sustainability of leasing companies directly or indirectly related to the state as well as those receiving state assistance. The bill involves the introduction of monitoring of the operation of leasing market entities by the regulator, minimum requirements for the amount of equity (capital), and general standards of a self-regulating organisation uniting the participants of leasing activity. According to preliminary estimates, more than 95% of companies satisfy potential equity requirements. Thus, as a result of adoption of the law, a substantial redistribution of market shares among existing lessors is not expected.

It is assumed that for the performance of leasing activity a leasing company directly or indirectly related to the state as well as one receiving state assistance must submit to the Bank of Russia an exhaustive list of documents and enter the registry. At the same time, the subjects of the leasing market not applying for state preferences need not participate in the programme for the promotion of transparency of leasing activity by entering information about them in the register, while retaining the possibility to engage in leasing (except for the previously mentioned leasing companies).

The draft law assumes that leasing companies directly or indirectly associated with the state as well as those receiving state assistance will be subject to registration and monitoring. Moreover, there are plans to introduce requirements for the minimum size of equity (capital) and general standards of self-regulation. Such companies must participate in the register; participation is voluntary for other lessors. Subjects of the leasing market not claiming government preferences need not participate in the leasing transparency programme.

It is expected that the key characteristics of the market—volume and growth rates, pricing and the state of the competitive environment—will remain unchanged in the short term. In the long term, the

increase in the transparency of the leasing market should lead to increased trust for the companies, availability of market information, and lower risk premiums.

4.4. Microfinance organisations

As a result of exclusion from the state register of microfinance organisations (MFOs) of one of the largest market players, LLC Domashnye Dengi, the issue of evaluation of the current financial situation of the largest MFOs has become particularly relevant. According to the analysis of the top 10 microfinance and top 10 microcredit companies (the 'largest MFOs' or the 'top 10 MFCs and top 10 MCCs', respectively), the cumulative share of which amounted to 64.6% of the portfolio of microloans of private MFOs, there are generally no risks of deterioration of their financial situation. Nevertheless, individual participants, which are mainly financed with their own funds, have quite low financial performance indicators for this market, in particular the level of overdue debt and the depreciation ratio of the microloan portfolio (the ratio of repaid principal to the average portfolio for the period).

According to the analysis of the largest market participants, most financial indicators show stable dynamics from 30 June 2017 to 30 June 2018. However, several MFOs (3% of consumer microfinance) showed a slight deterioration in terms of accumulation of the share of non-performing microloans during the period due to the lack of assignments and lower ratios within allowable values owing to an increase in the share of borrowed capital.

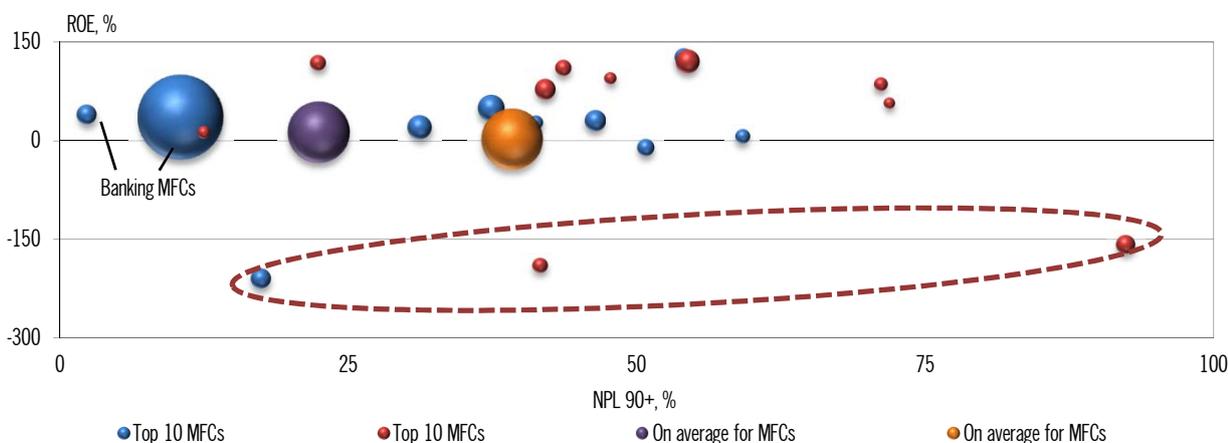
As of 30 June 2018, the quality of the portfolios of the largest MFOs is slightly below the average market level. Despite this, these organisations have a lower volume of assigned and written-off microloans in the portfolio compared to average market indicators (not more than 10% in total against 30%–40%). At the same time, the level of coverage of non-performing loans by provisions was at least 80%.

Most of the largest MFOs demonstrate higher profitability (from 10% up to 120%) compared to the market, with the exception of three MFOs (Figure 71), which had a higher level of unprofitability (ROE less than -150%). At the same time, as of

²⁷ In November 2018, the Government of the Russian Federation approved the introduction of the draft law to the State Duma of the Russian Federation.

Figure 71

Distribution of portfolio quality and profitability as of 30 June 2018



Source: Bank of Russia.

30 June 2018, they accounted for about 5% of the volume of private MFOs and/or about 4.6% of all borrowed funds of private MFOs, of which 64% was debt under subordinated liabilities. Therefore, no contagion risk to other participants of the financial market, including banks, is currently observed.

As of 30 June 2018, all the largest MFOs under analysis are characterised by consistently low financial leverage and an insignificant amount of borrowed funds: ₴3.5 billion—funds of individuals, except founders, and ₴8.5 billion—funds of credit institutions. These factors indicate a satisfactory level of risk of the largest market players.

The higher credit quality of the microfinance portfolios of MFCs related to large retail credit institutions (the 'banking MFCs') stands out: the share of NPL 90+ is from 2.4% to 10.5%, which

is explained by the difference in the segments of the clients of banking MFCs and other market participants. Other performance indicators of banking MFCs (capital adequacy ratio, ROE, cost of risk) are also above the market average. It is worth noting that in general the activity of banking MFCs promotes the development of the best risk management practices in the microfinance market. At the same time, prudential norms and requirements for microfinance and credit institutions are different due to the need for proportional regulation of various players of the financial market. In this regard, there is a possibility of regulatory arbitration by credit institutions to gain additional competitive advantages. Currently, no wide application of such practices has been observed.

5. THE BANK OF RUSSIA'S MACROPRUDENTIAL POLICY

5.1. Measures taken by the Bank of Russia to limit systemic risks and assessment of their efficiency

In Q2–Q3 2018, the Bank of Russia adopted a number of macroprudential measures in both retail and corporate lending. The measures undertaken are aimed at ensuring balanced growth of these segments that do not lead to the accumulation of risks by banks. In the context of the operation of risk control measures in individual lending segments as well as in the absence of signals indicating faster growth of lending activity in the economy as a whole, the value of the national countercyclical buffer is maintained at the level of 0%.

Measures in the unsecured consumer lending segment

In the segment of unsecured consumer lending, accelerated growth of the loan portfolio persists (annual growth rate of 20.7% as of 1 October 2018). Against the background of declining interest rates in the economy, the observed growth did not lead to a significant increase in the debt burden of the population. At the same time, when banks

exhaust their ability to further reduce rates, the current growth rates of the consumer portfolio could lead to a significant increase in the debt burden of the population as it did in 2011–2014, when in conditions of accelerated growth of loan debt on unsecured loans the debt burden of individuals increased from 4.9% to 8.9% of GDP, and loan payments increased from 4.5% to 9% of household nominal incomes over 2.5 years.

To limit these risks, the Bank of Russia has increased risk ratios on consumer loans, depending on the value of the effective interest rate. The first increase affected loans extended after 1 May 2018 with effective interest rate from 15% to 25%. The second increase affected loans extended after 1 September 2018 with effective interest rate from 10% to 30% (Figure 72). Increased risk ratios affect all types of unsecured consumer loans (loans with effective interest rate less than 10% accounted for less than 1% of all loans provided in Q3 2018).

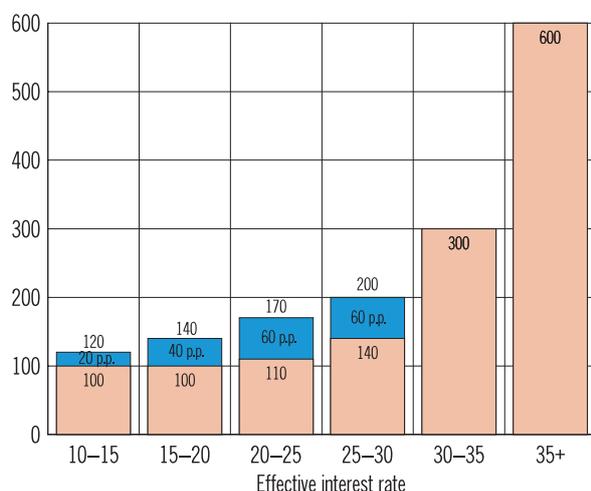
Measures in the residential mortgage lending segment

In the segment of residential mortgage lending, loan debt growth rates remain persistently high (annual growth rates of ruble loans amount to 25.6%¹). The growth of lending activity in this segment occurs both due to the revision by banks of price conditions and reduction of the requirements for the down payment. Analysis of historical data shows that mortgage loans with a small down payment are characterised by higher credit risks: the annual probability of default on a mortgage loan with a down payment from 10% to 20% is 1.5–2 times higher than that of loans with a payment of 20% to 40%.

To prevent banks from accumulating risks, the Bank of Russia increased the risk ratios from 1 January 2018 for loans with a down payment of less than 20%. This measure did not lead to a decrease

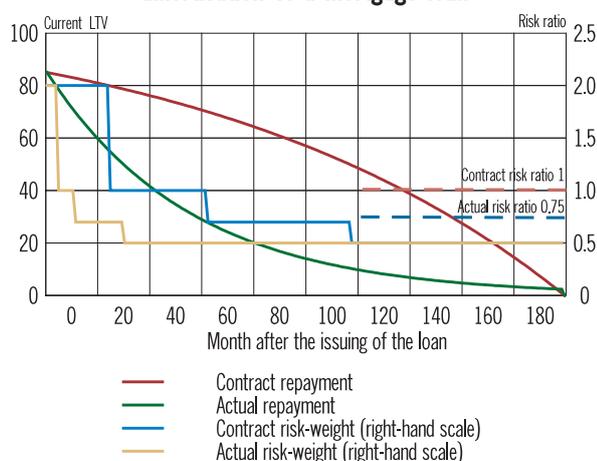
Figure 72

Scale of risk ratios for consumer loans
from 1 September 2018 (%)



¹ Reporting data of credit institutions from form 0409316. For credit institutions operating as of the last reporting date, including previously reorganised banks.

Figure 73
Dynamics of the risk ratio for the purposes of calculating capital adequacy requirements in the course of amortisation of a mortgage loan



in the share of such loans issued by banks; however, it made it possible to stabilise it. The share of newly issued mortgage loans with a down payment of 10% to 20% in Q2 2018 amounted to 42.6% (in Q1 2018, it was 42.3%). In this regard and for the sustainable development of the mortgage segment, the Bank of Russia Board of Directors decided on 1 October 2018 to increase the buffer² to the risk ratio on mortgage loans and credits for financing under a co-investment agreement in construction characterised by a low down payment³ from 0.5 to 1.0, which corresponds to a risk ratio of 200%. The decision will take effect in 3 months and will apply to loans issued starting from 1 January 2019.

As the mortgage loan is amortised, and the value of the 'loan/collateral' indicator decreases, the risk ratio of such loan will decrease. For newly issued

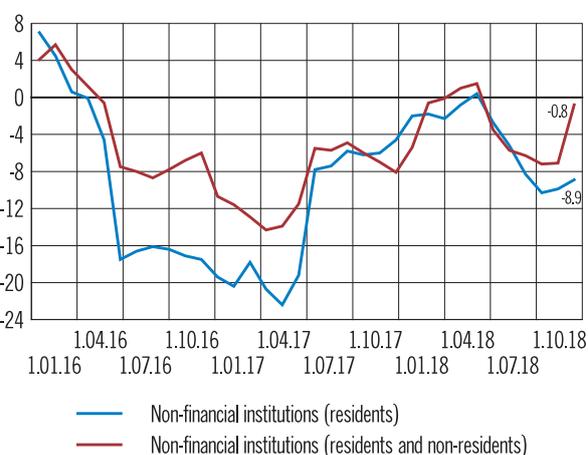
loans (after 1 January 2019), the average risk ratio for a mortgage loan with a down payment of 10% to 20% for the entire maturity of the loan, taking into account early repayment, will be about 75%. This risk ratio corresponds to the borrower's loss given default of 20% and 4% probability of the borrower's default within 12 months, which corresponds to the expected market performance in the case of stress in the mortgage market. If the loan will be amortised in accordance with the loan agreement (without early repayment), the weighted average risk ratio will be about 100%. Thus, the increase in the buffer to risk ratios is not prohibitive but is aimed at limiting the growth of banks' activity in mortgage loans with a small down payment.

Measures in the segment of lending to non-financial organisations in foreign currency

The process of reducing dollarization continued in the segment of lending to legal entities. Against the background of renewed growth of foreign currency lending in Q4 2017–Q1 2018 (Figure 74), the Bank of Russia decided to increase risk ratios for claims to legal entities in foreign currency when calculating capital adequacy ratio starting from 1 July 2018. The risk ratio for exposures (and investments in debt securities) to resident legal entities that act as exporters was increased from 100% to 110%. To stimulate the further reduction of the riskiest foreign currency loans – that is, loans for the acquisition of real estate, the Bank of Russia adopted a decision to increase the applicable risk weights from 130%

Figure 74

Annual growth rates of claims in foreign currency* (%)



* Excluding currency revaluation. For credit institutions operating as of the last reporting date, including previously reorganised banks.

² In accordance with Bank of Russia Ordinance No. 4892 U, dated 31 August 2017, On Types and Characteristics of Assets for Which Risk-based Capital Buffers are Set and on the Methodology for Applying These Buffers to the Said Types of Assets for Credit Institutions to Calculate Their Capital Adequacy Ratios '.

³ For mortgage loans that simultaneously meet the following conditions:

- 1) The ratio of the principal to the fair value of the collateral calculated on the date of requirements calculation exceeds 80% of the fair value of the collateral.
- 2) The ratio of the principal to the fair value of the collateral calculated on the date of the loan exceeds 80% and does not exceed 90% of the fair value of the collateral.
- 3) On loans for financing under co-participation agreements in construction for which the down payment is less than 20%.

For mortgage loans for which the ratio of the principal to the fair value of the collateral calculated on the date of issuance of the credit (loan) exceeds 90%, the increased risk ratio continues to operate at the rate of 300%, which is equivalent to a buffer of 2.0.

Box 4. Review of international practice on limiting LTV in mortgage

LTV is traditionally used to limit risks in mortgage lending. Initially, LTV restrictions were used in Asian countries (Hong Kong, Singapore, Republic of Korea), but after the global financial crisis of 2007–2008 it began to be applied by a wide group of countries.

The mechanisms for the application of the LTV ratio are mainly divided into two groups: 1) prohibiting the issue of loans with a certain level of LTV; 2) limiting the share of loans with a certain level of LTV in disbursements.

1. Prohibiting the issue of loans with a certain level of LTV

This policy is typical for Asian countries, where ‘bubbles’ have repeatedly occurred in the real estate market. In Hong Kong, the LTV indicator has been limited since 1991; in Singapore, since 1996; and in the Republic of Korea, since 2002. Below are the latest regulatory decisions in this area.

Singapore

In July 2018, to curb the growth of housing prices (annual growth rates were of 9% in 2017), the Monetary Authority of Singapore (MAS) tightened LTV limits by 5 p.p. for all loans provided by financial institutions for the acquisition of residential real estate (housing loans). The LTV limit is differentiated by loan term, the age of the borrower, and the number of other properties owned: for example, the maximum LTV is only 15% if a third real estate property is acquired, and the loan term is over 30 years (or the borrower’s age is over 65 years); for the second real estate property, LTV cannot be higher than 45%, and for the first real estate property, 75% (55% if the term of the loan is over 30 years, or the borrower’s age is over 65 years).

Republic of Korea

In 2017, the country already had an LTV limit of 70%, but amid speculative demand and rapid lending growth in some regions of the country, in August 2017, the Financial Services Commission introduced an LTV limit of 40% for lending to residential property buyers in these regions. For persons acquiring second and subsequent real estate properties, the level of LTV is limited to 30%.

Hong Kong

In Hong Kong, starting in May 2017, to obtain a mortgage loan for the acquisition of residential property for their own use, the buyer must have a down payment of 40% to 50%¹, depending on the cost of the purchased residential property. For the second and subsequent residential properties, the down payment must be more by 10 p.p.

Israel

In Israel, since 2012, LTV is limited to 70%. Exceptions are mortgages for the acquisition of the first real estate property (maximum LTV = 75%) and investment acquisition of real estate (maximum LTV = 50%).

In some countries, where historically lending with high LTV values has been allowed (including more than 100%), to gradually reduce the risks, requirements for minimum amortisation of debt are used (repayment of the principal along with the interest).

For example, in Sweden, where the LTV limit has existed since 2010 and since May 2017 is set at 85%, there is a requirement for the amortisation of new mortgage loans within 10 years. If the LTV is greater than 50% but less than 70%, the total amount of the new loan should be amortised annually by an amount equivalent to at least 1% of the loan amount. If LTV is more than 70%, the total amount of the new loan should be amortised annually by an amount equivalent to at least 2% of the loan amount.

In Norway, the maximum LTV ratio is also 85% (and not more than 60% for a second residential property in Oslo), while mortgage loans with LTV above 60% must be amortised by at least 2.5% per year.

2. Restriction of the share of loans with a certain level of LTV in disbursements

In Slovakia, the Czech Republic, and New Zealand, the amount of loans issued with a certain size of LTV is limited.

In Slovakia, with a maximum LTV of 90%, there is a gradual decline in the share of newly issued loans with LTV from 80% to 90%. Starting in Q3 2018, the share of such loans issued by a bank must not exceed 35%, and after 1 July 2019, 20%.

In the Czech Republic, the size of the maximum allowed LTV from 1 April 2017 is 90%, while loans with LTV of 80%–90% may make up not more than 15% of the total volume of mortgage loans issued².

¹ <https://www.hkma.gov.hk/media/eng/doc/key-information/guidelines-and-circular/2017/20170519e2.pdf>.

² Additionally, when applying for a mortgage, banks must find out the purpose for acquisition of residential real estate—for one’s own residence or for investment purposes. In the second case, the minimum down payment must be increased to 40%.

In New Zealand, the maximum allowable share of new mortgage loans issued with an LTV of more than 80% is 15% (10% before 1 January 2018).

The relationship of the level of LTV and credit risk

International experience shows that LTV restriction measures have a favourable effect on lending standards, contributing to greater sustainability of financial institutions. Application of restrictions for LTV and DSTI indicators helps to reduce the number of cases of default/sale of property of the borrowers when the economic situation worsens. For example, during the Asian financial crisis, property prices in Hong Kong fell from September 1997 to September 1998 by more than 40%, while the share of bad mortgage loans remained below 1.5%. In the Republic of Korea, with a decline in prices for residential real estate in 2008–2012, the share of bad loans did not exceed 1%.

As follows from the report of the Bank of France³, in 2003–2010, the default rate for loans with LTV from 70% to 95% was 2–3 times higher than for loans with LTV less than 70%. The report also emphasises that the tightening of the LTV limit helps to reduce excess credit risk growth since with the increase in the LTV ratio both individual and portfolio credit risk increases.

These empirical findings are confirmed by a number of foreign theoretical studies. The Central Bank of the Netherlands, in its report⁴, notes that the limitation of the maximum allowed value of LTV improves the financial stability of borrowers and increases stability in the real estate market. A study of the Hong Kong Monetary Authority (HKMA)⁵ shows that the LTV restriction policy is particularly effective for the reduction of systemic risk during periods of price shocks in real estate markets. According to the HKMA study a decline in real estate prices by 1% increases the delinquency ratio by 0.35 b.p. in the countries that use LTV limits, while in the countries that do not restrict LTV ratios the delinquency ratio increases by 1.29 b.p. In addition, all other things being equal, a 1 p.p. decline in GDP growth rates in the countries that use LTV limits entails an increase in the delinquency ratio by 3 b.p., in other jurisdictions, by 5.1 b.p. HKMA's experience of implementing macroprudential policy and the results of the study suggest that the LTV threshold after which there is a significant increase in risks to financial stability is 70%. For example, with an increase in LTV from 70% to 90%, the credit loss ratio quadruples, from 0.46% to 1.87% of total capital.

In February 2016, the European Central Bank rated⁶ the effectiveness of a macroprudential policy using the integrated micro/macro model for European households (data was analysed for seven countries: Austria, Belgium, Germany, Luxembourg, Portugal, Slovenia, and Slovakia). A general conclusion was formulated for all countries under review: LTV limits help to reduce the level of loss given default (LGD) and the probability of default (PD). In particular, for Austria, the positive impact on PD begins when LTV drops below 70%, and on LGD, when it falls below 90%.

In 2018, the Central Bank of Ireland analysed⁷ vulnerabilities of the Irish mortgage market among households by calculating a vulnerability index (VI) using information about the current performance and ratios of the mortgage according to the mortgage default model. The model calculates the annual VI, analysing various shocks over the past three years: falling housing prices, rising unemployment, and a sharp change in interest rates. Test results showed a stable relationship between LTV and the VI index: the higher the LTV, the greater the vulnerability index. Furthermore, the VI index increases significantly with LTV over 80%. The analysis of historical data also shows a steady positive correlation between LTV and the default ratio.

LTV level, %	Share of mortgage loans, %	Default ratio, %
Less than 61	53.3	2.8
61–70	10.4	3.6
71–80	9.0	4.6
81–90	7.9	5.5
91–100	5.9	7.5
101–120	8.7	10.9
121–150	3.9	27.8
More than 150	1.0	67.7

³ *Débats économiques et financiers N° 13. Do LTV and DSTI caps make banks more resilient? / Banque de France. 2014.*

⁴ *Effects of further reductions in the LTV limit / De Nederlandsche Bank. 2015.*

⁵ *The influence of external factors on monetary policy frameworks and operations / BIS. 2011.*

⁶ *Working Paper Series, Assessing the efficacy of borrower-based macroprudential policy using an integrated micro-macro model for European households / ECB. 2016.*

⁷ *Financial Stability Notes, A Vulnerability Analysis for Mortgaged Irish Households / Central Bank of Ireland. 2018.*

to 150%. All other claims to legal entities in foreign currencies are weighted with a risk ratio of 130% (the risk ratio for claims arising from 1 May 2016 to 1 July 2018 is 110%). The increase in risk ratios does not apply to exposures and investments in securities for which there is a direct or indirect guarantee of the Russian Federation.

Debt reduction on FX loans to non-financial organisations continued in Q3 2018. The largest reduction in debt from 1 April to 1 October 2018 was observed in such activities as wholesale and retail trade (by \$1.5 billion) and real estate transactions (\$1.8 billion). In the future, if risks of the dollarization of banking assets and liabilities increase, the Bank of Russia may take additional measures.

Preservation of the zero level of the national countercyclical buffer

Credit activity in the banking sector as a whole remains at a level below the long-term trend. Recommended by the Basel Committee on Banking Supervision (BCBS) as a key indicator for deciding on the countercyclical buffer, the indicator of credit activity (credit gap)⁴ continues to be negative (Figure 75). This is due to the ongoing process of reducing dollarization in the corporate portfolio as well as reduction of the external debt of companies (by 8.3% over the past 12 months). If the current growth rate of private sector debt compared to

GDP is maintained, the credit gap will continue to be negative (see the forecast in Figure 75).

In conditions where the growth of credit activity in various segments is heterogeneous, buffers to risk ratios can be used to accumulate a capital buffer in fast-growing segments to calculate capital adequacy requirements. Buffers to risk ratios, all other things being equal, reduce the value of banks' capital adequacy requirements and can thereby limit lending activity in high-risk segments to a greater extent than the countercyclical buffer.

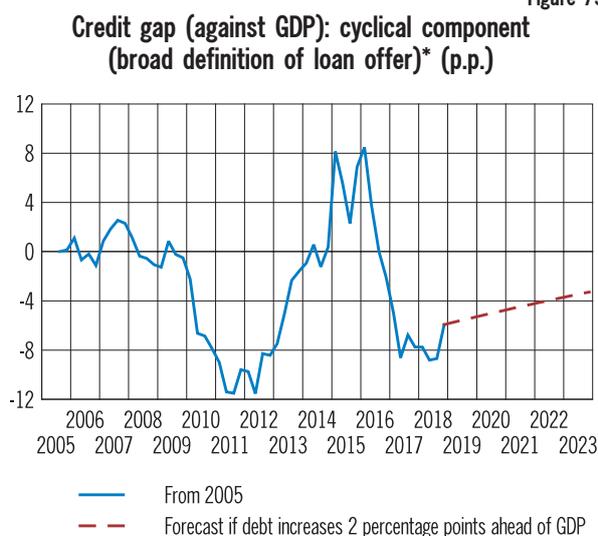
In the context of operation of buffers to risk ratios for individual segments of lending, the establishment of a positive value of the national countercyclical buffer to the equity of credit institutions is inadvisable. Given this, the meeting of the Bank of Russia Board of Directors on 1 October 2018 decided to maintain the national countercyclical buffer at 0% of risk-weighted assets.

5.2. Areas for further development of the Bank of Russia's macroprudential policy

In October, Bank of Russia Ordinance No. 4892 U, dated 31 August 2017, 'On Types and Characteristics of Assets for Which Risk-based Capital Buffers are Set and on the Methodology for Applying These Buffers to the Said Types of Assets for Credit Institutions to Calculate Their Capital Adequacy Ratios' ('Bank of Russia Ordinance No. 4892 U') came into force. The amounts of buffers to risk ratios for certain types of assets to which—in accordance with Bank of Russia Instruction No. 180 I, dated 28 June 2017, 'On Banks' Required Ratios' – increased risk ratios and the values of the characteristics of the assets, on which buffers to risk ratios depend, were previously applied will change based on the decision of the Board of Directors.

Starting 1 October 2019, the calculation of a new risk characteristic for loans granted to individuals, the debt burden ratio (PTI), will be introduced. Banks will calculate PTI in accordance with Appendix 1 to Bank of Russia Ordinance No.4892 U when making a decision on granting a loan in the amount (total credit amount) of ₹10,000 or more or an increase in the total credit amount on a bank card. When calculating the PTI, information on the borrower's

Figure 75



* Bank loans to households and non-financial organisations, issued debt obligations, and external debt of the non-financial sector.

⁴ A credit gap is defined as the deviation of the actual value of the ratio of loans adjusted for currency revaluation to GDP from its long-term trend.

income will be taken into account subject to the existence of supporting documents and data on all loans and borrowings of the borrower from the CHB. Income declared by the borrower and not confirmed by the necessary documents will be taken into account in the calculation of the CHB in an amount not exceeding the average per capita income in the region. In addition, until 1 October 2020, banks can calculate PTI using the amount of income declared by the borrower when granting a loan of up to ₹50,000 or an auto loan. The introduction of a unified approach to the calculation of PTI in banking practice should improve risk assessment of borrowers by banks and limit lending to borrowers with a high debt burden.

In October–November 2018, the Bank of Russia posted draft regulations according to which PTI will be applied in the regulation of microfinance organisations for public discussion. The draft regulations of the Bank of Russia are expected to be adopted in Q4 2018.

In order to use PTI to determine macroprudential buffers and for other regulatory purposes, it is necessary to ensure the high quality of the calculated ratio, which depends on the availability and completeness of the information used. The Bank of Russia is working on modernisation of the

system for generating credit histories and takes part in the development of electronic services for obtaining information about the income of the borrower.

The main objectives of reforming of the credit history system are to improve the quality and availability of data as well as to increase the number of legal entities and individuals with a credit history. With the participation of the Bank of Russia, a draft federal law ‘On amending the Federal Law «On Credit Histories»’ was prepared and provides for the introduction of mechanisms to enhance the accuracy of identification of transactions and subjects of credit histories, clarification of the procedure for the generation and composition of information contained in credit histories, creation of organisational conditions for the calculation of total debt (payment) burden, improvement of supervisory authorities of the Bank of Russia regarding CHBs, and a number of other measures. Currently, banks can calculate PTI using the information available for calculation. As a result of reforming the CHB system, banks will be able to receive more complete information about the current obligations of the borrower, which will enable more efficient use of PTI in regulation.

Box 5. Impact of debt burden on credit risk level

The analysis of credit portfolio characteristics of some major retail market participants¹ in 2011–2017 showed extensive relation between the level of credit risk² and debt burden of borrowers. For example, the increase of borrowers PTI from 20 to 80% in the reviewed period provided the growth of annual credit risk from 2–2.5% to 3.5–4.5% for all income ranges (Figure 76).

¹ The assessed group of banks comprise more than 65% of aggregate unsecured loan market for households.

² The realised risk during the period is assessed using a formula $\text{Risk_cost} = 12 * \frac{(\Delta P + \sum C)}{\text{Avg}(D - P)}$, where P is the amount of credit risk provisions; C is the amount of uncollectable debt that is written off; D is the aggregate debt.

6. SYSTEMIC RISKS OF DEVELOPMENT INSTITUTIONS

JSC DOM.RF

An increasingly complex risk profile (against the background of the consolidation of JSCB RUSSIAN CAPITAL (PJSC) (the ‘Bank’)) in combination with an increase in the systemic importance of the DOM.RF Group¹ in the case of the implementation of a new large-scale mechanism – guaranteeing of targeted loans for the construction of apartment buildings – makes the introduction of prudential requirements for the development institute relevant.

In H1 2018, the net profit of the DOM.RF Group amounted to ₺5.7 billion, which combined with a decrease in equity (see below) made it possible to increase the ROE to 14.2%.

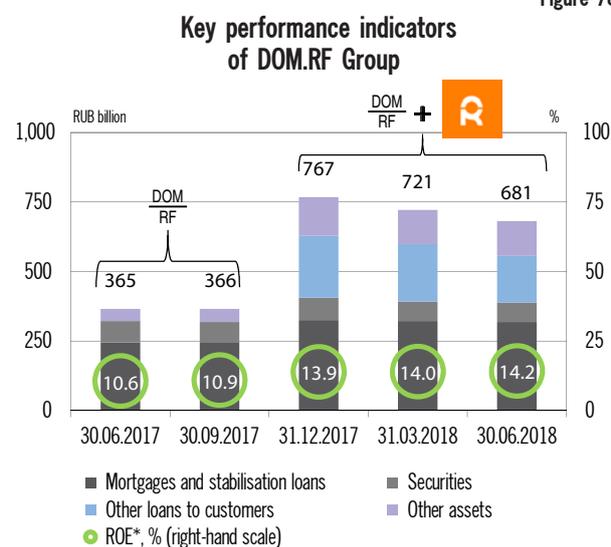
At the same time, according to IFRS consolidated financial statements, the inclusion of the Bank into the DOM.RF Group was accompanied by a decrease in equity from 31 December 2017 through 30 June 2018 by 31.4% (to ₺100.5 billion), an increase in operating costs (the cost-to-income ratio increased from 30.1% to 55.0% (H1 2018 compared to the same period of 2017)), and a decrease in net interest margin from 5.8% to 3.2% (H1 2018 compared to the same period of 2017).

At present, the share of NPL 90+ in the mortgage portfolio of the DOM.RF Group remains slightly higher than the average market indicators: 3.0% and 2.0%, respectively (Figure 79). However, the impairment of the assets is fully secured with reserves, and the majority of NPL 90+ can be attributed to mortgages purchased before 2015. The share of mortgages bought out in the framework of the MBS Factory project² is about 19.5% of the mortgage portfolio of DOM.RF Group; the share of NPL 90+ does not exceed 0.4%. As

of 30 June 2018, 7 securitization transactions had been performed for a total of ₺114.1 billion (the largest originators were Sberbank (₺48.2 billion) and VTB Bank (₺48.4 billion)).

Additional risks for the financial situation of the development institution arise in connection with the implementation of a new mechanism for guaranteeing loans to developers received from credit institutions as part of project financing of apartment buildings and other real estate³. According to the forecasts of JSC DOM.RF, a sevenfold increase in the volume of project financing of residential construction is necessary for complete replacement of shared construction participants’ funds, from ₺0.6 trillion to ₺4.3 trillion; up to half of this amount can be achieved using the new mechanism⁴. These volumes may lead to a further decrease in the level of capital adequacy of DOM.RF Group.

Figure 78



* Calculated on the basis of a rolling year.

Source: Bank of Russia on the basis of the reporting of JSC DOM.RF in accordance with IFRS.

¹ Organisations within the Unified Development Institute in the Housing Sector are defined according to Article 3, Clause 1 of Federal Law No. 225 FZ, dated 13 July 2015, ‘On Assistance in the Development and Enhancement of Management Efficiency in the Housing Sphere and on Amending Separate Legal Acts of the Russian Federation’.

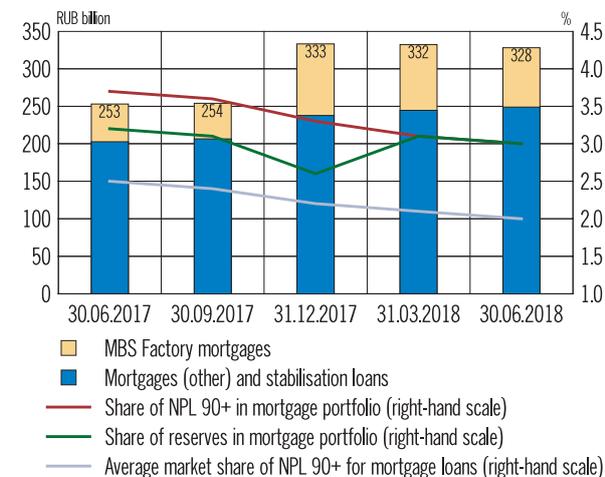
² Securitisation of bank mortgage portfolios and their swap into mortgage-backed securities issued and guaranteed by AHML with an option for their subsequent sale or repo.

³ The action plan (roadmap) for the gradual replacement over three years of the funds of citizens attracted to make apartment buildings and other real estate by bank lending and other forms of financing that minimise the risk to citizens approved by the Prime Minister of the Russian Federation on 21 December 2017, No. 9679p-P9.

⁴ JSC DOM.RF press release.

Figure 79

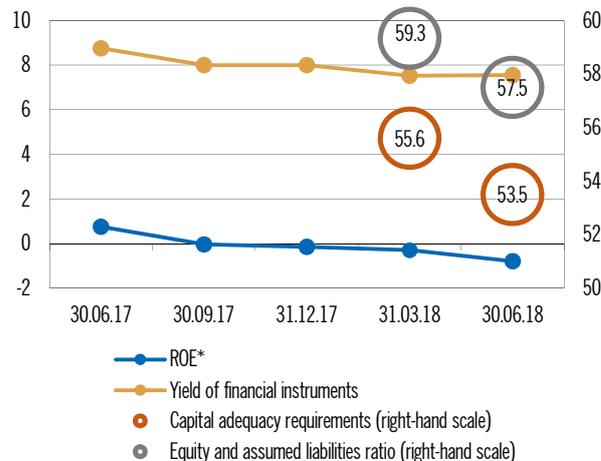
Dynamics of the quality of the mortgage portfolio of DOM.RF Group



Source: Bank of Russia on the basis of the reporting of JSC DOM.RF in accordance with IFRS.

Figure 80

Dynamics of the income of SME Corporation JSC (%)



* Calculated on the basis of a rolling year.

Source: Bank of Russia on the basis of the reporting of SME Corporation JSC in accordance with RAS.

In this regard, in October 2018, the National Council for Financial Stability made a decision on the advisability of setting the following standards and requirements for activities aimed at maintaining the financial stability of JSC DOM.RF at the legislative level:

- The capital adequacy ratio
- The standard maximum risk per one borrower or group of related borrowers
- Mandatory periodic stress testing

In addition to the capital adequacy requirement, it is assumed that JSC DOM.RF will calculate the value of the financial leverage ratio on a consolidated basis within the framework of monitoring⁵.

The mechanism for standard setting and obligations to conduct stress testing as well as the procedure for and terms of disclosure of information about their observance by JSC DOM.RF is currently being investigated by the Ministry of Finance of Russia together with the Ministry of Economic Development and the Bank of Russia.

JSC Corporation SME

According to the results of Q2 2018, the activity of JSC Corporation SME had become unprofitable, and its profitability amounted to -0.8% (Figure 80) mainly due to a decrease in the profitability of financial investments (from 8.8% to 7.6%) as well as an increase in the cost of creation of provisions

⁵ Paragraph 2.1.2 of Bank of Russia Instruction No. 180 I, dated 28 June 2017, 'On Banks' Required Ratios'.

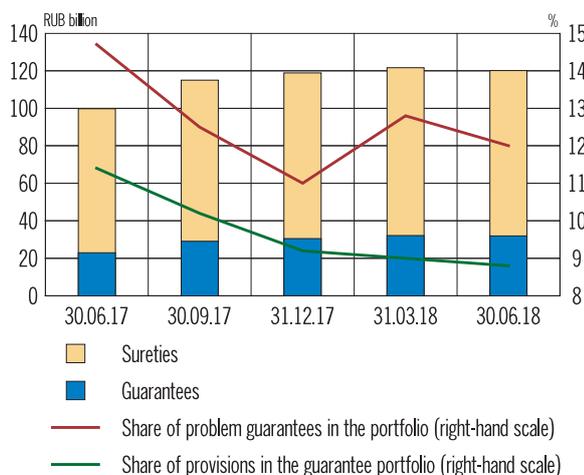
for payments under guarantees in connection with portfolio growth. Within the framework of support for small- and medium-sized businesses, the main source for the coverage of the losses of JSC Corporation SME (the 'Corporation') is budget subsidies. For example, government subsidies for ₹9.2 billion were received in Q2 2018⁶.

To ensure the sustainability of the Corporation, in late 2017, mandatory requirements for capital adequacy and incurred liabilities were introduced, so was the value of the marginal risk for the counterparty and insiders⁷. According to the results of Q2 2018, the values of requirements for capital adequacy and incurred liabilities decreased by 2.2 p.p. and 1.8 p.p., respectively (or to 53.5% and 57.5%, respectively) due to the increase in investments in subsidiaries; however, these requirements are quite high. Given the current structure of the balance sheet and the level of risk appetite, the minimum acceptable values of the Corporation's requirements make it possible to

⁶ In accordance with Federal Law No. 362 FZ, dated 5 December 2017, 'On the Federal Budget for 2018 and the Planning Period of 2019 and 2020', in 2018, budget investments were made in the form of a contribution to the authorised capital of the Corporation for a total of ₹9.2 billion.

⁷ In accordance with Federal Law No. 356 FZ, dated 27 November 2017, 'On Amending Articles 25.1 and 25.2 of the Federal Law «On the Development of Small- and Medium-Sized Businesses in the Russian Federation»'.

Figure 81

Dynamics of guarantees
and sureties

Source: Bank of Russia on the basis of the reporting of SME Corporation JSC in accordance with RAS.

double the portfolio of contingent liabilities (to 20% and 25%, respectively)⁸.

In Q2 2018, the Corporation's portfolio of contingent liabilities reached ₹120.1 billion (Figure 81), of which sureties to banks under Program 6.5 accounted for ₹88.1 billion⁹ (the 'Programme'), and guarantees accounted for ₹32.0 billion. Programme principals are primarily major credit institutions, and at the moment about half of the funds envisaged by the project have been disbursed. According to the Bank of Russia, the Programme may be of interest to regional banks, which mostly work with small businesses, so the matter of its extension for 2019 and lowering the bar in terms of the maximum loan size from ₹5 million to ₹3 million, making it more affordable for small business, is being worked out.

Due to the nature of the business, the main risk is currently concentrated on the guarantee

portfolio. Despite a decline in the share of problem guarantees in the portfolio from 12.8% to 12.0%, in Q2 2018, there was a shift toward the most depreciated guarantees in the structure itself (an increase from 25.1% to 33.5%). However, it should be noted that almost the entire volume of bad guarantees is covered with provisions formed for possible losses. In terms of the portfolio of sureties, the share of partner banks with capital of less than ₹50 billion, which is the main target segment of the Corporation, also increased.

As part of the implementation of support measures for SMEs¹⁰, the Corporation, with the joint participation of regional government bodies, established 4 leasing companies¹¹ and in 2018 plans to conduct the first transactions for issuance of guarantees for multi-originator securitization of loans to SMEs. New activities in case of materialisation of losses may increase financial leverage (quasi-government debt obligation). Given the new potential risks of the Corporation, the Bank of Russia will continue to monitor its operation.

VNESHECONOMBANK

According to IFRS consolidated statements of Vnesheconombank Group¹² for H1 2018, the cumulative loss amounted to ₹105.7 billion, and the consolidated equity fell to ₹358.8 billion (-₹36.9 billion during the period). Against this background, state support remains key for the development institution, and its prospects largely depend on the success of the implementation of the new Development Strategy up to 2021¹³ ('VEB 2.0').

The main loss factors of Vnesheconombank Group from 31 December 2017 through 30 June 2018 were losses from the initial recognition of deposits of the Sovereign Welfare Fund in the amount of ₹44.5 billion due to a change in their

⁸ In accordance with Resolution of the Government of the Russian Federation No. 235, dated 7 March 2017, 'On the Approval of Numerical Values and the Rules for Calculating the Standards Specified in Part 11.4 of Article 25.1 of the Federal Law «On the Development of Small- and Medium-Sized Businesses in the Russian Federation», the Procedure and Timing for Disclosing Their Observance by the Joint-Stock Company Russian Small and Medium Business Corporation, and the Submission of the Auditor's Opinion on the Results of Verification of Compliance with the Specified Standards to the Government of the Russian Federation'.

⁹ The 6.5% Program provides loans to SMEs for business development at a reduced fixed rate of 9.6% for medium businesses and 10.6% for small businesses. The reduced loan cost is supported by loans granted by the Bank of Russia to its authorised banks under the Corporation's guarantee at 6.5% per annum.

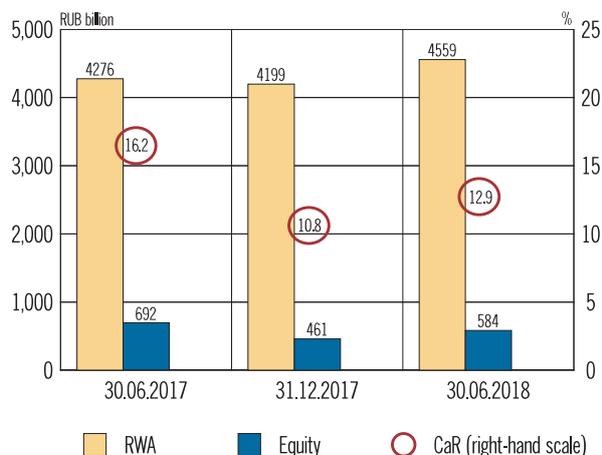
¹⁰ In accordance with Federal Law 415 FZ, dated 19 December 2016, 'On the Federal Budget for 2017 and for the Planning Period of 2018 and 2019'.

¹¹ Four regions will be included in the programme of preferential equipment leasing in 2018.

¹² State Corporation 'Bank for Development and Foreign Economic Affairs (Vnesheconombank)' and its subsidiaries.

¹³ The Development Strategy up to 2021 and the VEB Business Model.

Figure 82

Dynamics of the capital adequacy
of Vnesheconombank

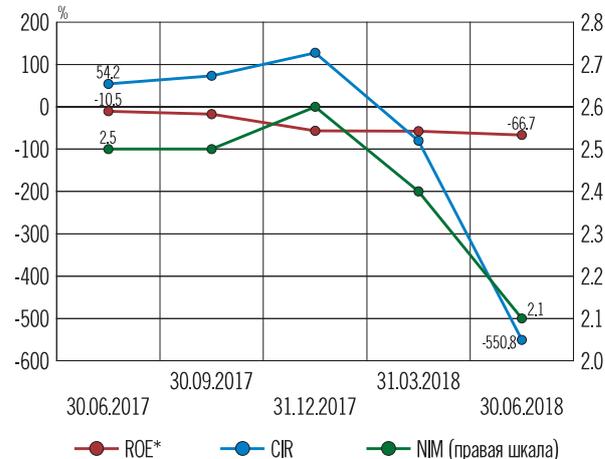
Source: Bank of Russia on the basis of the reporting of Vnesheconombank in accordance with RAS.

currency (from US dollars to rubles)¹⁴, revaluation of financial instruments in accordance with IFRS 9 (-₽31.2 billion), reduction in net interest margin (NIM) to 2.1% (-0.4 p.p., H1 2018 compared to the same period of 2017), growth of interest expenses by ₽6.1 billion (+6.7%, mainly due to an increase in attracted funds of customers¹⁵), and an increase in Cost-to-Income Ratio (CIR) from 54.2% to -550.8%¹⁶ (H1 2018 compared to the same period of 2017).

As a result, the negative return on equity of Vnesheconombank Group increased to 66.7% (-9.8 p.p. for the period), and capital adequacy decreased to 12.9% (-3.3 p.p.).

In this regard, the VEB 2.0 program, the key element of which is the 'Project Financing Factory' project ('PFF'), is acquiring particular relevance. PFF envisages provision of funds to borrowers under syndicated loan agreements implemented

Figure 83

VEB Group operating
performance indicators

* Calculated on the basis of a rolling year.

Source: Bank of Russia on the basis of the reporting of Vnesheconombank in accordance with IFRS.

with the use of state support measures (subsidies and guarantees from the federal budget). At the same time, the volume of PFF participation cannot exceed 40% of the syndicated loan for project financing.

Considering the potential risks set forth and the systemic significance of Vnesheconombank Group for the stability of the financial system of the Russian Federation, the need for detailed monitoring of the risk of the development institution on an ongoing basis becomes especially relevant. In this regard, in early 2018, the Bank of Russia and Vnesheconombank concluded an addendum to the previous agreement on the provision of information (mainly within the framework of statistical reporting forms), providing for the transfer to the Bank of Russia of information about the main financial risks of Vnesheconombank Group on a quarterly basis.

¹⁴ In January 2018, pursuant to Resolution of the Government of the Russian Federation No. 1335, dated 8 November 2017, and Order of the Government of the Russian Federation No. 2639 p, dated 28 November 2017, the currency of long-term deposits (including subordinated deposits) placed in Vnesheconombank at the expense of SWF funds in the common nominal amount of \$6,254 million was changed from dollars to rubles.

¹⁵ The balances of the current accounts of private corporations and state-controlled corporations as well as household funds placed in deposits (for the banks resolved by VEB Group).

¹⁶ The negative value of the indicator is associated with the incurrance of losses from operating activities, including in connection with the negative revaluation of financial instruments at the reporting date.

APPENDIX. SUMMARY OF CURRENT MACROPRUDENTIAL POLICIES IN OTHER COUNTRIES

1. Requirements for the Countercyclical Capital Buffer (CCyB)

- In June 2018, the National Bank of the Czech Republic announced that from 1 July 2019 the countercyclical capital buffer (CCyB) will be increased from 1.25% to 1.50% of the risk-weighted domestic exposures.
- In June 2018, the Supreme Financial Stability Board of France, according to the recommendation of the Chairman of the Bank of France, for the first time decided to introduce a CCyB for banks in the amount of 0.25% of risk weighted assets ('RWA') from 1 July 2019. The decision was based on the updated forecast of the Bank of France, according to which the country is expecting rapid economic growth, while the regulators need to remain vigilant regarding factors of economic and political instability. A statement from the Supreme Financial Stability Board noted an increase in the risk appetite in financial markets as well as an increase in the accumulated debt of French non-financial companies and households.
- In July 2018, the Central Bank of Slovakia announced an increase in the size of the CCyB by 0.5 p.p. to 1.5% from RWA starting from 1 August 2019 due to excessive lending growth rates of 10% (mortgage lending by 13% annually since 2014), exceeding similar indicators in the countries of Central and Eastern Europe.
- In July 2018, the Central Bank of Ireland announced the introduction of a CCyB of 1% of the RWA starting from 5 July 2019 amid escalating cyclic systemic risks (namely, external shocks) and continuing high levels of accumulated debt by households and a high share of low-quality loans.

2. Requirements for global and national systemically important banks and the Systemic Risk Buffer (SRB)

- In April 2018, the Board of Governors of the US Federal Reserve and the Office of the Comptroller of the Currency of the United States (OCC) published revised requirements for an enhanced supplementary leverage ratio of global systemically important banks (G-SIBs) and their subsidiaries in the deposit insurance system. The enhanced supplementary leverage ratio applies to those G-SIBs to which a risk-based systemic importance buffer applies. Instead of a fixed level of enhanced supplementary leverage ratio of 2%, this ratio will be equal to 50% of the capital adequacy buffer of G-SIBs. Thus, the cumulative level of the enhanced supplementary leverage ratio for G-SIBs will make up 3% of total consolidated assets plus 50% of the capital adequacy buffer of G-SIBs. The same requirement will apply to subsidiary banks of G-SIBs (3% of the total consolidated assets plus 50% of the capital adequacy buffer for the parent G-SIB).
- In April 2018, the Board of Governors of the US Federal Reserve published proposals for single integrated capital adequacy requirements for major banks, taking into account both the systemic importance of the banks and the results of Comprehensive Capital Analysis and Review (CCAR) and stress testing. The Federal Reserve Board proposes abolishing the capital conservation buffer (CCB) of 2.5% of RWA and introducing a so-called stress capital buffer (SCB) that takes into account the characteristics of specific banks and is sensitive to the results of stress testing. The minimum buffer value will be

set at 2.5% of RWA, and its size will be calculated as the difference between the minimum first-tier capital adequacy requirements for G-SIBs and the minimum first-tier level of capital achieved during the stress test.

- In June 2018, the Office of the Superintendent of Financial Institutions of Canada (OSFI) initiated a public disclosure of information on the amount of capital buffers (in Canada, domestic stability buffer, DSB) for national systemically important banks and the relevant risks. The information about the amount of capital buffers was previously sent by NSIB directly to the banks privately, while now the information about the size of the buffer will be published twice a year – in June and December. OSFI reserves the right to change the size of the buffer between these publication dates. Currently, the size of the capital buffer of NSIB is 1.5% of RWA; it will be imposed on such banks as Toronto-Dominion Bank, Bank of Montreal, Bank of Nova Scotia, Canadian Imperial Bank of Commerce, Royal Bank of Canada, and the National Bank of Canada.
- In June 2018, the Financial Services Commission of the Republic of Korea (FSC) announced the identification of four national systemically important banks (NSIBs): Shinhan Financial Group, Hana Financial Group, KB Financial Group, NH Financial Group and Woori Bank. In 2019, these banks will have to form an additional capital buffer of 1% of RWA.

Banks	Systemic Risk Buffer, %	O-SII Buffer, %	Aggregate buffer, %
Všeobecná úverová banka	1	1	2
Slovenská sporiteľňa	1	1	2
Tatra banka	1	0.5	1.5
Československá obchodná banka	–	1	1
Poštová banka	–	1	1

- In June 2018, the National Bank of Slovakia notified the European Systemic Risk Board about the introduction of a systemic risk buffer (SRB) as well as a capital buffer for other systemically important institutions (O-SII Buffer) under Article 131 of the Capital Requirements Directive (CRD) (from RWA) starting from 1 January 2019.
- In June 2018, the Finnish Financial Supervision Authority (FIN-FSA) announced the introduction

of an SRB starting from 1 July 2019 for the following credit institutions: Nordea at a rate of 3.0%, Op Group at a rate of 2.0%, Municipality Finance Plc at a rate of 1.5%; other credit institutions at a rate of 1.0% of risk-weighted assets.

FIN-FSA believes that there are increased systemic risks in the Finnish financial system: excessive concentration (mortgage and loans to the construction industry) and high levels of household indebtedness. The size of the financial sector is extremely large compared to the real sector of the economy. In addition, the Finnish financial system is highly connected with the financial systems of other Scandinavian countries. Since credit institutions are the main supplier of financial services, serious difficulties can have a significant negative impact on the financial sector as a whole and the real economy.

FIN-FSA also introduced additional capital requirements for Nordea of 1.0% (in accordance with FSB recommendations for G-SIBs). In addition, Nordea, Op Group, and Municipality Finance Plc are recognised as other systemically important financial institutions, for which additional capital adequacy requirements will be set. Note that in respect of credit institutions, buffers will not be summed up, and only the highest buffer will apply.

O-SIBs, %	Additional capital adequacy requirements for G-SIBs, %	Additional capital adequacy requirements for O-SIBs, %	Systemic Risk Buffer, %	Total additional capital adequacy requirements, %
Nordea,	1	2	3	3
OP Group	–	2	2	2
Municipality Finance Plc	–	0.5	1.5	1.5
Other credit institutions	–	–	1	1

- In July 2018, the Basel Committee on Banking Supervision (BCBS) released the updated methodology 'Global systemically important banks: revised assessment methodology and the higher loss absorbency requirement'. Based on the experience of member countries and comments received during the consultation period¹, BCBS left the fundamental structure of the methodology unchanged. The decision to preserve the main elements of the methodology

¹ Held in March–June 2017.

will further strengthen the stability of the regulatory framework after the recent revision of Basel III. The updated methodology includes, among other things, the following changes:

- Amendment of the definition of cross-jurisdictional indicators to bring them in line with the definitions of the consolidated statistics of BIS;
- Introduction of a trading volume indicator and changing the weights in the substitutability category;
- Inclusion of insurance subsidiaries in the assessment;
- Review of requirements for information disclosure;
- Adoption of a transitional schedule for the implementation of these improvements in the methodology for G-SIB assessment.

The revised methodology is expected to be implemented by 2021.

3. Setting the loan-to-value ratio (LTV) cap

- In July 2018, the Central Bank of Indonesia decided to relax the requirements for the ratio of the amount of the loan and the cost of purchased residential property (LTV). Previously banks independently established the acceptable LTV ratios for mortgage loans for the acquisition of residential houses with an area of less than 70 m², apartments of less than 21 m², or home stores/home offices. Now they will be able to do so with regard to residential houses with an area of more than 70 m² and apartments with an area of 22–70 m².
- Since 1 July 2018, the Central Bank of Slovakia has set the maximum allowed LTV at 90% and tightened the limits on the issue of new loans with an LTV above 80%.

	1 July–30 September 2018	1 October–30 December 2018.	1 January–30 June 2019	From 1 July 2019
Maximum allowable share of newly issued loans with an LTV ratio of over 80%, %	35	30	25	20

Until 1 July 2018, the share of newly issued loans with an LTV ratio of over 80% could not exceed 40%.

- In July 2018, the Monetary Authority of Singapore (MAS) announced a tightening of LTV limits by 5 p.p. for all categories.

Type of real estate	LTV limit until 5 July 2018, %	LTV limit after 5 July 2018, %
First residential real estate	80	75
– If the term of the loan exceeds 30 years, or if the age of the borrower exceeds 65 years	60	55
Second residential real estate	50	45
– If the term of the loan exceeds 30 years, or if the age of the borrower exceeds 65 years	30	25
Third and subsequent residential real estate	40	35
– If the term of the loan exceeds 30 years, or if the age of the borrower exceeds 65 years	20	15
For co-borrowers	20	15
Minimum down payment for the first residential real estate	15	
– If the term of the loan exceeds 30 years, or if the age of the borrower exceeds 65 years	10	
Minimum down payment for the second and subsequent residential real estate	20	

- In September 2018, the South Korean Financial Services Commission (FSC) lowered the maximum allowable size of the LTV ratio for mortgage loans for the acquisition of real estate in so-called speculative areas to 40%.

4. Setting Debt-to-income (DTI), Debt-service-to-income (DSTI), Loan-to-income (LTI), and Payment-to-income (PTI) caps

- In June 2018, the National Bank of the Czech Republic announced the introduction of tougher requirements for mortgage loans starting 1 October 2018: the DTI ratio should not exceed 9%, and the DSTI ratio should not exceed 45% of monthly income. These requirements are waived only in certain cases, which should account for no more than 5% of newly issued mortgage loans.
- In June 2018, the National Bank of Hungary announced its intention to increase the threshold of the average monthly income for calculating the DSTI ratio starting 1 July 2019. Requirements for the ratio of monthly payment and income will be tightened for borrowers with incomes from 400,000 forints to 500,000 forints (from \$1,400 to \$1,800).

	Size of the DSTI ratio, %		
	Term for which interest rate is fixed on a mortgage loan		
	less 5 five years	from 5 to 10 years	more than 10 years, fixed rate
Average monthly income of less than 400,000 forints (from 1 July 2019 less than 500,000 forints)	25	35	50
Average monthly income is not less than 400,000 forints (from 1 July 2019 not more than 500,000 forints)	30	40	60

5. Other measures

- In April 2018, the Bank for International Settlements (BIS) published a report on the possibilities of coordinating macroprudential policies on international level. The impact of measures implemented in individual countries can be negative and thus exacerbate risks to financial stability, especially when countries are in different economic and financial cycles. Another rising problem is the emergence of regulatory arbitrage. The report concludes that the coordination of macroprudential policy on international level may be not only useful but also necessary.
- In May 2018, the French Supreme Financial Stability Board decided to limit large investments (more than €300 million) of the six largest

banks (BNP Paribas, Societe Generale, Credit Agricole, Credit Mutuel, BPCE, and La Banque Postale) in large French companies with a high debt burden—in the amount of 5% of the banks' equity. The Board identifies companies with a high debt burden by means of two indicators: the company's leverage ratio at the highest level of consolidation exceeds 100%, and the ratio of coverage of the company's interest expenses (ratio of EBIT and interest payments) is less than 3. The restrictions were imposed from 1 July 2018 for 2 years with the possibility of extension.

- In May 2018, US President Donald Trump signed the 'Economic Growth, Regulatory Relief, and Consumer Protection Act', which provides for the mitigation of requirements for banks with small assets. The law provides for the following:
 - Raising the threshold of the consolidated assets of a bank upon reaching which the bank will be recognised as systemically significant from \$50 billion to \$250 billion;
 - Raising the threshold of the consolidated assets of a bank at which it becomes subject to the requirement to participate in stress testing from \$10 billion to \$250 billion;
 - Raising the threshold of the consolidated assets of a bank upon reaching which the bank must organise a mandatory risk committee from \$10 billion to \$50 billion.

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