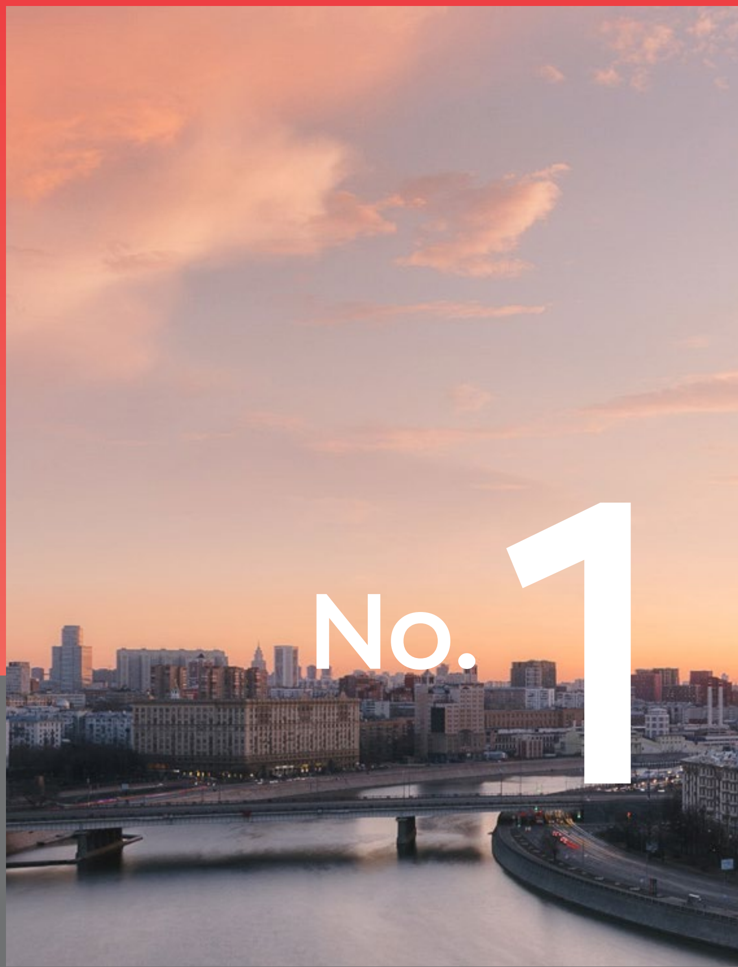
Bank of Russia



Q4 2018 – Q1 2019

FINANCIAL STABILITY REVIEW

Information and analytical review

Moscow
2019

Contents

This material was prepared by the Bank of Russia Financial Stability Department.

All statistical data and calculations in this review are provided as of 1 April 2019.

ЭThe electronic version of this Review is available in Russian and English on the Bank of Russia's official website (http://www.cbr.ru/publ/?PrtId=stability).

You can send your remarks, comments, or suggestions concerning the structure or contents of the review to reports@cbr.ru.

Photo on the cover: Shutterstock.com

12 Neglinnaya St., Moscow 107016, Russian Federation
Bank of Russia website: www.cbr.ru

SUMMARY

1. External and internal risks of the economy and financial system

In Q4 2018-Q1 2019, the situation in emerging market economies (EMEs), including Russia, has improved since the release of the previous review for Q2-Q3 2018. Currently, there are three major factors influencing the dynamics of the global financial markets.

- Firstly, the risks of global economic growth slowdown are increasing. According to the IMF, the growth of world GDP in 2018 slowed down to 3.6% (in 2017 - 3.8%). At the same time, the financial authorities of the advanced economies (first of all, the US and the eurozone) revised their 2019 economic growth forecasts downwards. Growth rates of the Chinese economy have declined to the lowest point over the long period.
- Secondly, there is still uncertainty regarding the central banks policies in the advanced economies. In December 2018, the US Federal Reserve still intended to increase the interest rate and to reduce its balance sheet, what significantly differed from the market expectations. Under these conditions, there was a significant decline in stock indices. In the first quarter of 2019, the US Federal Reserve and the ECB decided not to raise interest rates during the 2019 due to the risk of economic growth slowdown. That led to an increase in investor risk appetite and capital inflows into the emerging markets. Currently, the financial markets and the US Federal Reserve still differ in their estimates of the interest rate dynamics (market indicators are based on the assumption that the US Fed will decrease the interest rate at the end of 2019). The further rhetoric of central banks of the advanced economies will largely determine the volatility of capital flows.
- Thirdly, the importance of international economic and geopolitical factors is increasing. Intensifying trade disputes between the United States, China and other countries may lead to a reduction in global trade volumes and have a serious impact on inflation, consumer sentiment and ultimately on global economic growth. Brexit can have a tangible impact on market stability as well (this question remains open, taking into account the postponement of British exit from the EU until 31 October 2019), and the oil prices dynamics – on the developments in Iran and Venezuela.

Materialisation of certain risks can cause volatility in global markets. Volatility can also be amplified by the vulnerabilities accumulated in the jurisdictions. These vulnerabilities are primarily associated with the debt burden, which has increased over a long period of loose monetary policy of the advanced economies' central banks. In advanced economies, there is a concern regarding the increase in lending to companies with high debt burden. In such cases, debt accumulation is often associated not with the investment activates of the borrower, but the mergers and acquisitions (M&A), including LBO/MBO. At the same time, countries with developed markets may now face limited space in macroeconomic policies to support economic growth. Since the beginning of 2008, EMEs have experienced a significant increase in external debt levels, and in some countries (Turkey, Chile, Argentina, South Africa, Indonesia) it is several times larger than the accumulated international reserves.

The stability of the Russian economy to external challenges in recent years has increased due to improvements in fundamental macroeconomic indicators (a decrease in inflation, a transition to a budget surplus, an increase in the current account surplus, a decrease in external debt, an increase in international reserves). However, geopolitical risks associated with a possible tightening of sanctions still exist.

The domestic problems of the Russian economy can also pose a risk to the Russian financial system. In Q1 2019, the real disposable income of the population continued to decline (by 2.3% YoY), while the debt burden is growing rapidly. Income stagnation may have a negative impact on the quality of consumer loans.

2. Vulnerabilities of the financial system

- **The rapid growth of the population debt burden against the backdrop of accelerated growth of consumer lending**

The growth in consumer lending has stabilised at a high level: as of 1 April 2019, the annual growth rate of total amount of mortgages reached 24.7%, of unsecured consumer loans - 24.3%. In 2019, the debt service ratio (the ratio of loan payments to the cumulative disposable income of all households) for unsecured loans may reach its peak level of 2014 (9.0%). Further stagnation of real income of the population can lead to an increase in non-payments of consumer loans. In the first quarter of 2019, in the mortgage market, the share of loans with a small down payment (less than 20%) remained high (42.0%). The down payment on a mortgage loan reflects the financial condition of the borrower and his ability to save money. Loans with a small down payment are characterised by a higher level of credit risk of the borrower and are potentially vulnerable to a decrease in real income of the population.

Sustainability factors and actions taken

Unsecured consumer lending. Starting from 1 April 2019, in order to limit risks in the unsecured consumer lending and to stimulate banks to create capital buffers, the Bank of Russia increased capital add-ons (risk-weights) for consumer loans with effective interest rate from 10% to 30%. If excessive growth rates of consumer lending persist, add-ons for unsecured consumer loans, depending on the effective interest rate, can be further increased taking into account the value of payment to income ratio, which banks will be obliged to calculate starting from 1 October 2019.

Mortgage. In Q4 2018, the Bank of Russia increased the buffers to risk weights for mortgage loans issued after 1 January 2019, with LTV from 80 to 90%. As a result, the share of such loans in Q4 of 2019 decreased from 42.9% to 40.7%. The quality of mortgage loans, including those for new houses, still remains high. The share of overdue debt on such loans does not exceed 0.4% as of 1 April 2019.

- **Risks of dollarization and dependence on external financing**

Crisis developments in the Russian market in 2008–2009 and 2014–2015, as well as cases of other countries (Turkey as one of the most recent examples) show that substantial dollarization of the banks' balance sheets and high dependence of the national economy on external financing are factors of vulnerability of the financial system.

Dollarization of the deposits of individuals

As inflation declined and after the transition to a floating exchange rate regime, the attractiveness of FX borrowing and FX savings in Russia decreased. However, in Q4 2018-Q1 2019, the process of reducing dollarization of the balance of the Russian banking sector was partially halted. In terms of assets, the reduction of FX loans continued (to legal entities-residents - by 16%, to non-financial organisations as a whole - by 10%), but the volume of swaps and interbank loans in foreign currency increased. The reduction of liabilities to non-residents continued, but the growth of FX deposits of corporates and individuals resumed. The share of deposits of individuals in foreign currency in the total volume of deposits of individuals in Q1 2019 increased from 20.3% to 21.5% (eliminating the exchange rate revaluation[1]).

Sustainability factors and actions taken

In order to gradually stimulate the reducing dollarization tendency, the Bank of Russia considers raising the mandatory reserve requirement for FX liabilities to individuals. Additionally, the proposal for amending the current legislation on deposit insurance to reduce the marginal deviation of interest rates on FX deposits from the base rate of return, over which banks pay additional and increased additional insurance premiums, is being discussed.

Dependence on foreign investors

Russia's total external debt has continued to decline (since the beginning of 2016 to 1 April 2019, total external debt decreased by 10% to $467.8 billion, corporate debt – by 8% to $317.9 billion, banks' debt – by 38%, to $82.3 billion) and now is fully covered by gold and foreign currency reserves ($490 billion). Nevertheless, in 2018, the Russian market faced the risks associated with its sensitivity to the behavior of foreign investors: the OFZ returns (and, as a consequence, other interest rates) were affected by the non-residents selling OFZ caused by the discussions of potential US sanctions. In 2018, the share of foreign investments in total public debt decreased from 33.1% to 24.4%. However, in Q1 2019, against the backdrop of high oil prices and a significant risk appetite of international investors, the volume of non-residents' investments in OFZ increased by 256 billion rubles; the share of non-residents' investments in OFZ in the total market volume as of 1 April was 26.7%.

Sustainability factors and actions taken

The Russian OFZ market stability is determined by the low level of total public debt (14.6% of GDP as of 1 January 2019), a relatively small proportion of non-residents (27% in Russia, in comparison: South Africa — 40%, Indonesia – 38 %, Mexico – 32%) and the high demand for OFZ from domestic financial institutions (non-government pension funds, life insurance companies and banks). In the event of high volatility, the Bank of Russia may impose a moratorium on the revaluation of securities in their portfolios.

- **Increase in banks' short-term funding**

The vulnerability of the banking sector is associated with a high sensitivity to liquidity and interest rate risks against the backdrop of a significant share of short-term borrowings. In general, in all currencies, the share of legal entities' deposits with a term of up to 1 year exceeded 60% in the second half of 2018 and continued to grow; for individuals it stabilised at 60%. At the same time, while ruble operations showed a slight upward trend in the share of long-term deposits, the share of short-term deposits in foreign currency significantly increased over the past year: for individuals - from 37% to 48%, for legal entities - from 22% to 26%. The increase in the share of short-term liabilities is also connected with the current environment (expectation of lower interest rates) and does not pose a threat in the short term. As of 1 January 2019, the actual values of the structural liquidity ratio (net stable funding ratio)[2], that ensures that stable sources of liabilities for funding of the assets and off-balance sheet liabilities are sufficient, ranged from 102% to 177%, the average value was 115%. In the long term, it is advisable to increase the share of long-term funding sources.

A high share of short-term liabilities increases the vulnerability of the banking sector to liquidity risk. Nevertheless, liquidity risks in the Russian banking sector are limited given the fact that highly

[1] *Based on the rate of the Bank of Russia on 03.30.2019.*

[2] *The minimum allowed value of the structural liquidity ratio is 100%.*

liquid assets are sufficient to meet the LCR requirement. At the same time, some banks resort to the use of irrevocable credit lines as an additional option to comply with the ratio. In order to strengthen the incentives for banks to comply with the LCR requirement by forming a portfolio of highly liquid assets, the Bank of Russia decided to phase out the possibility to use this tool[3].

Sustainability factors and actions taken

In order to stimulate long-term savings of the population and reduce the risks of the banking sector, a new instrument has been introduced to the market since June 2018 - a bank deposit agreement certified by a savings certificate, the terms of which do not include the depositor's right to receive deposit on demand. Currently, the Bank of Russia is working on improving this tool. In particular, adjusting the terms of registration of conditions for issuing of certificates is being considered.

- **The growing concentration of the banks' loan portfolio in some of the largest borrowers characterised by high debt burden**

In general, the debt burden of Russian non-financial organisations (46.9% of GDP) is at an average level (Brazil - 40.6%, India - 45.7%, South Africa - 39.3%, Turkey - 69.2% , China - 157.1%), however, it is traditionally concentrated in the largest companies (92 public companies account for 35% of the total debt). These borrowers are characterised by high debt burden indicators (the median value of "Net debt to capital" indicator is close to 80%, "Interest coverage by operating profit" is close to 3). In recent years, there has been an increase in the concentration of loans issued by the Russian banks to the largest borrowers (since 1 January 2016 to 1 January 2019, the volume of loans issued to the largest borrowers[4] increased by 68%). In case of a stress scenario (for example, a decline in commodity prices), companies with a high debt burden may face substantial difficulties in servicing and refinancing their debt. This may have a negative impact on the stability of the national financial market.

Sustainability factors and actions taken

The Bank of Russia has issued a consultation report on the identification of the companies with high debt burden. Moreover, the Bank of Russia intends to monitor the exposures of the largest banks to the liabilities of such companies. At the next stage, the Bank of Russia may implement higher add-ons for loans to companies which debt burden is significant at the systemic level and characterised by a low ability to service accumulated debts.

3. Assessment of the sustainability of the banking sector

The profit of the banking sector in 2018 reached a record high level of 1.3 trillion rubles. The profit of credit institutions, excluding banks undergoing the financial recovery process, increased by 30%5 to 1.8 trillion rubles mainly as a result of an increase in net interest income (by 344.4 billion rubles, or 14%) as well as net fee and commission income (by 189 billion rubles, or 21.3%). The profitability of the banking business continues to rise: as of 1 April 2019, during the previous 12 months, the return on assets increased from 1.0% to 1.8%, and the return on equity – from 8.5% to 15.9%. As of 1 April 2019, the ROA of banks that were not undergoing the financial recovery over the same period increased from 2.0% to 2.4%, while their ROE increased from 15.5% to 19.3%. The capital adequacy

[3] Since 1 May 2019, the fee for the right to utilise a newly opened irrevocable credit line has been increased from 0.15% to 0.5% per year. A single schedule has also been established to reduce the maximum number of individual limits for each bank. This will reduce the total number of utilised lines to zero by 1 May 2022.

[4] The credit requirements for 25 companies for which at least one bank had the extent of exposure to credit risk, corresponding to the total amount of credit claims of the bank to the borrower used in calculating the N6 requirement, exceeded 100 billion rubles as of 1 January 2019.

[5] Compared to the profit of credit institutions excluding banks that undergone the financial recovery in 2017.

ratio of credit institutions remains at a stable level (14.6% with the exception of banks undergoing the financial recovery), while the capital buffers increased due to higher risk weights (up to 0.6 p.p. of capital adequacy of the banking sector[6]). In such conditions, the counter-cyclical capital buffer is kept at 0%.

4. Assessment of the sustainability of non-credit financial organisations

The risks of life insurers, which in recent years strengthened their positions on the investment market for individuals (the volume of life insurance provisions as of 31 December 2018 amounted to 3.1% of deposits of individuals on the same date), remain at an acceptable level due to high quality of assets. At the same time, the accumulated capital surplus of companies continues to decline, and the dynamics of premiums show signs of a slowdown (the quarterly increase in premiums in Q4 2018 was 26.7%, decreasing by 20.8 p.p. compared to the same period in 2017). The key risk is still the widespread practice of misseling - the number of complaints against life insurers has increased by 75% compared to the year of 2017. For non-life insurers, there has been an improvement in the results of both insurance and investment activities. The reform of the compulsory motor third party liability insurance (OSAGO) remains important for the situation in this segment.

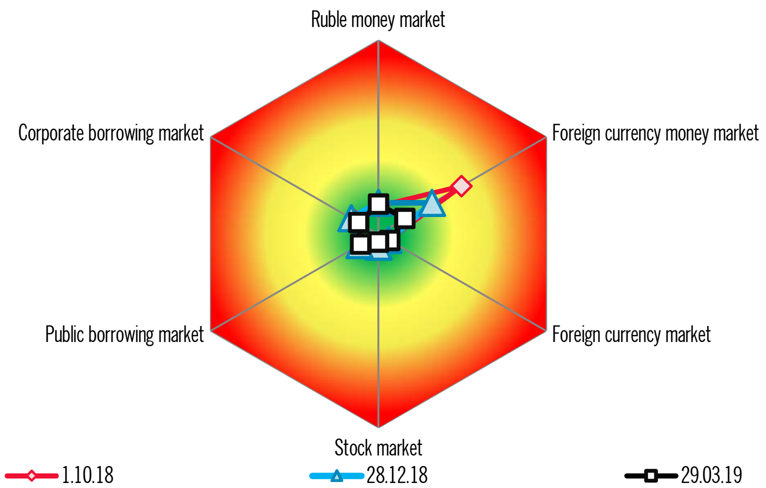
The risks of non-government pension funds (NPFs) have substantially decreased over the past few years with the growth in the quality of their assets. At the same time, because of the materialisation of the previously accumulated credit risks, NPFs have shown low returns on the portfolio of pension savings. The requirement to guarantee the break-even results of investments of pension savings may force the pension funds to utilize their own capital. At the same time, the situation is mitigated by the presence of a five-year horizon for calculating the break-even level. Moreover, increase in minimum capital requirements for NPFs up to 200 million rubles from 1 January 2020 will contribute to the financial stability of the industry.

At the end of 2018, about 40% of brokers reported losses, including those arising from the transition to a new accounting system in accordance with the requirements of the Industry Accounting Standards. Market risks were at acceptable levels: the securities portfolio for the industry as a whole consisted mainly of high-class assets. One of the main risks in the broker-dealer sector is liquidity risk. To protect clients in the financial market, the Bank of Russia plans to introduce a threshold value for the indicator of short-term liquidity.

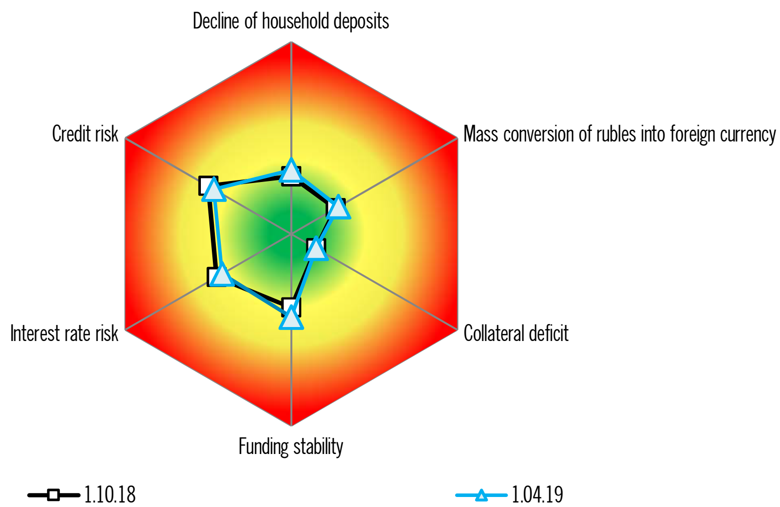
[6] *If the buffers to risk weights were reduced to zero, the capital adequacy of the banking sector would be higher by 0.6 p.p.*

RISK MAP

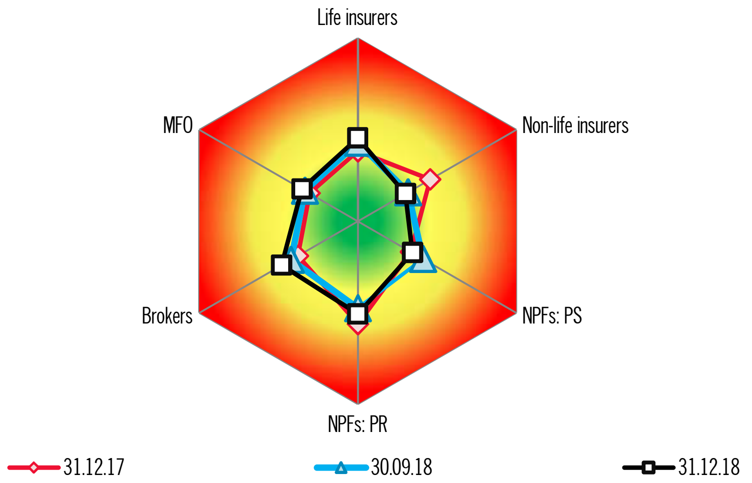
RUSSIA FINANCIAL MARKET RISK MAP *Chart 1*



MAP OF RUSSIA'S BANKING SECTOR RISKS *Chart 2*



NON-BANK FINANCIAL INSTITUTIONS RISK MAP *Chart 3*



1. RISKS OF THE GLOBAL ECONOMY AND GLOBAL FINANCIAL MARKETS

Uncertainty about the prospects of global economy growth increased during the reporting period. The IMF and national regulators have revised their forecasts on the growth of leading economies downwards. In the light of increased risks of an economic slowdown in developed countries (the USA and the euro area), growth of global financial market volatility was observed in Q4 2018. In Q1 2019, the situation stabilised gradually thanks to the decision of the US Federal Reserve to suspend normalisation of the monetary policy in 2019. The ECB also softened its rhetoric due to the slowdown of economic growth in the euro area and significant aggravation of the situation in the industrial sector (including Germany). The market expectations were generally negatively affected by the continuation of foreign trade disputes between the US and China and by uncertainty about Brexit. The situation in the emerging market ecomoies (EMEs) remained fairly stable, except for some countries (Turkey, Argentina). In the future, a more lengthy continuation of the low cost of borrowings in the global financial markets may contribute to the growth of risk appetite among investors and support the EMEs. However, it may also lead to further accumulation of vulnerabilities in the global financial system, including even greater growth of the debt burden and the formation of 'bubbles' in the markets.

In January and April 2019, the IMF downgraded its forecasts for global economic growth (Table 1). According to the IMF, the growth rate of the global GDP in 2018 slowed down to 3.6% (from 3.8% in 2017). The global economic growth rate is expected to decline to 3.3% in 2019 (0.4 p.p. below the forecast for October 2018). GDP growth rates in advanced economies in 2019 will slow down to 1.8% (from 2.2% in 2018), and in EMEs and developing economies, to 4.4% (from 4.5%).

The deterioration in the global economy growth estimates is mostly associated with the expected end of the upward phase of the economic cycle in advanced economies, which started in 2009, and with the termination of the

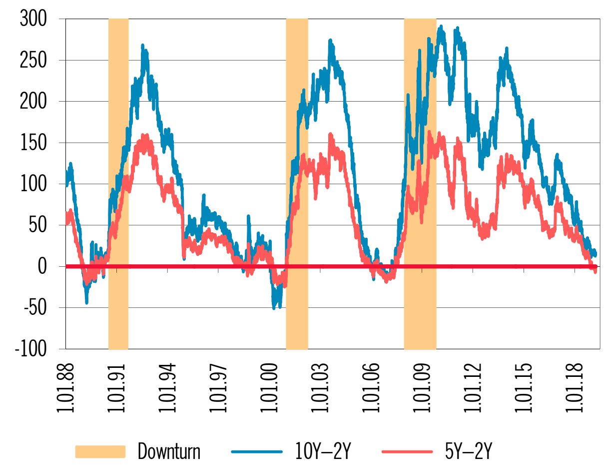
GDP GROWTH RATES, IMF FORECAST FOR APRIL 2019

Table 1

	GDP growth rates (%)				Deviation from January 2019 forecast (p.p.)		Deviation from October 2018 forecast (p.p.)	
	2017	2018	Forecast for April 2019		2019	2020	2019	2020
			2019	2020				
World	***3.8***	***3.6***	***3.3***	***3.6***	***-0.2***	***0.0***	***-0.4***	***-0.1***
Advanced economies	***2.4***	***2.2***	***1.8***	***1.7***	***-0.2***	***0.0***	***-0.3***	***0.0***
USA	2.2	2.9	2.3	1.9	-0.2	0.1	-0.2	0.1
United Kingdom	1.8	1.4	1.2	1.4	-0.3	-0.2	-0.3	-0.1
Euro area	2.4	1.8	1.3	1.5	-0.3	-0.2	-0.6	-0.2
Germany	2.5	1.5	0.8	1.4	-0.5	-0.2	-1.1	-0.2
Japan	1.9	0.8	1.0	0.5	-0.1	0.0	0.1	0.2
Emerging markets economies and developing countries	***4.7***	***4.5***	***4.4***	***4.8***	***-0.1***	***-0.1***	***-0.3***	***-0.1***
China	6.9	6.6	6.3	6.1	0.1	-0.1	0.1	-0.1
India	6.7	7.1	7.3	7.5	-0.2	-0.2	-0.1	-0.2
Russia	1.5	2.3	1.6	1.7	0.0	0.0	-0.2	-0.1
Brazil	1.1	1.1	2.1	2.5	-0.4	0.3	-0.3	0.2
South Africa	1.3	0.8	1.2	1.5	-0.2	-0.2	-0.2	-0.2
Mexico	2.1	2.0	1.6	1.9	-0.5	-0.3	-0.9	-0.8

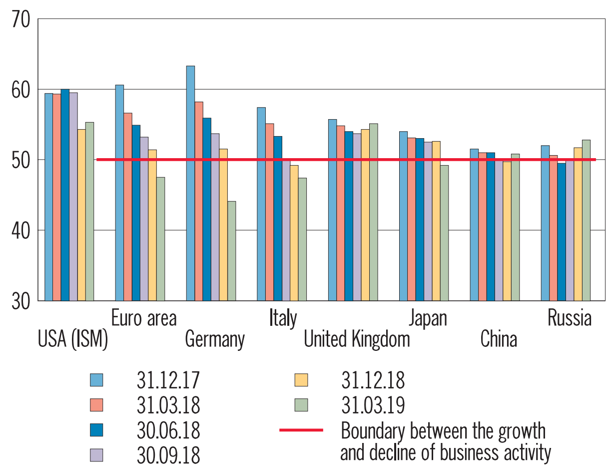
Source: IMF.

US TREASURIES YIELD SPREADS
(B.P.)
Chart 4



Source: Bloomberg.

PMI MARKIT IN THE PRODUCTION SECTOR
IN THE LEADING COUNTRIES
Chart 5



Source: Bloomberg.

influence of budget stimuli in the US. Historically, one sign of increased market expectations that the economic growth of the US will slow down has been an inverted yield curve of US treasury bonds (Chart 4). The revision of forecasts on the US economy in 2019 is partially associated with less optimistic estimates regarding company profits, the expected decline of the positive effect from tax incentives, and the expected decline of global demand because of trade disputes between the US and China. In leading countries, the trend toward deterioration in the processing industry (PMI indices) intensified during the reporting period, especially in the euro area (Chart 5). In China, despite fiscal and monetary stimuli, GDP growth continues to slow to the lowest levels in a long time (to 6.6% in 2018, which was the worst indicator in 28 years).

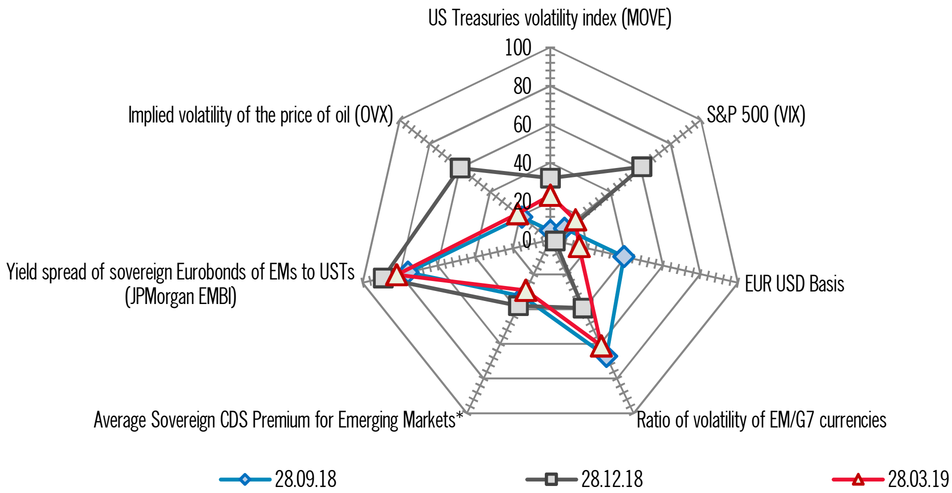
In Q4 2018, amid growing concerns regarding the economic growth outlook in the US and the euro area, growth of volatility in the global markets was observed (Chart 6). It reached its peak value at the end of December 2018, after the US Federal Reserve increased the rate once again to 2.25–2.50% and adjusted the number of increases of the rate in 2019 much less than the market expected (from three to two). The US S&P 500 index had fallen by 6% by 24 December following the meeting of the US Federal Reserve on 18–19 December (in the fourth quarter, by 14%), which caused the decline of indices in the global stock markets. The VIX 'fear index' exceeded 36 points, which may be compared with the growth in February 2018. The conditions in EMEs toughened notably as well: in the fourth quarter, the yield spread of the sovereign bonds of EMEs against the yield on US bonds grew by 61 bp to 445 bp. Furthermore, oil prices declined significantly (in the fourth quarter, the price of Brent oil fell by 35%) amid increased risks of the decline of global demand for oil and active growth of oil production in the US.

In these conditions, in early 2019, the US Federal Reserve signalled an even more gradual increase of the rate, and in March 2019 it announced the end of the policy normalisation cycle in 2019. The managers of the US Federal Reserve do not expect any increase of the rate in 2019, and in 2020 one increase is expected (the market expects a decrease in the rate in late 2019). The US Federal Reserve also announced that it would finish the reduction of assets on its accounts in September 2019. The ECB also softened its rhetoric: the regulator plans to keep rates at a record low level for a longer period of time (at least until the end of 2019). The ECB also announced a new round of targeted long-term repo operations (TLTRO) for banks.

Amid the softening of the rhetoric of the US Federal Reserve and the ECB in Q1 2019, the situation in the global financial markets normalised (Chart 6). In the first quarter, the S&P 500 grew by 13%. The yield spreads in emerging markets declined, and the softening of foreign

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

Chart 6



** Selection of countries: China, Brazil, South Africa, Indonesia, Philippines, Malaysia, Mexico, Peru, Chile, Turkey.*
Scale from 0 to 100 points reflects minimum and maximum values of the indicators during the period from 1.01.2012 to 28.03.2019. From center: growth of volatility (VIX, MOVE, OVX), depreciation of EMEs' currencies, growth of sovereign bonds yields and sovereign CDS premia.
Source: Bloomberg.

regulators' rhetoric contributed to increased risk appetite among international investors. In January–March 2019, the net inflow of portfolio investments to EMEs (to the funds of shares and bonds) amounted to $43 billion (Chart 7). However, in February–March 2019, some EMEs demonstrated aggravation of internal imbalances and growth of volatility in the local markets (Turkey and Argentina), which had a certain negative effect on investors' perception of EME's risks. In some EMEs, growth of the cost of insurance against the risk of default (CDS) resumed in March 2019 (Table 2). Amid the depreciation of the national currencies, a trend towards a certain lessening of the attractiveness of carry-trade deals began to take shape (Chart 7).

Since the beginning of 2019, the growth of oil prices resumed as well: the price of Brent oil grew by 34.2% from the beginning of the year to 21 May to $72 per barrel. Oil prices are growing as oil production is being cut by OPEC+ countries (ahead of schedule in Saudi Arabia) under a new agreement reached in late 2018 and also due to the crisis in Venezuela and the US decision to terminate the temporary exemptions from sanctions for a number of countries importing oil from Iran starting 2 May.

In Russia, the situation in the financial market remained favourable during the reporting period. In Q1 2019, the improvement of the situation in the global markets, a strong current account, and the growth of prices in the oil market created favourable conditions for capital inflow. Investments of non-residents in OFZs in Q1 2019 amounted to ₽256 billion (this amount fully covered the outflow of non-residents' funds from the OFZ market from August to December 2018). Non-residents' share in the OFZ market as of 1 April 2019 amounted to 26.7%. Foreign investments in securities maturing within less than three years favoured the lowering of the yield curve for maturities of over one year by 25 bp on an average (Chart 8).

At present, we can single out several **main triggers** whose effect may, in the future, lead to the growth of volatility in the global financial markets and, in particular, negatively affect the

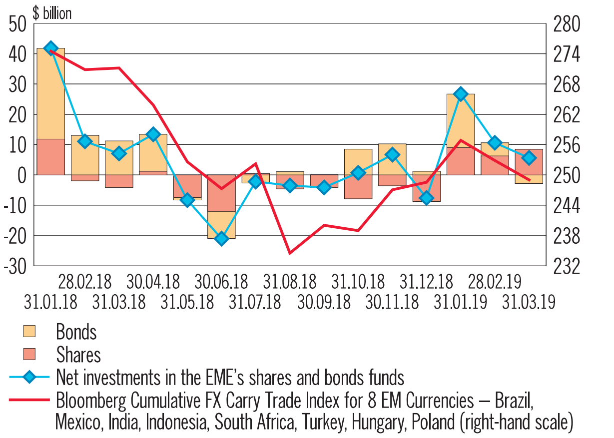
CHANGE IN THE FINANCIAL MARKET INDICATORS IN EMERGING MARKETS IN MARCH 2019

Table 2

	5Y sovereign CDS (b.p.)	10Y government bond yield (b.p.)	Foreign exchange rates (%)
Turkey	150	339	-4.2
Argentina	115	106	-10.3
South Africa	31	-9	-2.9
Brazil	26	-10	-3.7
Russia	8	-4	0.3
Indonesia	3	-19	-1.2
Mexico	2	-15	-0.8
Malaysia	-2	-13	-0.4
China	-3	-10	-0.3
India	-8	-25	2.3

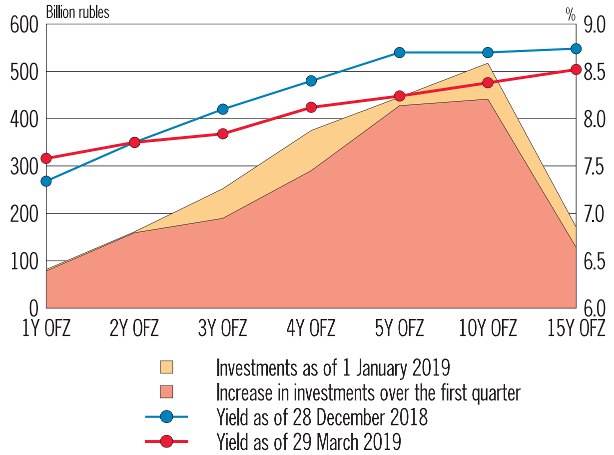
Source: Bloomberg.

NET INVESTMENTS IN THE SHARES AND BONDS FUNDS OF THE EMERGING MARKET ECONOMIES BY MONTHS AND THE CARRY-TRADE INDEX WITH THE EMERGING MARKETS' CURRENCIES *Chart 7*



Source: EPFR.

NON-RESIDENTS' INVESTMENTS IN OFZS AND YIELD ON OFZS BROKEN DOWN BY TIME LEFT TO MATURITY *Chart 8*



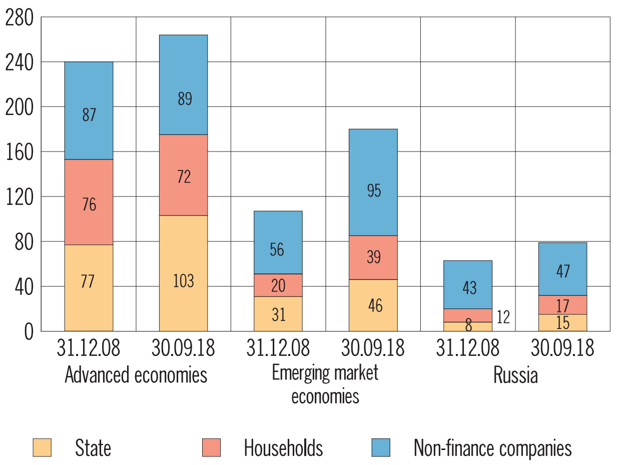
Source: Bloomberg, NSD.

stability of EMEs. The risk of a further slowdown of global economic growth is in the foreground today. In this light, the risks of a quicker normalisation of monetary policy by the major central banks have become less relevant. However, the US economy still remains fairly strong, while in Europe economic growth is slowing down. We cannot exclude the possibility that in the future (if there is a notable improvement of the situation in the US economy) the US Federal Reserve will respond by changing its rhetoric toward a greater increase of its rates. In this case, emerging market economies may face capital outflow, even though these risks have already materialised partially. The risks for the emerging market economies will be mitigated to a certain extent by the improvement of investors' expectations amid the acceleration of the US economy's growth. In any case, the situation may get worse because of the aggravation of foreign economic and political risks (including the intensification of foreign trade disagreements between the USA and China and other countries as well as Brexit, despite its postponement to 31 October 2019). The intensification of political uncertainty may undermine the trust of market participants in the stability of the global financial system.

The degree of possible unfavourable consequences for the markets will be determined to a large extent by **vulnerabilities of the global financial system**. The financial sector reforms implemented over the last ten years (primarily strengthening of regulation and supervision, the role of central counterparties in the derivatives trade, etc.) significantly increased the overall stability of the financial system and the stability of the largest financial institutions. However, the global financial system still has vulnerabilities. The key weaknesses at present include a high and increasing debt burden in some sectors and customer groups. According to the Bank for International Settlements (BIS), as of 30 September 2018, the aggregate debt of the non-financial sector (including the state, households and non-financial companies) in advanced economies grew to 264% of GDP (at the end of 2008 - 240% of GDP), and in emerging markets economies, to 179% of GDP (from 107% of GDP) (without China, from 93% of GDP to 123% of GDP). Advanced economies show a significant increase in debt in the public sector, while emerging market economies show an increase in debt in non-financial companies (Chart 9). The aggregate debt of the non-financial sector in Russia amounts to 79% of GDP and is comparable with the level in Indonesia and Mexico.

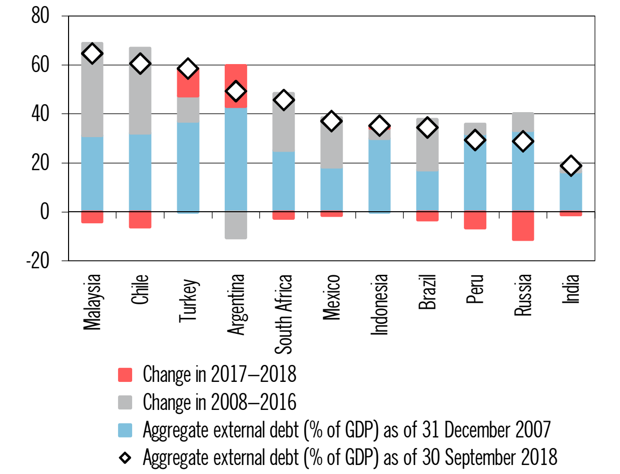
Taking into account the recent normalisation of the US Federal Reserve's rhetoric, an extension of the period of low interest rates will continue to encourage market participants to extensively increase their leverage, which will increase the exposure of countries to the risks of future rate growth even more. Further growth of

AGGREGATE DEBT OF THE NON-FINANCE SECTOR (STATE, HOUSEHOLDS, NON-FINANCE COMPANIES) (% OF GDP) *Chart 9*



Source: BIS.

EXTERNAL DEBT IN EMERGING MARKET ECONOMIES (% OF GDP) *Chart 10*



Source: Bloomberg.

investments in assets with significant risk may be observed. In recent years, advanced economies (the USA, the United Kingdom and the euro area) show a significant increase in lending to companies with a high debt burden (leveraged lending) and the growth of issuance of collateralised debt obligations (CLO) secured by high-risk loans.

Furthermore, a change in the economic cycle phase followed by the decline of real household earnings may cause the growth of payment default on loans. In recent years, many regulators have started to introduce requirements for a countercyclical capital buffer to increase the resilience of banks to possible loss, even in the case of a negative credit gap (a deviation of the lending to GDP ratio from its long-term trend). For example, a countercyclical capital buffer in the case of a negative credit gap has been established in the United Kingdom, Denmark, Lithuania, Norway and the Czech Republic. A countercyclical capital buffer in the case of a positive credit gap has been introduced in Hong Kong, France and Sweden. In Russia, lending is growing unevenly; therefore, an countercyclical capital buffer is not applied, and measures to limit retail lending growth rates are being implemented (see Section 2.1 for details).

Significant dependence on US dollar-denominated financing constitutes another important vulnerability factor. Countries with a high dependence on US dollar-denominated financing are exposed to risks of an increase in the cost of US dollar-denominated borrowings, a shortage of US dollar-denominated liquidity in the global markets and the appreciation of the US dollar. In many emerging markets, the aggregate external debt relative to GDP in 2018 was 1.5–2 times greater than the level at the beginning of 2008 (Malaysia, Turkey, Chile) (Chart 10). In Russia, external debt is now lower than at the beginning of 2008 and is at a fairly low level (29% of GDP). Furthermore, unlike other countries, Russia's aggregate external debt is fully covered with international reserves. In some emerging markets, external debt is 3–5 times greater than accumulated international reserves (in Turkey, Chile, Argentina, South Africa and Indonesia). The exposure of Russia to the potential risks of growth of the cost of foreign currency borrowings is declining due to the continued process of reducing dollarization (see Section 2.1 for details).

Finally, both advanced economies and EMEs currently have more limited opportunities for supporting economic growth than in 2008. Advanced economies may now face limitations in macroeconomic policy in order to support economic growth. In many emerging markets, inflation risks and risks of national currency depreciation do not allow the key rate to be lowered significantly, while a budget deficit limits the introduction of fiscal concessions. In China, the government faces difficulties in stimulating economic growth because of the need to limit the excessive growth of debt burden (especially in the shadow banking system)[1] by toughening its regulatory requirements.

Russia has space to manoeuvre thanks to its macroeconomic policy. The transition to a budget surplus (2.7% of GDP in 2018) and retention of a low level of aggregate public debt (12% of GDP as of 1 January 2019 according to the Bank of Russia's official exchange rate as of 10 January 2019) increased the stability of public finance. Furthermore, the budget rule plays an important stabilising role by smoothing the fluctuations of budget expenditures and noticeably reducing the dependence of the economy on oil market conditions. Accumulated international reserves provide a significant safety buffer (due to their growth to the maximum level since the beginning of 2014, $495 billion as of 10 May 2019). Furthermore, the Bank of Russia has a full set of tools that may be employed to stabilise the market situation (foreign currency repo, swaps or a change in the schedule of FX purchases within the framework of the budget rule), and the banking system has the necessary capital buffers.

[1] *According to Moody's, outstanding loans in the shadow banking sector of China in 2018 declined by 6.5% to 61.3 trillion RMB (for the first time in more than ten years).*

2. KEY VULNERABILITIES AND MACROPRUDENTIAL POLICY OF THE BANK OF RUSSIA

There are a number of vulnerabilities in the Russian financial sector which may increase risks in the event of aggravation of the situation in the global markets. The materialisation of credit risk may also be caused by the growing debt burden of individual borrowers and the high portfolio concentration of some banks on large borrowers with an increased debt burden. The negative consequences of the materialisation of interest rate risk and liquidity risk may be exacerbated by a high share of short-term deposits in the structure of bank liabilities. A high level of foreign currency predominance on the balance sheet of banks, which is typical for Russian banks, contributes to the increase of both market and credit risks. The share of FX assets and liabilities has declined steadily over the past five years; however, it has stabilised during recent quarters, and some growth of FX household deposits is now observed.

2.1. KEY VULNERABILITIES IN THE RUSSIAN FINANCIAL SYSTEM AND CURRENT MACROPRUDENTIAL MEASURES OF THE BANK OF RUSSIA

Vulnerability 1. The rapid growth of the population debt burden against the backdrop of accelerated growth of consumer lending

Unsecured lending

From 1 October 2018 to 1 April 2019, the annual growth rates of loan debt increased by 3.7 p.p. to 24.3%. The annualised growth rates of loan debt declined during Q1 2019 from 25% to 22.1%, which indicates a possible slowdown of credit activity. However, lending growth rates still remain much higher than the growth rates of households' income and salary. The debt burden of the population related to unsecured consumer loans, which is calculated as the ratio of planned payments to the disposable income of all households[1], grew from 7.1% to 8.1% over 2018 and came close to the peak values of 2014 (9%).

The acceleration of the growth of debt burden in 2018–2019 is associated with the end of the trend for the cost of loans to decrease. In Q4 2018 – Q1 2019, the weighted average effective interest rate (EIR) in the largest segment of unsecured consumer lending, 'Cash Loans', increased by 1.1 p.p. against Q3 2018 to reach 16.4%.

The adjusted EIR trend does not take into account borrowers' liabilities for insurance premiums, which are currently not always included in the calculation of mandatory payments. In the light of the high level of insurance penetration (up to 60% for cash loans), this factor may affect the real cost of credit significantly. At present, the Bank of Russia is preparing amendments to the procedure for calculating EIR according to which any payments made by the borrower for the additional services provided by the creditor or third parties, including those related to insurance of the borrower's risks or legal (advisory) services, that the borrower agreed to receive, will be subject to inclusion in the calculation of EIR.

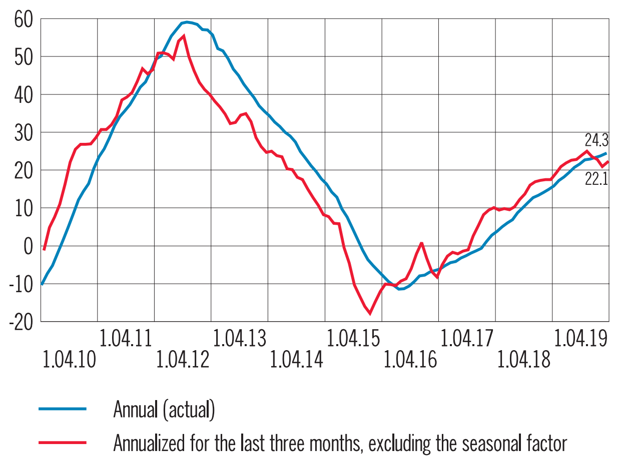
The increase in the cost of lending also caused an increase in the average payment to income ratio[2] of new borrowers in the largest market segment, 'Cash Loans'. The average ratio in Q1 2019 was 43.9% (in the third quarter, 42.7%[3]).

[1] *This indicator takes into account the overall disposable household income in Russia, including that of individuals who do not have loans. Thus, the indicator is understated.*

[2] *This indicator is calculated on the basis of a survey of the largest retail lending banks. Banks are not obliged to take into account payments on the borrower's loans in other banks.*

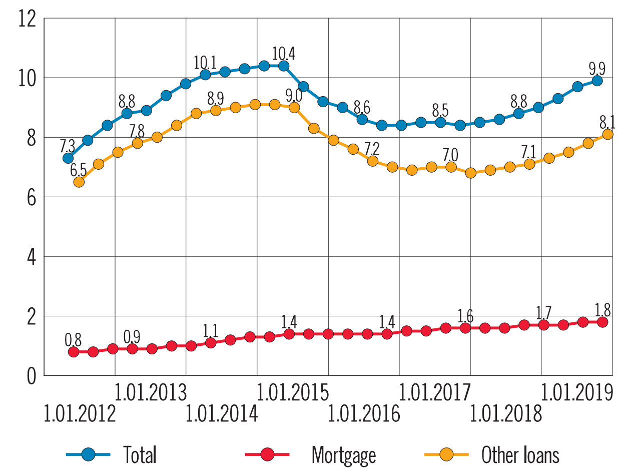
[3] *The Bank of Russia's monitoring on the study of retail loan debt (as of 1 January 2019). It covered 77.4% of the retail lending market.*

GROWTH RATE OF OUTSTANDING UNSECURED CONSUMER LOANS *Chart 11*
(%)



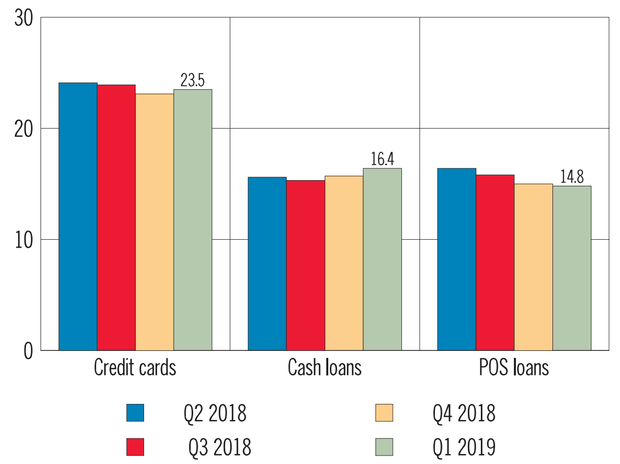
Source: reporting form 0409115, Section 3.

FUTURE PAYMENTS ON HOUSEHOLD LOANS *Chart 13*
(% OF DISPOSABLE INCOME OF POPULATION)



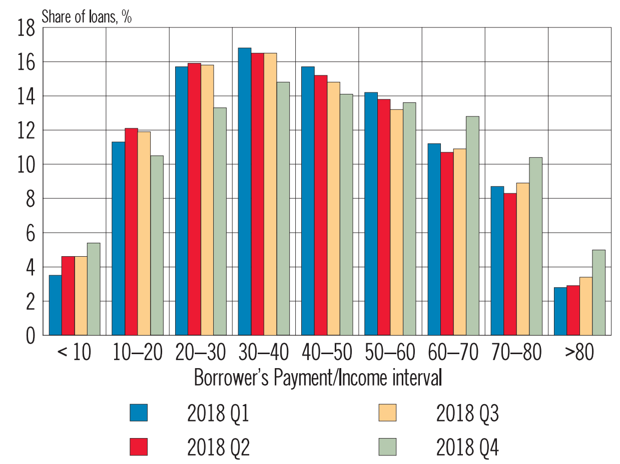
Source: reporting forms 0409101, 0409316, 0409128.

EFFECTIVE INTEREST RATE DYNAMICS *Chart 12*
(%)



Source: reporting form 0409126.

BREAKDOWN OF PAYMENT/INCOME RATIO FOR NEWLY EXTENDED CASH LOANS *Chart 14*
(%)

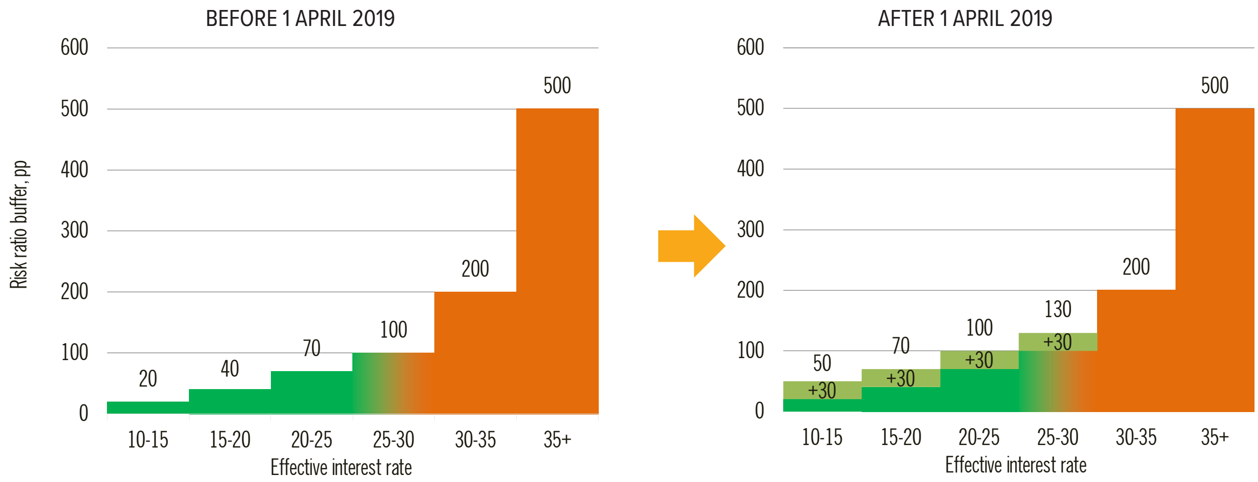


Source: bank survey.

To provide the borrower with the requested amount of credit and to maintain the payment to income ratio, many banks increased the maximum loan maturity. The share of loans with a maturity of more than five years in Q4 2018 amounted to 15.3%, having increased by 7.1 p.p. against the third quarter and by 10.3 p.p. against Q2 2018. Extended loan maturity reduces the borrowers' debt burden and increases their short-term payment solvency. However, the negative side of such extended maturity is that the borrower's probability of default will grow throughout the loan period, especially for borrowers with a volatile income level or with income sensitive to the growth of prices for goods and services. Furthermore, credit institutions' options for operational management of the loan portfolio decrease when the macroeconomic background deteriorates.

To limit the growth of the debt burden of households and to increase the banking sector's resilience to unsecured consumer lending risks, the Bank of Russia increased by 30 p.p. the risk weights add-ons for loans issued after 1 April 2019 with an EIR from 10% to 30%. In these conditions, 12–16% of extended consumer loans (depending on the EIR) will be covered by bank capital. To fulfil these requirements, retail banks will have to maintain an additional part of income in their capital, which will limit the risks of unsecured consumer lending and increase the sustainability of credit institutions.

CHANGE IN RISK RATIO BUFFERS FOR UNSECURED CONSUMER LOANS *Chart 15*



Without the existing add-ons (including on consumer and mortgage loans, corporate FX loans and other types of assets defined in the Bank of Russia Ordinance No. 4892-U, dated 31 August 2018, 'On Types and Characteristics of Assets for Which Risk-Based Capital Add-ons Are Set and on the Methodology for Applying These Add-ons to the Said Types of Assets for Credit Institutions to Calculate Their Capital Adequacy Ratios'), the aggregate capital adequacy of the banking sector, except banks going through financial recovery, would have been 0.6 p.p. higher as of 1 April 2019. Therefore, the said add-ons make up an additional capital buffer that may be used by banks during the negative phase of the credit cycle. The capital buffer of retail banks, which is made up of risk-weights add-ons, is much higher, 2 to 3 pp, depending on the portfolio structure.

Further trends of the unsecured consumer loan portfolio will depend on the cost of credit, household income growth rates and credit risk level. If excessive growth rates of loan debt on unsecured consumer loans continue, leading to a significant increase in the debt burden on the population, the Bank of Russia may additionally increase add-ons for unsecured consumer loans depending on their EIR, taking into account the debt burden of an individual, which banks will be obliged to calculate starting from 1 October 2019, in accordance with Bank of Russia Ordinance No. 4892-U, dated 31 August 2018.

At present, the Bank of Russia, together with the largest market participants, has started collecting data on the level of the debt burden of individuals who received loans during 2019. Furthermore, the Bank of Russia, during the stress testing of the unsecured consumer loan portfolio, collects information on the level of risk on loans depending on the debt burden, which is calculated on the basis of the bank's internal methodology. The data of these studies will be used to adjust buffers to risk ratios depending on the effective interest rate and the debt burden ratio and to evaluate the regulatory impact of risk-weights add-ons on the credit activity of banks and capital adequacy ratios. For the purpose of limiting risks of regulatory arbitrage, the debt burden ratio will be also introduced for MFOs from 1 October 2019 (see Box 1).

Box 1. Microfinance market trends

In 2018, the consumer microfinance market[1] significantly outpaced the unsecured consumer lending market significantly with regard to annual growth rates (51.9 versus 22.8%) and grew to ₽134.0 billion (Chart 16). Despite that, the share of this market in the aggregate volume of consumer loans and micro-

[1] *Hereinafter, for the purpose of data comparability, the analysis was conducted without including Domashniye Dengi LLC due to its exclusion from the state register of MFOs on 30 August 2018.*

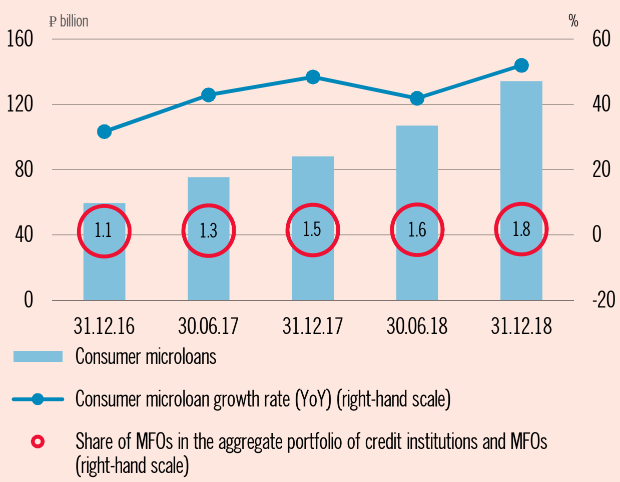
loans remains insignificant, though it demonstrates stable growth. Bank microfinance onragnisations[2]- remained the key market growth driver, accounting for about 50% in the total growth. It should be noted that during 2019 a number of microfinance organisations not affiliated with banks also increased their microloan portfolios significantly, which made some of them market leaders.

We can single out two segments in the consumer microfinance market: microloans with an instalment plan, which are divided into microloans extended by bank microfinance organisations and other microfinance organisations, and payday loans (PDLs). This division is explained by specific aspects of each segment related to the maturity of agreements, the cost of risk and the aims of microloans (Chart 17).

In 2018, the instalment segment of bank microfinance organisations showed a small increase in the share of NPL90+ from 9.5% to 11.0%, which was mostly associated with the gradual 'maturing' of borrowers in their portfolios. Such a low indicator for bank microfinance organisations is explained by the fact that their target customers are mostly borrowers who did not undergo scoring in the credit institution amid the toughening of requirements for high-risk loans when calculating capital adequacy ratios. We should also point out the decline of the effective interest rate in the instalment loans of bank microfinance organisations (from 37.1% to 31.8% per annum) in the light of similar processes in banks. The slowdown of the growth rates of interest income and the increase of deductions for provisioning along with the additional contributions of founders to the authorised capital which were observed in some bank microfinance organisations affected the decline of ROE from 44.6% to 19.2%. At the same time, the instalment (other microfinance organisations) and PDL segments showed growth of return on equity as of 2018 year-end: from 10.5% to 19.1% and from 9.5% to 47.3%, respectively, which was associated, among other things, with the decline of loss from the assignment of claims under microloans in 2018 as compared to 2017. In general, we should note that despite aggressive growth rates in all segments of consumer microfinancing the share of NPL90+ has grown from 28.0% to 30.6%, which indicates the growth of the debt burden of the population.

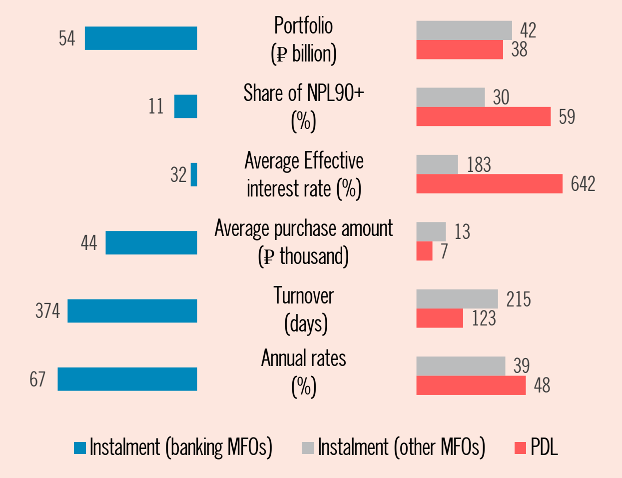
To suppress excessive lending activity, the Bank of Russia is considering the introduction of a borrower payment to income ratio for MFOs in 2019, which will be calculated just like it is for credit institution as the ratio of the monthly amount of payments on all credit facilities and loans to average monthly income, and, if a certain limit is exceeded, a risk-weight add-on will apply when calculating the microfinance organisation's capital adequacy ratio.

CONSUMER MICROLOAN DYNAMICS *Chart 16*



Source: Bank of Russia.

COMPARATIVE ANALYSIS OF THE TYPES OF CONSUMER MICROLOANS *Chart 17*



Source: Bank of Russia.

[2] *Hereinafter, microfinance organisations affiliated with credit institutions. At present, the Bank of Russia distinguishes at least six MFOs interconnected with banks.*

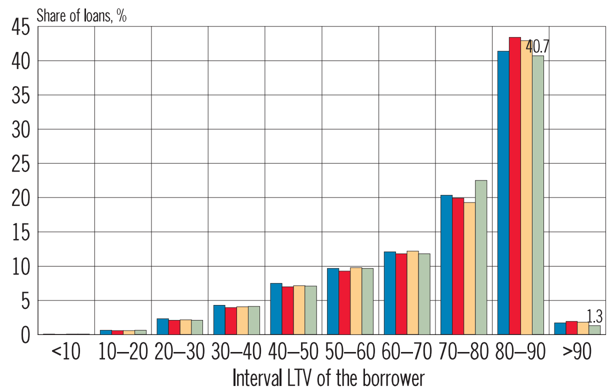
Mortgage lending

In the mortgage lending segment, high growth rates of loan debt continue. The contribution of the growth of debt to the increase of the debt burden of the population is insignificant due to a low level of interest rates and significant loan maturity periods. Furthermore, the scope of mortgage loans still includes a significant share of loans with a small down payment. As such loans are characterised by high borrower credit risk, the Bank of Russia increased the risk-weights add-ons for them from 1 January 2019. In response to those measures, banks increased interest rate differentiation depending on the down payment amount. This will contribute to the decrease of the share of loans with a small down payment in the total disbursements of banks.

From 1 October 2018 to 1 April 2019, the growth rates of outstanding ruble-denominated mortgage loan debt remained high (24.7% as of 1 April 2019[4]). In Q4 2018, banks securitised mortgage loans for a total amount of ₽137.9 billion. JSC "DOM.RF" issued a guarantee for mortgage securities, which lowers the risk ratios under such securities to 20% and makes securitisation profitable for banks from the point of view of savings on capital in the event of a buy-back of mortgage securities.

In Q1 2019, the share of mortgage loans with a down payment of 10% to 20% in the total disbursements of banks decreased by 2.2 p.p. against Q4 2018 to 40.7%. The share of loans with a down payment less than 10% remains insignificant (1.3% of total disbursements in Q1 2019). Loans with a small down payment are characterised by high borrower credit risk; therefore, the Bank of Russia increased the risk ratio-weight add-on for loans with a down payment of 10% to 20% from 50% to 100% starting from 1 January 2019. The aggregate risk ratio on such loans amounted to 200% (before 1 January 2019, 150%). A risk-weight add-on shall apply while the ratio of outstanding mortgage loan debt to the cost of the mortgaged property exceeds 80% and shall not apply when the LTV ratio falls below that level. Thus, these measures are aimed at reducing the share of loans with a down payment of 10% to 20% in the total disbursements of banks.

BREAKDOWN OF EXTENDED MORTGAGE LOANS BY LTV
(%)
Chart 18



Source: Bank of Russia's project for monitoring outstanding household loans.

Banks took those measures into account and increased the difference in the rates on loans with a small down payment and those on other loans. According to information published on websites, banks additionally increased the rates on loans with a small down payment in January 2019 by 0.2–0.5 pp, which makes these loans less attractive to borrowers and will reduce their share in the total disbursements of banks.

The Bank of Russia also tracks possible practices of using unsecured consumer loans as a down payment under a mortgage loan. Therefore, information was requested from the three largest credit history bureaus (CHB) on the number of mortgage borrowers or their co-borrowers who received a consumer loan of over ₽100,000 three months before applying for a mortgage loan. In 2018, the share of such borrowers in the total number of mortgage bor-

DEPENDENCE OF THE INTEREST RATE ON A MORTGAGE LOAN ON THE DOWN PAYMENT (SALARY PROJECT)
(%)
Table 3

Type of housing	Under construction housing		Finished housing	
Down payment	15	20	15	20
Bank 1	10.7	10.5	11.2	11.0
Bank 2	10.8	10.3	10.8	10.3
Bank 3	10.8	10.5	10.8	10.5
Bank 4	10.5	10.1	10.6	10.2

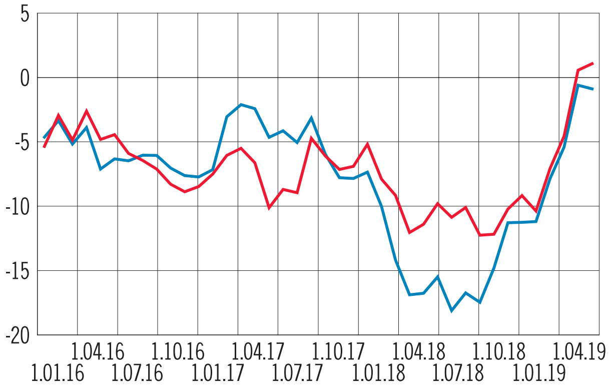
Source: data from bank websites in April 2019.

SHARE OF BORROWERS (CO-BORROWERS) WHO TOOK AN UNSECURED CONSUMER LOAN THREE MONTHS BEFORE TAKING A MORTGAGE LOAN
(% OF THE TOTAL NUMBER OF BORROWERS WHO TOOK A MORTGAGE LOAN)
Table 4

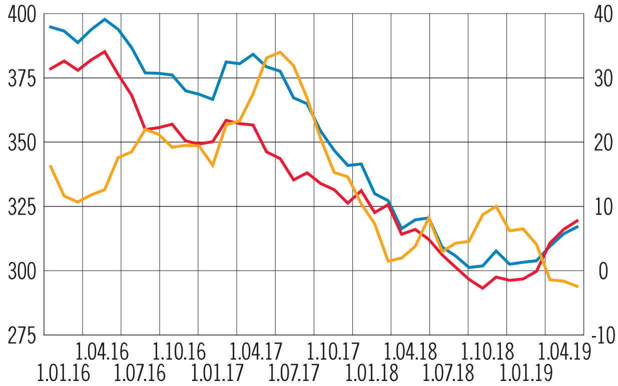
Year	2015	2016	2017	2018
CHB 1	2.2	2.9	3.6	3.1
CHB 2	2.6	2.9	3.7	3.9
CHB 3	2.1	2.3	3.0	3.9

[4] *For credit institutions operating as of 1 April 2019.*

GROWTH RATE OF FOREIGN EXCHANGE ASSETS AND LIABILITIES
(%)
Chart 19



FOREIGN EXCHANGE ASSETS AND LIABILITIES
($ BILLION)
Chart 20



rowers was 3.1% to 3.9% according to various CHBs. Since 2015, the share of such borrowers has increased insubstantially, by 0.9–1.8 pp.

Thus, the share of borrowers who received an unsecured consumer loan three months before a mortgage loan remains low, and its increase over three years is insignificant. The indicator of debt burden of an individual, calculation of which will become mandatory for credit institutions from 1 October 2019, will also contribute to limiting the risks of using unsecured consumer loans as a down payment under a mortgage loan.

In 2018, the prices for residential real estate in the new homes market grew by 8.7% for Russia as a whole, and in the existing homes market by 4.9%, which is comparable with the growth of people's salary (9.9% in 2018). Most regions demonstrate a positive correlation between the trend of real estate prices and the trend of the mortgage loan portfolio. The leading region in this indicator is the Republic of Bashkortostan, the Kursk and Orel regions, Moscow, and Krasnodar Territory. In the regions where the correlation is negative or close to zero (the Leningrad, Samara and Kostroma regions), it is explained by the 'overhang' of supply on the real estate market, which neutralises the growth of real estate prices even amid the growth of mortgage lending.

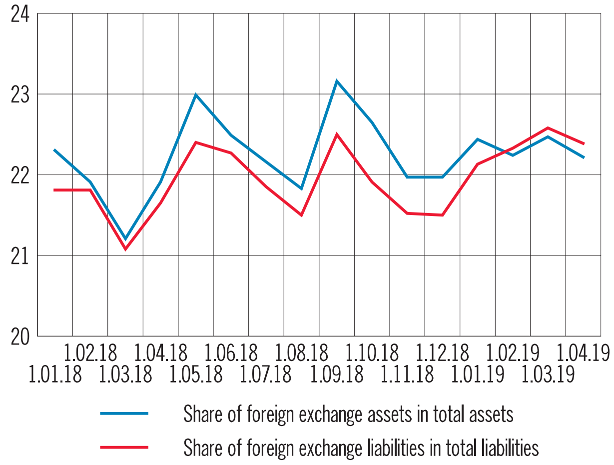
The possibility of a 'credit spiral', where mortgage lending growth causes the increase of real estate prices, and the latter contributes to further growth of lending, poses a risk for the sector. A positive inverse relation between real estate prices and the growth of mortgage lending is typical of mortgage boom periods.

In this regard, the Bank of Russia's measures to suppress household lending with a small down payment (less than 20%) are becoming even more important. To support the quality growth of banks' loan portfolios, the Bank of Russia will continue to make extensive use of risk-weights add-ons for the most vulnerable segments of mortgage lending. It will also continue monitoring of the practices of using consumer loans as a down payment under mortgage loans and the influence of mortgage loans on residential real estate price trends.

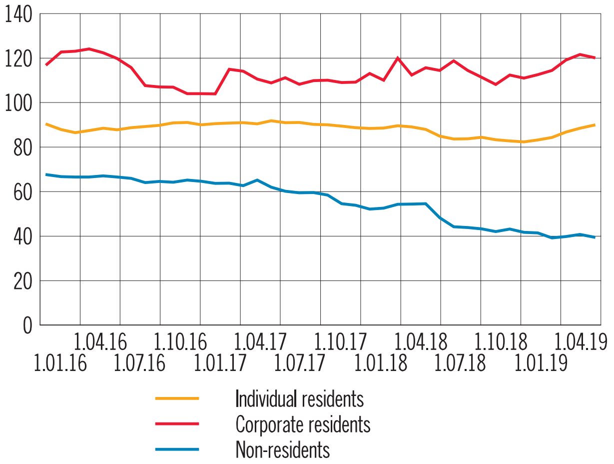
Vulnerability 2. Risks of dollarization and dependence on external financing

In Q4 2018– Q1 2019, the decline of the foreign currency part of the banking sector's balance slowed down. The annual growth rate of FX assets during that period increased by 10.4 p.p. to -0.88%, and that of liabilities increased by 11.3 p.p. to 1.07% as of 1 April 2019 (Chart 19). At the same time, the gap between foreign currency assets and liabilities decreased to -$2.4 billion as of 1 April 2019 (Chart 20). This led to the convergence of the shares of FX assets and liabilities in the total balance of the banking sector. In Q1 2019, the said share stabilised at 22% (Chart 21).

SHARE OF FOREIGN EXCHANGE ASSETS AND LIABILITIES ON THE BANKING SECTOR BALANCE SHEET *Chart 21*
(%)



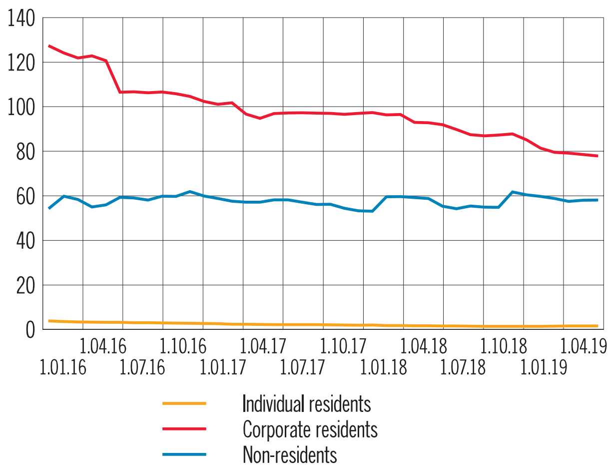
DYNAMICS OF DEPOSITS AND FUNDS ON BANK ACCOUNTS IN FOREIGN CURRENCY *Chart 23*
($ BILLION)



With regard to assets, the growth of the foreign currency component over the last six months was mostly caused by an increase in the balances of correspondent and deposit accounts with credit institutions. Furthermore, the volume of FX loans extended to resident legal entities continues to decline in the light of measures taken to increase the risk-weights on foreign currency loans. For example, disbursement of FX loans to resident legal entities decreased by $15 billion, or 16%, over the last 12 months. The decline of outstanding loan debt in foreign currency was observed in almost all kinds of economic activities.

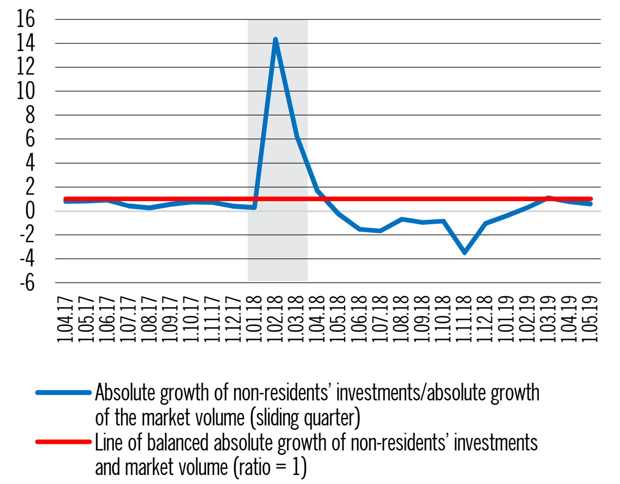
The increase of foreign currency liabilities resulted from the inflow of corporate funds to current and other accounts and the growth of household deposits. As at the end of Q1 2019, the balances of FX accounts of resident legal entities increased by $5.8 billion, while those of resident individuals increased by $5.5 billion as of 1 April 2019. Due to the appreciation of the Russian ruble and the inflow of ruble-denominated liabilities to legal entities, the share of foreign exchange liabilities to legal entities has declined since the beginning of the year by 1.12 p.p. to 32.1%, while the share of foreign exchange liabilities to individuals remained at the level of 21.5%. However, adjusted for the influence of foreign currency revaluation, the increase of household foreign currency deposits in total deposits for Q1 2019 amounted to 1.2 pp.

DYNAMICS OF FOREIGN CURRENCY LOANS *Chart 22*
($ BILLION)



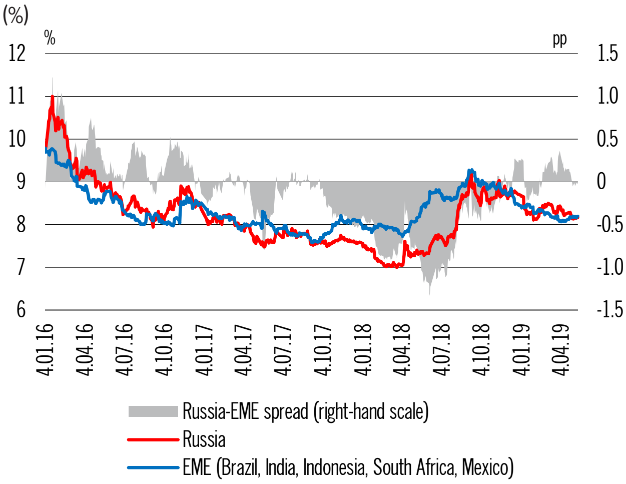
The increase in the balances of corporate accounts is mostly explained by seasonal factors, while the increase in the volume of foreign currency household deposits amid increased passive rates requires additional attention. As of 1 April 2019, the annual growth rate of foreign currency household deposits (of residents) amounted to 2.2%. To reduce incentives for banks to attract foreign currency deposits, the Bank of Russia is considering increasing the required reserve ratio for foreign currency liabilities to individuals. Furthermore, amendments to laws regarding deposit insurance are under discussion with regard to decreasing the maximum deviation of interest rates, including on foreign currency deposits, from the base yield, upon ex-

ESTIMATED RATIO OF NET PURCHASES OF OFZS BY NON-RESIDENTS AND NET SUPPLY OF OFZS BY THE MINISTRY OF FINANCE OF RUSSIA *Chart 24*



DYNAMICS OF AVERAGE YIELD ON OFZS AND BONDS OF EMERGING MARKET ECONOMIES IN 2016–2019 Q1 *Chart 25*

(%)



ceeding which banks will pay additional and increased additional insurance premiums.

Another vulnerability the Russian financial sector is exposed to is the significant presence of foreign investors in the OFZ market, which may lead to an imbalance of demand and supply of securities in the market during certain periods. At the end of Q1 2018, their share in the OFZ market reached its historical maximum and amounted to 34.5%. Though that share was not extremely high as compared with other EMEs (South Africa: 40%, Indonesia: 38%, Mexico: 32%), non-residents' demand during that period of time significantly exceeded the volume of securities supply from the Russian Ministry of Finance.

For example, in Q1 2018, net purchases by non-residents were several times greater than net supplies of securities in the primary market. As a result, the ratio of the quarterly demand of non-residents to the supply of securities by the issuer during that period of time reached its peak (Chart 24). This caused a significant deviation in the yield trend of OFZs and the average yield of comparable emerging market economies (Brazil, India, Indonesia, South Africa, Mexico) (Chart 25).

In Q2-Q3 2018, under the influence of increased global risks and sanctions rhetoric, the OFZ yield underwent adjustment. Taking into account the effect of the 'overbuying' of OFZs by non-residents in Q1 2018, the said adjustment turned out to be greater than the average adjustment in other emerging market economies. In general, during 2018, the share of foreign investors in the total volume of public debt declined from 33.1% to 24.4%. Therefore, non-residents' activity in the OFZ market may be accompanied by imbalances of demand and supply, which will increase the Russian market's vulnerability to the external environment.

In January–March 2019, amid high oil prices and considerable risk appetite of international investors, non-residents' investments in OFZs grew by ₽256 billion, which made the share of non-residents' investments in OFZs in the total market volume around 26.7% by the beginning of April. Despite the significant growth of non-residents' demand for Russian public debt, the ratio of their net purchases and the net supply of securities from the Russian Ministry of Finance did not exceed 1 on average during that period. Internal investors participate actively in the purchase of OFZs, and their average share in net purchases during the first four months of 2019 amounted to about 61%.

Factors that preserve the stability of the Russian market include the presence of internal demand supported by the high credit quality of sovereign liabilities. The attractiveness of OFZs is primarily connected with a low level of aggregate public debt (14.6% of GDP as of 1 January 2019) and the significant safety buffer of the Russian budget in the light of the budget rule.

Vulnerability 3. Increase in banks' short-term funding

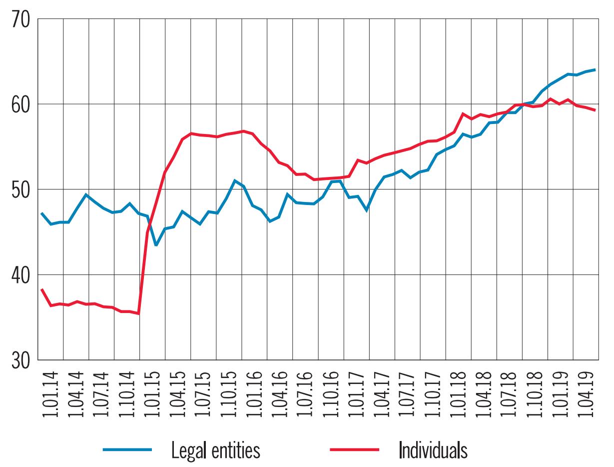
For the period of 1 October 2018 to 1 April 2019, the share of short-term deposits in the funding structure grew by 0.81 p.p. to 61.3%. The share of corporate deposits placed for up to one year in the total volume of corporate deposits grew by 2.55 p.p. to 64.0%, while the share of household deposits decreased somewhat (by 0.50 p.p. to 59.3%).

The maturity of liabilities decreased as a result of an increase in short-term FX deposits to the detriment of long-term ones. Amid the increase of rates on new corporate and household foreign currency deposits, the share of short-term foreign currency liabilities in the total volume of foreign currency deposits grew by 3.0 and 6.1 p.p. to 26.3% and 48.5%, respectively.

Despite the growth of the attractiveness of long-term ruble deposits[5], the share of ruble deposits placed for more than one year in the total volume of ruble deposits still remains low, 29.4% as of 1 April 2019.

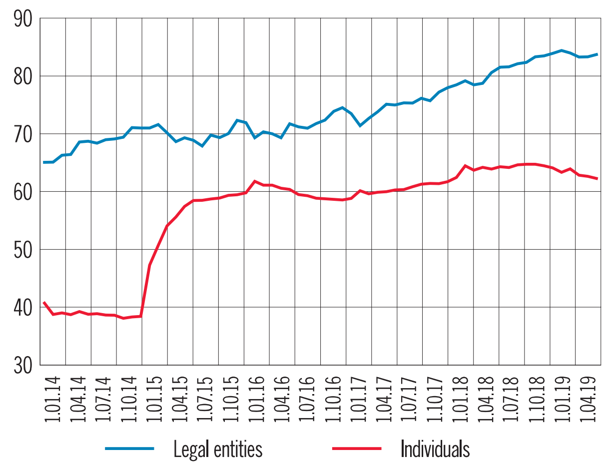
For the purpose of developing long-term household savings and mitigating risks of the banking sector, a new instrument was introduced to the market starting in June 2018: a bank deposit agreement certified with a savings certificate which does not provide for the depositor's right to receive the deposit early on demand. At present, the Bank of Russia is working on improvements of this instrument. In particular, it is considering adjustment of the period for registration of the terms and conditions of certificate issuance. In Q2-Q3 2019, the Bank of Russia plans to take actions aimed at speeding up registration of the standard terms and conditions of issuance of savings certificates by credit institutions, which would provide for standard sets of conditions (including irrevocability and a fixed interest rate). It is expected that the development of this instrument may be potentially facilitated by its higher yield as compared with time deposits which provide for the depositor's right to receive the deposit early on demand.

SHARE OF DEPOSITS WITH A MATURITY OF UP TO ONE YEAR IN TOTAL DEPOSITS (%) *Chart 26*



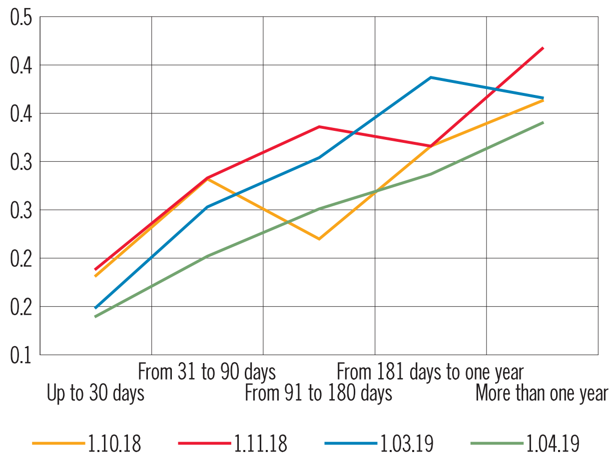
Source: Bank of Russia's Banking Sector Review.

SHARE OF RUBLE DEPOSITS MATURING WITHIN ONE YEAR IN TOTAL RUBLE DEPOSITS (%) *Chart 27*



Source: Bank of Russia's Banking Sector Review.

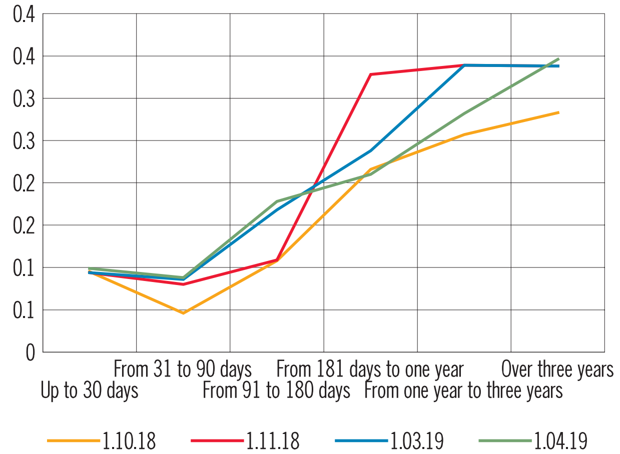
WEIGHTED AVERAGE YIELD CURVE OF CORPORATE DEPOSITS IN US DOLLARS (%) *Chart 28*



Source: Bank of Russia calculations.

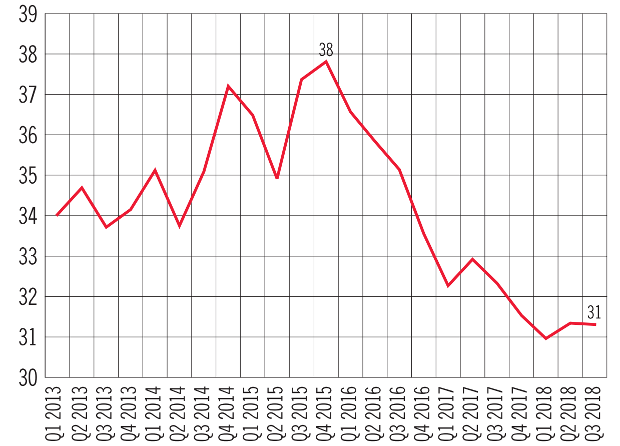
[5] *The growth of rates on ruble deposits for the period of 1 October 2018 to 1 April 2019 was mostly observed on the long section of the yield curve, by 1.05 p.p. for household deposits placed for more than one year and by 0.39 p.p. for corporate deposits placed for more than one year.*

WEIGHTED AVERAGE YIELD CURVE OF HOUSEHOLD DEPOSITS IN US DOLLARS *Chart 29*
(%)



Source: Bank of Russia calculations.

SHARE OF EXTERNAL BORROWINGS IN THE TOTAL CORPORATE DEBT *Chart 30*



Source: Bank of Russia.

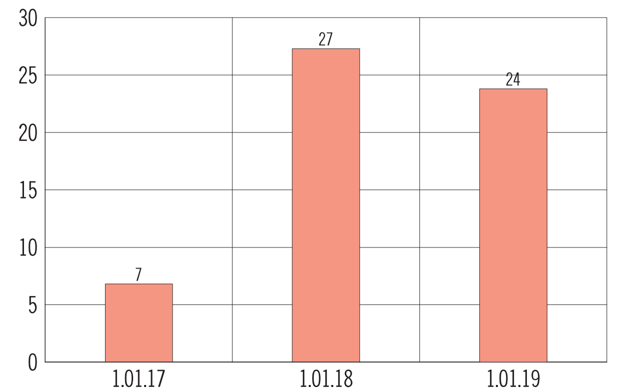
Vulnerability 4. The growing concentration of the banks' loan portfolio in some of the largest borrowers characterised by high debt burden

A high level of debt burden of major non-financial institutions is currently one of the sources of systemic risk for the Russian economy. Despite a moderate level of debt burden of the corporate sector as a whole, the banking sector is characterised by a high concentration of credit risks in large corporate borrowers (about 35% of the aggregate debt of the sector accrues to 92 major companies[6] whose cumulative assets amount to about 76% of GDP, and whose cumulative debt amounts to about 20% of GDP). This trend is partly natural and stipulated by the decline of external debt (the share of external borrowings in total corporate debt decreased from 38% to 31% from the end of 2015 to Q3 2018). However, if the concentration on borrowers with a high debt burden increases, it will lead to an increase in systemic risk.

The financial insolvency of one or several large borrowers may negatively affect the stability of systemically important banks, which may ultimately have a negative impact on the entire economy.

Therefore, the Bank of Russia is considering the possibility of using macroprudential measures to limit the debt burden on non-financial institutions with a high level of debt. Limitation of the debt burden on Russian companies may be implemented through banking regulation using the mechanism of risk-weights add-ons for bank claims against companies. At present, the collection of market participants' comments on suggested mechanisms for identifying highly leveraged companies and on macroprudential measures is complete. Following discussions, it is planned to implement a debt burden ratio at the initial stage as part of monitoring for major banks.

DYNAMICS OF THE CREDIT RISK VOLUME FOR MAJOR BORROWERS* *Chart 31*
(YOY)



** Credit claims to 25 companies, for which at least one bank had the credit risk exposure for more than 100 bln rubles on 1.01.2019.*
Source: reporting form 0409118.

[6] *The aggregate debt and assets of 92 major companies were calculated on the basis of consolidated financial statements.*

2.2. AREAS FOR THE FURTHER DEVELOPMENT OF THE BANK OF RUSSIA'S MACROPRUDENTIAL POLICY

The current trends of macroprudential policy development in Russia and other countries prove the importance of the regulator having macroprudential regulation instruments to suppress the excessive growth of lending in high-risk segments and to mitigate accumulated systemic risks in the financial sector. A countercyclical prudential policy is aimed at limiting the accumulation of systemic risks during credit boom periods and avoiding 'credit crunch' during economic crises.

The Bank of Russia has a fairly positive experience in implementing macroprudential policy. For example, a number of measures[7] that the Bank of Russia took promptly in response to the excessive growth of unsecured consumer lending in 2011–2012 enabled banks to build capital buffers, thanks to which most Russian banks were able to absorb accumulated credit risks that materialised during the economic slowdown period of 2014–2015 and to strengthen their financial position. The main instrument used by the Bank of Russia is sectoral risk-weights add-ons provided for by Bank of Russia regulations[8]. However, there may be a need to expand the set of macroprudential policy tools in future.

Limitation of the growth of lending in risky segments

We can single out two main goals of macroprudential measures: limiting the accumulation of systemic risks (excessive growth of lending) and ensuring the stability of financial institutions (by creating buffers). Macroprudential risk-weights add-ons are primarily aimed at achieving the second goal. Credit risks associated with the growth of unsecured consumer lending with a high payment to income ratio and mortgage lending with a small down payment, upon their materialisation, will be absorbed by banks' capital buffers created as a result of the implementation of macroprudential capital add-ons. However, if the return on products to which add-ons apply is higher than the return on other types of lending, banks with a large capital reserve will be able to increase their lending volumes despite the applicable risk-weights add-ons. That is why protection of borrowers' interests and prevention of the growth of the segment of borrowers with an excessive debt burden may require direct-action instruments aimed at individual categories of assets with certain characteristics.

In the said circumstances, we should also point out current trends in the microlending segment. At present, the volumes of the Russian consumer microloan market are not large [9]and do not pose a threat to financial stability from the point of view of risk accumulation. However, taking into account that the majority of financial activity is accounted for by banks, the measures applied by the Bank of Russia are traditionally focused on the said financial market participants, which may favour the 'migration' of lending activity to the microfinance market, outside the perimeter of macroprudential measures.

For the purpose of creating benchmarks to enable the borrower to service its liabilities, increasing protection of borrowers' interests and supporting overall social stability, the Bank of Russia is studying the experience of foreign countries' use of tools focused on financial institutions which are aimed at discouraging extensive disbursements of unsecured consumer loans and mortgage loans with a small down payment to borrowers with an excessive debt burden.

Analysis of foreign experience shows that the most popular methods of limiting systemic risks of unsecured consumer lending and sup-

[7] In 2013, increased risk-weightsfor consumer loans depending on the currency of a loan and the effective interest rate level were introduced.

[8] Bank of Russia Ordinance No. 4892-U, dated 31 August 2018, 'On Types and Characteristics of Assets for Which Risk-Based Capital Add-ons Are Set and on the Methodology for Applying These Add-ons to the Said Types of Assets for Credit Institutions to Calculate Their Capital Adequacy Ratios'.
Bank of Russia Ordinance No. 5072-U, dated 12 February 2019, 'On the Specifics of Applying Add-ons to Risk Ratios for Certain Assets of Credit Institutions Which Commit to Use Banking Methodologies for Risk Management and Models of Qualitative Risk Assessment for Calculating Required Ratios'.

[9] ₽121 billion; the entire microloan market, including corporate loans, is ₽149 billion.

porting high standards of mortgage underwriting are to establish disbursement limits on individual types of credit facilities (loans) or to fully prohibit their disbursement (like in Singapore, the Republic of Korea, Hong Kong and Israel).

In international practice, the scope of credit facilities (loans) covered by lending limitation measures in high-risk segments is limited depending on the following characteristics:

– intended use of loan (e.g., loans to buy homes for living or for rent, consumer loans or increasing the limit on a credit card)

– indicators of the borrower's ability to pay debts (e.g., debt-service-to-income (DSTI) ratio[10] (Republic of Korea), debt-to-income ratio[11] (Singapore), or both (Slovakia))

– borrower's trustworthiness (e.g., existence of payments overdue by more than 60 days (Singapore[12])).

For the purpose of limiting risks in mortgage lending, the LTV[13] ratio is traditionally used along with the PTI. For example, extension of mortgage loans with a certain level of LTV is prohibited in such countries as Singapore, the Republic of Korea, Hong Kong and Israel, while Slovakia, the Czech Republic and New Zealand limit the share of mortgage loans with a certain level of LTV in the total volume of disbursements.

Development of alternative models for analysing the credit cycle

To determine the optimal time for setting a countercyclical buffer, the Basel Committee on Banking Supervision (BCBS) recommends using an approach that is based on the credit gap, which is calculated as the difference between the current Debt to GDP ratio and its long-term trend.

The approach suggested by BCBS has a number of weaknesses, the key one is its impracticability for emerging markets economies which are characterised by structural shifts in the development of the economy and the financial sector. Structural shifts are often followed by a situation where a 'credit boom' is actually observed, and the credit gap becomes negative.

The international experience of countries that decided to increase their national countercyclical capital buffer in 2018–2019 shows that such decisions are often made because -of the growth of risks in individual segments. In these cases, credit gaps usually remain negative (e.g., Bulgaria, Great Britain, Denmark, Iceland, Ireland, Lithuania, Luxembourg, Norway, Czech Republic). Therefore, many regulators have studied alternative models for evaluating the credit cycle phase and the value of the countercyclical buffer.

In Q2 2019, the Bank of Russia plans to publish a report analysing the experience of decision-making on a countercyclical buffer by regulators in other countries and the models used to determine the credit cycle phase; the report will also review the decision-making process in respect of the countercyclical capital buffer in the Bank of Russia.

---

[10] Debt-service-to-income (DSTI) ratio - limitation of the ratio of payments on loans for a certain period of time to the borrower's income for the same period.

[11] Debt-to-income (DTI) ratio - limitation of the ratio of debt on the loan to income for a certain period of time.

[12] MAS (2013): 'Credit Card and Unsecured Credit Rules Strengthened to Help Individuals Avoid Getting Into Debt Problems', September. http://www.mas.gov.sg/news-and-publications/media-releases/2013/Credit-Card-and-Unsecured-Credit-Rules.aspx.

[13] The ratio of principal debt on a mortgage loan to the fair value of the mortgaged property.

3. SYSTEMIC RISKS OF THE BANKING SECTOR

The situation in the banking sector is improving, which is reflected by the increased profitability, high level of capital adequacy and improvement of loan portfolio quality. The growth of lending is balanced; to limit risks in segments with accelerated growth of lending—that is, unsecured consumer lending and mortgage lending, the Bank of Russia uses sectoral macroprudential measures. In these conditions, the Bank of Russia maintained the value of the countercyclical capital buffer at a zero level.

In the light of the structural liquidity surplus, the situation with regard to banking sector liquidity is generally favourable. Therefore, the Bank of Russia adopted a schedule for the gradual termination of the use of irrevocable credit lines (a tool for initial replenishment of insufficient high-quality liquid assets that meet Basel III criteria).

Credit activity trends

The debt of non-financial institutions and individuals in the broad sense[1] for 2018 increased by 11.6%, which was somewhat lower than the growth of economic activity in nominal terms. Nominal GDP grew by 12.5% over the same period. Therefore, the Debt to GDP ratio for 2018 decreased by 1.3 p.p. to 74.5%.

The growth of credit activity remains non-uniform in different segments. Credit activity in the corporate segment remains restrained (annual growth rates of outstanding loans amounted to 6.5% as of 1 April 2019[2]), which corresponds to the growth of economic activity. The external debt of companies in foreign currency and outstanding FX loans payable to Russian banks are going down gradually (by 8.2% over 2018), while lending in rubles and the debt of companies under ruble-denominated bonds is gradually increasing (by 10.1% over 2018), including due to the substitution of foreign currency loans. Therefore, the aggregate debt of companies under loans and debt securities denominated in rubles and in foreign currency as of 1 April 2019 grew by 1.4% as compared with the same period of the previous year (net of foreign currency revaluation).

During the period from 1 October 2018 to 1 April 2019, outstanding ruble-denominated loans issued to non-financial institutions grew by 7.1%. Significant growth of debt was observed in respect to loans issued to non-residents due to the replacement of foreign currency loans with ruble loans as well as in respect of loans issued to coal producers and to a wide range of agricultural companies and companies dealing with real estate. Outstanding loans to construction companies continue to decline (by 16.7%, or ₽227 billion, during the period under review) mostly due to the depreciation of existing loans.

The amount of outstanding foreign currency loans decreased by 9.0% from 1 October 2018 to 1 April 2019 (net of foreign currency revaluation). A decrease in outstanding debt was observed in almost all types of economic activity.

In the retail lending segment, the growth rates of loan debt accelerated in 2018. In these circumstances, the Bank of Russia employed targeted measures (see Section 2.1) to limit accumulation of risk by banks and to increase their resilience to potential systemic risks.

[1] The debt burden in its broad sense includes liabilities of non-financial institutions under loans of Russian banks, external debt and debt securities as well as liabilities of individuals on loans of Russian banks.
The debt burden in its narrow sense includes liabilities of non-financial institutions under loans of Russian banks, debt securities acquired by banks and liabilities of individuals under loans of Russian banks.

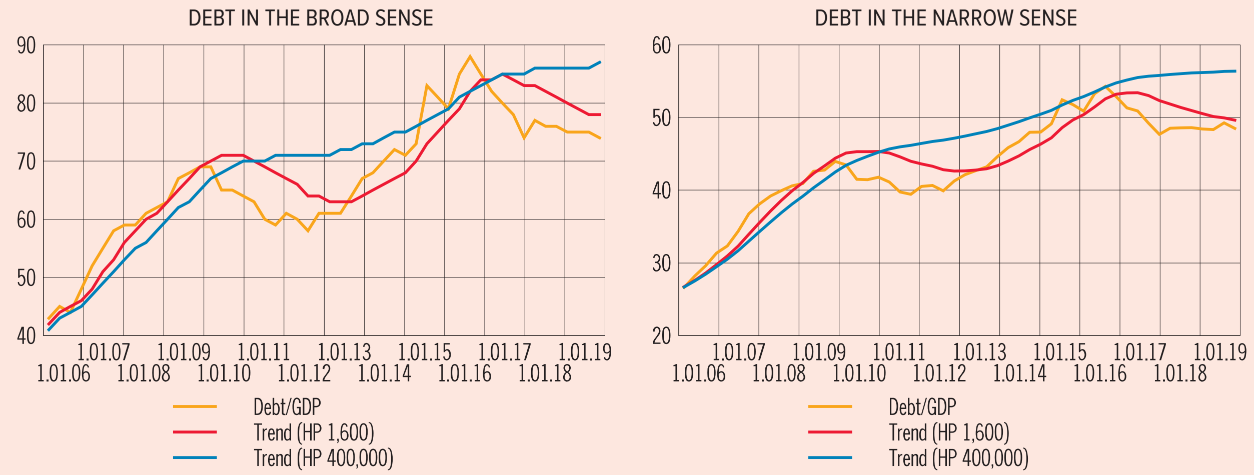
[2] Net of currency revaluation. For credit institutions operating as of 1 April 2019.

Box 2. Identification of the credit cycle phase based on the methodology of BCBS

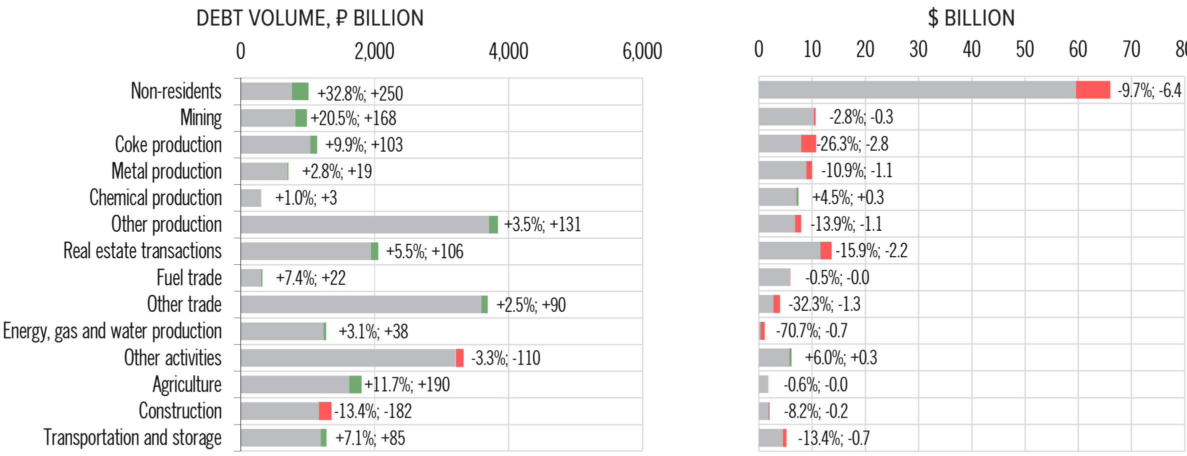
To identify the credit cycle phase, the Basel Committee on Banking Supervision (BCBS) recommends using the credit gap. The credit gap is calculated as the deviation of the Debt/GDP ratio from its trend value. To distinguish a trend in the time series, the BCBS recommends using a one-sided Hodrick – Prescott filter with λ = 400,000. The credit gap value calculated in compliance with this methodology remains negative: -11.2 p.p. as of 1 April 2019 (-8.8 p.p. a year before), which proves that credit activity remains below the long-term level.

Since the methodology suggested by the BCBS requires significant time for the Debt/GDP trend to adjust, a similar filter with λ = 1,600 is additionally used. The trend calculated this way adjusts more quickly to changes in Debt/GDP dynamics. This method can be used by countries that have experienced accelerated growth of credit activity in the past, leading to erroneously high trend values and incorrect interpretation of the credit cycle phase. Such countries include, for example, Bulgaria, Iceland and Ireland, which made a decision to increase their national countercyclical capital buffer amid significant negative values of the credit gap (from -70 to -40 p.p.). For Russia, 2005–2008 was such a period. The credit gap values for Russia calculated with λ = 1,600, while remaining negative, decrease gradually because the trend gradually adjusts to the Debt/GDP values, which have remained almost unchanged over the last two years (Chart 32).

CREDIT GAP DYNAMICS *Chart 32*



CHANGE IN OUTSTANDING LOANS BY INDUSTRY SECTORS FOR THE PERIOD FROM 1 OCTOBER 2018 TO 1 APRIL 2019 *Chart 33*



Source: reporting form 0409303.

Banks' loan portfolio quality

The quality of the corporate credit portfolio did not undergo any material changes. The trend of credit quality was determined by the financial condition of individual major borrowers and by the handling of troubled debts by banks, including the sale of loans. The share of loans of quality categories IV and V increased from 1 October 2018 to 1 April 2019 by 0.1 p.p. to 12.8 p.p.[3]. Excluding banks going through financial recovery, the share of such loans declined by 0.2 p.p. to 8.3%, and the total cost of risk[4] on the loan portfolio for the period of 1 October to 1 April amounted to 0.8%, having declined by 0.5 p.p. against the same period of the previous year. The growth of the share of 'bad' loans in foreign currency loans is explained by the decline of debt under the loan portfolio (Chart 32).

A high share of loans of quality categories IV and V is preserved in the construction industry (21.4% for ruble loans and 31.5% for foreign currency loans[5]) and in respect of companies performing transactions with real estate (24.0% for foreign currency loans). The cost of risk5 in these segments for the period from 1 October 2018 to 1 April 2019 remained close to zero or negative, which indicated an insignificant volume of loans whose quality category deteriorated.

Because of financial problems, the cost of risk5 of some companies increased significantly in the segments 'Production of coke and petrolium products' (the cost of risk amounted to 2.0% for ruble loans and 2.2% for foreign currency loans for the period from 1 October 2018 to 1 April 2019) and 'Mineral extraction' (4.3% for ruble loans).

Such economic activities as chemical production, metal production and electricity, gas and water generation and distribution maintained the highest quality from the point of view of loans of quality categories IV and V and the cost of risk.

The quality of the unsecured consumer loan portfolio remains high. The share of loans overdue by more than 90 days as of the 12th month of loan life for generations of loans extended in the first half of 2018 falls within the range of 2–3%, which is the lowest level since 2011. In respect of loans extended in 2016, this indicator amounted to 3–8%, and in respect of loans extended in 2014 it amounted to 8–13%. As generations of loans with lower credit risk on borrowers accumulate in the loan portfolio, the share of loans overdue by more than 90 days is declining. The decline of the share of such loans from 1 October 2018 to 1 April 2019 amounted to 1.7 p.p., to 8.7%, and reached the level of the beginning of 2014. The actions of banks aimed at writing off bad debts and assigning claims under loans to the collection agencies (1.5% to 2% of the loan portfolio quarterly) also make a significant contribution to the decline of the share of 'bad' debts.

The quality of the mortgage loan portfolio remains at a historically high level. The share of loans overdue by more than 90 days amounts to 1.5% as of 1 April 2019, having declined by 0.3 p.p. since 1 October 2018. Despite the growth of the loan portfolio, the amount of debt under loans overdue by more than 90 days continues to decline. Mortgage loans secured with claims under co-investment agreements are also characterised by high credit quality. The share of overdue debt under such loans does not exceed 0.4% as of 1 April 2019. Therefore, the current credit quality trends do not indicate the growth of materialised credit risks.

Profitability and interest income dynamics

Profit of the banking sector as of 2018 year-end exceeded the result of 2017 by 71% and amounted to ₽1.3 trillion[6]. The key factors in the growth of the income of credit institutions (excluding banks that underwent financial recovery) were the increase of net interest

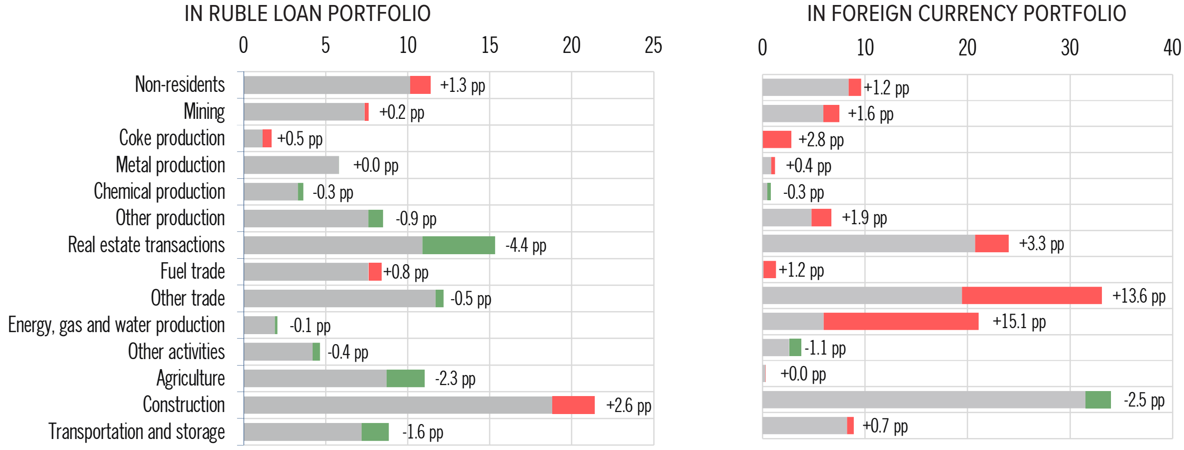
[3] Based on the reporting form 0409303, excluding financial and insurance activity and public self-governance.

[4] The ratio of the increase in loan loss provisions for the period to the average loan debt under the loan portfolio for the same period less loan loss provisions. The change in provisions was adjusted by the retirement of loan debt and the sale of claims under loans. Calculated on the basis of the reporting form 0409303.

[5] The data on loan portfolio quality broken down by types of economic activity are provided net of banks that are going through financial recovery.

[6] Profit of credit institutions, not including banks that underwent financial recovery, increased by 30% to ₽1.8 trillion over 2018.

CHANGE IN THE SHARE OF LOANS OF QUALITY CATEGORIES IV–V IN THE RUBLE AND FOREIGN CURRENCY LOAN PORTFOLIO FOR THE PERIOD FROM 1 OCTOBER 2018 TO 1 APRIL 2019 (EXCEPT BANKS GOING THROUGH FINANCIAL RECOVERY) *Chart 34*
(%)



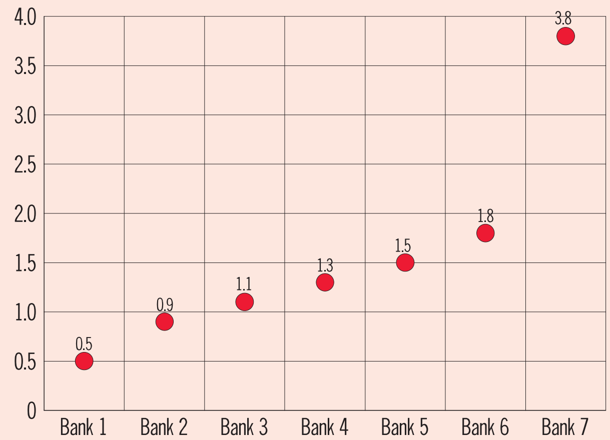
Source: reporting form 0409303.

Box 3. Bank survey based on the estimated probability of default of borrowers under IFRS 9

According to the Order of the Ministry of Finance of Russia No. 98n, dated 27 June 2016, credit institutions shall apply the IFRS 9 standard for annual periods starting 1 January 2018 or later. To compare the approaches of banks to loan risk assessment, the Bank of Russia studied the seven largest credit institutions by the size of their corporate loan portfolio in Q1 2019. Credit institutions submitted information on 30 major borrowers regarding the probability of default and expected loss within a one-year horizon and throughout the loan period, if such loan is characterised by significant growth of risk on the borrower. The aggregate amount of outstanding loans included in the study was ₽8.8 trillion (26% of outstanding loan debt of non-financial institutions to banks as of 1 April 2019). The assessments of probabilities of default and loss in the event of default on loans to the major borrowers of the banks will be used in macroprudential stress testing and in the evaluation of banks' losses under the base scenario.

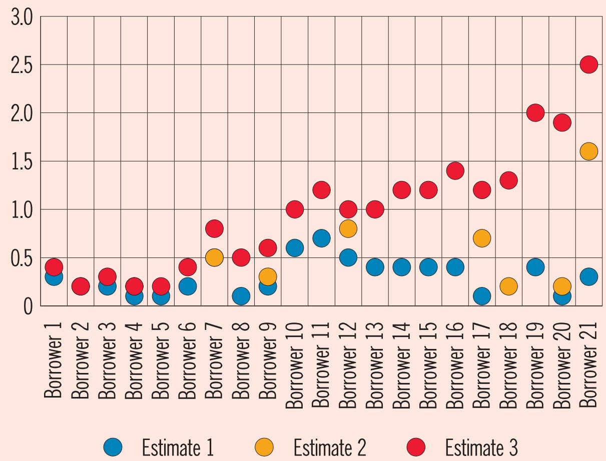
The average probability of default within a one-year horizon weighted by debt amount under the loan portfolios of the banks included in the study varies from 0.5% to 3.8% (excluding loans with signs of default), and the estimated loss within the same time horizon varies from 0.2% to 3.2% of outstanding loans. The average estimated reserve weighted by debt amount, which has been calculated for the same group of loans based on the data from the reporting form 0409303, is within the range of 0.1–7.3% and

AVERAGE PROBABILITY OF DEFAULT ON MAJOR BORROWERS AT A ONE-YEAR HORIZON *Chart 35*
(%)



Source: bank survey.

ESTIMATED PROBABILITY OF DEFAULT ON MAJOR BORROWERS BY DIFFERENT BANKS *Chart 36*
(%)

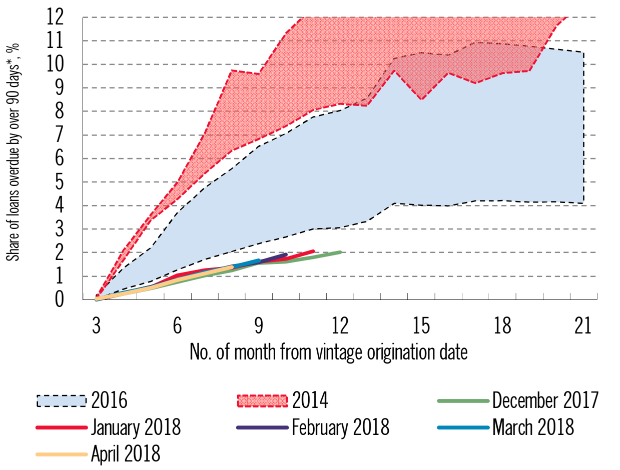


Source: bank survey.

may differ in respect of a certain bank upward or downward as compared with the default probability because of the approaches to the evaluation of expected loss and the differences in the consolidation perimeter. The probability of default on the same borrower also differs from bank to bank. This problem was also mentioned in the BCBS study on credit risk assessment for the same borrowers by different banks within the framework of the internal ratings-based (IRB) approach. To increase conservatism in credit risk assessments, the BCBS suggested setting a minimum level of probability of default and loss given default (floor)[1]. Therefore, employment of IFRS 9, called to solve the procyclicality problem of the estimated provision for expected credit loss, preserves the problem of differences in the evaluations of risk parameters of the same borrowers by different banks.

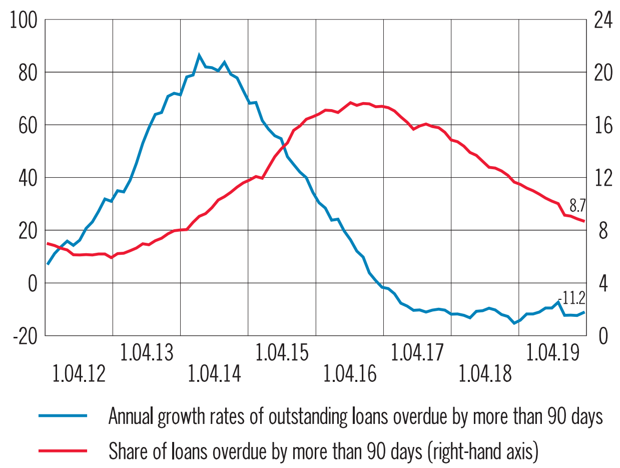
[1] *Basel III: Finalising post-crisis reforms, December 2017.*

QUALITY OF UNSECURED CONSUMER LOANS BROKEN DOWN BY GENERATIONS *Chart 37*



Source: NBCH data.

UNSECURED CONSUMER LOANS OVERDUE BY OVER 90 DAYS *Chart 38*
(%)



Source: data of reporting form 0409115, Section 3.

income (NII) on transactions with individuals (by ₽345 billion) and net commission income (by ₽189 billion, Chart 39).

At the beginning of 2019, profit continued to grow: as of the end of Q1 2019, the financial result of the banking sector exceeded profit as of the end of Q1 2018 and amounted to ₽587 billion[7]. For the period from 1 October 2018 to 1 April 2019, return on assets increased from 1.4% to 1.8%, while return on equity increased from 12.4% to 15.9% as of 1 April 2019. The profitability of credit institutions, excluding banks that underwent financial recovery, grew over the same period from 2.1% to 2.4%, and return on equity grew from 16.3% to 19.3% as of 1 April 2019.

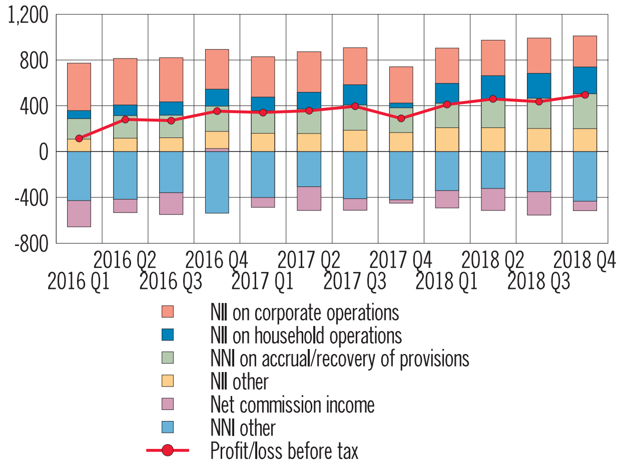
A low level of materialised credit risks favoured the growth of the return on equity of banks specialising in unsecured consumer lending[8], which reached 19.1% as of 1 March 2019 and exceeded the overall ROE of the banking sector (16.3%).

In Q4 2018 and during the first months of 2019, interest rates in the banking sector in-

[7] *Adjustments associated with amendments in the Chart of Accounts as per IFRS 8 made a significant impact on profit. As at the end of 2019 Q1, the profit of credit institutions, not including banks that underwent financial rehabilitation, amounted to ₽586 billion.*

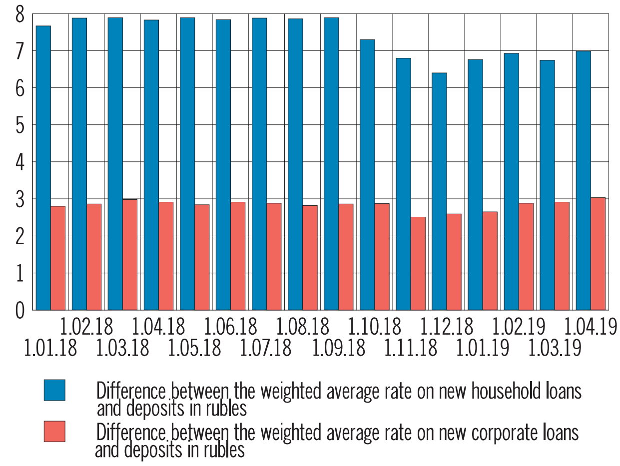
[8] *Credit institutions with debt under the household loan portfolio exceeding ₽25 billion and the share of household loans in total assets exceeding 40% were classified as retail banks. Excluding credit institutions that are going through financial recovery.*

BANKING SECTOR PROFIT STRUCTURE *Chart 39*
(₽ BILLION)



Source: reporting form 0409102.

DYNAMICS OF THE DIFFERENCE BETWEEN THE RATES ON NEW RUBLE LOANS AND DEPOSITS *Chart 40*
(PP)



Source: Bank of Russia calculations.

creased[9]. Credit institutions increased their rates on newly attracted household ruble deposits ahead of schedule, which caused some narrowing of the interest rate spread on ruble transactions with households (Chart 40). However, as early as at the end of March the trend towards the growth of deposit rates stopped: at the end of Q1 2019, banks adjusted their interest rate policy and started to decrease rates on attracted ruble and FX deposits.

Despite the reduction of the difference between the rates on new loans and deposits, the net interest income dynamics in 2018 remained stable. Amid the accelerated growth of retail lending volume, net interest income on transactions with individuals was the key factor in net interest income growth. Net interest margin[10] on transactions with individuals grew by 1.87 p.p. to 6.2% over 2018 (due to the growth of net interest margin on ruble transactions by 1.80 p.p. to 7.1%). At the same time, the volume of the main source of interest income, net interest income on transactions with legal entities, declined by 10.9% over 12 months to ₽1.2 trillion as of 1 January 2019. The decline was caused by the higher-than-anticipated growth of the volume of deposits attracted. As a result, net interest margin on transactions with legal entities declined by 0.74 p.p. to 3.8% over 2018 (the NIM declined both on ruble (by 1.02 p.p. to 4.3%) and on foreign currency transactions (by 0.22 p.p. to 2.0%).

Capital adequacy of banks

The growth of credit activity in different lending segments caused the increase of the amount of risk-weighted assets. Banks kept a part of their income as part of equity to support the capital adequacy ratio. For comparison, from 2010 to 2013, amid the growth of credit activity, the capital adequacy of the banking sector declined significantly by 8 p.p. (Chart 41).

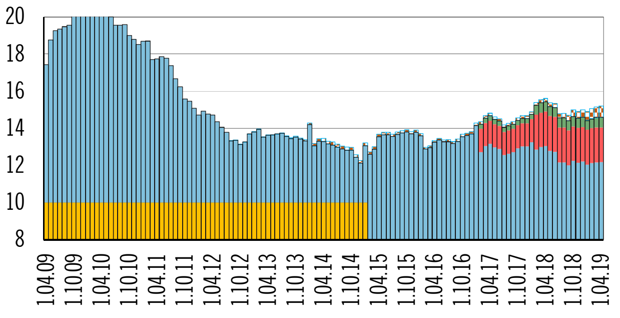
From 1 October 2018 to 1 April 2019, the capital adequacy ratio of credit institutions that did not undergo financial recovery remained unchanged (14.6%)[11]. However, we should point out the growth of the capital buffer by 0.2 p.p. to 0.6% due to the effect of risk-weights add-ons under various types of loans. Risk ratio buffers essentially replace the countercyclical

[9] During the period from 1 October 2018 to 1 April 2019, the weighted average rate on ruble deposits attracted during a month from individuals grew by 0.98 p.p. to 6.4% (not including on-demand deposits), while the weighted average rate on ruble loans grew by 0.67% to 13.3%. The weighted average rate on new corporate ruble deposits grew by 0.25 p.p. to 6.5%, and on loans it grew by 0.41 p.p. to 9.5%. The weighted average rate on household foreign currency deposits grew by 0.12 p.p. to 2.4%, and on foreign currency loans it grew by 2.55 p.p. to 8.6%. The weighted average rate on corporate foreign currency deposits declined by 0.41 p.p. to 1.5%, and on foreign currency loans it declined by 0.09% to 5.5%.

[10] Net interest margin is calculated as the ratio of net interest income to the average amount of banking sector assets generating interest income for the period.

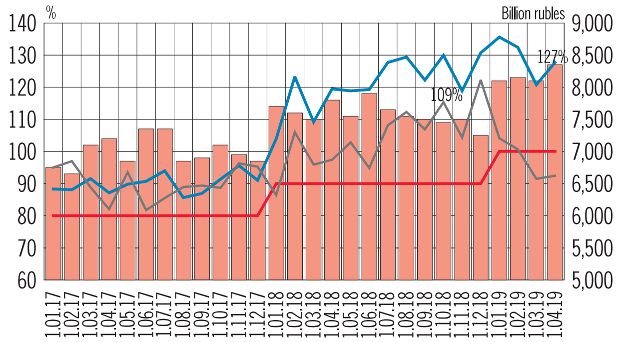
[11] The overall decline of the capital adequacy of the banking sector during the period under review amounted to 0.2 p.p. (to 12.2%).

DYNAMICS OF THE BANKING SECTOR ADEQUACY RATIO (EXCEPT BANKS GOING THROUGH FINANCIAL RECOVERY) *Chart 41*



Source: reporting form 0409135.

DYNAMICS OF THE ACTUAL AVERAGE VALUE OF LCR AND ITS COMPONENTS FOR SIBS *Chart 42*



Source: reporting forms 0409805 and 0409135.

buffer but apply to individual kinds of loans. If risk-weigts add-ons had been set to zero, capital adequacy would have been 0.6 p.p. above the current level.

Countercyclical capital buffer

In Q1 2019, amid the moderate growth of corporate lending and the effect of increased risk-weights add-ons in some lending segments, the Bank of Russia Board of Directors decided to keep the national countercyclical capital buffer at the level of 0% of risk-weighted assets. When making a decision, the Bank of Russia took into account a wide range of factors and ratios: the growth of credit activity in various lending segments, business plans of banks for increasing their loan portfolio in 2019, loans underwriging standards, household debt burden dynamics, credit quality of the portfolio, price trends of residential real estate, the effect from existing macroprudential measures, the capital adequacy reserve for individual banks and banking sector profitability.

Since the countercyclical capital buffer applies to the entire loan portfolio of banks, the Bank of Russia uses targeted measures to limit the accumulation of risk by banks in certain segments and for the purpose of capital buffer accumulation. In the light of the non-uniform growth of debt for different segments and the effect of risk ratio buffers in the segments where the Bank of Russia observes risk accumulation, it is not expedient to set a positive national countercyclical capital buffer.

Liquidity risk

From the beginning of 2016, systemically important credit institutions must comply with the Bank of Russia's requirements for the liquidity coverage ratio N26 (N27) (the 'LCR')[12]. From 1 January 2019, the minimum allowable numerical value of the ratio is 100%. In the light of the structural liquidity surplus and the growth of the supply of assets available to banks which meet the Basel III criteria, most systemically important credit institutions have a sufficient volume of high-quality liquid assets (HQLAs) on their balance to comply with the LCR. The total volume of HQLAs of systemically important credit institutions which are taken into account for the purpose of LCR calculation exceeds the minimum amount required by the ratio by 22% as of 1 April 2019. The average actual value of systemically important credit institutions' LCR grew over six months by 17 p.p. to 127% as of 1 April 2019. The actual values of the LCR as of the same date were in the range from 100% to 254% (Chart 42).

The main sources of HQLA formation at systemically important credit institutions are debt

[12] *Systemically important credit institutions must comply with the LCR in accordance with Bank of Russia Regulation No. 510-P, dated 3 December 2015, 'On the Procedure for Calculating the Liquidity Coverage Ratio (Basel III) by Systemically Important Credit Institutions'.*

securities denominated in rubles which have been issued by the Government of the Russian Federation or the Bank of Russia, funds of credit institutions in the Bank of Russia and cash funds. As of 1 April 2019, they account for 94.3% of the aggregate volume of systemically important credit institutions' HQLAs taken into account for the purpose of LCR calculation, or ₽5.9 trillion[13]. Investments of credit institutions in OFZs and coupon bonds of the Bank of Russia traditionally constitute the most important source (47.2%).

At the same time, some credit institutions continue to include additional elements stipulated by Bank of Russia regulations[14] in the calculation of the numerator of the ratio. The aggregate maximum possible limit of opened irrevocable credit lines for the last six months increased by ₽639 billion to ₽1.4 trillion. During the period from 1 October 2018 to 1 April 2019, four out of seven banks with opened irrevocable credit lines included it in the calculation of the ratio as of the reporting date. In Q1 2019, the share of irrevocabvle credit lines in the numerator of those banks reached 19.9%.

Based on the Bank of Russia's estimate and the plan of the Ministry of Finance of Russia for the issuance of OFZs, the volume of assets available to banks which meet the Basel III criteria will continue to grow during the next years. Therefore, to encourage banks to comply with the LCR by way of forming an HQLA portfolio on their books, the Bank of Russia has decided to gradually wind down the possibility of using irrevocable credit lines. From 1 May 2019, the fee for the right to use a newly opened irrevocable credit line increased from 0.15% to 0.5% per annum. A uniform schedule for reducing the maximum possible individual limits for each bank was also established[15]. This will enable the gradual decline of the volume of newly opened irrevocable credit lines to zero within three years[16].

---

[13] *Based on data of the reporting form 0409122.*

[14] *Upon the implementation of the LCR, because of the lack of HQLAs corresponding to the Basel III criteria, the Bank of Russia, according to the BCBS standard, made a decision on the possibility of including the limits of irrevocable credit lines opened by the Bank of Russia and HQLAs in some foreign currencies in the amount exceeding the demand for such currency in the calculation of the LCR numerator. For details, see 'Analysis of the demand for high-quality liquid assets in the Russian banking sector', http://www.cbr.ru/Content/Document/File/50188/szco.pdf.*

[15] *Amendments to Bank of Russia Order No. OD-3439, dated 3 December 2015, 'On Measuring the Maximum Limit of the Irrevocable Credit Line' became effective on 16 April 2019.*

[16] *For credit institutions that do not have irrevocable credit line agreements or existing irrevocable credit line limits as of 1 May 2019, the maximum possible irrevocable credit line limit is set equal to zero starting from 1 May 2019.*

4. SYSTEMIC RISKS OF NON-CREDIT FINANCIAL INSTITUTIONS

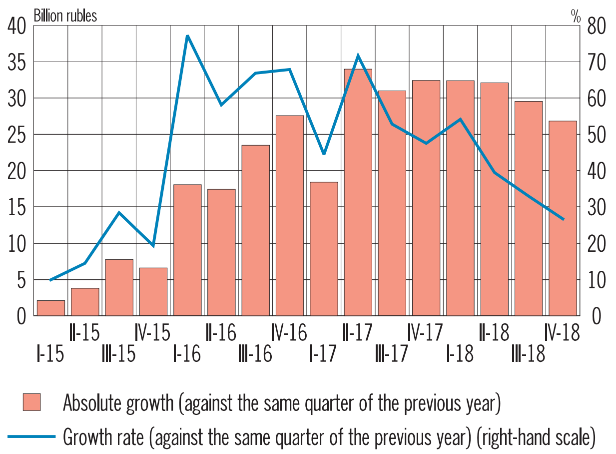
The activity of life insurers, whose premiums have been growing significantly over the past years, is characterised by a high quality of assets, while a downward trend of the capital reserve continues in the sector on the whole, and signs of slowdown can be seen in the dynamics of premiums. Non-life insurers improved the results of their insurance and investment activities. The progress of the OSAGO reform is of crucial importance for the development of the segment. The NPF risks have decreased amid the increase of the quality of their assets. Following the simulation results based on the assumptions made, the aggregate payouts under mandatory pension insurance (taking into account the beginning of mass payments in 2022) will not exceed 11% of pension savings within the next ten years. As of 2018 year-end, about 40% of broker organisations reported loss incurred, inclunding because of the employment of a new accounting procedure in accordance with the requirements of the industry accounting standard (IAS). Brokers' market risks were at acceptable levels: the overall securities portfolio of the industry mostly consisted of assets of high-grade issuers.

4.1. RISKS OF INSURANCE ORGANISATIONS

Life insurers

In 2018, the materiality of risks of the life insurance market continued to grow: following active promotion via credit institutions, the amount of life insurance reserves as of 31 December 2018 reached ₽884.7 billion, or 3.1% of the aggregate amount of household deposits as of the same date. A company specialising in life insurance became the leader of the insurance market by premiums. There are signs of slowdown in the dynamics of the segment (Chart 43): the growth rate of premiums declined in Q2–Q4 2018, and market growth during the year in absolute terms increased insignificantly as compared with growth in 2017 (₽120.9 and 116.0 billion, respectively).

QUARTERLY DYNAMICS OF LIFE INSURANCE PREMIUMS IN 2015–2018 *Chart 43*

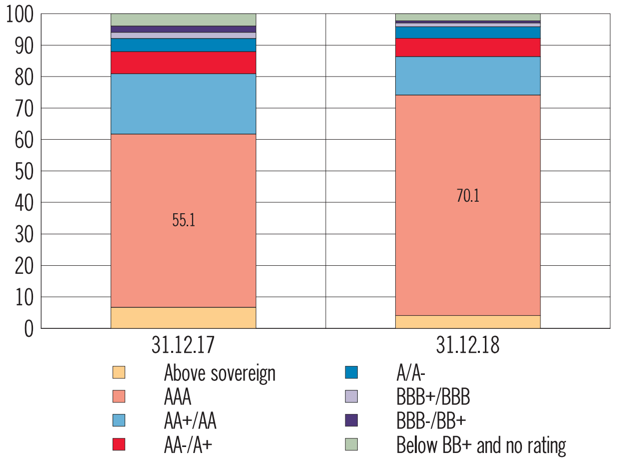


Amid the growth of assets, life insurers' potential loss-absorbing capacity remained at an acceptable level, although it was characterised by a decline in capital supply. The aggregate ratio of the actual and regulatory solvency margin of life insurers[1] as of 31 December 2018 decreased to 149.1% (as of 31 December 2017: 188.3%, as of 31 December 2016: 218.7%). Life insurers' investments were characterised by high credit quality: the share of investments with a sovereign rating as of 31 December 2018 grew to 70.1% (as of 31 December 2017: 55.1%), including 37.7% of assets (or 49.1% of the securities portfolio) accounted for by investments in government and municipal securities. The group of assets with a rating within two steps from the sovereign rating amounted to 88.1% (81.3% as of 31 December 2017), while assets without a rating did not exceed 1.4% (Chart 44).

The level of sectoral diversification of life insurers' investments is evaluated as acceptable.

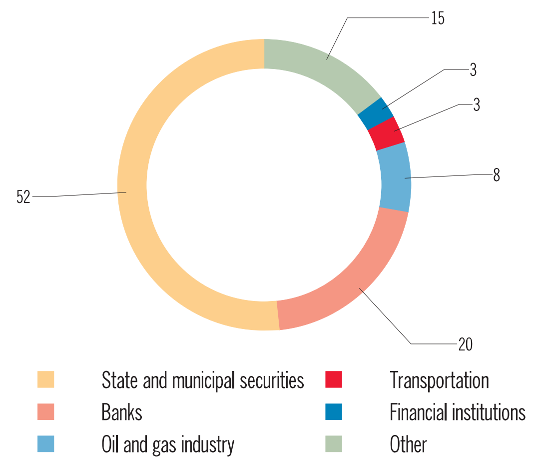
[1] *For the purposes of calculation of ratios, life insurers mean companies whose share of life insurance exceeds 85% of insurance premiums.*

CREDIT QUALITY OF LIFE INSURERS' ASSETS AS OF 31 DECEMBER 2018* *Chart 44*
(%)



** Ratings are provided based on credit scales of AKRA and «Expert» CRAs.*

SECTORAL STRUCTURE OF LIFE INSURERS' SECURITIES PORTFOLIO IN 2018* *Chart 45*
(%)



** Not including non-residents.*

Apart from OFZs, a significant share in insurers' securities portfolio comprised investments in the banking (20.1%) and oil and gas sectors (7.8%)[2]. The share of the top three sectors (not including the public and municipal sectors) as of 31 December 2018 amounted to 31.1% (Chart 45).

The significant share of the banking sector in the sectoral structure of investments is explained by the common practice of placing the funds with the credit institutions acting as life insurers' agents for selling investment life insurance policies. As estimated by the Bank of Russia, as of 31 December 2018, investment life insurers had invested a total of 13.9% of assets into liabilities of their partner banks. The biggest share of investments in partner credit institutions (including both deposits and bonds) was observed in respect to insurers selling investment life insurance products mostly via the parent bank of their own group. For some life insurers, investments in liabilities of affiliated entities were close to the ratio of investments in related parties (25% of insurance reserves). The conditions of placement of life insurers' funds with intermediary banks corresponded to the market conditions. The weighted average interest rate on insurers' ruble deposits with intermediary banks which were opened in 2018 was 7.4% (maturity period up to one year) and 8.0% (above one year), while average market levels were 6.5% and 6.7%, respectively.

The currency risk of life insurers remained low. Despite the increase in the share of foreign exchange liabilities (16.4% as of 31 December 2018 vs 14.8% as of 31 December 2017), they continued to be adequately secured with foreign exchange assets (20.7% as of 31 December 2018). Most companies had a long open foreign currency position.

The growth of the segment was accompanied by an increase in the number of complaints (by 75.1% as compared with 2017, to 2,096 complaints). As a response measure, the Bank of Russia established requirements regarding disclosure of information to customers about the material terms and conditions of universal and investment life insurance agreements[3], which came into force on 1 April 2019. Insurers also had to ensure that their intermediaries comply with those requirements (88.0% of life insurance premiums in 2018 were received from banks).

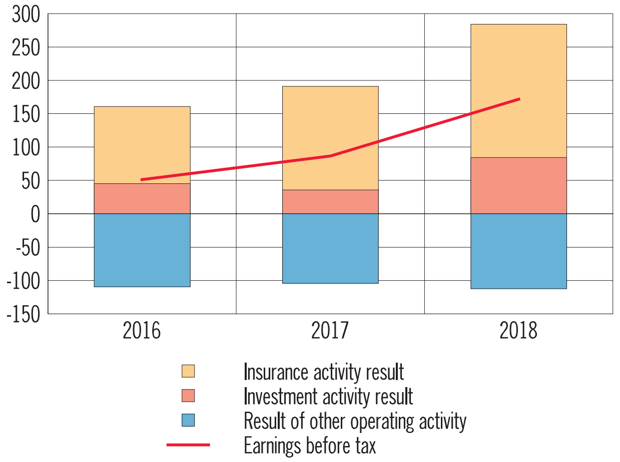
Non-life insurers

The development of the non-life insurance market in 2018 was generally characterised by positive trends of return on equity (29.9%, or

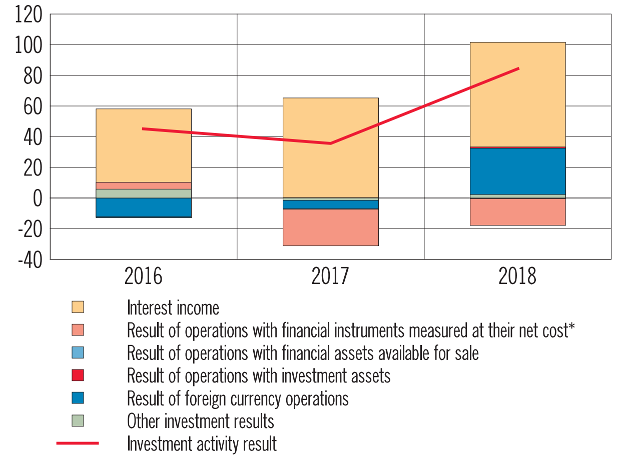
[2] Not including investments in non-residents' securities.

[3] *Bank of Russia Ordinance No. 5055-U, dated 11 January 2019, 'On the Minimum (Standard) Requirements for the Conditions and Procedure for Provision of Voluntary Life Insurance with Periodic Insurance Payments (Rents, Annuities) and/or Participation of a Policyholder in the Investment Income of an Insurer'.*

FORMATION OF NON-LIFE INSURERS' PROFIT IN 2016–2018 *Chart 46*
(₽ BILLION)



FORMATION OF THE RESULT OF NON-LIFE INSURERS' INVESTMENT ACTIVITY IN 2016–2018 *Chart 47*
(₽ BILLION)



11.5 p.p. above 2017) and the dynamics of premiums.

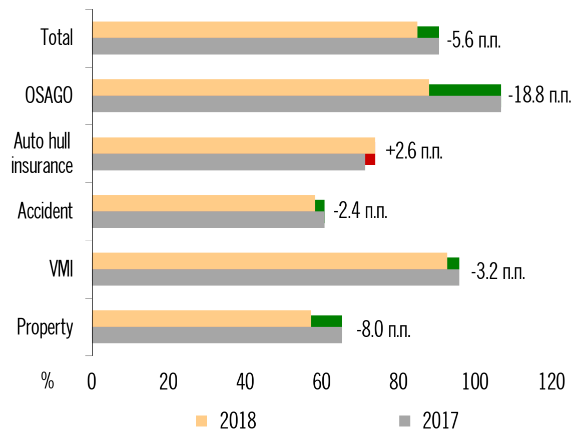
The volume of non-life insurance premiums grew by 8.4% against 2017. Among core activities, a negative trend was observed only in the insurance of other corporate assets (-7.8%) due to the expiry of insurance for a number of large projects. A major contribution to the increase in premiums was still made by activities accompanying retail lending (accident insurance and financial risk insurance accounted for 68.7% of the absolute increase in the non-life insurance market). After a decline in 2017, the vehicle insurance market showed a positive trend. Motor hull insurance premiums grew by 3.8% due to the growth of sales of new cars (12.8% against 2017), and OSAGO premiums grew by 1.8% due to more active sales in anticipation of the reform of this market.

The income of the sector grew due to the improvement of the results of both insurance and investment activity (Chart 46). The investment activity of non-life insurers (Chart 47) in 2018 was characterised by the preservation of the amount of interest income, neutralisation of negative results of individual insurers for operations with financial assets and a significant positive result for foreign currency operations. The aggregate long open FX position of companies in the segment as of 31 December 2018 amounted to 23.6% of their capital (26.6% as of 31 December 2017).

The combined loss ratio (CLR) characterising the results of companies' insurance activity declined by 5.6 p.p. over the year to 84.9% (Chart 48). The most significant influence on the loss ratio was made by the improvement of insurers' results in OSAGO (the CLR went down by 18.8 p.p. to 87.9%).

In Q1 2019, the first stage of an extensive reform of the OSAGO system was implemented. This reform is aimed at personalising tariffs, eliminating regional disproportions, reducing insurance fraud and increasing the affordability of this service. From 9 January 2019, the corridor for the base OSAGO tariff established for the regions was expanded (including by 20% in both directions for individuals), and a more detailed

COMBINED LOSS RATIO ON KEY ACCOUNTING GROUPS IN 2017–2018* *Chart 48*



** Resulting CLR includes total and administrative costs.*

grading of the 'age/driving experience' ratio was introduced (58 levels instead of 4). Insurers started making extensive use of the opportunities for managing the tariff corridor and changed their tariffs promptly depending on the regional figures and competitors' actions.

For the purpose of further improving insurers' financial stability, the Bank of Russia introduced a new concept for regulation of insurers' equity at the beginning of 2019, which was aimed at more thorough consideration of risks on assets (particularly, market and credit risks) in the requirements for the capital of insurance organisations.

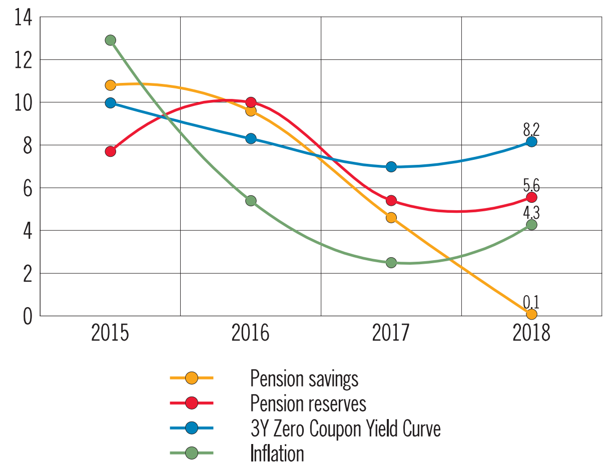
4.2. RISKS OF NPFS

The NPF market is demonstrating a slowdown in the growth rates of pension funds due to the absence of new inflows to the mandatory pension insurance system, the decline of the inflow of pension savings from the Pension Fund of Russia to the NPF following the transitional campaign and low investment yield on the funds. The amount of pension savings grew by 5% over 2018 (15% a year before), and the amount of pension reserves grew by 4% (8% a year before). As a result of the transitional campaign in 2018, NPFs will receive ₽40.4 billion[4], which is four times less than in 2017.

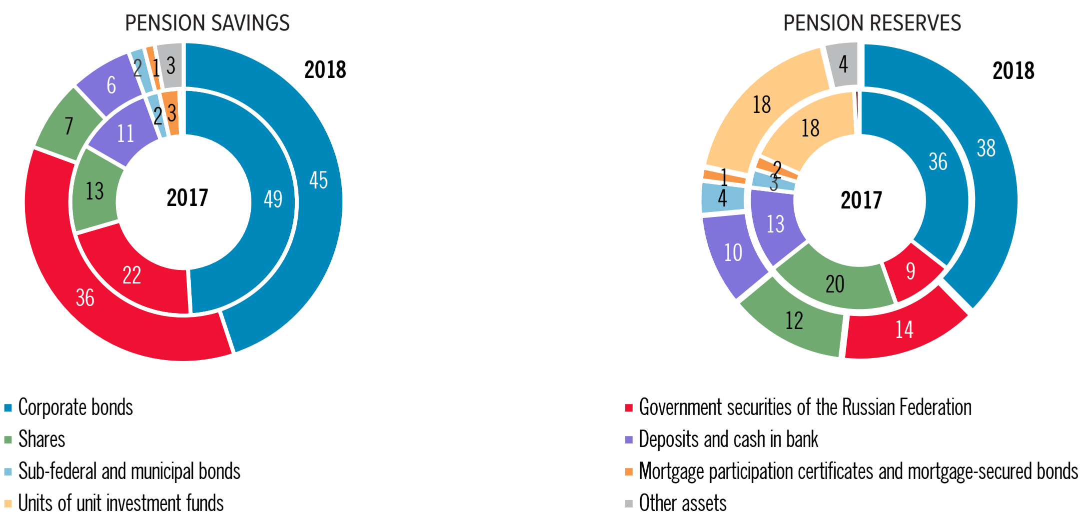
The weighted average return on investment of pension savings as of 2018 year-end amounted to 0.1% (before paying compensation) (Chart 49). Return above the inflation rate before paying compensation was demonstrated by 26 out of 35 NPFs. It should be noted that under mandatory pension insurance NPFs must guarantee the break-even point of the investment of pension savings within a five-year horizon, which, in turn, may lead to the need to use their own funds for this purpose. The yield on the pension reserves portfolio of the funds was higher and amounted to 5.6% (before paying compensation).

In 2018, the share of government stock in the pension savings portfolio grew by 15 p.p.

RETURN ON PENSION SAVINGS AND PENSION RESERVES PORTFOLIOS *Chart 49*
(%)



STRUCTURE OF PENSION FUNDS' PORTFOLIOS BY CLASSES OF ASSETS *Chart 50*

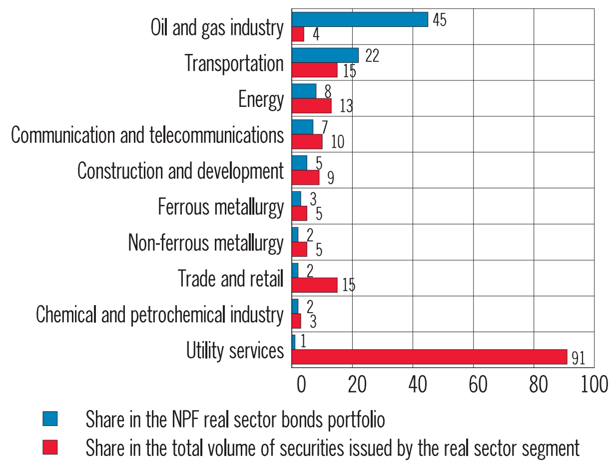


[4] *According to the Pension Fund of the Russian Federation.*

(to 36%), and in the pension reserves portfolio it grew by 5 p.p. (to 14%), which contributed to the improvement of the credit quality of pension portfolios. NPFs are significant investors for the state: they account for 9.1% of the value of government stock issues. The share of government securities increased due to the decline of the share of stock as well as deposits and cash funds on settlement accounts. At the same time, corporate bonds continue to account for the largest share in the portfolios of pension funds: they account for 45% of the value of the pension savings portfolio and 38% of the value of the pension reserves portfolio (Chart 50). The share of investments of pension funds in bonds of non-finance companies in 2018 grew somewhat amid the decline of investments in bonds of credit and financial institutions and leasing companies.

The pension portfolios of NPFs demonstrate a high level of asset concentration by industry sectors. As of 2018 year-end, the five largest industry sectors accounted for 84% of the value of the pension savings portfolio and 81% of the value of the pension reserves portfolio (net of the public sector, 52% and 70%, respectively).

STRUCTURE OF THE NPF REAL SECTOR BONDS PORTFOLIO BROKEN DOWN BY SECTORS OF THE ECONOMY (TOP 10) *Chart 51*



Analysis of the real sector bonds in the portfolios of pension funds showed that the oil and gas sector is the most important sector for

Box 4. Simulation of MPI payments

The Bank of Russia simulated the dynamics of payments by NPFs under mandatory pension insurance (MPI) within the next ten years (Chart 52).

The following payments are made at the cost of pension savings accumulated for an insured person:

1) payment of the funded pension

2) lump-sum payment of pension savings

3) term pension payment

4) payment of pension savings to the successors of the deceased insured person.

An insured person becomes entitled to a funded pension upon reaching the age of 55 or 60 years for women and men, respectively, subject to compliance with the conditions for awarding an insurance old-age pension with regard to whether one has the necessary pensionable service and the required individual pension ratio.

Receiving pension savings as a lump-sum payment is possible for insured persons whose funded pension, if assigned, would have amounted to 5% or less of the amount of the insurance old-age pension and of the amount of the funded pension calculated as of the date of funded pension assignment.

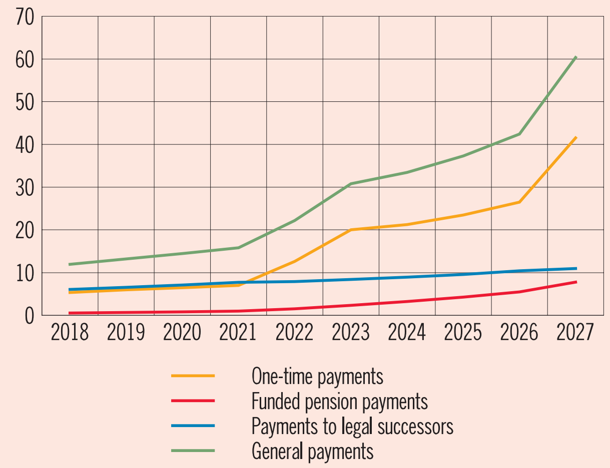
A term pension payment may be assigned for insured persons who took part in the state co-financing program.

The simulation took into account the cash flows for NPF payments based on the following assumptions:

- calculation was made on the basis of information on insured persons according to the reporting data of the NPFs conducting MPI activity as of 31 December 2017;
- transfer of insured persons from one NPF to another or to the Pension Fund of Russia was not taken into account;
- term pension payments, due to their insignificant volume, were taken into account in building the funded pension payment flow;
- the simulation took into account the table of mortality of the Russian population based on Rosstat data for 2017, for men and women separately;
- inflow of new insurance contributions under MPI, including additional voluntary contributions and funds from maternity capital, were not taken into account;

- adjustment (increase) of pensions corresponds to the rate of accrual of income to pension accounts, which is set equal to the target inflation rate of 4%[1];
- most insured persons retire at the age of 55 and 60 years old for women and men, respectively; the possibility of early retirement on privileged conditions is taken into account;
- the flow of payments to successors was built with due regard to the NPFs' statistical data on the actual payments to successors in 2016–2018;
- the amount of the insurance old-age pension for the calculation of the minimum assigned funded pension was set equal to the average annual amount of the insurance old-age pension as of 31 December 2017 according to the data of the Pension Fund of Russia—that is, ₽13,800.

NPF PAYMENTS UNDER MPI (₽ BILLION) *Chart 52*



Starting from 2022, the number and volume of pension payments will start increasing gradually. This is because insured persons[2] born in 1967 or later will be reaching retirement age: in 2022 for women (55 years old), and in 2027 for men (60 years old). However, the amount of lump-sum payments will exceed the amount of assigned funded pensions due to the absence of inflow of new insurance contributions and, therefore, the lack of pension savings of insured persons for assigning them a funded pension (less than the 5% threshold). The trend of the growth of overall payments will be preserved in the long-term perspective.

In general, the amount of payments within 10 years will amount to about ₽282 billion subject to the above assumptions. At the same time, as of 31 December 2017, the amount of pension savings amounted to ₽2,467 billion, including ₽274 billion in cash funds on current accounts and deposits, and ₽537 billion in government stock. Therefore, due to a significant volume of liquid assets of pension savings, the growth of MPI payments within a ten- years' horizon will not place a big load on the NPFs conducting MPI activity.

[1] *According to the forecast of the Russian Ministry of Finance until 2036.*

[2] *The insured persons who built their pension savings and chose to keep deductions of 6% insurance contributions to build a funded pension and preferred to have an NPF as their insurer in charge of management of their pension savings.*

NPFs (44.6% of the value of bond portfolios). The share of NPFs in the total issuing volumes of the oil and gas sectors amounts to 4.4%. Investments in transport are ranked second (21.5% of the value of NPFs' bond portfolio and 15.3% of the issuing volume of the transport sector) (Chart 51). The most significant investments of NPFs are made in the sector of utility services, which issues concession bonds (91.1% of the issuing volume). However, the share of this sector in NPF portfolios is insignificant and amounts to only 1.2%[5].

[5] *As of 2018 year-end, the share of all concession bonds held by NPFs amounted to 64% of their total issuing volume, while the share of concession bonds in the pension savings and pension reserves portfolios amounted to 1.8% and 0.7%, respectively.*

For the purpose of improving regulation of NPFs' activity, in November 2018, Bank of Russia Regulation No. 580-P[6] was amended to provide for a gradual decrease of the limit on investments in assets of a group of related parties

[6] *Bank of Russia Regulation No. 580-P , dated 1 March 2017, 'On Additional Restrictions on Investing Pension Savings Placed with Non-Governmental Pension Funds Providing Mandatory Pension Insurance; on Cases When a Management Company Acting as a Trustee of Pension Savings Is Entitled to Execute Repo Agreements; on Requirements Aimed at Risk Mitigation the Observance Whereof Entitles the Management Company to Execute Derivative Contracts; on Additional Requirements for Credit Institutions Which Servicemen's Pension and Housing Savings Are Placed With; and on the Additional Requirement for the Management Company to Finance a Funded Pension under a Pension Savings Trust Management Agreement'.*

from 15% to 10% of the value of the investment portfolio and on investments in shares of a single issuer in the amount of 5%. This innovation will have a positive effect on the quality of the pension savings portfolio.

4.3. RISKS OF BROKERS[7]

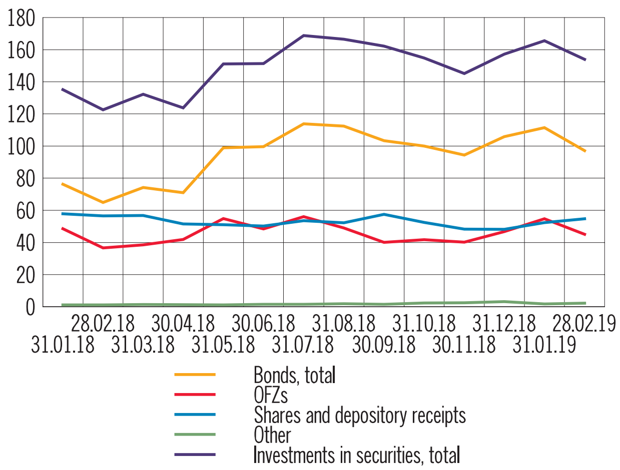
Brokerage organisations are smaller in size than other financial organisations but may have a significant impact on their financial stability as a result of the possible materialisation of network effects. In particular, the customer securities portfolios of brokers and their own portfolios are smaller than the securities portfolio of credit institutions, yet they are generally comparable with the portfolios of insurance organisations and pension funds by size. Furthermore, brokers' business model is characterised by a high level of interrelation with other financial market participants; therefore, in the event of the growth of volatility in the stock market, the activity of the said organisations may increase it significantly. The structure of brokers' activity entails the possibility for a quicker change in securities portfolio volumes, which, in turn, especially in crisis conditions, makes brokers' transactions significant for the market.

During 2018, brokers increased their aggregate amount of investments in securities from ₽135 billion to ₽160 billion. The main growth was accounted for by investments in corporate bonds (particularly, in bonds of major joint-stock companies and their foreign subsidiaries and infrastructure organisations). The share of stock (including depository receipts) and government bonds (OFZs) was at significant levels, about 35% and 30%, respectively. The aggregate growth was caused by the actions of three major securities holders (comprising about 2/3 of the total securities portfolio of brokers). Without including the said organisations, the volumes of investments in securities were approximately at the same levels (Chart 54).

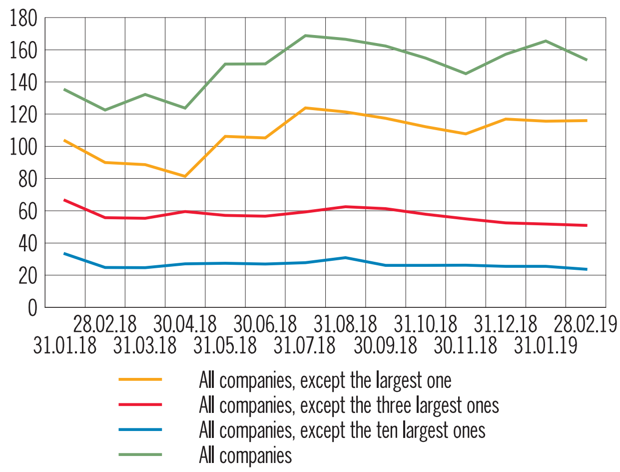
Liquidity risk is one of the main risks of the sector of brokerage organisations. To protect customers in the financial market, the Bank of Russia introduced a liquidity coverage ratio (LCR) in 2017; it must be calculated by brokers to which customers have assigned the right to use their cash funds for their benefit. The staged increase of the threshold LCR value from 0.5 (in 2020) to 1 (from 2022) is planned. This approach will allow most market participants to get prepared for the introduction of the first prudential ratio.

In the near future, the situation with the segregation of customers' funds on trading accounts during on-exchange trades may become one of the problem points in the industry. Brokers open a unified trading account for all customers quite often, which involves potential risks: in the event of the broker's bankruptcy,

BROKERS' INVESTMENTS IN SECURITIES BROKEN DOWN BY TYPES OF SECURITIES *Chart 53*
(₽ BILLION)



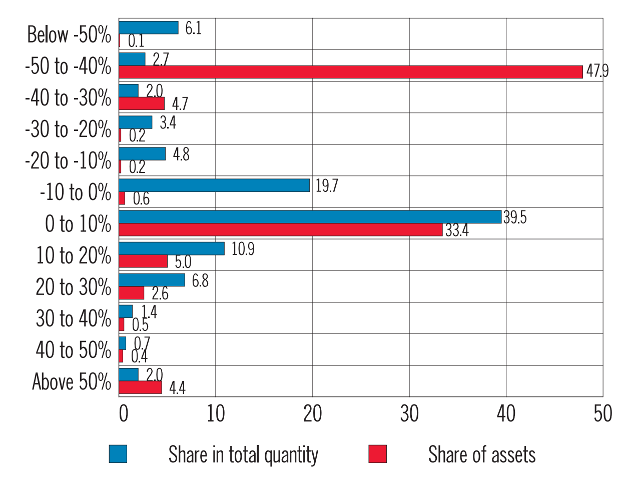
BROKERS' INVESTMENTS IN SECURITIES (CONCENTRATION) *Chart 54*
(₽ BILLION)



[7] *Hereinafter, non-bank financial institutions with a brokerage licence are considered.*

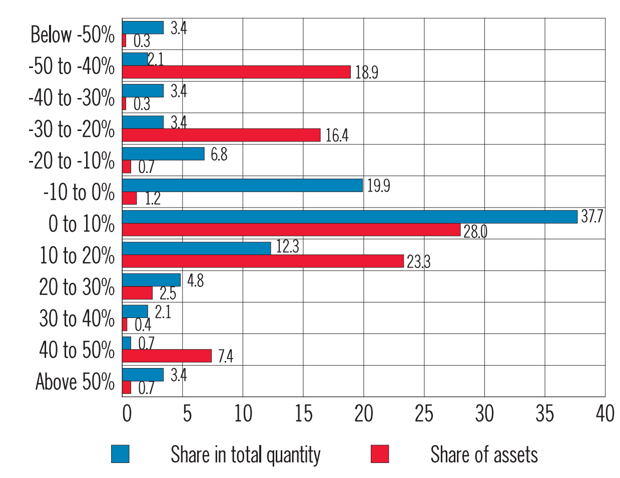
DISTRIBUTION OF BROKERS' ROE AS OF 31 DECEMBER 2018 (%)

Chart 55



DISTRIBUTION OF BROKERS' ROE AS OF 31 DECEMBER 2017 (%)

Chart 56



during close-out netting, the potential losses of some customers may be repaid with other customers' assets. Furthermore, most customers do not take this fact into account when concluding brokerage agreements. Upon deterioration of the situation in the financial markets, the probability of the said situation increases.

As of 2018 year-end, about 40% of brokerage organisations reported losses. Furthermore, three large brokers whose assets exceed 50% of the total assets of the sector reported loss in the amount of ₽14.3 billion (while the aggregate profit of other organisations amounted to ₽7.9 billion). Return on equity (ROE) in most organisations was from -10% to 0% (mostly small organisations) and from 0% to 10% (small, medium and large organisations) (Charts 55, 56). The main items of loss include the decline of interest income, the growth of general and administrative expenses and expenses from transactions with financial instruments that are mandatorily classified as measured at fair value. The occurrence of loss was also due to a new accounting procedure in accordance with IAS requirements (in particular, brokers had not been obliged to create reserves before).

Small organisations are leaving the market voluntarily, which may indicate the low effectiveness of their business model. In 2018, Bank of Russia Regulation No. 481-P, dated 27 July 2015, was amended. By virtue of those amendments, organisations are divided into categories depending on their business volume, which enables future easing of the regulatory burden on brokers with small business volumes.

APPENDIX. SUMMARY OF CURRENT MACROPRUDENTIAL POLICY MEASURES IN FOREIGN COUNTRIES

1. Requirements for the Countercyclical Capital Buffer (CCyB)

- 13 December 2018 The Norges Bank advised the Ministry of Finance of Norway to increase the countercyclical capital buffer from 2.0% to 2.5% of risk-weighted assets (RWA). This decision is associated with the continued growth of private sector debt and prices for real estate. Furthermore, the stress test performed by Norges Bank showed that in the event of stress banks will have to use funds from the previously formed countercyclical capital buffer and other buffers to keep their capital adequacy ratios at an adequate level. New requirements will come into force on 31 December 2019.
- On 14 February 2019, the European Central Bank (ECB) published an article dedicated to the development of a cyclical systemic risk indicator to assess the likelihood and severity of financial crises (Anticipating the bust: a new cyclical systemic risk indicator to assess the likelihood and severity of financial crises). The indicator developed therein (domestic cyclical systemic risk indicator, d-SRI) allows considering the risks of the internal lending market, real estate market, market risk of assets and external imbalances and is characterised by a high level of transparency and representativeness.
  d-SRI starts growing on average 3–4 years before the start of a systemic financial crisis. d-SRI is superior to the output gap ratio (total credit-to-GDP gap/Basel gap) with regard to early warning capability for the euro area countries. Its dynamics at the beginning of a crisis are highly correlated with such indicators of crisis depth as the decline of GDP. Thus, d-SRI enables estimation of the probability and the probable value of systemic financial crises within several years; therefore, d-SRI is a useful analytical tool for the development of the macroprudential policy.
- On 19 March 2019, the High Council for Financial Stability of France (Haut Conseil de la Stabilité Financière (HCSF)) announced an increase of the countercyclical capital buffer from 0.25% to 0.5% of risk-weighted assets (RWA) from 2 April 2020. The previous buffer increase took place in June 2018. The requirements for the countercyclical capital buffer apply to all French banks and EU and EEA banks holding French assets. The decision of the Council will be submitted to the ECB for approval and will come into force from April 2020.
  The Council increased the buffer value in response to continued lending growth: the debt of the non-financial private sector grew from 131% of GDP as of the end of Q1 2018 to 133.3% of GDP as of Q3 2018 (one of the highest levels in the EU countries). The output gap also grew by 2.7% as of the end of Q4 2018, while the average indicator in the euro area countries was -12.4%.

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

- On 19 October, 2018, Norway's Financial Supervisory Authority (FSA) proposed that the Ministry of Finance should include large regional banks accounting for over 10% of extended corporate loans among systemically important financial institutions (SIFIs). In this case, additional requirements for Common Equity Tier I (CET 1) will be imposed for banks in the amount of 2% of risk-weighted assets (RWA).
- On 16 November 2018, the Financial Stability Board (FSB) published the list of global systemically important banks (G-SIB) based on the data for 2017, where the number of banks decreased from 30 to 29: one new bank, BPCE, was included, and two banks, Nordea

and RBS, were excluded from the list. G-SIBs shall apply increased capital buffers and additional requirements to the total loss absorbing capacity (TLAC) during resolution, a requirement for the development of recovery plans and their evaluation and tougher supervisory requirements (related to risk management, risk aggregation, corporate governance and internal control instruments).

- On 12 December 2018, the Office of the Superintendent of Financial Institutions of Canada (OSFI) announced the toughening of requirements for domestic systemically important banks, in particular, an increase of the buffer for D-SIBs (the Domestic Stability Buffer)[1] from 1.5% to 1.75% of risk-weighted assets. Additional requirements for D-SIBs' capital were introduced in June 2018 in the amount of 1.5% of risk-weighted assets; they may vary from 0% to 2.5% and are revised twice a year. According to OSFI estimates, systemic risks that have been identified remain high, while the economic conditions continue to remain favourable.
- On 13 January 2019, the Insurance Regulatory and Development Authority of India (IRDAI) announced the start of work on identifying national systemically important insurance companies. For these purposes, IRDAI set up a Committee to study the existing evaluation methodologies for the systemic importance of insurance companies (IAIS and regulators of individual countries) and develop an evaluation methodology and enhanced methods of supervision of systemically important insurance companies. The Committee will prepare the said materials within six months.
- On 22 February 2019, the South African Reserve Bank (SARB) published the methodology for the identification of domestic systemically important banks (D-SIBs) for consultations. This methodology is based on four indicators and their contribution to the final index but differs from the methodology for the identification of global systemically important banks with regard to the national peculiarities of the South African financial system.
  The indicators Size and Interconnectedness and Substitutability have 40% weight each, while two other indicators, Global Activity and Complexity, account for 10% each. In the BCBS methodology, the weight of Size is 20%, while the South African Reserve Bank suggests using a greater weight because of the high concentration of the South African banking sector. The South African Reserve Bank also combined the Interconnectedness and Sustainability indicators with a total weight of 40% (while in the BCBS each indicator accounts for 20%). Because of the smaller value of international operations of South African banks, the Global Activity weight was reduced from 20% to 10%. The Complexity weight was reduced from 20% to 10% because of the lesser engagement of South African banks in complex trading transactions and transactions with derivatives.
- On 22 February 2019, The People's Bank of China (PBC) together with the China Banking and Insurance Regulatory Commission (CBIRC) and the China Securities Regulatory Commission (CSRC) published a guideline for improving the regulation of systemically important financial institutions (SIFIs). The guideline contains the following information:
  – the definition of SIFIs and areas of business of SIFIs;
  – SIFIs shall be subject to additional requirements for equity and leverage as well as special insolvency settlement mechanisms (to reduce the 'too-big-to-fail' risk);
  – a list of SIFIs shall be prepared by PBC, CBIRC and CSRC and shall be revised annually;
  – PBC together with CBIRC and CSRC shall perform stress testing of SIFIs on a regular basis.

  A special mechanism for settling SIFIs' insolvency will be created, and the regulators will facilitate the development of financial recovery plans and insolvency settlement and evaluate the conformance of the plans to

[1] *The Domestic Stability Buffer comprises additional requirements to the equity of D-SIBs along with the Capital Conservation Buffer and the Systemic Importance Buffer (D-SIB).*

the requirements to ensure the safe, quick and efficient elimination of the major risks caused by SIFIs' activities.

- On 28 February 2019, the European Systemic Risk Board (ESRB) published a notice of the Ministry of Industry, Business and Financial Affairs of Denmark on the introduction of requirements for a systemic risk buffer (SRB) for seven banks from 1 January 2019. The buffer varies from 1% to 3% depending on the category of systemic importance (the shares of assets of the financial institution against the sector and the share of loans and deposits). Dansk Bank fell within the fifth category, with the highest buffer value of 3%.
  A notice on increasing the systemic risk buffer for all credit institutions located in the Faroe Islands and all Danish institutions with investments in Faroe Island companies exceeding 200 million Danish kroner was also published. From 1 January 2019, SRB was set equal to 2%, and from 1 January 2020, to 3%. This measure is explained by the economic structure of the Faroe Islands—that is, high concentration and big exposure to external shocks.

- On 6 March 2019, the US Financial Stability Oversight Council (FSOC) published an updated text of the guideline for the identification and mitigation of potential risks to financial stability stemming from systemically important non-bank financial institutions. According to the proposals of the Council, the risk assessment procedures will change significantly.
  - ◊ The Council focuses on using an activities-based assessment approach, which enables identification of risk sources, not individual systemically important companies.
  - ◊ When evaluating the systemic importance of the companies, the Council suggests using cost-benefit analysis; therefore, a company will be declared systemically important if the expected benefit for financial stability exceeds related costs.
  - ◊ The Council will assess the risks of financial difficulties of a given company along with its systemic importance.
  - ◊ The number of systemic importance assessment stages was reduced from three to two by excluding the first stage (according to the guideline of 2012, the first stage provided for assessment of sets of economic indicators of a variety of non-bank financial companies to exclude the companies that were not subject to assessment, which caused confusion).
  - ◊ During the assessment, procedural improvements were introduced to expand the interaction of the Council and the companies in the course of assessment and to allow the companies to get a wider view of the risks they pose for financial stability and to develop tools for mitigating these risks. If no material risks occur over time, and the companies adequately mitigate the existing risks, the Council may decide that the companies are not systemically important.

3. Setting the Loan-to-Value ratio (LTV) limit

- On 28 November 2018, the Reserve Bank of New Zealand (RBNZ) softened requirements to the Loan-to-Value (LTV) ratio because of the slowdown of the growth of prices for real estate and mortgage lending as well as due to the decline of risks in the mortgage lending market from 1 January 2019:
  - – the maximum allowable share of new mortgage loans with LTV higher than 80% was increased from 15 to 20%;
  - – the limit LTV value was increased from 65% to 70% for investment mortgage loans (their share remains limited to 5% of all new extended loans).

4. Setting limits on borrower's debt-to-income ratio

- On 18 October 2018, the Korean Financial Services Commission (FSC) announced introduction of a debt service ratio (DSR) calculated as the ratio of the annual amounts of principal debt and interest repayment under all credit obligations of the borrower to the borrower's annual income.

Depending on the DSR value, a mortgage loan will be assigned to one of two categories: if DSR is higher than 70%: to risky loans, if DSR is higher than 90%: to high-risk loans.
Limits on the shares of mortgage loans within each of the categories will be set for different categories of banks.

Bank type	DSR/Limit on the disbursement of new loans		
	> 70%	> 90%	Average DSR for all mortgage loans which must be achieved by 2021
Commercial banks (national level)	15%	10%	40%
Local banks (regional level)	30%	25%	80%
Specialised banks*	25%	20%	Less than 80%

** Specialised banks created by order of the government, for example: Korea Development Bank, Export-Import Bank, Industrial Bank of Korea, National Agricultural Cooperative Federation, etc.*

DSR rules apply to new mortgage loans starting from 31 October 2018. Furthermore, loans for borrowers with a low income level will be exempted from DSR rules, which will protect them from tougher lending conditions.
It is noted that at present loans with DSR higher than 100% account for 14.3% of the total loan volume in commercial banks as compared to 30.1% in local banks and 27.9% in specialised banks. The average DSR value also differs: 52% in commercial banks, 123% in local banks and 128% in specialised banks.

5. Other

- On 14 November 2018, the International Association of Insurance Supervisors (IAIS) published an holistic framework for systemic risk in the insurance sector for consultations. It constitutes a combination of two approaches toward systemic risk assessment: the one resulting from individual insurers' activity (entity-based assessment, EBA) and the one arising in connection with certain areas of activity (activities-based assessment, ABA).
Within the framework of the holistic approach, IAIS suggests abandoning the policy under which additional requirements apply only to global systemically important insurance companies. Instead, IAIS suggests proportional application of additional macroprudential measures to restrain certain business areas and to limit risk investments that may pose systemic risks for the entire insurance market.
The Financial Stability Board published a press release in which they supported the holistic approach suggested by IAIS and reported that in 2018 the list of global systemically important insurance companies would not be published.

- On 28 January 2019, the European Systemic Risk Board (ESRB) published a report on macroprudential approaches toward non-performing loans (NPLs). The report reflects the point of view of ESRB on the possibility of preventing a systemically important growth of NPLs with macroprudential policy tools and on the application of macroprudential instruments to increase the resilience of banks against the significant growth of NPLs.
The report indicated the main triggers (the business cycle and shocks associated with the prices for assets), vulnerability factors (e.g., excessive growth of lending, high level of debt, banking practice) and intensifying factors (e.g., weakness of the legal and judicial systems), the effect of which may cause the growth of NPLs.
ESRB notes that no fundamental changes to the existing set of macroprudential instruments are required. ESRB recommends further improvement of sectoral capital buffers and development of measures aimed at borrowers (households, non-finance corporations). Instruments based on equity requirements may be also considered as a tool for reducing vulnerabilities which could cause the systemically important growth of NPLs. Macroprudential policy authorities are advised to set up early warning systems for monitoring the risks of loan portfolio deterioration.

- On 11 February 2019, the Bank for International Settlements (BIS) published a consultative document that brings the questions of whether the activity of for-profit central counterparties disrupts financial stability. Such CCPs maximise their profit by supporting the optimal equity amount and establishing a certain amount of security for clearing participants. The study sets out the factors affecting the CCP's decisions, analyses the role of the CCP's ownership structure in preserving of financial stability and suggests a hypothesis that the equity amount of a for-profit CCP and the amount of security raised from clearing participants will be below the optimal level. The analysts arrive at the conclusion that a for-profit CCP will have a smaller equity amount, while a CCP owned by immediate clearing participants (used-owned CCP) will have a bigger equity amount and, therefore, a lower default probability. The study also discovered a positive interrelation between the CCP's equity and the amount of security required from clearing participants. Capital growth by 1% leads to the growth of security of the clearing participants by 0.6%.

- On 15 February 2019, the European Systemic Risk Board (ESRB) approved the Recommendations of the High Council for Financial Stability of France to extend the limitations on exposures (exceeding €300 million) of systemically important financial institutions (SIFIs) in French non-finance companies with a debt burden of 5% of the equity amount to all EU jurisdictions. The Recommendation is aimed at limiting the possibilities for over-borrowing from banks of other EU member states for French companies with a high debt burden.
- On 9 May 2018, the High Council for Financial Stability of France decided to limit exposures2 of the six largest banks (BNP Paribas, Societe Generale, Credit Agricole, Credit Mutuel, BPCE and La Banque Postale) in French companies with a high debt burden for the period from 1 July 2018 to 30 June 2020.

[2] *With an amount exceeding €300 million.*

LIST OF CHARTS

List of tables