Section 3. Financial markets and financial institutions

3.1. Fundamental characteristics of Russia's equity market[1]

In 2018, the Russian stock market held up its reputation as one of the most volatile markets in the world. In 2018, Russian companies' stocks turned out to be instruments with highest returns, outperforming 36 world's largest stock exchange markets, in contrast to 2017, when Russian stocks were at the bottom of the list of stocks with lowest returns. In 2018, the MOEX Russia Index (formerly the MICEX Index) picked up 12.3 percent, whereas the RTS Index lost 7.4 percent. In 2018, the MOEX Russia Index found itself in a small group of stock indices of Brazil, India and Argentina that managed to stay within a range of positive returns (see *Fig. 1*). While being composed of the same companies, the two of Russia's indices differ in that the dollar-denominated RTS Index offers bigger returns than the ruble-denominated MOEX Russia Index. Therefore, when the Russian ruble depreciates the ruble-denominated returns on investment in the stocks composing the MOEX Russia Index are higher than the dollar-denominated returns on the RTS Index portfolio.

In other words, higher returns on the MOEX Russia Index in 2018 were in large part driven by a 17.1 percent ruble depreciation during the year (see *Fig. 2*). It is no accident that in 2018 other emerging market economies – Brazil, India and Argentina – with positive returns on index portfolios were also at the top of the list of countries faced with devaluation of the national currency. The national currency depreciation in 2018 at the majority of emerging market economies was led by unfavorable trends in global trade and capital drain from this the global market segment driven by a U.S. Fed's key rate hike and gradual taper of quantitative easing in the United State and in Europe. The depreciation of the Russian ruble continued because of uncertainties about anti-Russia sanctions.

[1] Sections 3.1–3.6 are written by A. Abramov, RANEPA; M. Chernova, RANEPA.

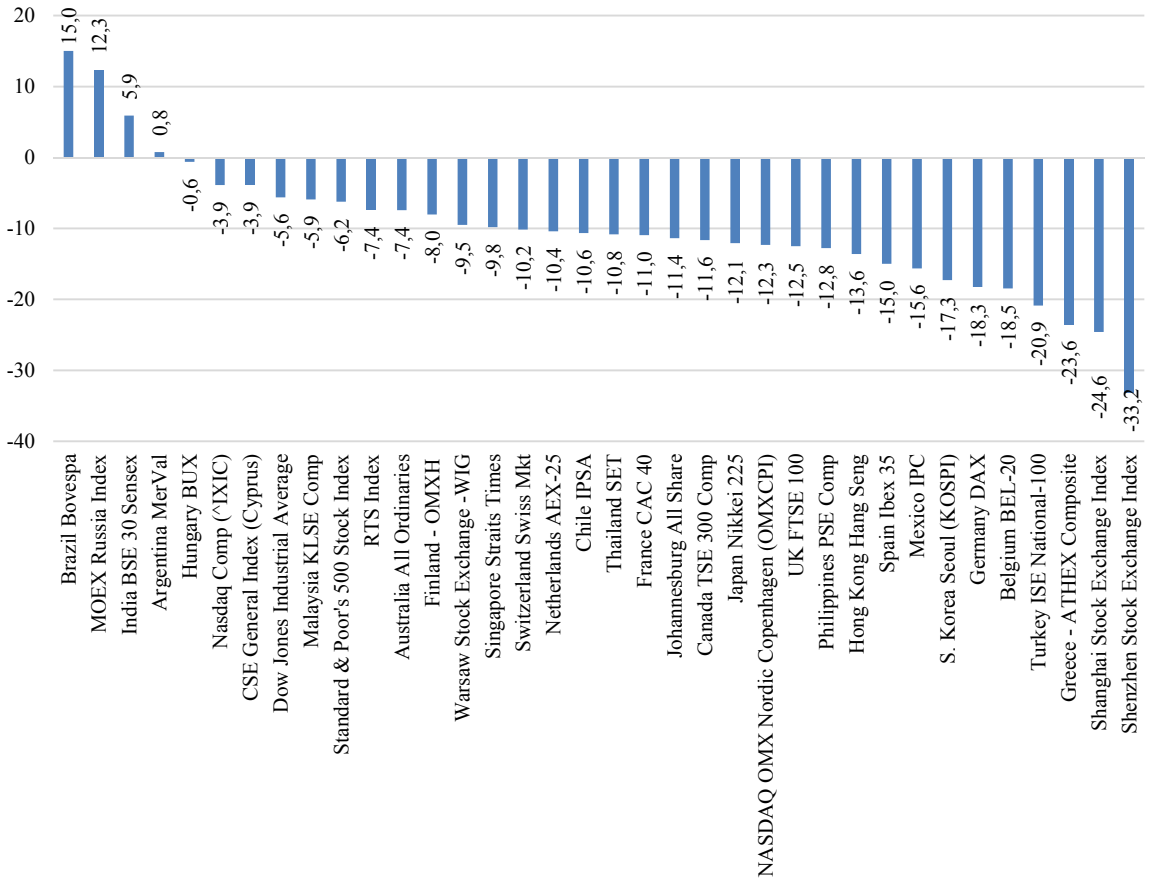

Fig. 1. Investment returns on 36 world's stock indices on largest stock exchanges in 2018, percent per annum

Source: own calculations using data from The Wall Street Journal.

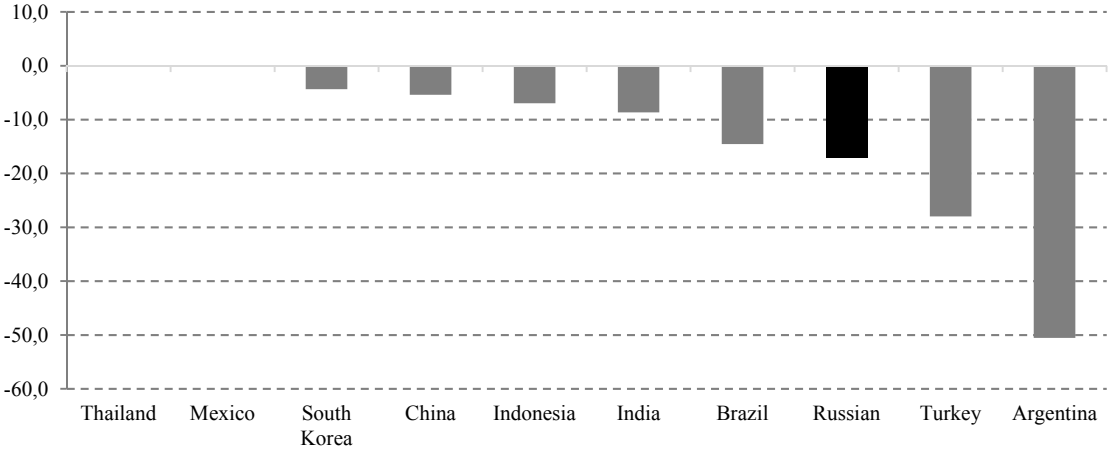

Fig. 2. Changes in value of national currency against U.S. dollar in 10 countries, 2018, percent

Source: own calculations using data from Bloomberg.

In the 2008–2018 period – 11 years from the 2008 global crisis – the MOEX Russia Index, with returns of 14.4 percent per annum, had come to rank 4th out of 36 global stock indices in terms of the geometric average (effective) annual return, whereas the RTS Index was only 25th with returns of 5.4 percent (see *Fig. 3*). Here too a relatively high level of the ruble-denominated returns on the MOEX Russia Index was in large part due to considerable depreciation of the Russian ruble within the time horizon under review.

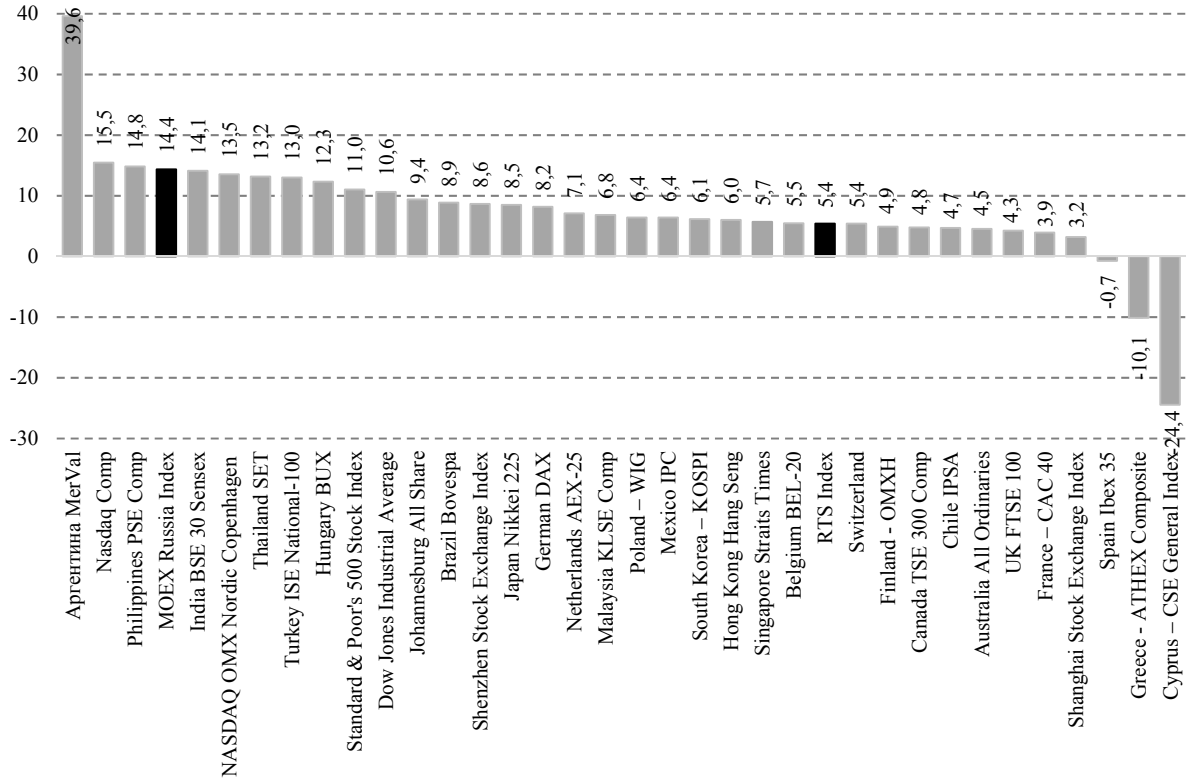

Fig. 3. Geometric average (effective) returns on 36 world's stock indices of largest stock exchanges, 2008–2018, percent per annum

Source: own calculations using data from The Wall Street Journal.

The stocks of the majority of Russian companies did not recover within 11 years from the 2008 crisis to their pre-crisis levels in dollar terms. The pace of recovery was slow due to structural problems facing the Russian economy, including its reliance on external prices of primary commodities. This can be easily witnessed when comparing the recovery of Russia's equity market from the 1997–98 cyclic crisis and from the 2008 structural crisis. Formally, both crises followed a similar scenario: stock indices collapsed amid falling crude prices, the Russian ruble tumbled and there was speculative capital drain, and then stock indices started recovering amid rising crude prices, the ruble exchange rate stabilized at a new level, and foreign portfolio investment recovered. While stock indices recovered at a relatively rapid pace from the crisis late in the 1990s,

the RTS Index has not yet recovered since 2008. The problem lies in that crude prices have not yet recovered to pre-crisis levels for objective reasons that are evident today, and by one count they are not expected to recover in the offing[1]. A stable growth in the domestic equity market is conditioned by a successful structural economic reform and major improvements in the investment climate, which is not happening yet.

It took the ruble-denominated MICEX Index just eight months to recover from the 1998 collapse, which was largely due to a 5-fold devaluation of the Russian ruble (see *Fig. 4*). The RTS Index recovered within nearly five years, or 58 months, as crude prices bounced back. It was not until H2 2003 that the Russian equity market saw full recovery coincidently with the upgrading of Russia's sovereign ratings by Moody's on October 8, 2003, later confirmed by similar upgrading by Fitch on November 17, 2004 and by S&P on January 31, 2005. The upgrading of Russia's investment ratings encouraged further foreign portfolio investment and fundraising.

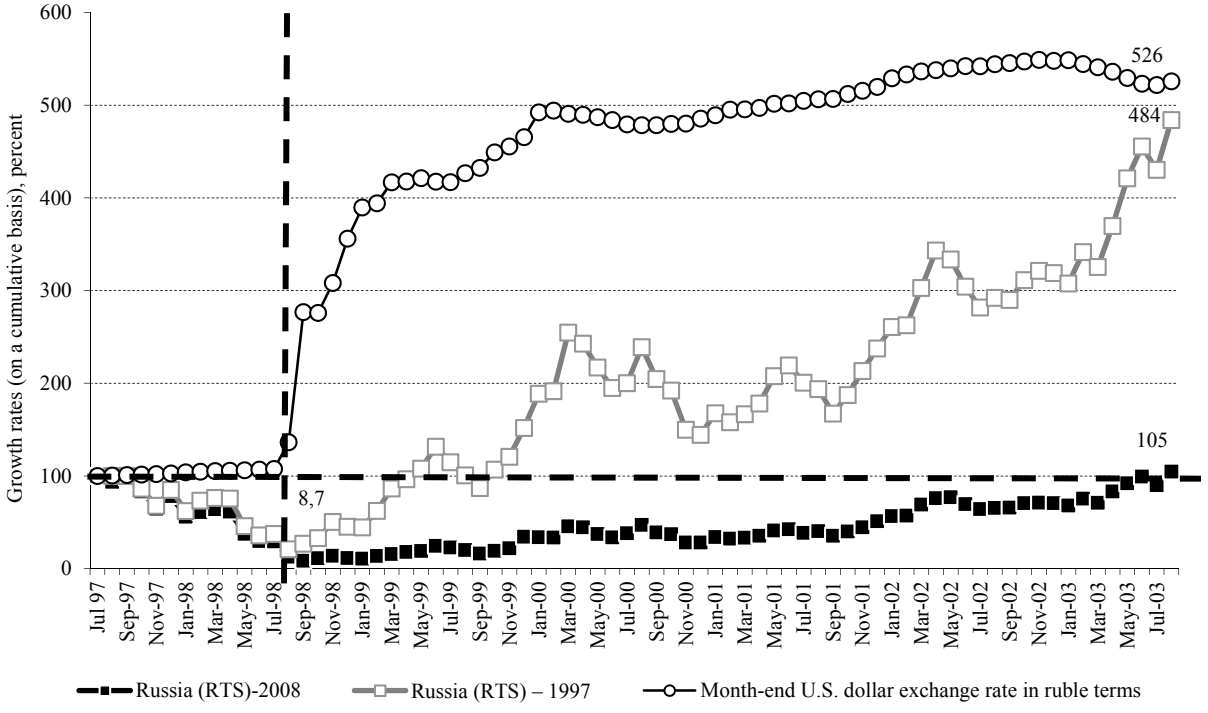

Fig. 4. Growth rates of U.S. dollar exchange rate, RTS Index and MICEX Index, 1997–2003 (July 1997 = 100 percent)

Source: own calculations using data from the Moscow Exchange and Bank of Russia.

[1] Crude prices will stay at a moderate price level for a long period of time, exhibiting "a new crude reality", said RANEPA Rector Vladimir Mau, (Mau V. Recall the 1980s. Vedomosti, February 16, 2016). The International Energy Agency (IEA) assumes that crude oil may be traded at USD 50–70 a barrel until 2040 given the growth factor of shale crude production and the upturn in the electric vehicle industry. (IEA. World Energy Outlook 2017, synopsis, Russian version, p. 9).

As of January 2019, it took the MOEX Russia Index 7.5 years, or 92 months, to recover after May 2008; within almost 11 years, or 128 months, the RTS Index reached merely 49.5 percent of its pre-crisis peak level (see *Fig. 5*). The slow climb in both indices was driven by slow recovery of crude prices, including no visible progress in undertaking a structural reform. Furthermore, unlike in the 1997–1998 crisis scenario, slow recovery since 2008 of the ruble-denominated MOEX Russia Index was due to a more moderate depreciation of the Russian ruble in recent decade, in contrast to the shock devaluation late in the 1990s. The ruble exchange rate weakened by 2.7 times in the period between May 2008 and January 2019, compared to the 5-fold devaluation late in the 1990s.

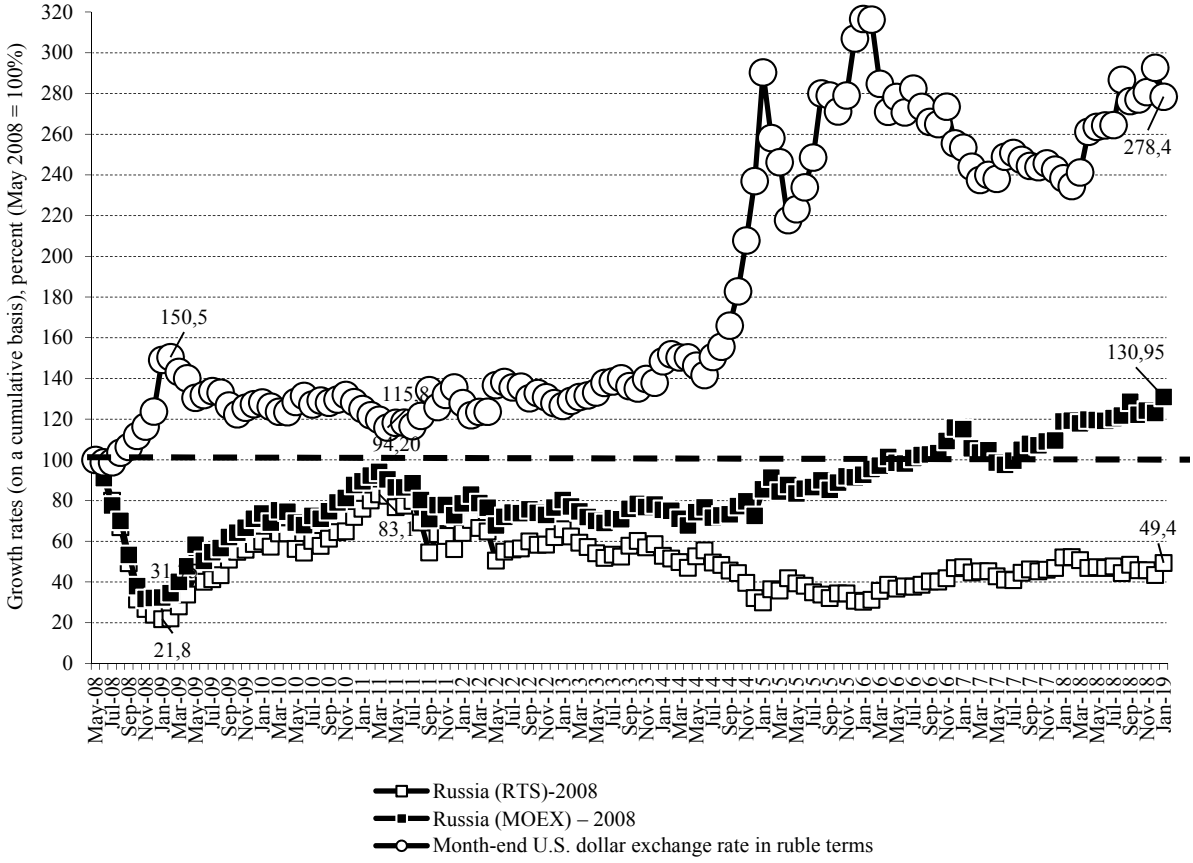

Fig. 5. Growth rates of U.S. dollar exchange rate, RTS Index and MICEX Index from May 2008 to January 2019 (May 2008 = 100 percent)

Source: own calculations using data from the Bank of Russia and Moscow Exchange.

As shown in *Fig. 6,* it took crude prices three years, or 36 months, to recover completely from the 1997–1998 crisis, given the price fall to 31.1 percent of the pre-crisis peak level seen in December 1996. As of January 2019, the Brent crude price remained at merely 44.4 percent of its highest level, USD 133.90 per barrel, that was recorded, in July 2008, or 126 months ago.

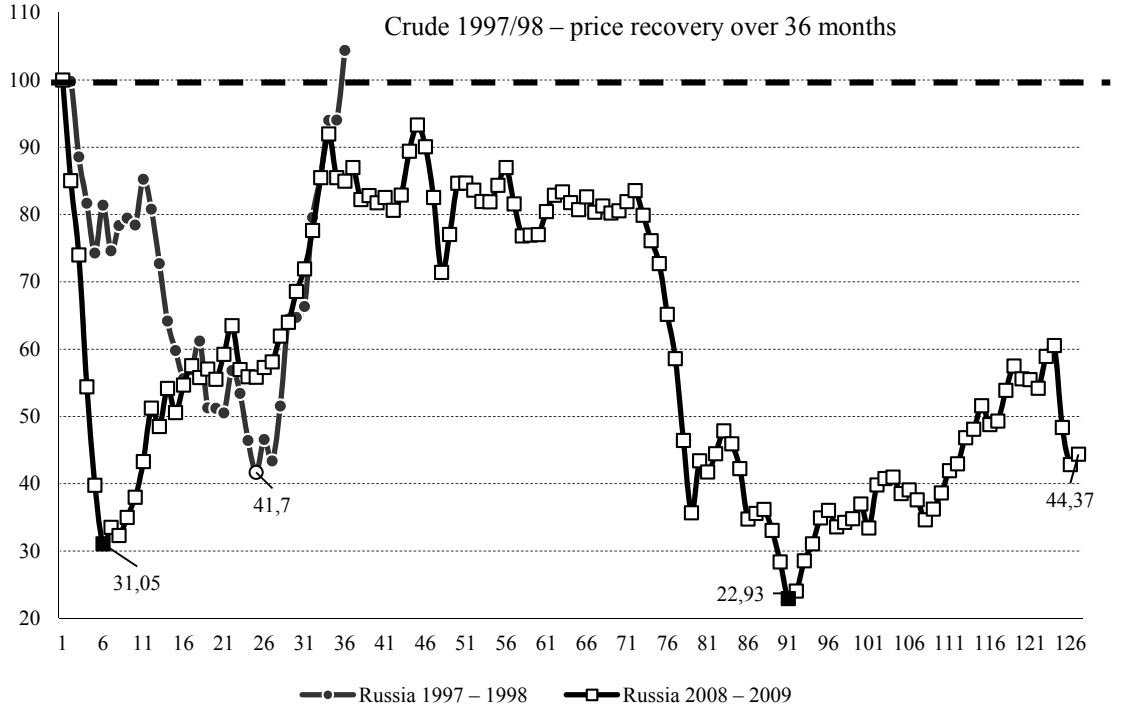

Fig. 6. Growth rates of Brent crude price after financial crises in Russia (price peak =100 percent) as of January 2019

Source: own calculations using data from IFS, IMF and International Energy Agency (IEA).

The recovery of BRICS countries' stock indices is shown in *Fig. 7* and in *Table 1*. BRICS countries MSCI indices denominated in U.S. dollars have been used as indicators for comparing results for various countries. Changes in the Russian stock market have been assessed using the dollar-denominated RTS Index, including a similar index that includes the dividend yield on the Russian stocks composing the index.

As of January 2019, there were two BRICS countries – Russia and Brazil – where dollar-denominated stock indices had not recovered from the 2008 crisis. Three BRICS nations saw their indices hit pre-crisis highs within 128 days since May 2008, but the RTS Index and the MSCI Brazil Index recovered to as low as 49.4% and 47.0%, respectively, with the former having faster recovery pace than the latter, reaching (in January 2019) a total return, including the dividend yield on stocks, that accounted for 74.8 percent of the value seen in May 2008. This is an indirect evidence that Russia and Brazil, both being reliant on fuel and energy export prices, are faced with structural issues to a much greater extent than the other BRICS nations.

It took the dollar-denominated MSCI India, South Africa and China indices 22, 28 and 82 months, respectively, to recover to their pre-crisis level since May 2008. These markets, however, did not exhibit stable growth after the recovery: in January 2019, the MSCI India, China and South Africa indices stood at merely 109.7, 107.8 and 98.6 percent, respectively, of what they were in May 2008.

Table 1

BRICS stock indices recovery after 2008 crisis, as of January 2019

Indices	Index recovery period since May 2008, months	Recovered	Index current value, % (May 2008 = 100%)
RTS	128	No	49.4
RTS – total returns	128	No	74.8
MSCI Brazil	128	No	47.0
MSCI South Africa	28	Yes	98.6
MSCI India	22	Yes	109.7
MSCI China	82	Yes	107.8

Source: own calculations using data from the Moscow Exchange and Bloomberg.

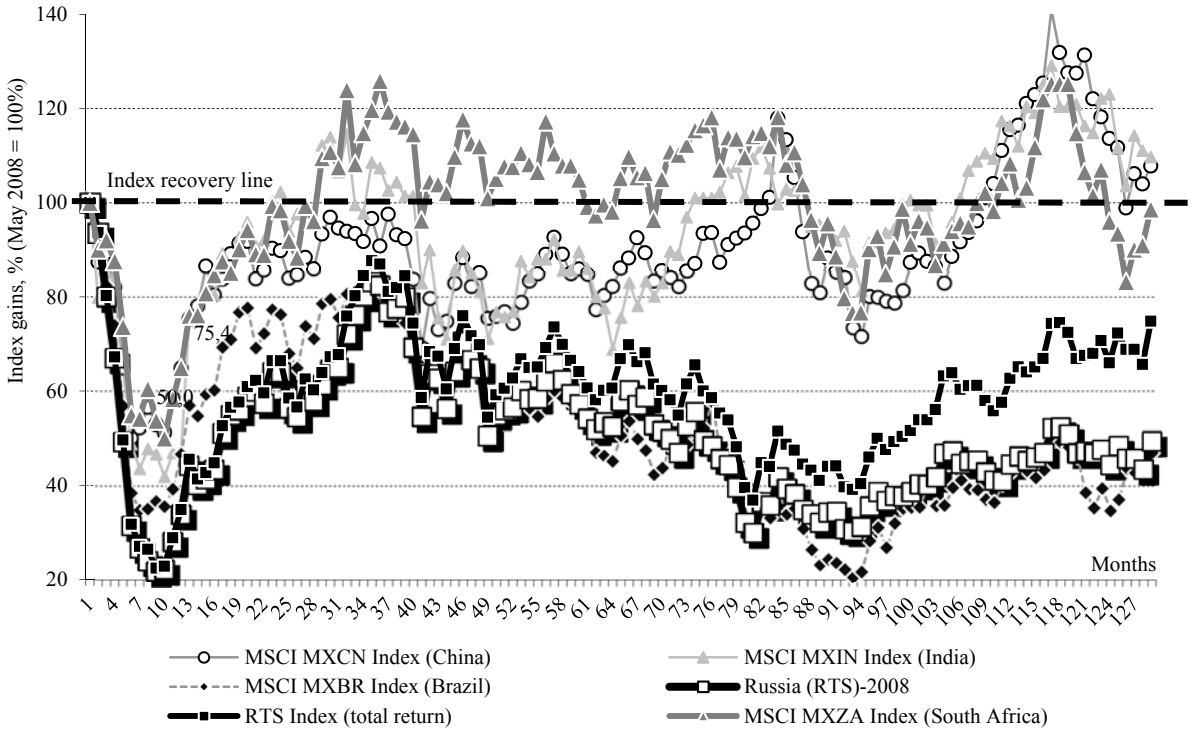

Fig. 7. Depth and duration of 2008 financial crisis effect on stock indices of BRICS countries, in U.S. dollars, as of January 2019 (peak in May 2008 = 100 percent)

Source: own calculations using data from the Moscow Exchange and Bloomberg.

The recovery of BRICS stock markets in the 2010s differs notably from the recovery from the 1997–1998 crisis (see *Fig. 8* and *Table 2*), when it took the RTS Index just 73 months to recover, outpacing the recovery of the MSCI South Africa, Brazil and China indices. For Russia, the 1998 crisis was a cyclic crisis, while the 2008 crisis was a structural crisis. Devaluation of the Russian ruble and the subsequent relatively swift recovery of crude prices had triggered a long-term rise in stock prices in dollar terms. For China, in contrast, the 1997 stock crisis reflected in many ways structural problems piled up in China's equity market. That is why it took the MSCI China index a longer

time to recover amid major reforms in China's financial sector, including opening up mainland China for foreign portfolio investors and enhancing the effectiveness of domestic financial intermediaries.

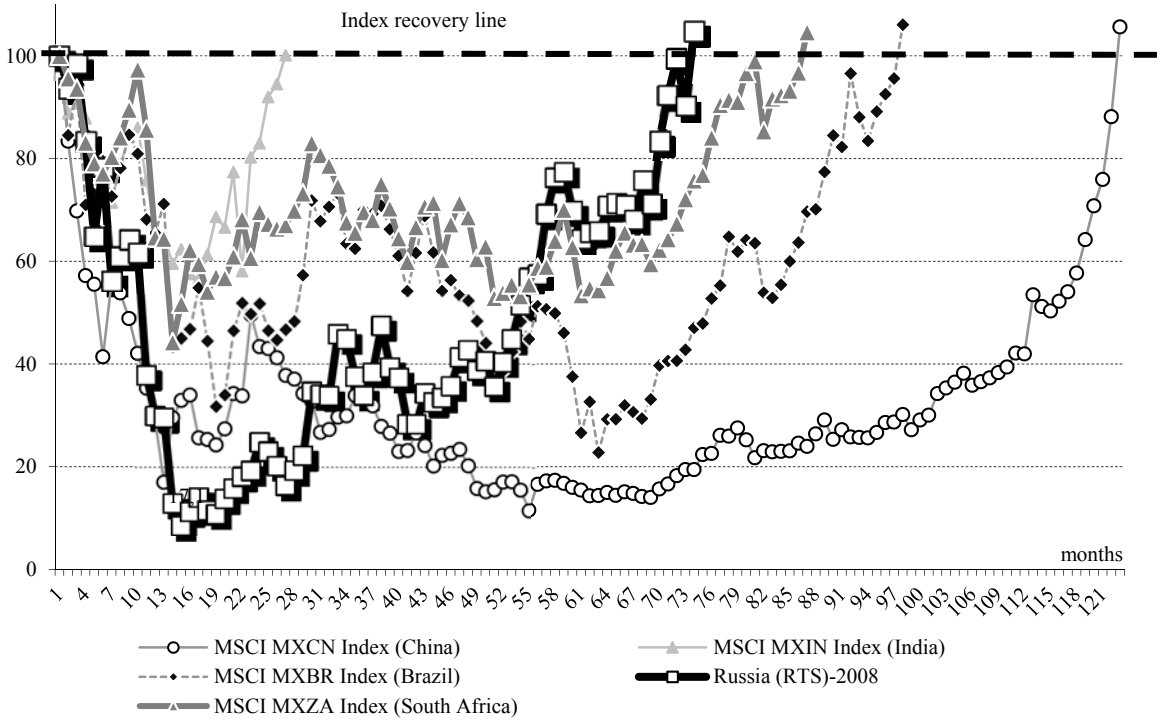

Fig. 8. Depth and duration of BRICS stock indices recovery, in U.S. dollars, after 1997–1998 crisis (pre-crisis peak level = 100 percent)

Source: own calculations using data from the Moscow Exchange and Bloomberg.

Table 2

BRICS stock indices recovery, in U.S. dollars, after 1997–1998 crisis

	RTS	MSCI Brazil	MSCI South Africa	MSCI India	MSCI China
Index recovery duration since 1997 pre-crisis peak level, months	73	97	86	26	122

Source: own calculations using data from the Moscow Exchange and Bloomberg.

The downturn in the U.S. equity market spurred by the Great Depression (1929–1933), as well as the collapse of Japan's stocks after 1989 are the longest living crises in the history of equity markets. It took the Dow Jones Industrial Average (DJIA) 303 months, or 25.3 years, to recover from the Great Depression (see *Fig. 9* and *Table 3*). Japan's NIKKEI-225 index topped in 2015 the DJIA's abysmal record. NIKKEI-225 stood unrecovered as of January 2019, for more than 29 years, or 349 months, which is now at merely 53.4 percent of its 1989 monthly peak. Crises that are followed by long periods of stock price recovery are unique and generally spurred by not only deep

structural economic problems but also problems coupled with blunders in economic and monetary policies.

Markets that were hit by mid-term financial crises triggered by structural economic disproportions, such as the 1989 downturn in South Korea and the 2000 downturn in the U.S. stock market of innovative companies, used to see their index recovery being guided by a W-shaped trajectory (see *Fig. 9*). The above crises lasted for 183 and 177 months, respectively. Both of the above stock indices are now higher than their highest pre-crisis levels.

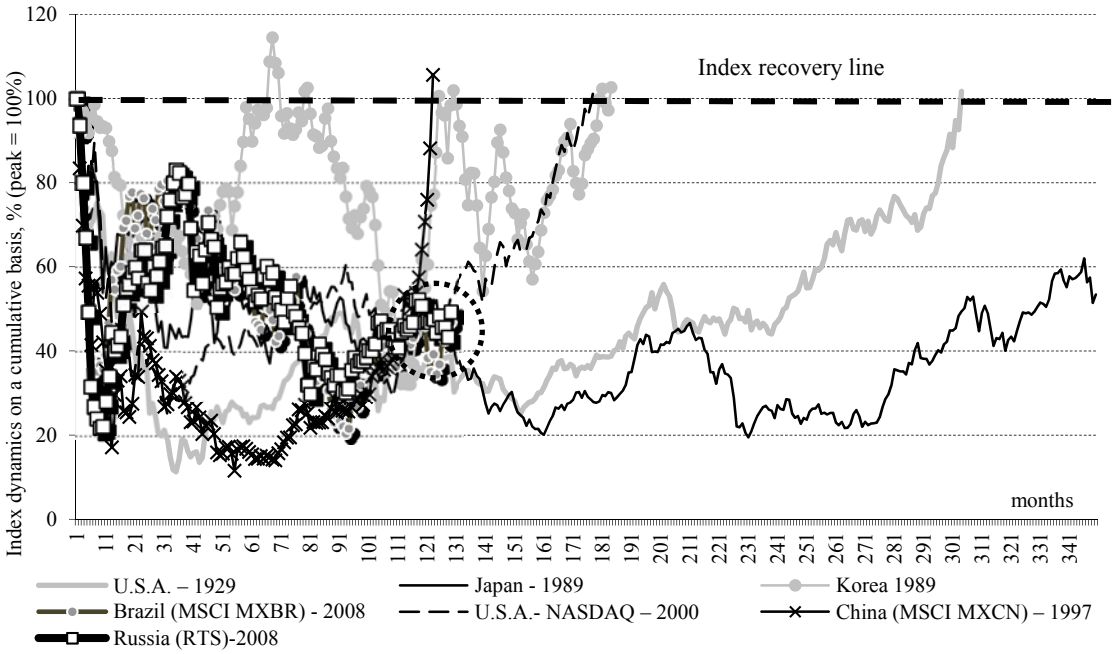

Fig. 9. Depth and duration of stock indices recovery during longest-lasting crises in 20th and 21st centuries, as of January 2019 (pre-crisis peak level = 100 percent)

Source: own calculations using data from the Moscow Exchange and Bloomberg.

Table 3

Longest lasting periods of stock indices recovery from crises in 20th and 21st centuries

Country (index – year of crisis onset)	Index recovery period since peak, months	Recovered	Unrecovered index current value, percent (peak = 100 percent)
Japan (Nikkei – 1989)	349	No	53.4
U.S.A. (DJIA – 1929)	303	Yes	
South Korea (KOSPI – 1989)	183	Yes	
U.S.A. (NASDAQ – 2000)	177	Yes	
Russia (RTS USD – 2008)	128	No	49.4
Brazil (MSCI USD – 2008)	128	No	47.0
China (MSCI-Shanghai (USD) – 1997)	122	Yes	
China (MSCI-Shanghai (USD) – 2008)	82	Yes	
U.S.A. (DJIA – 1907)	64	Yes	

Source: own calculations using data from the Moscow Exchange and Bloomberg.

Against a backdrop of the above crises, the still ongoing (128 months) recovery of Russia's RTS Index and Brazil's MSCI index to 49.4 and 47.0 percent, respectively, has not yet reached beyond time horizons that are typical of mid-term crises. As shown in *Fig. 8*, the ongoing recovery of the RTS and MSCI indices is guided by the trajectory of long-term rather than mid-term crisis, that is what's normally typical of equity markets in countries facing structural problems coupled with unaddressed challenges in economic and monetary policies.

The Russian stock market remains one of the most volatile markets in the word. As shown in *Fig. 10,*[1] Russia's RTS Index (35.4 percent) lagged only behind the indices of Argentina, Brazil, Turkey and Greece in terms of investment risk (as measured as the average standard deviation), out of 30 world's largest stock indices within 11 years from January 2008 to December 2018. The RTS Index, with -7.0 percent per annum of geometric average (effective) return on investment, outperformed only five countries over the same period, namely Greece, Spain, Italy, Turkey and Vietnam. Thus, the RTS Index exhibited the highest investment risk and lowest returns in the world, deteriorating substantially its investment appeal.

The Russian stock market's high volatility and low returns in 2008–2018 were due to not only the volatile ruble exchange rate, adverse external economic and geopolitical factors, but also poor key performance figures of largest publicly traded companies. In particular, this was reflected in the fact that securities issuers, financial intermediaries and investors in the domestic market paid not enough attention to companies' key performance indicators, focusing more on exogenous factors (the U.S. monetary policy salient features, energy and commodity prices, foreign investors' optimism, value of financial resources in the global market, etc.) to make investment decisions[2]. As of December 31, 2018, the ratio of price to net earnings per share (P/E ratio)[3] for the companies composing the RTS Index turned out to be the lowest (4.8) out of 29 stock indices of selected countries, as shown in *Fig. 11*. The P/E ratio in other major emerging market economies was 22.7 for India's Nifty 50 index; 20.4 for China's Shenzhen Stock Exchange Index; 19.5 for Brazil's IBOVESPA index and 14.8 for the Johannesburg Stock Exchange index in South Africa.

[1] Quantitative parameters of the indices are presented in *Tables 4* and *5*.

[2] For more details on the effect of exogenous factors on investment cash flows in emerging capital markets see, for example, Koepke, Robin. 2014. Fed Policy Expectations and Portfolio Flows to Emerging Markets. Working Paper, Institute of International Finance, Washington, DC; International Monetary Fund. 2017. Global Financial Stability Report: Is Growth at Risk? Washington, DC, October, pp.19–21.

[3] This financial ratio describes a relative size of companies' capitalization, that is, the period of years within which the size of net earnings per share offsets the market value of the share.

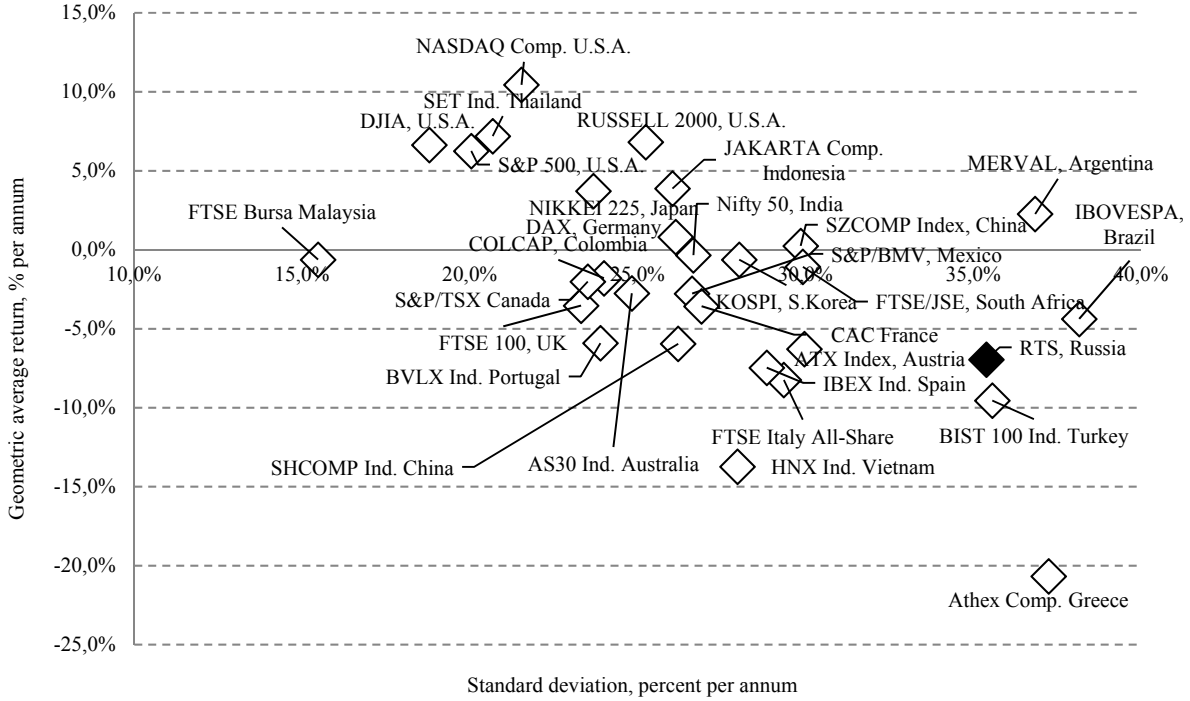

Fig. 10. Parameters for average annual returns and risk on 30 stock indices of selected countries, from January 2008 to December 2018, in U.S. dollars, percent per annum

Source: own calculations using data from the Moscow Exchange and Bloomberg.

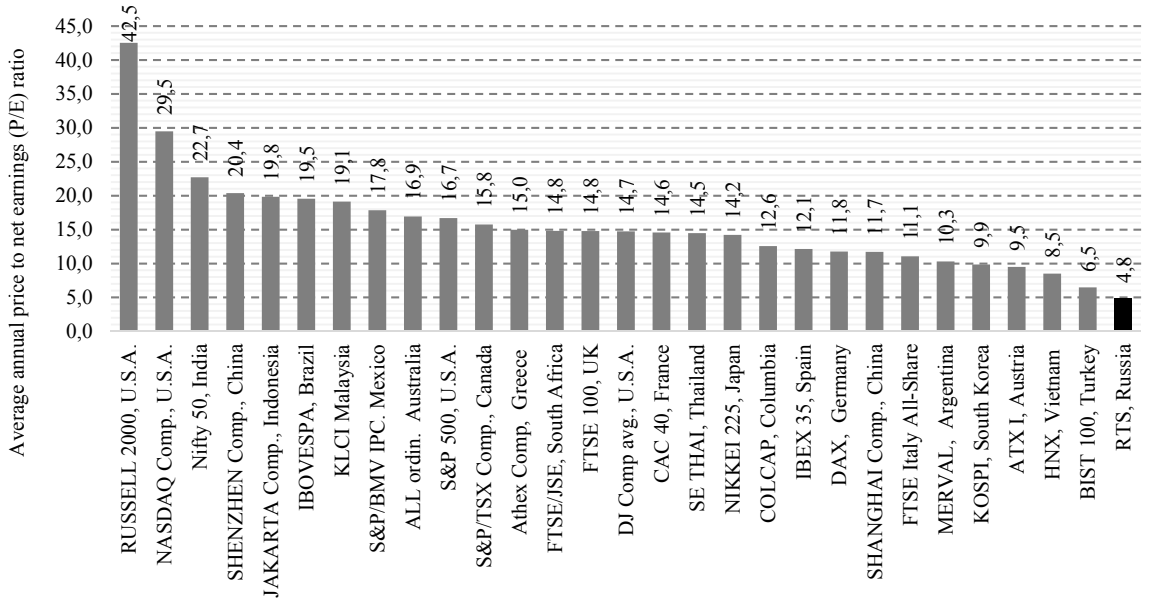

Fig. 11. Ratio of price to net earnings per share (P/E ratio) as of December 31, 2018 for 29 stock indices of selected countries, in U.S. dollars

Source: own calculations using data from the Moscow Exchange and Bloomberg.

Fig. 12 shows the P/E ratio for the RTS Index in 2008–2018 versus other largest emerging market economies. During the pre-crisis period the P/E ratio for the RTS Index posted consistently low values, suggesting that there is a pervasive problem of undervalued stocks of Russian companies regardless of whatever favorable external factors and geopolitical risks were seen in 2014–2018. The figure shows that the P/E ratio's linear trend line for the RTS Index is parallel to X axis, suggesting that the trend for the P/E ratio is constant.

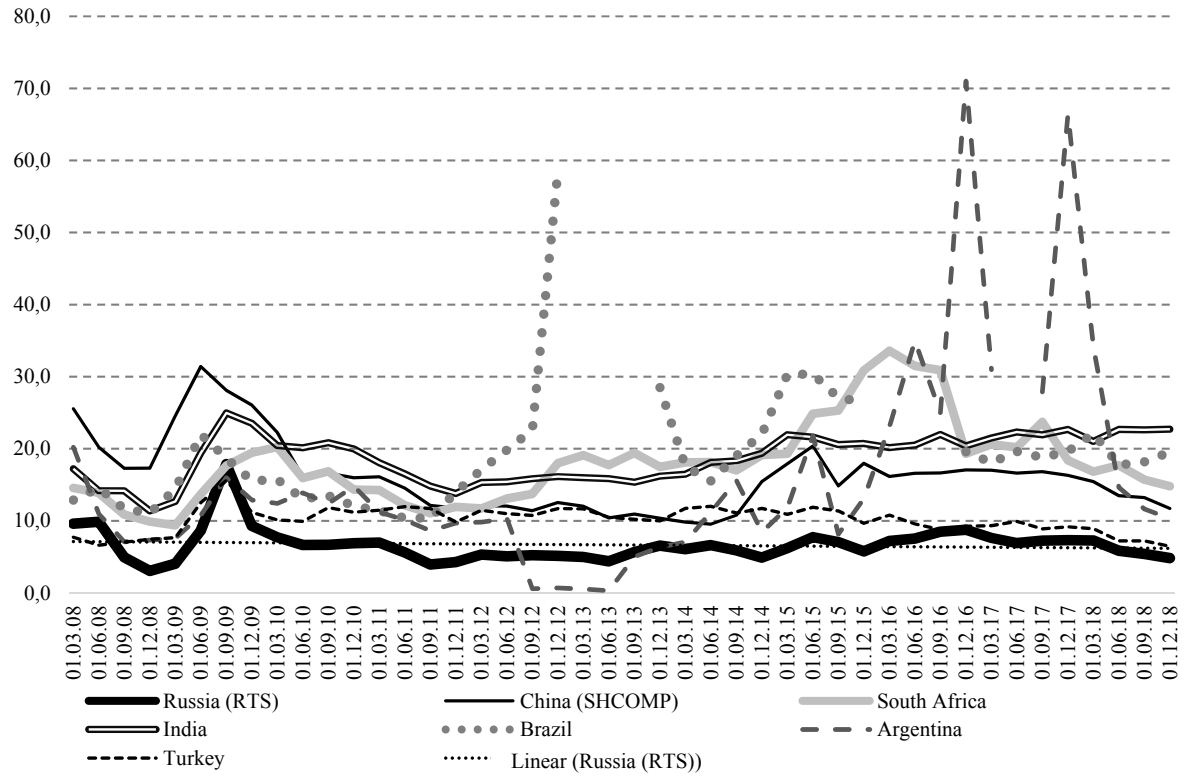

Fig. 12. Ratio of price to net earnings per share (P/E ratio) for stock indices of 7 largest emerging market economies, from March 1, 2008 to December 31, 2018, in U.S. dollars

Source: own calculations using data from the Moscow Exchange and Bloomberg.

As shown in *Fig. 13*, the ratio of price to book value per share (P/BV ratio)[1] of the companies composing the RTS Index turned out to be one of the lowest (0.8), surpassing only that of Greece's equity market, out of 29 stock indices of selected countries. The P/E ratio for other major emerging market economies was as follows: 2.9 for India's Nifty 50 index; 1.9 for China's Shenzhen Stock Exchange Index and Brazil's

[1] The P/BV ratio also represents a relative capitalization of companies. Expressed *as per share value*, it shows the ratio of company's market capitalization to the book value of its stockholders' equity, including the charter capital, reserves and retained earnings.

IBOVESPA index; 1.7 for the Johannesburg Stock Exchange index in South Africa. The low P/E ratio for the RTS Index reflects somehow sector-specific features of the companies composing the index, that is, the index is composed mostly of stocks of industries with high capital/labor ratio and, accordingly, low P/BV ratio.

Fig. 14 shows the P/BV ratio for the RTS Index in 2008–2018 versus other largest emerging market economies. The P/BV ratio was consistently low after the 2008 crisis, suggesting that there is a pervasive problem facing Russian stocks. In the figure, the P/BV ratio's linear trend line for the RTS Index reflects a downtrend for the ratio: the P/BV ratio for the RTS Index fell from 1.0 (as of December 31, 2010) to 0.8 (as of December 31, 2008).

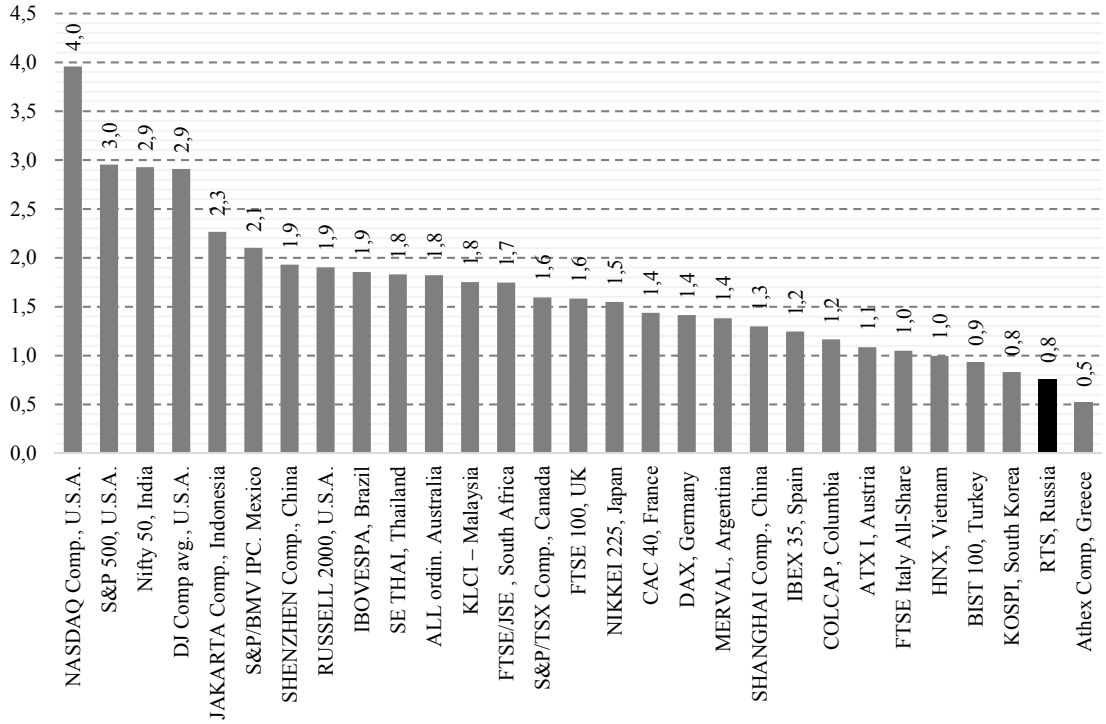

Fig. 13. Ratio of price to book value per share (P/BV ratio) for 29 stock indices of selected countries, as of December 31, 2018, in U.S. dollars

Source: own calculations using data from the Moscow Exchange and Bloomberg.

Russian issuers exhibited an overly conservative behavior in terms of applying raised money following the 2008 crisis, compared to their counterparts in other mature and emerging market economies. The conservative approach on the one hand reflected a positive trend towards maintaining companies' financial soundness in hard times in the light of financial markets volatility and geopolitical risks, and on the other hand was necessary amid restrictions imposed by anti-Russia sanctions targeting fundraising by Russian largest companies in global markets and a high key interest rate in the domestic

market. A complex investment climate remained a factor that dampened demand for money, making it difficult for businesses to take long-term investment decisions.

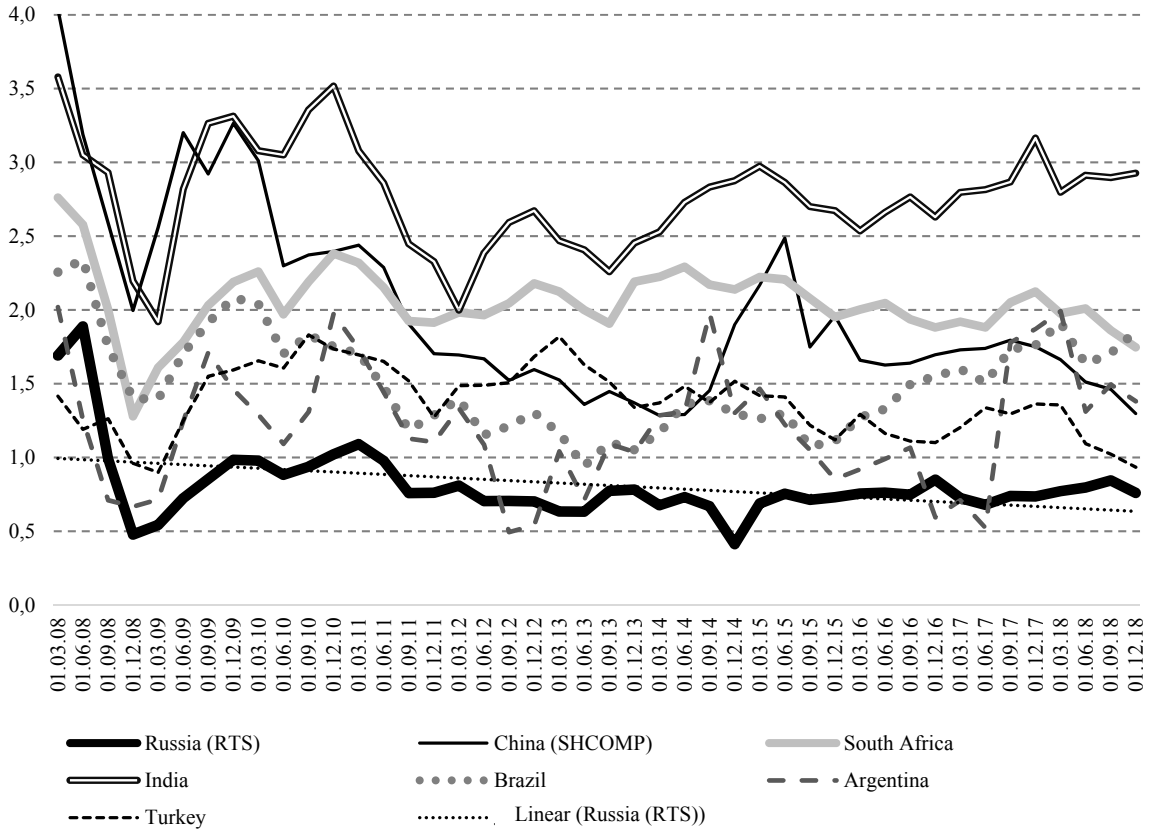

Fig. 14. Ratio of price to book value per share (P/BV ratio) for stock indices of 7 largest emerging market economies, from March 1, 2008 to December 31, 2018, in U.S. dollars

Source: own calculations using data from the Moscow Exchange and Bloomberg.

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As shown in *Fig. 15,* the 2018-year-end ratio of net debt to earnings before interest, taxes, depreciation and amortization (D/EBITDA ratio)[1] for companies composing the RTS Index turned out to be (0.9) higher than that of Argentina, the U.K., South Africa and Japan out of 29 stock indices of selected countries. The D/EBITDA ratio for the other four major emerging market economies was 2.7 for India's Nifty 50 index; 2.6 for China's Shenzhen Stock Exchange Index; 2.4 for Brazil's IBOVESPA index and 0.3 for the Johannesburg Stock Exchange index in South Africa.

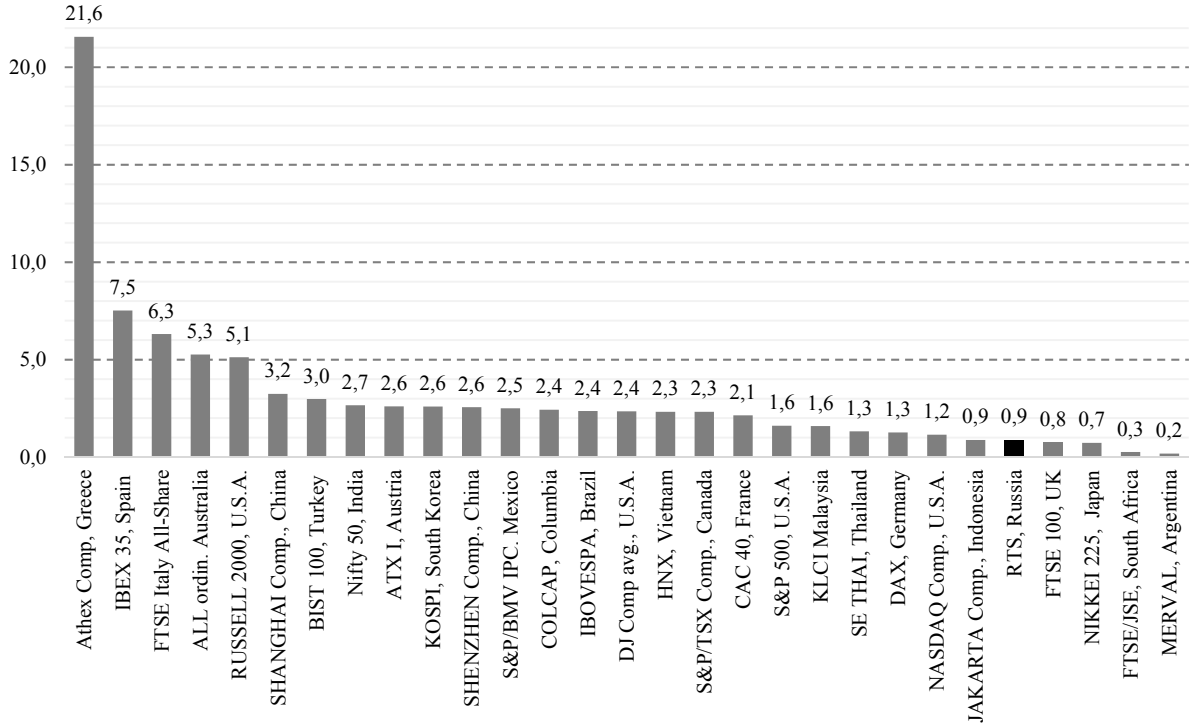


Fig. 15. Ratio of net debt to operational earnings (D/EBITDA ratio) on 29 stock indices of selected countries as of December 31, 2018, in U.S. dollars.

Source: own calculations using data from the Moscow Exchange and Bloomberg.

Fig. 16 shows the dynamics of D/EBITDA ratio for the RTS Index in 2008–2018. The ratio for Russia stood at an average of 0.72 for the period under review, rarely reaching beyond 1.0, lagging consistently behind most of other nations. The ratio's trend line was nearly parallel to X axis.

[1] The D/EBITDA ratio represents the ratio of companies' debt burden to their operating earnings before interest, taxes, depreciation and amortization, thus reflecting companies' ability to cover their debt by the amount of income generated and available annually.

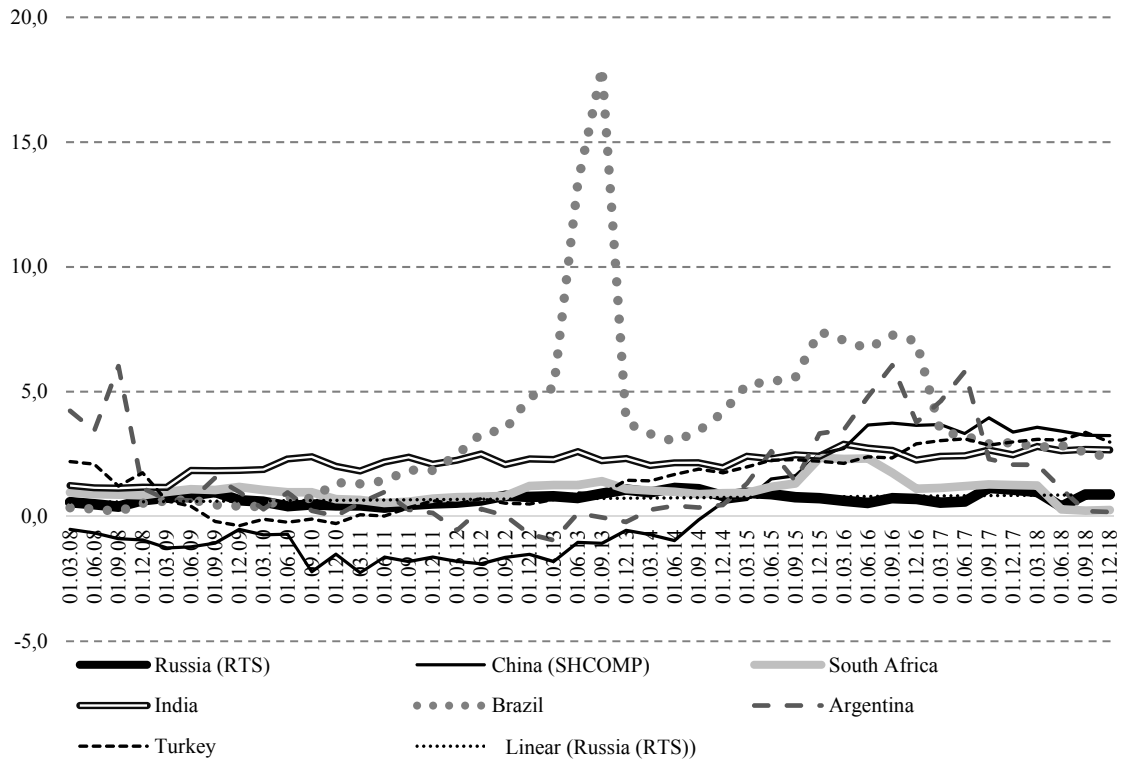


Fig. 16. Ratio of net debt to operational earnings (D/EBITDA ratio) for stock indices of 7 largest emerging market economies, from March 1, 2008 to December 31, 2018, in U.S. dollars

Source: own calculations using data from the Moscow Exchange and Bloomberg.

Substantial rise in the dividend yield on Russian stocks marked a positive trend in the domestic equity market after the 2008 crisis. This reflected, on the one hand, that publicly traded companies strove to maintain capitalization amid lower than prior to the 2008 crisis oil prices, stagnant economic growth and foreign investment drain led by anti-Russia sanctions and, on the other hand, they had substantial spare money that for some reasons was not used for financing investment projects. The increase in the dividend yield of largest companies wholly or partially owned by the government was in no small part due to the Finance Ministry's policy including a target level of dividend payouts equal to not less than 50 percent of their net earnings.

In 2008, as shown in *Fig. 17*, the dividend yield on the RTS Index portfolio represented 6.0 percent of the stock value, surpassing considerably the dividend yield of the other 28 markets of both developed and developing countries.

From January 2010 to December 2018, the dividend yield on the RTS Index increased from 1.6 percent to 6.0 percent (see *Fig. 18*). In terms of growth pace, the dividend yield on the RTS Index was the most dynamic in the world for the period under review.

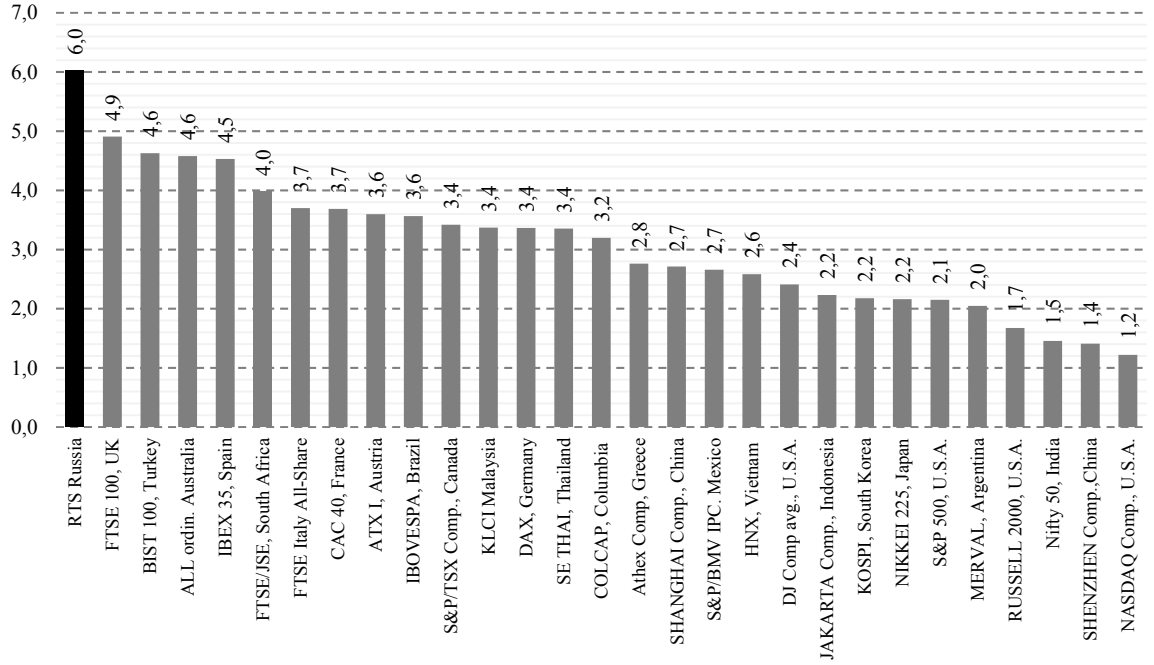


Fig. 17. Dividend yield on 29 stock indices of selected countries as of December 31, 2018, in U.S. dollars

Source: own calculations using data from the Moscow Exchange and Bloomberg.

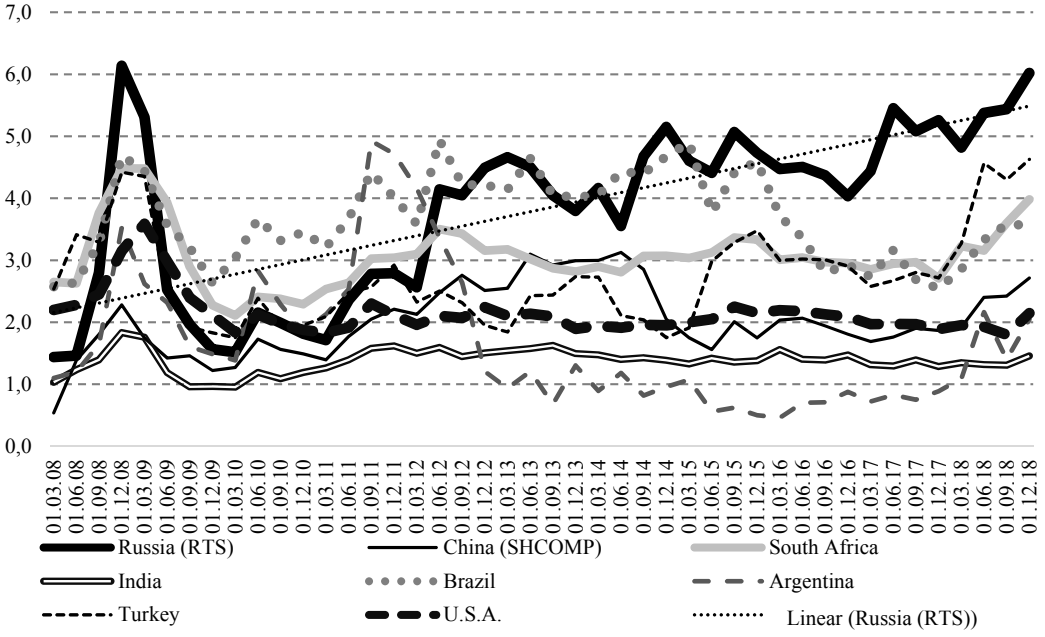


Fig. 18. Dividend yield on stock indices of 7 largest emerging market economies and U.S. stock indices, from March 1, 2008 to December 31, 2018, percent per annum

Source: own calculations using data from the Moscow Exchange and Bloomberg.

Table 4

Return and risk parameters on stocks in largest emerging market economies in 2008–2018, percent

Index, country		RTS, Russia	SHENZHEN SE Comp., China	SHANGHAI SE Comp., China	Nifty 50, India	IBOVESPA, Brazil	JAKARTA Comp., Indonesia	BIST 100, Turkey	MERVAL, Argentina	SE THAI, Thailand	S&P/BMV IPC. Mexico	COLCAP, Columbia	FTSE Bursa Malaysia KLCI	HNX, Vietnam	FTSE/JSE ALL SHR., South Africa
2008–2018	Risk	35.4	29.9	26.2	26.7	38.2	26.0	35.6	36.8	20.7	26.6	24.0	15.5	28.0	29.9
	Return	-7.0	0.2	-6.0	-0.3	-4.4	3.9	-9.6	2.3	7.2	-2.8	-1.9	-0.6	-13.7	-1.1
2013–2018	Risk	28.3	27.4	23.5	18.4	32.6	19.3	31.8	39.2	15.8	21.0	21.1	13.6	17.7	22.9
	Return	-2.8	3.7	0.7	3.4	-2.6	-0.5	-8.8	3.9	1.2	-4.9	-8.2	-2.9	5.3	-2.0

Note. Returns and standard deviations have been calculated using daily index data in dollar terms for the periods under review.
Source: own calculations using data from the Moscow Exchange and Bloomberg.

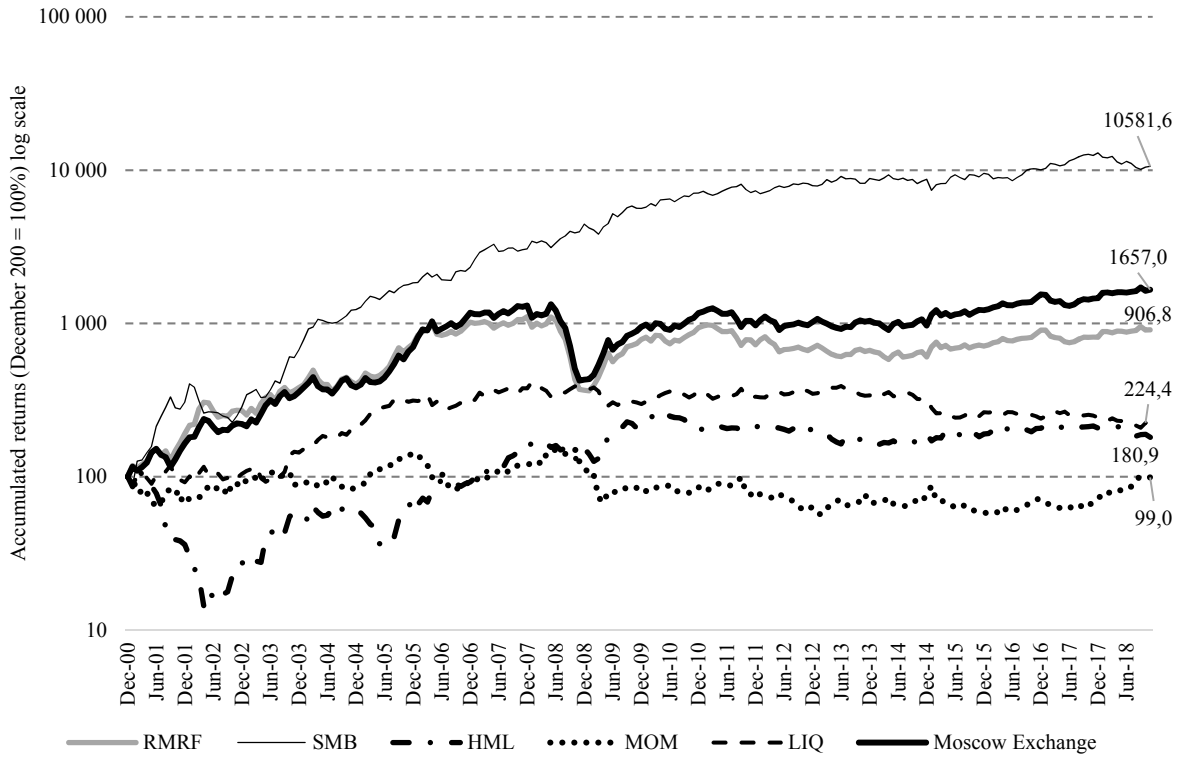
Table 5

Return and risk parameters of stock indices in mature equity markets in 2008–2018, percent

Index, country		RTS, Russia	S&P 500, U.S.A.	NASDAQ Comp., U.S.A.	DJ Comp avg., U.S.A.	RUSSELL 2000, U.S.A.	NIKKEI 225, Japan	DAX, Germany	FTSE 100, the U.K.	S&P/TSX Comp., Canada	FTSE Italy All-Share	PSI All-Share, Portugal	Athex Comp, Greece	CAC 40, France	ALL ORDIN. Australia	ATX I, Austria	KOSPI, South Korea	IBEX 35, Spain
2008–2018	Risk	35.4	20.0	21.5	18.8	25.2	23.7	26.1	23.3	23.5	29.4	23.9	37.2	26.9	24.8	30.0	28.0	28.8
	Return	-7.0	6.3	10.4	6.6	6.8	3.7	0.8	-3.5	-2.0	-8.2	-5.9	-20.7	-3.6	-2.8	-6.3	-0.6	-7.5
2013–2018	Risk	28.3	12.6	15.0	12.1	15.9	19.5	17.6	15.5	14.4	21.7	18.0	32.7	17.2	16.5	18.3	16.2	19.6
	Return	-2.8	6.6	9.0	6.5	5.7	4.9	2.5	-0.7	-0.9	0.6	0.6	-4.6	1.7	-1.3	0.9	0.2	-0.5

Note. Returns and standard deviations have been calculated using daily data in dollar terms for the periods under review
Source: own calculations using data from the Moscow Exchange and Bloomberg.

Stock index dynamics often depends on movements of stock prices of various groups of publicly traded companies that are characterized by a given concept of growth governed by companies' specific key business characteristics. For example, small and medium-sized enterprises (SME) that go public for the first time, undervalued large companies, joint-stock companies with higher liquid stocks can generate a higher than the average rate of return in the market. Key features of returns on the stocks of companies with differing key characteristics are used by major institutional investors in the process of factor investing.



Note. RMRF (the market factor) is a stock's market risk premium calculated as the difference between market-portfolio returns and the risk-free asset returns. The returns on a portfolio of the stocks available in the market, where stocks are weighted by the stock issuers' market cap (with a 15 percent of maximum weight limit), is used as the market portfolio. SMB (the size factor) is calculated as the difference between the average weighted returns on the portfolio of small-cap stocks and the average weighted returns of large-cap stocks. Companies are broken down, on a quarterly basis, into "small" and "big" companies, with a market capitalization threshold equal to the median. HML (the value factor) is calculated as the difference between average weighted returns on portfolios of value stocks and growth stocks. The stocks are broken down, on a quarterly basis, into growth stocks and value stocks by the Book-to-Market ratio. MOM (the momentum factor) is calculated as the difference between the returns on portfolios with high and low accumulated returns over previous 11 months. The stocks are distributed at monthly intervals among portfolios of stocks with low and high returns using thresholds of 30 and 70 percent of the quantile, respectively. LIQ (the liquidity factor) is calculated as the difference between the average weighted returns on portfolios of low-liquidity stocks and high-liquidity stocks.

Fig. 19. Accumulated returns on factor-based strategies of investing in Russian companies' stocks, from December 2000 to November 2018

Source: own calculations using data from CAPM-ru Constructor, RANEPA Institute of Applied Economic Studies (IAES) https://ipei.ranepa.ru/capm-ru

We have calculated accumulated returns on factor-based strategies of investing in stocks of various groups of Russian publicly traded companies in the period between December 2000 and November 2018, as shown in *Fig. 19*. Only small-cap stocks showed higher than the MOEX Russia Index returns amongst most commonly employed strategies of investing in factors, such as value, size, liquidity and momentum,

in the global equity market. During the time horizon under review the value of investing RUB 100,000 in December 2000 would be RUB 1.66 million for the MOEX index portfolio and RUB 10.59 million for portfolios of factor of companies' size. All the other factor-based strategies, including investment in the broad RMRF stock index, portfolios including the effect of value, liquidity and momentum, offered much lower than the MOEX Russia Index returns.

The above data suggest that the Russian stock market shows prerequisites that are favorable in terms of returns for investing in SMEs in the stock market. However, other factor-based investing strategies are still not working well due to problems of disclosing information about undervalued large companies, slim investment demand for their stocks, liquidity problems facing the exchange-traded stock market and other factors that dampen domestic and foreign investment in Russia's equity market.

The problem of high risks facing moderate investments returns resided not only with investment in stocks, but also with the bonds issued by Russian largest companies. In the 2008–2018 period, as shown in *Fig. 20* and in *Table 6*, the return and risk parameters in dollar terms were much worse for ruble-denominated corporate bonds in Russia than for the other 13 corporate bond indices of selected countries. During that period of time, the average returns on the IFX-Cbonds (IFX-Cbonds Russian Corporate Bond Index) portfolio stood at 0.09 percent per annum with a standard deviation (risk indicator) of 16.42 percent, thus showing the lowest return parameters and the highest risk parameters among the 13 corporate bonds indices. The returns on similar corporate bonds indices in India, China (CVFBTRID Index) and South Korea stood at 8.68, 7.40 and 3.13 percent per annum, respectively, and the risk parameters were 4.89, 3.46 and 8.71 percent per annum, respectively. Furthermore, within a shorter time interval – between 2013 and 2018 – the IFX-Cbonds index lagged behind all the above corporate bonds indices in terms of return-risk parameters (see *Table 6*).

Low returns coupled with high risks of investing in the IFX-Cbonds portfolio dampen long-term foreign and domestic investment in the bonds. Only short-term investments using speculative strategies, such as the carry trade, offer acceptable returns to foreign investors.

Another problem facing the domestic equity market is a stagnant low liquidity in the stock and bond exchange-traded market segment[1] (see *Fig. 21*). Respective transactions are significant because they underlie the calculation of the market value of Russian stocks and bonds and key stock indices. Overall volume of such transactions dropped from 44.8 percent of GDP in 2007 to 14.3 percent of GDP in 2018 as a result of the 2008 crisis and the subsequent drain of foreign (portfolio) investment since 2012. The factors that triggered the investment drain are examined in Section 3.6.3.

[1] Auction transactions and trading by negotiated mode (NTM) at the Moscow Exchange.

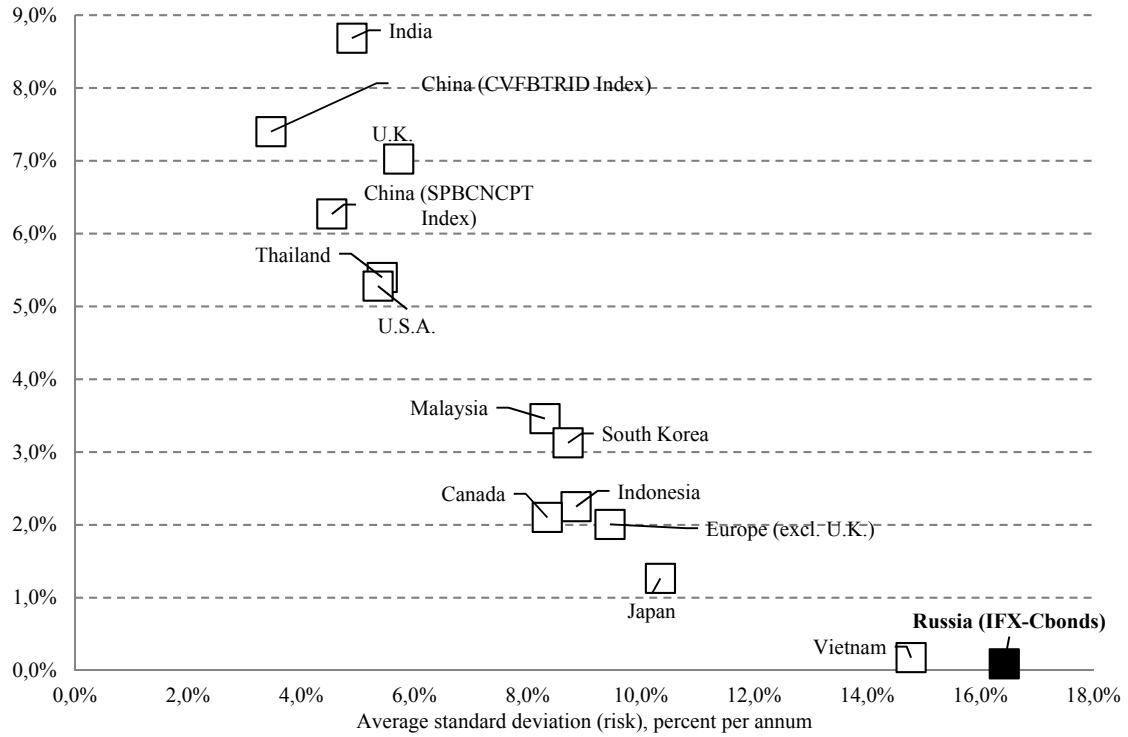


Fig. 20. Average annual returns and risk parameters on 14 corporate bonds indices of selected countries, 2008–2018, in U.S. dollars, percent per annum

Source: own calculations using data from CBonds.ru and Bloomberg.

Table 6

Return and risk parameters on 14 corporate bond indices of selected countries in 2008–2018, in U.S. dollars, percent per annum

Index, Country		IFX-Cbonds, Russia	ChinaBond Corporate Bond Total, China	SPBCNCPT Index, China	Clearing Corp of India Broad T, India	IBPA INDOBeX Corporate Total R, Indonesia	SPBTHCPT, Thailand	SPBMYCPT, Malaysia	Vietnam Bond Index - Composite, Vietnam	LUACTRUU Index, U.S.A.	SPBJPCPT, Japan	Morningstar UK Eurobond Corpor, the U.K.	Global Agg, Canada	KOBI Credit Bond Index Total R, South Korea	Pan-European Aggregate, Europe (ex1.UK)
2008-2018	Risk	16.4	3.5	4.5	4.9	8.9	5.4	8.3	14.8	5.4	10.3	5.7	8.3	8.7	9.5
	Return	0.1	7.4	6.3	8.7	2.2	5.4	3.5	0.2	5.3	1.3	7.0	2.1	3.1	2.0
2013-2018	Risk	19.5	3.7	4.5	4.5	8.9	5.2	8.6	5.0	4.2	9.3	5.5	6.7	8.7	7.9
	Return	-2.6	2.5	1.8	4.9	2.2	1.7	-0.4	-0.2	1.4	-2.0	2.7	-0.9	1.4	0.1

Note. Returns and standard deviations have been calculated using daily data for the periods under review.

Source: own calculations using data from the Moscow Exchange and Bloomberg.

The drain was not offset in a timely manner through accelerated development of domestic institutional investors. In 2018, however, there was a marginal rise in liquidity that was seen mostly in the equity market and driven by heightened interest of domestic

private investors in exchange-traded transactions involving stocks amid moderate rates on bank deposits.

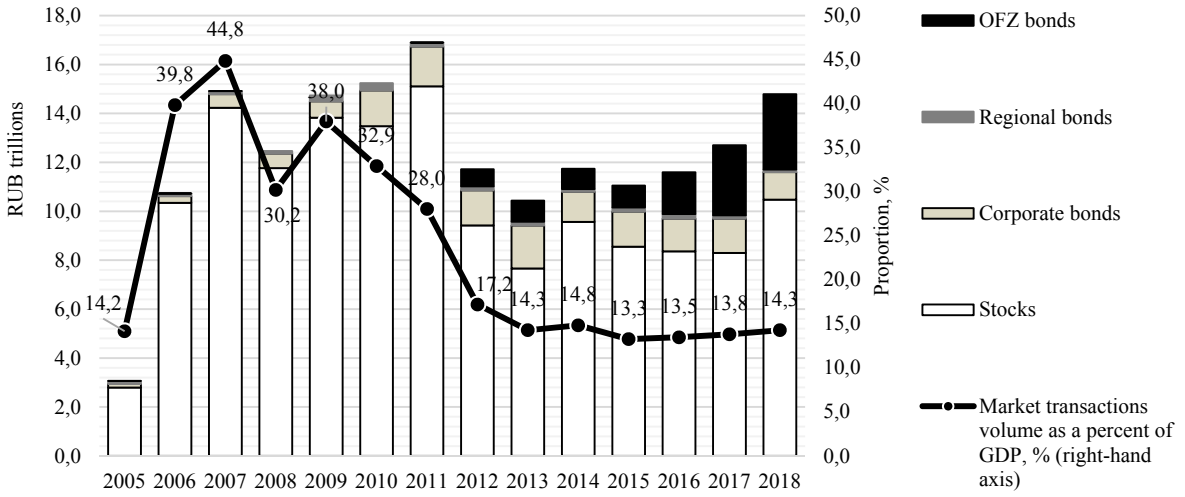


Fig. 21. Trading volumes of exchange-traded and negotiated transactions involving securities on Moscow Exchange, 2005–2018

Source: own calculations using data from the Moscow Exchange.

In terms of volumes of exchange-traded transactions involving stocks, the Moscow Exchange in 2018 ranked only 27th out of 81 world's stock exchanges, according to data from the World Federation of Exchanges (WFE). In terms of volumes of exchange-traded transactions involving bonds, the Moscow Exchange in 2018 ranked 9th out of 54 world's stock exchanges. In addition, what needs to be considered is that bond markets of the majority of developed countries are historically, for the most part, OTC markets.

Russia's financial market is characterized by the money market's dominance over the equity market. The equity market represents merely 4 percent, whereas the money market makes up 47 percent of the overall trading volume on the Moscow Exchange. The money market operates basically through repo transactions whereby banks, other organizations and private persons raise funds (mostly short-term funds) on a daily basis that are used for speculative transactions in the financial market[1]. Furthermore, banks use repo transactions as a source of short-term funding for a wide range of bank operations, including purchase of bonds and lending operations. There is no other

[1] In October 2018, according to data from the Bank of Russia, overnight and "one week or less" fundraising through exchange-traded ruble and foreign-currency repo transactions accounted for nearly 60% of the overall transactions, while other transactions had maturities of up three months (Bank of Russia. Financial Stability Review Q2–Q3 2018, No. 2(13), p. 24). In our view, the average maturity in the repo market can be defined by dividing the number of calendar days a year by the number of days calculated by dividing the annual volume of repo transactions by the average annual value of all open positions in the market: dividing 365 days by the fraction of RUB 309 trillion / RUB 2.2 trillion. The result is 2.6 days.

trading venue in the world, except in Russia, where repo transactions are executed on a such large scale and through a such high-tech trading process. Repos are attractive for many participants in that they allow for investing spare financial resources *collateralized* by other assets as an alternative to short-term deposits at a higher interest rate because there is no requirement for provisioning commitments.

The data presented in *Fig. 22* reflect the evolution of Russia's repo market as a key driver of growth in the equity market through short-term funding of exchange-traded transactions involving stocks and bonds. As shown in the figure, the repo market's intermittent growth is attributed to the fact that every few years the market experienced substantial changes in sources of cash liquidity that is used for short-term lending.

Until the 2008 crisis, amid a stable ruble exchange rate, liquidity was generated in the money market through carry trade strategies[1] from external sources of fundraising, which nearly led to a full-on banking crisis in the Russian market and bankruptcy of largest investment companies in the fall of 2008. From September 2008 to August 2011 – at the peak of the crisis and during a subsequent market recovery – the monetary authorities maintained the adequate level of the banking system liquidity through target sources of centrally-controlled funds, employing high rate of refinancing in order to restrict the use of such funds for crediting. The fact that Russian businesses were shut out of refinancing in global markets since the onset of the 2011 Eurozone debt and exchange crisis and foreign (portfolio) investment drain from Russia forced Russia's monetary authorities to change refinancing of the banking system by switching to refinancing through direct repo transactions and the Bank of Russia. From 2016 till now, financial market liquidity is maintained basically through accumulation of assets provided by the federal budget and the Reserve Fund on accounts of state-funded entities and bank accounts. Another source of generating excessive cash liquidity for businesses and banks was liquidity formation amid a relatively comfortable economic/business environment of 2017–2018, when the crude price was on the rise as companies' ruble-denominated costs were on the slide due to ruble depreciation and less investments in foreign assets because of sanctions and specific features of the business cycle of fuel and energy companies, metallurgical sector and some other Russian industries. The upturn in the repo market was also encouraged by technological developments which helped Russian largest companies with direct access to the MOEX equity market.

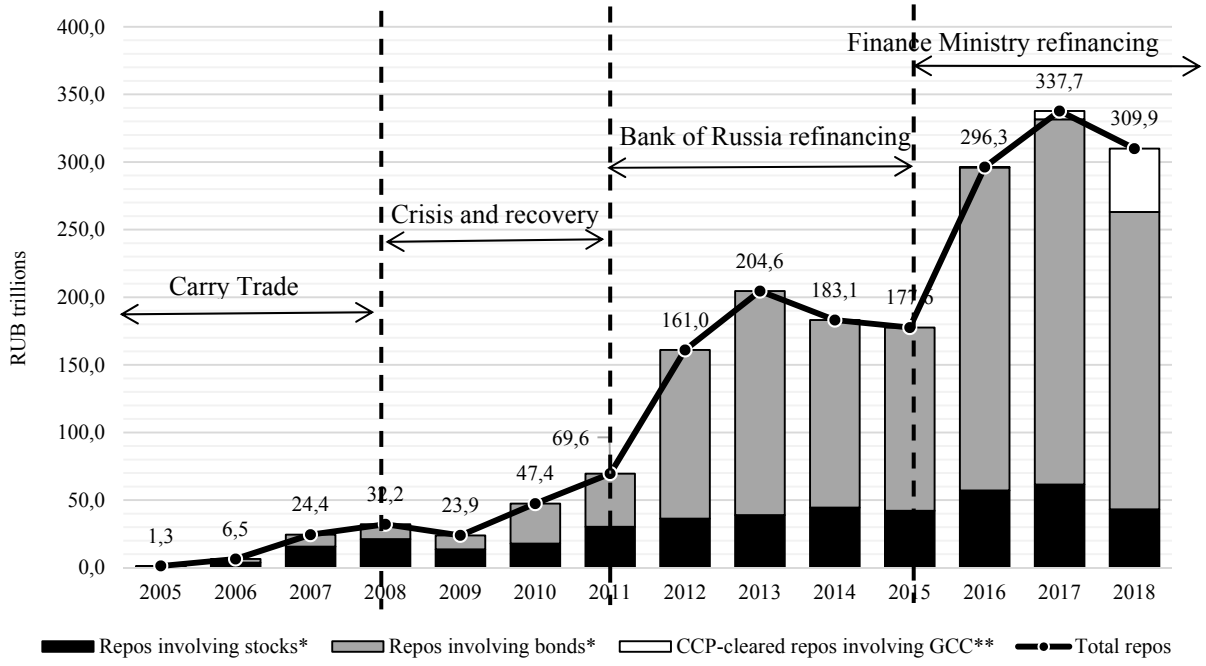
The above processes led to a 260.0-fold increase in the overall volume of repo transactions on the Moscow Exchange, from RUB 1.3 trillion in 2005 to RUB 337.7 trillion in 2017. Later, however, the money market volume dropped 8.2 percent to RUB 309.9 trillion in 2018. The today's repo market contraction is likely driven by

[1] The Bank of Russia defines carry trade as a strategy of borrowing at low interest rates and then investing the borrowed money in financial assets that offer higher returns. Foreign-exchange and equity market participants employ the strategy to make money from the positive difference between interest rates on borrowing and on investing in various currencies or with various maturities (Financial Review: Monetary Policy Terms. Information and Analsysis Materials of the Bank of Russia. No. 4, Q4 2016, pp. 36–37).

banks' slim demand for short-term fundraising because of the bailout of a few ailing big banks in H2 2017 and improved cash liquidity in the banking system as a whole. In November 2017, the Bank of Russia discontinued foreign-currency repo transactions with 28-day and 1-year maturities. The marginal decline in the number of exchange-traded repo transactions involving stocks can be attributed to the fact that brokers moved some of the foregoing transactions to the OTC market in order to reduce their costs.

An important trend in the MOEX repo market in 2017–2018 was an increase in the market segment involving transactions with settlements using a general collateral certificate (GCC). The GCC introduction coupled with granting largest nonfinancial companies with excessive cash liquidity direct access to this market segment turned this instrument into a source of cheaper short-term resources for financial companies in the market, replacing more expensive mechanisms, including repo transactions involving stocks, that can tackle this problem.

Thus, the problem of undervalued Russian companies' stocks and bonds and slow recovery of the equity market in the post-crisis decade was in large part due to the problems accumulated in the Russian economy, an unstable financial system and insufficient level of development of domestic institutional investors.



* Includes repos: direct repos with the Bank of Russia, inter-dealer repos and CCP (National Clearing Center) cleared repos (excluding repos involving GCC in the equity market);
** Transactions involving stocks, bonds and securities baskets.

Fig. 22. Volumes of repo transactions involving stocks, ruble-denominated bonds and general collateral certificate (GCC) on Moscow Exchange, 2005–2018

Source: own calculations using data from the Moscow Exchange.

3.2. Stock market

No visible positive changes in the number of listed companies and in attracting new issuers to the exchange were seen in 2018. In terms of the number of listed companies, the Moscow Exchange moved up to 40th place in 2018 from 39th place in 2017 out of 78 world's stock exchanges, according to WFE's statistics. Since 2018, the Moscow Exchange no longer participates in WFE's annual rankings in terms of the number of new IPOs and completed IPOs/SPOs. In 2017, the Moscow Exchange ranked only 39th out of 62 stock exchanges in terms of the number of new companies. Not a single IPO/SPO took place on the Moscow Exchange in 2018.

The number of listed companies on the Moscow Exchange in 2012 hit its highest (293) after the merger of the RTS stock exchange with the MICEX stock exchange. The 2013–2018 period saw a firm trend towards decrease in the number of listed companies (see *Fig. 23*). In 2018, there were 229 companies listed on the Moscow Exchange, a further decrease of 2.1 percent from a year earlier.

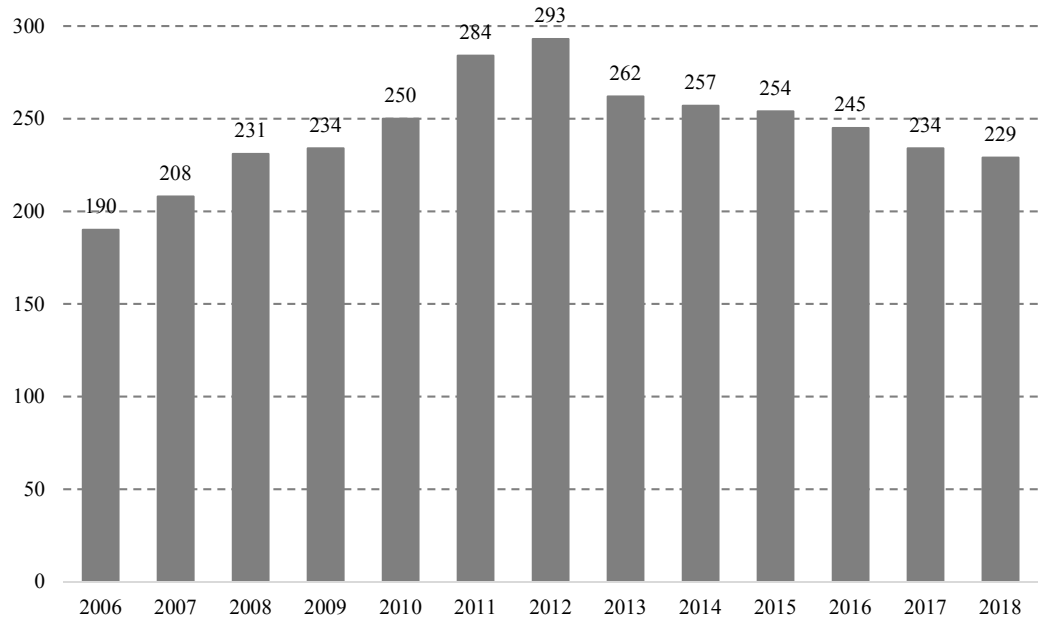


Fig. 23. Number of MOEX-listed companies in 2006–2018[1]

Source: own calculations using data from NAUFOR's compendium "Russian Equity market in 2015. Events and Facts, p. 8 for 2006–2008" and data for 2009–2017 from the World Federation of Exchanges.

Amendments to the Civil Code of the Russian Federation that came into force on September 1, 2014 and amendments to the Federal Act of "On Joint-Stock Companies"

[1] The data for 2006–2011 are presented according to data from the MICEX listing, the data for 2012–2018 are presented according to the listing of PAO Moscow Exchange.

of February 26, 1995, introducing a new article (Article 7.1)[1], whereby companies seeking the publicly traded company status must enter into a listing agreement with the stock exchange before they submit official new legal status documents to the single state register of legal entities, failed to resolve the problem of decreasing number of national stock issuers eligible for listing on the stock exchange.

In July 2017, a Growth Sector was established on the Moscow Exchange with the assistance of MSP Corporation (a federal state corporation for SME promotion), the Industrial Development Fund (IDF), the Russian Direct Investment Fund (RDIF), the Russian Export Center (REC), the Ministry of Economic Development, the Ministry of Industry and Trade and the Bank of Russia. The Growth Sector is intended to encourage SMEs to raise capital via the Stock Exchange. However, the establishment of the Growth Sector was not enough to reverse negative trends in the listing.

The limited number of companies listed on the Moscow Exchange was indication of high level of their concentration in the overall capitalization of issuers (see *Fig. 24* and *Table 7*). In 2018, 10 biggest PAOs accounted for 66.8 percent, while top-20 companies represented 80.6 percent of the overall capitalization. The above figures increased considerably – 60.2 percent and 76.0 percent, respectively – from what they were in 2017. Five largest Russian publicly traded companies (PAOs) – PAO Gazprom, PAO NK Rosneft, PAO Sberbank and PAO LUKOIL and PAO NOVATEK – have in recent years been engaged in a tight race for leadership in terms of capitalization size. In 2018, Sberbank of Russia took the lead in the capitalization size for the second year in a row.

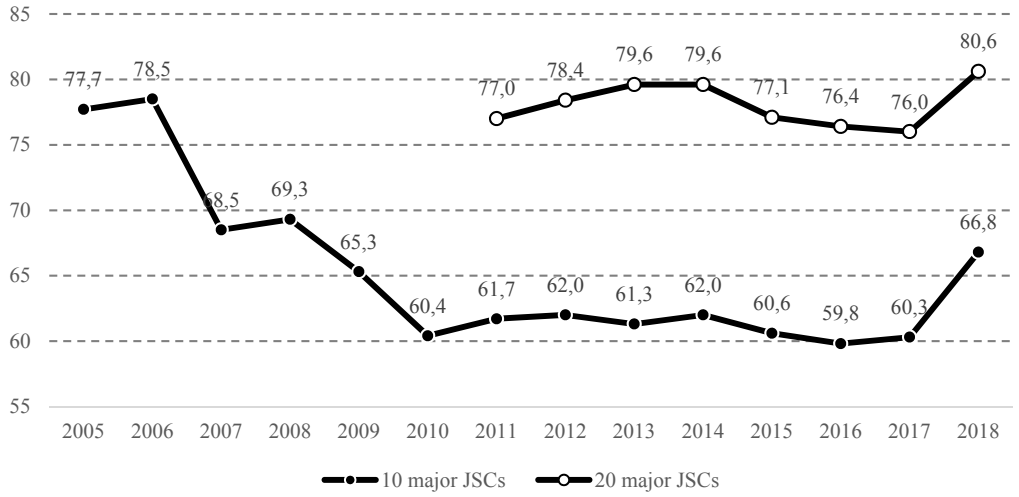


Fig. 24. Proportion of largest joint-stock companies in domestic stock market capitalization, percent

Source: own calculations using data from the Moscow Exchange.

[1] Under Federal Act No. 210-FZ of June 29, 2015.

Table 7

Capitalization of 10 largest Russian publicly traded companies (PAO) in 2016–2018

	2016			2017			2018		
	Issuer	Capitalization, RUB billion	Proportion, percent	Issuer	Capitalization, RUB billion	Proportion, percent	Issuer	Capitalization, RUB billion	Proportion, percent
1	PAO NK Rosneft	4.240	11.2	PAO Sberbank	4.859	13.5	PAO Sberbank	4.535	11.4
2	PAO Sberbank	3.710	9.8	PAO Gazprom	3.074	8.6	PAO LUKOIL	4.017	10.1
3	PAO Gazprom	3.635	9.6	PAO NK Rosneft	3.072	8.6	PAO Gazprom	3.739	9.4
4	PAO LUKOIL	2.916	7.7	PAO LUKOIL	2.823	7.9	PAO NK Rosneft	3.629	9.1
5	OAO NOVATEK	2.379	6.3	PAO NOVATEK	2.048	5.7	PAO NOVATEK	3.431	8.6
6	PAO Nornickel	1.589	4.2	PAO Nornickel	1.701	4.7	PAO Nornickel	2.059	5.2
7	OAO Sugrutneftegaz	1.105	2.9	PAO Gazprom Neft	1.162	3.2	PAO Gazprom Neft	1.639	4.1
8	PAO Magnit	1.031	2.7	PAO Tatneft	1.035	2.9	PAO Tatneft	1.588	4.0
9	PAO Gazprom Neft	1.024	2.7	OAO Sugrutneftegaz	991	2.8	OAO Sugrutneftegaz	959	2.4
10	VTB Bank (PAO)	960	2.5	PAO NLMK	885	2.5	PAO NLMK	944	2.4
	All issuers' market capitalization on Moscow Exchange	**37.748**	**100.0**	**All issuers' market capitalization on Moscow Exchange**	**35.896**	**100.0**	**All issuers' market capitalization on Moscow Exchange**	**39.716**	**100.0**
	Top-10 issuers' market cap	**22.591**	**59.8**	**Top-10 issuers' market cap**	**21.650**	**60.3**	**Top-10 issuers' market cap**	**26.541**	**66.8**

Source: own calculations using data from the World Federation of Exchanges and the Moscow Exchange.

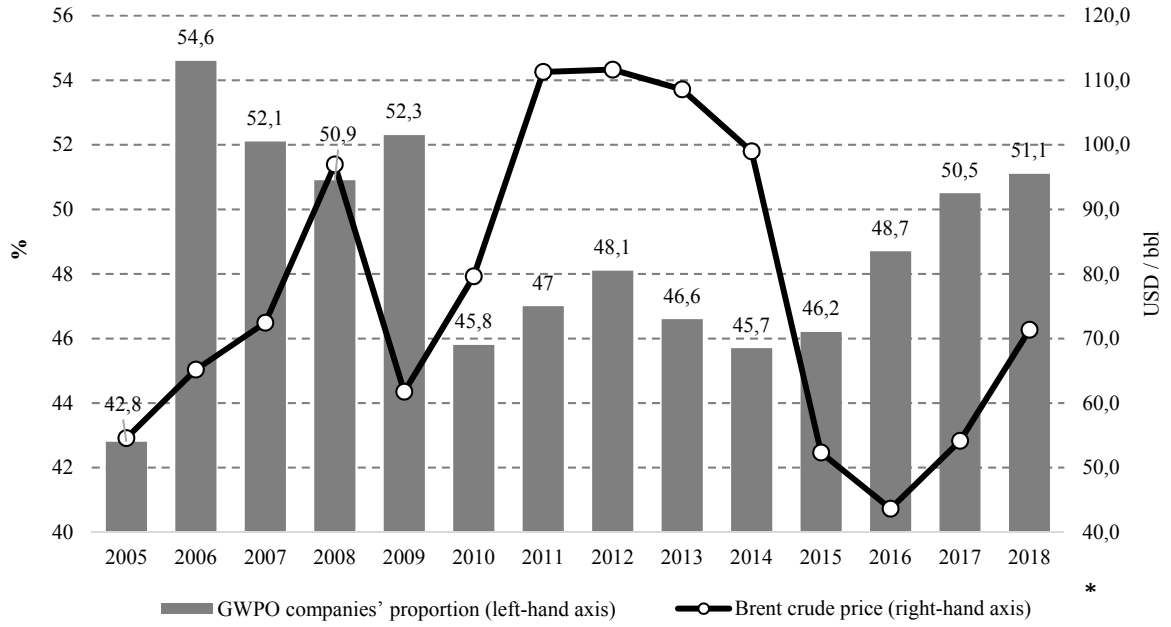
Another noticeable trend of 2014–2018 was an increase in the capitalization of companies wholly or partially owned by the government (GWPO companies)[1] from 45.7 percent in 2014 to 51.1 percent in 2018 (see *Fig. 25*). The trend was linked to accelerated growth in the capitalization of fuel and energy companies' (most of which are wholly or partially owned by the government) stocks as crude prices in 2017–2018 were on the recovery-driven rise following the collapse of 2015–2016, as well as favorable terms of trade for Gazprom's natural gas in the European market. In addition, there were contributing factors, such as growth in the appeal of Sberbank of Russia's stock for foreign investors, the acquisition of privately-owned TNK-BP by state-run NK Rosneft in 2013, the transition of PAO Bashneft (in 2014) and PAO Magnit (in 2018) from privately-owned company to GWPO company[2].

The Moscow Exchange has so far retained its leadership as a principal venue for pricing and settlements for the given financial instruments in the competition with global stock exchanges for the market of Russian largest issuers. After the merger of the two stock exchanges late in 2011, the proportion of the Moscow Exchange in the overall

[1] A company wholly or partially owned by the government (GWPO company) constitutes an entity in which the government holds a 100% equity stake, a majority equity stake or at least a substantial minority equity stake (equity interest) that is not less than 10%.

[2] More details on GWPO companies' contribution to capitalization can be found in Radygin et al. Thirty years after privatization: The scale and effectiveness of Russia's public sector / A.D. Radygin, P.M. Entov, A.E. Abramov, M.I. Chernova, G.N. Malginov – M.: Delo Publishing House RANEPA, 2019.

volume of trading in equity instruments increased from 41.2 percent in 2012 to 60.3 percent in January 2019 (see *Fig. 26*). In contrast, the proportion of the principal rival – the London Stock Exchange – during the same period of time dropped from 48.8 to 26.8 percent, while the proportion of the remainder of foreign stock exchanges picked up from 10.0 to 12.9 percent. The decline in the proportion of foreign trading venues was largely attributed to the decline in the appeal of stocks and Russian stocks depositary receipts for foreign investors due to, among other things, anti-Russia sanctions.



* The 2018 data for GWPO companies' proportion in capitalization are preliminary data.

Fig. 25. Proportion of government wholly or partially-owned companies in domestic stock market capitalization and Brent crude price per barrel, 2005–2018

Source: own calculations using data from companies wholly or partially owned by the government, data source: RANEPA IAES https://ipei.ranepa.ru/kgu

In 2018, the stock market was nearly frozen by sanctions for RUSAL EN+ GROUP PLC, a holding company registered under the jurisdiction of Jersey Island, that raised USD 1.5 billion through IPO on the London Stock Exchange (LSE) in 2017, as well as RUSAL's stock on the Hong Kong Stock Exchange. The markets for these instruments began to recover gradually late in the year as the problems with the U.S. Treasury were tackled.

PAO Megafon's stock depositary receipts were delisted from the London Stock Exchange (LSE) in October 5, 2018. MTS's representatives said in February 2019 the company might decide to voluntarily delist its stock from the New York Stock Exchange

(NYSE), some analysts attributed this to risks induced by sanctions[1]. PAO TMK said early in 2018 it might decide to voluntarily delist its stock from the London Stock Exchange (LSE).

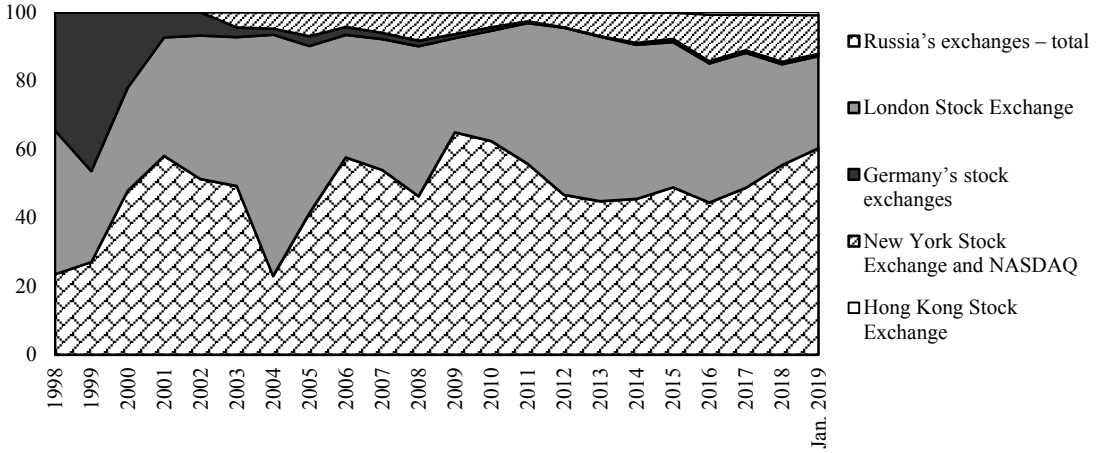


Fig. 26. Proportion of stock exchanges in trading volumes of Russian joint-stock companies' equity instruments, from 1998 to January 2019,[2] percent

Source: own calculations using data from stock exchanges.

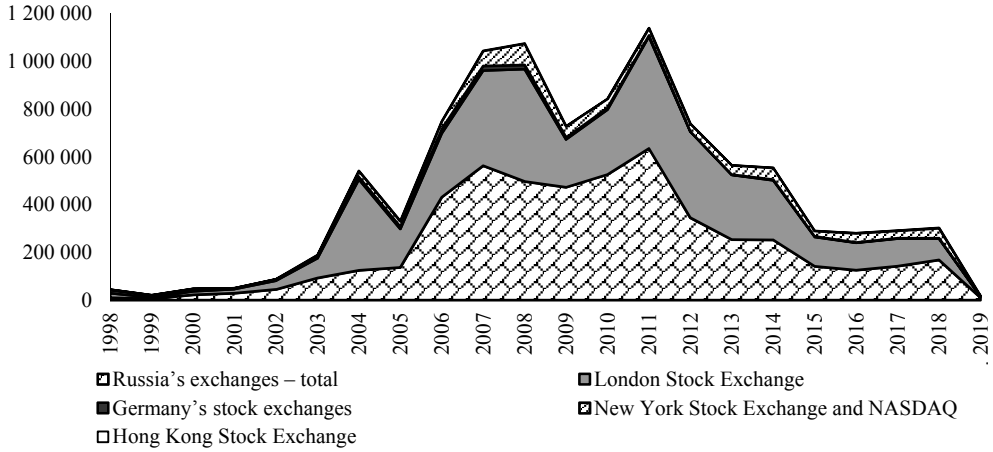


Fig. 27. Trading volumes of Russian joint-stock companies' equity securities on selected stock exchanges, from 1998 to January 2019, USD millions[3]

Source: own calculations using data from stock exchanges.

[1] BCS Express. Investor's breakfast. MTS's voluntary delisting from NYSE not to be ruled out. Experts' opinion. February 11, 2019, URL: https://bcs-express.ru/novosti-i-analitika/zavtrak-investora-mts-ne-iskliuchaet-delisting-c-nyse-chto-dumaiut-eksperty

[2] The data includes solely exchange-traded transactions in the auction market, excluding the rest of the stock trading modes employed on the Moscow Exchange.

[3] The data includes solely exchange-traded transactions in the auction market, excluding the rest of the stock trading modes employed on the Moscow Exchange.

A recent years' serious problem that is typical of trading in Russian equity instruments on various trading venues worldwide lies in drastic contraction in volumes of exchange-traded transactions, which contributes to increase in the liquidity risk premium required by investors in these companies. As shown in *Fig. 27*, overall volumes of exchange-traded transactions involving the given equity securities on all the selected stock exchanges dropped from USD 1.1 trillion in 2011 to USD 0.3 trillion in 2018, including on Russia's stock exchanges – from USD 0.6 trillion to USD 0.2 trillion.

The problem of low liquidity of the exchange-traded stock market is facing not only the Moscow Exchange but also organized markets of most countries. As shown in *Table 8,* it was not until 2018 that the world's overall volumes of transactions involving stocks recovered completely to 109.1 percent of the pre-crisis 2007 level. It's been 11 years now, but the volumes of exchange-traded transactions on stock exchanges, such as the NASDAQ and NYSE, London Stock Exchange, Euronext, German Stock Exchange, Australia's and Canada's stock exchanges, NASDAQ OMX Nordic Exchange, have not yet reached the 2007 level. The liquidity crunch that took place after the 2008 crisis was due to the crackdown on market makers[1] and bank risk-bearing operations,[2] slow portfolio turnover for major institutional investors at a backdrop of growing appeal of asset management index-based strategies[3], institutional investors' countermeasures against high-frequency trading practices[4].

The Russian exchange-traded stock market is characterized by greater liquidity crunch; in 2018, the volume of exchange-traded stocks on the Moscow Exchange constituted as little as 30.6 percent of the 2008 pre-crisis peak. However, the 2017–2018 period saw a positive factor, such as increase in the given proportion mainly due to influx of domestic private investors, which offset in part an adverse effect of factors, such as foreign (portfolio) investment drain and the freeze on local pension savings (funds).

Unlike stock indices, capitalization depends on not only stock price movements but also the number of issuers listed on national stock exchanges. As shown in *Table 9,* the capitalization of Russian companies was in slow recovery from the 2008 crisis. 2018 saw the size of capitalization of Russian issuers lagging further behind the 2007 level: in 2018 it accounted for merely 38.0 percent of the 2007 value, whereas it came to reach 41.5 percent a year earlier. Capitalization in dollar terms was down 8.3 percent from

[1] More information on the impact of post-crisis regulation on market participants' risk appetite and liquidity of various financial instruments can be found in, for example, PricewaterhouseCoopers. Global financial markets liquidity study. August 2015.

[2] More details on this can be found in, for example, the IMF Financial Stability Reports of October 2012 and October 2015.

[3] According to data from the Investment Company Institute (ICI), the 2016 portfolio average turnover of U.S. equity mutual funds stood at only 34%, with an average of 57% between 1984 and 2016. (Investment Company Fact Book, 2017. ICI, 57th Edition, p. 38).

[4] *Lewis M.* Flash Boys: A Wallstreet Revolt / *Michael Lewis*; Transl. from English into Russian – M.: Alpina Publisher, 2015, p. 51.

USD 623.4 billion in 2017 to USD 571.7 billion in 2018. Considering the fact that the RTS Index lost only 7.4 percent during the same period, a further loss of 0.9 percent was driven by factors, such as the delisting of some joint-stock companies and faster decline in dollar terms in the capitalization of their stocks that do not compose the RTS Index.

Table 8

Value of exchange-traded transactions involving stocks on largest stock exchanges in 2007–2018 (2007 = 100 percent)[1]

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
U.S.A. (NYSE and NASDAQ)	100	120.1	72.6	71.0	71.7	54.2	54.3	65.5	69.9	66.2	60.3	84.3
China (two exchanges)	100	63.0	128.9	132.8	106.9	81.8	124.9	198.0	674.2	314.4	274.5	225.2
Japan	100	87.3	61.2	63.2	66.3	57.5	103.9	86.8	88.3	89.6	92.7	100.4
U.K.	100	89.0	62.9	63.5	65.7	50.8	51.7	64.1	60.2	52.9	53.9	59.0
Euronext	100	84.7	42.7	44.5	47.1	34.8	36.7	43.1	45.8	39.0	42.9	48.6
Germany	100	95.5	45.1	48.4	52.3	37.9	39.7	43.7	46.3	38.9	44.1	54.1
Hong Kong	100	77.3	70.1	74.1	71.5	54.7	65.5	75.3	105.2	66.8	96.9	115.8
Canada	100	105.3	75.5	83.0	93.5	82.3	83.2	85.4	71.9	71.3	75.5	87.8
Australia	100	77.5	57.9	77.1	86.8	67.9	63.9	58.6	58.0	59.7	60.2	62.3
Russia	100	89.0	77.3	75.5	95.2	55.8	44.0	46.0	25.8	23.6	26.4	30.6
NASDAQ OMX Nordic Exchange	100	84.5	48.8	52.6	58.0	41.1	43.8	50.6	52.9	49.8	56.2	59.5
Total for WFE members	100	103.1	77.7	83.2	89.0	69.8	77.2	87.5	90.7	95.7	92.7	109.1

Source: own calculations using data from the World Federation of Exchanges and Moscow Exchange.

In 2018, the Moscow Exchange ranked 22nd out of 76 stock exchanges in terms of issuer's market capitalization, whereas it ranked 22nd out of 78 world's stock exchanges in 2017, according to WFE's statistics.

Table 9

U.S. dollar market cap of stocks on largest stock exchanges in 2007–2018 (2007 = 100 percent)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
U.S.A. (NYSE and NASDAQ)	100	58.3	76.7	87.9	79.5	94.9	122.2	133.9	127.5	139.1	163.3	154.8
China (Shanghai SE)	100	38.6	73.2	73.5	63.8	68.9	67.6	106.4	123.1	111.1	137.8	106.1
Japan	100	71.9	76.3	88.4	76.8	80.3	104.9	101.1	113.0	116.9	143.7	122.3
U.K.	100	48.6	89.8	93.9	84.9	88.3	115.1	104.3	100.8	90.9	115.8	94.6
Euronext	100	49.8	68.0	69.4	57.9	67.1	84.9	78.6	78.3	82.7	104.0	88.3
Germany	100	52.8	61.4	67.9	56.3	70.6	92.0	82.6	81.5	82.3	107.5	83.4
Hong Kong	100	50.1	86.8	102.1	85.1	106.7	116.8	121.8	120.0	120.3	163.9	143.9
Canada	100	47.3	76.7	99.3	87.4	94.2	96.7	95.8	72.8	93.4	108.3	88.6
Australia	100	52.7	97.2	112.0	92.3	106.8	105.2	99.3	91.4	101.4	116.2	97.3
Russia	100	26.4	57.3	91.7	72.9	71.8	69.3	34.4	26.2	42.3	41.5	38.0
NASDAQ OMX Nordic Exchange	100	45.3	65.8	83.9	67.8	80.1	102.1	96.3	102.0	101.4	123.4	106.5

Source: own calculations using data from the World Federation of Exchanges and Moscow Exchange.

[1] Including transactions involving securities of issuers on given stock exchanges.

In July 2018, the Moscow Exchange reduced considerably the volume of its publicly disclosed information – as defined in Bank of Russia Regulation No. 437-P 'On Conducting Organized Trading' of October 17, 2014, as amended by Bank of Russia Ordinance *No. 4622-U* of November 27, 2017[1] – and discontinued the release of data sheets on volumes of NTM (negotiated trading mode) transactions, two-sided CCP-cleared repo transactions, inter-dealer repos and some other trading modes for various categories of financial instruments. This somehow hampers analysis of the relationship between exchange-traded transactions and the money market trading volume in stocks and bonds. Additionally, the Moscow Exchange discontinued the release of data sheets on transactions involving financial instruments by stock market participant, thus making impossible an independent market competition analysis based on the Herfindahl-Hirschman index. The decision to disclose less information on exchange-traded transactions is a negative sign that might indicate deterioration of the Moscow Exchange's performance and transparency. That said, it is unclear what underlies the Bank of Russia's decision to issue Regulation No. 4622-U of November 27, 2017, thus making information about competition on the exchange unavailable to the public.

As shown in *Fig. 28,* exchange-traded transactions accounted for merely 17.8 percent, repo transactions constituted 81.6 percent and NTM transactions represented 0.6 percent of the overall exchange-traded transactions involving stocks in 2018. The economic rationale for repo transactions involving stocks lies in using broker customers' assets for short-term crediting against stocks or money of short sales[2] or margin trading[3]. Repo transactions increase liquidity in the equity market segment by raising extra funds and placing credit risks on a wide range of brokers' customers who may not always understand how the market runs. The use of almost free assets for repo transactions constitutes the principal source of brokers' revenues representing 27 percent of what they earn, with broker commissions and other fees making up as little as 16 percent of their earnings[4].

That said, allowing brokers to dispose customer's money and stocks through special broker's accounts and similar settlement depository securities accounts leads sometimes to uncertainty about whether customers are going to be refunded if their broker ceases

[1] This information is available on the Moscow Exchange official website: URL: https://www.moex.com/ru/markets/stock/month-reports.aspx Under the Bank of Russia Regulation, overall information or information broken down by type of traded instruments and trading modes is to be defined by the stock exchange, meaning that the decision to reduce, since July 01, 2018, the list containing this information was based on the exchange's sole discretion in compliance with the provisions set forth in Bank of Russia Ordinance No. 4622-U of November 27, 2017.

[2] Short sale of securities in hope of reaping a profit when the market value of the securities goes down.

[3] Purchase of securities with borrowed money in hope of reaping a profit when the market value of the securities goes up.

[4] Bank of Russia. Brokers. Analytical Review. 2017 and Q1 2018. Available at URL: http://www.cbr.ru/finmarkets/files/supervision/broker_18-01.pdf

to operate or the broker's personnel are found to be involved in fraudulent activities[1]. There are legal uncertainties that elevate risks to investors, particularly when it comes to unpredictable increase in equity market volatility.

Models designed to determine an optimum relationship between volumes of exchange-traded transactions and repo transactions in the stock market are not currently available. Regrettably, the Bank of Russia no longer releases its dedicated reviews on the repo market and respective risks. However, as shown in *Fig. 28,* the decrease in the proportion of exchange-traded transactions in the overall market trading volume from 69.5 percent in 2005 to 17.8 percent in 2018 with a concomitant increase in the volume of repo transactions from 18.5 percent to 81.6 percent gives evidence of considerable increase in volumes of fundraising in the stock market and, accordingly, credit risks to market participants. 2018 saw a positive trend towards a marginal rise in the proportion of exchange-traded transactions from 11.7 percent in 2017 to 17.8 percent in 2018.

As shown in *Fig. 29,* the previous years' trend towards stable increase – from RUB 4.0 trillion in 2005 to RUB 70.7 trillion in 2017 – in the overall trading volume for exchange-traded stocks was in part affected in 2018, when the trading volume dropped 17.0 percent to RUB 58.9 trillion from the previous year's level. Furthermore, volumes of exchange-traded transactions changed in a static manner: market volumes of transactions were on a gradual slide up until 2017 following the decline early in the 2010s – from RUB 15.7 trillion in 2011 to RUB 9.4 trillion in 2012 – that was driven by foreign (portfolio) investment drain. It was not until 2018 that they picked up 26.5 percent from RUB 8.3 trillion in 2017 to RUB 10.5 trillion.

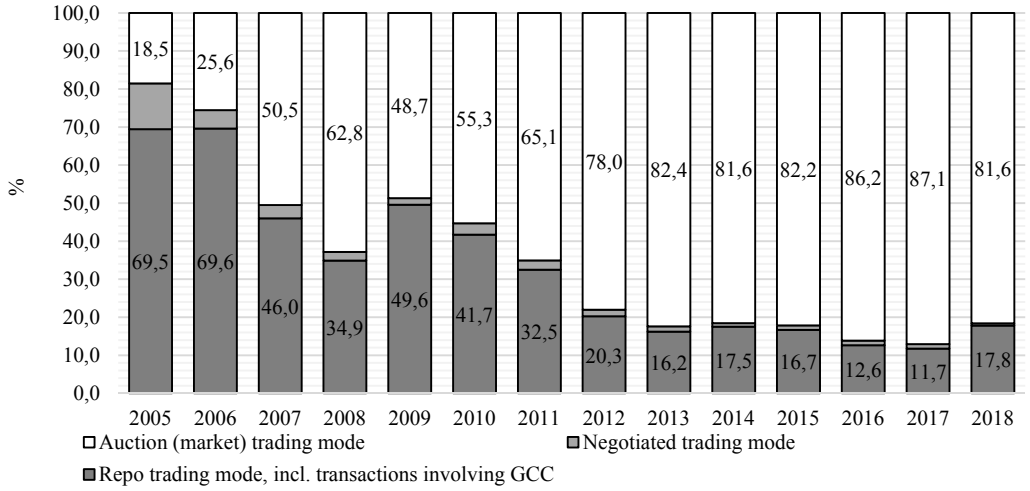


Fig. 28. Breakdown of transactions involving stocks on primary MOEX market, 2005–2018, percent

Source: own calculations using data from the Moscow Exchange.

[1] Similar cases were previously seen regarding the customers of Eltra Investment Company (in 2016) and Energocapital Investment Company (in 2018).

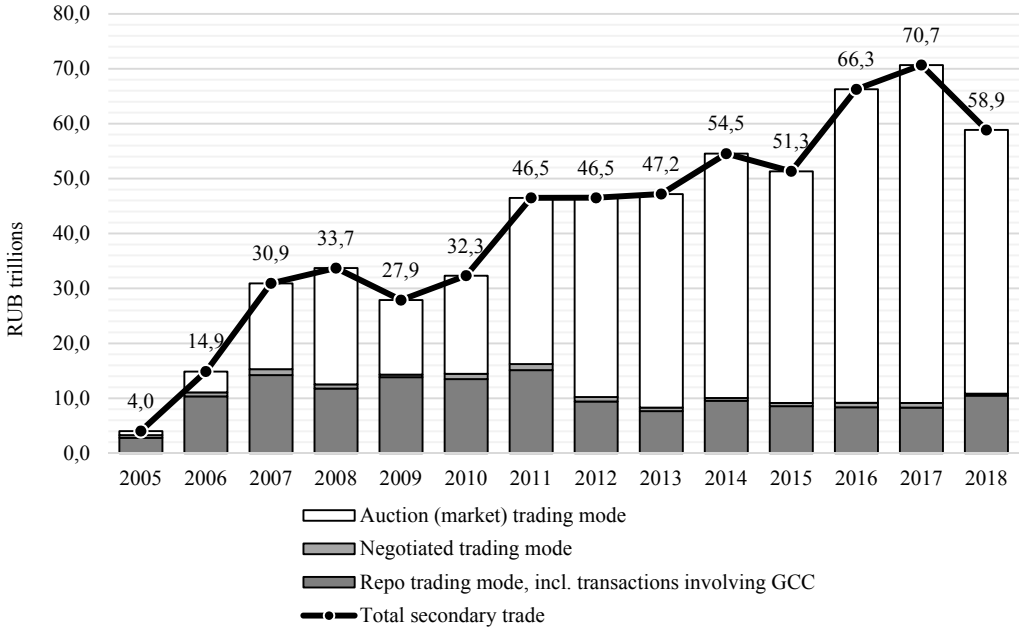


Fig. 29. Volumes of transactions involving stocks in MOEX primary market, 2005–2018, RUB trillion

Source: own calculations using data from the Moscow Exchange.

In contrast, the volume of repo transactions involving stocks surged from RUB 0.7 trillion in 2005 to RUB 61.5 trillion in 2017, however, slid down 22.0 percent in 2018 to RUB 48.0 trillion from the previous year's level. The market of repos involving stocks declined in 2018 after exchange-traded repo transactions involving customers' assets were partially redirected into the OTC market in order to reduce brokers' transaction costs.

It still remains to be seen how to assess an increase in the activity of individuals and non-residents engaged in exchange-traded transactions involving stocks. The Moscow Exchange does not provide information on the matter on a regular basis. One may assume, according to the available information, that the proportion of individuals engaged in (exchange-traded and NTM) transactions involving stocks picked up from 29.6 percent in 2017 (according to data from The National Association of Stock Market Participants (NAUFOR))[1], to 35 percent in 2018 (according to data from the Moscow Exchange)[2]. On top of that, the 2018 level is similar to that reported by NAUFOR in 2016.

[1] NAUFOR. Russia's Stock Market: 2017. Events and Facts. Available at: URL: https://naufor.ru/download/pdf/factbook/ru/RFR2017.pdf.

[2] The Moscow Exchange press release dd. February 4, 2019. Available at: URL: https://www.moex.com/n22490/?nt=106.

Fig. 30 presents data on the structure of transactions involving stocks by investor category[1] that are calculated regarding the overall volume of transactions involving stocks, including repo transactions that are disclosed by the Moscow Exchange. The data show that the proportion of individuals engaged in the stock market increased from 9.2 percent in January 2018 to 11.4 percent in January 2019. In contrast, the proportion of non-residents in the trading volumes contracted from 40.4 percent to 33.6 percent during the same period. The foregoing reflects a trend towards partial replacement of foreign (portfolio) investment drain by the influx of money from domestic private investors seeking a sort of alternative in the stock market to slim returns on bank deposits. While this is an overall positive trend, full engagement of individuals in investing in the equity market is contingent upon unfreezing the pension savings framework, engendering conditions for the development of corporate and individual retirement plans/schemes, promoting collective investment. Otherwise, it is unlikely that the trend will continue and the pre-crisis level of individuals' engagement in stock market transactions will be reached.

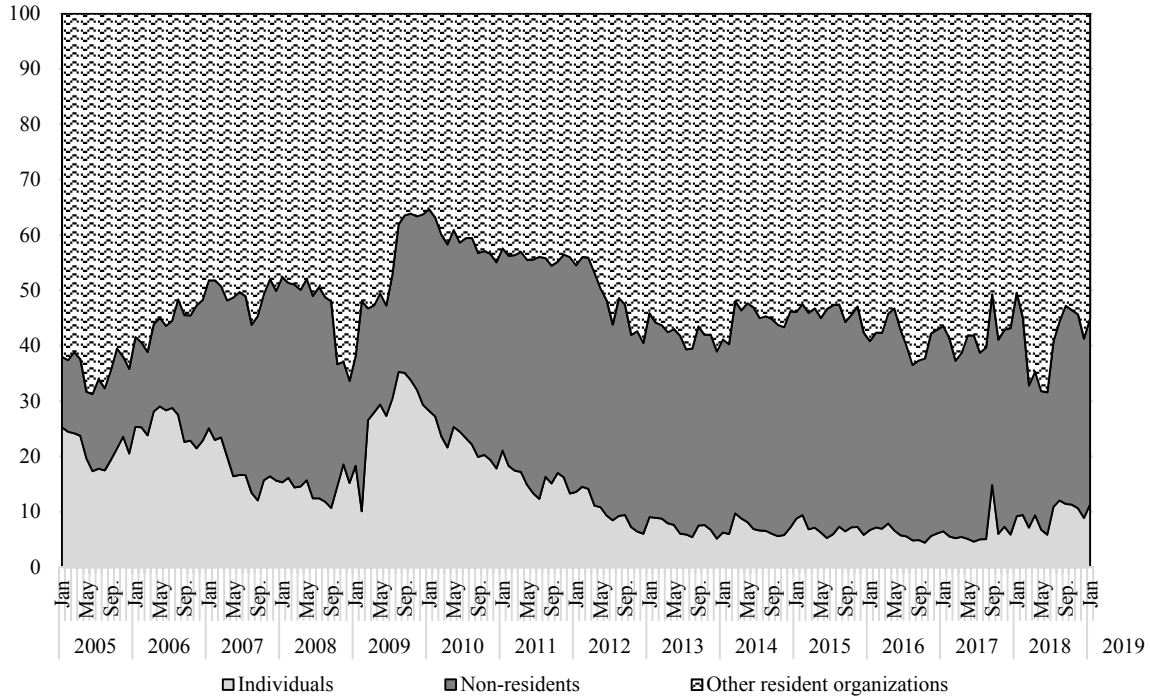


Fig. 30. Breakdown of investors engaged in exchange-traded transactions involving stocks on Moscow Exchange from January 2005 to January 2019, percent

Source: own calculations using data from the Moscow Exchange.

[1] Since July 01, 2018, according to the reduction of the contents of information disclosed by the Moscow Exchange, the proportion of non-residents, private investors and other resident organizations is calculated using solely volumes of exchange-traded transactions and CCP-cleared repo transactions open to any counterparties. Up until that time, transaction volumes covered a broader spectrum of transactions executed by various exchange trading modes.

The equity market's influence on investment and economic growth is basically exerted by way of allowing publicly traded companies to raise funds through IPO and various companies to exercise merger/acquisition transactions.

It follows from the data shown in *Table 10* that the Russian stock market's influence on investment and the economy weakened considerably in recent five years. In 2014–2018, companies raised as little as USD 8.8 billion through IPOs/SPOs, without a single IPO on the Moscow Exchange in 2018. During the previous 5-year period, Russian companies raised USD 37.8 billion through IPOs/SPOs in 2009–2013, that is, 4.3 times the amount raised in recent 5 years.

Nearly a similar context was observed regarding the volume of closed merger/acquisition transactions, totaling USD 223.6 billion in 2014–2018 versus USD 433.9 billion in 2009–2013, that is, 48.5 percent less than the amount recorded during the previous 5 years.

In 2016, equity issuances accounted for merely 0.1 percent of overall sources of fixed investment, suggesting that Russian companies continued to spend the bulk of their fundraising in the domestic stock market and corporate bond market on debt refinancing/redemption, merger/acquisition funding and other purposes that have little to do with fixed investment. Rosstat discontinued since 2017 disclosing the given information, most likely because these funds are thought to be irrelevant.

Table 10

Parameters of Russian companies equity market, USD billions

	Capitalization	Secondary market, including foreign stock exchanges	IPO/SPO, equity offerings	Increase in equity through IPOs			Volume of closed merger/acquisition transactions
				USD billions	The same as a percent of capitalization	The same as a percent of IPO/SPO volume	
000	41	47	0.5	0.2	0.5	40.0	5.0
2001	75	49	0.2	0.1	0.1	50.0	12.0
2002	106	87	1.3	0.2	0.2	15.4	18.1
2003	176	188	0.6	0.2	0.1	33.3	32.4
2004	230	541	3	0.1	0.0	3.3	27.1
2005	549	374	5.2	3.2	0.6	61.5	60.2
2006	1057	914	17	3.2	0.3	18.8	61.9
2007	1503	1687	33	3.6	0.2	10.9	127.7
2008	397	1983	1.9	2.1	0.5	110.5*	117.0
2009	861	1156	1.7	2.0	0.2	117.6*	55.7
2010	1379	1431	6.3	2.4	0.2	37.9	55.1
2011	1096	2222	11.3	2.6	0.2	23.1	94.3
2012	1079	1931	9.5	3.1	0.3	32.6	72.7
2013	1041	1801	9.0	3.1	0.3	34.4	156.1
2014	517	1739	1.7	3.1	0.6	182.0*	58.7
2015	393	997	0.6	0.9	0.2	150.0*	56.9
2016	635	1154	2.1	0.7	0.1	32.0**	41.7
2017	623	1363	4.4	n/a	n/a	n/a	31.4
2018	572	998	0	0	0	0	34.9

* The value is more than 100 percent because a part of fixed investment could be exercised through private offerings of stocks;

** The amount of fundraising through IPOs by Rosneft and FH Otkrytie on the Moscow Exchange in 2016.

Source: own calculations using data from Rosstat, Bank of Russia, Moscow Exchange and Merger.ru (an information analysis resource)

Therefore, the stock market still makes a moderate contribution to companies' fixed asset formation and economy's growth. The domestic equity market's potential in terms of addressing the key problems facing the Russian economy is yet to be fully tapped. The equity markets' contribution is not reflected in the Russian government's documents on national projects until 2024[1], which is a serious oversight on the part of financial market regulator and its infrastructure organizations.

3.3. Bond market

3.3.1. Characteristics of bond market

In 2018, the value of bonded loans in Russia continued to climb to RUB 21.8 trillion, posting an increase of 10.3 percent from 2017 (see *Fig. 31*). Bank of Russia's short-term bonds (BoRB) designed to manage the banking system liquidity came to play a prominent part, there were RUB 1.4 trillion of outstanding BoRB in 2018. Corporate bonds, including OTC issuances, increased 4.5 percent in value from RUB 11.4 trillion to RUB 11.9 trillion during the year; federal loan bonds (OFZ, GSO (government savings bonds), etc.) were up 3.9 percent from RUB 7.2 trillion to RUB 7.7 trillion. The 2018 volume of outstanding regional bonds remained almost unchanged from 2017 (RUB 0.7 trillion). While there was high demand for cash to finance federal budget expenditures, Russia's Finance Ministry in 2018 pursued a moderate policy towards raising the internal public debt, which was in large part due to a lack of sufficient demand for federal bonds in the domestic market as non-residents pulled out of the market over fears of further sanctions.

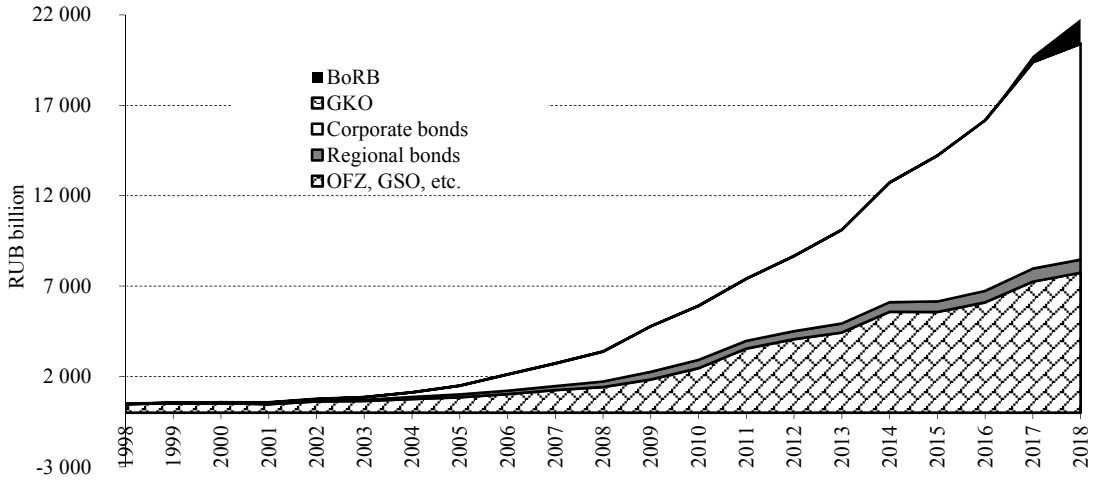


Fig. 31. Outstanding ruble-denominated bond volumes, from 1998 to 2018, RUB billion

Source: own calculations using data from Russia's Finance Ministry and Cbonds.ru

[1] Available at: URL: http://static.government.ru/media/files/p7nn2CS0pVhvQ98OOwAt2dzCIAietQih.pdf

Corporate bond issuances declined considerably in volume terms in 2018 (see *Fig. 31*). The volume of corporate bond issuances contracted from RUB 2.9 trillion in 2017 to RUB 1.6 trillion in 2018, or 43.7 percent. The decline in the volume of corporate bond placements in the domestic market was mainly due to uncertain economic policy, rising interest rates on loans, restricted access of Russian companies to global capital markets because of extended sanctions, the freeze on state pension savings and a shift towards investment of non-government pension savings in government securities. According to data from the Bank of Russia, the proportion of federal government bonds in the portfolio of non-government pension funds increased from 24.3 percent as of December 2017 to 37.7 percent in September 2018[1].

The volume of federal bond issuances dropped 41.5 percent from RUB 1.8 trillion in 2017 to RUB 1.0 trillion in 2018. The volume of regional bond issuances fell 59.9 percent from RUB 210.9 billion to RUB 84.6 billion during the same period. In contrast, the volume of short-term BoRB issuances increased by 14 times from RUB 0.5 trillion to RUB 7.0 billion during the same period of time (see *Fig. 32*). The downturn in the primary OFZ bond market and the ruble-denominated corporate bond market was spurred by negative expectations of new sanctions (in April 2018) restricting global investors from buying Russia's government securities and bonds of some major Russian companies, as well as a weakening Russian ruble and risks of accelerating inflation. Therefore, the yield rate on ruble-denominated bonds increased considerably in 2018.

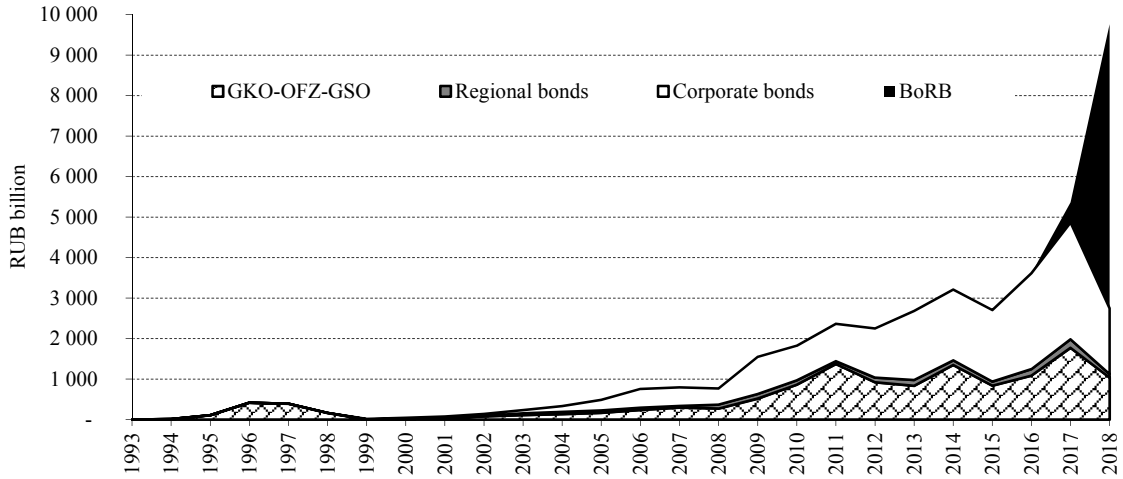


Fig. 32. Ruble-denominated bond placement volume in 1993–2018

Source: own calculations using data from Russia's Finance Ministry and Moscow Exchange.

The secondary exchange-traded market saw a 19.0 percent decline in volumes of transactions involving corporate bonds from RUB 159.3 trillion in 2017 to RUB 129.1 trillion in 2018 (see *Fig. 34*). Volumes of exchange-traded and NTM

[1] Usov I. Pension funds fleeing real sector. Kommersant, November 30, 2018.

transactions involving OFZ bonds picked up 4.9 percent from RUB 6.6 trillion to RUB 6.9 trillion.

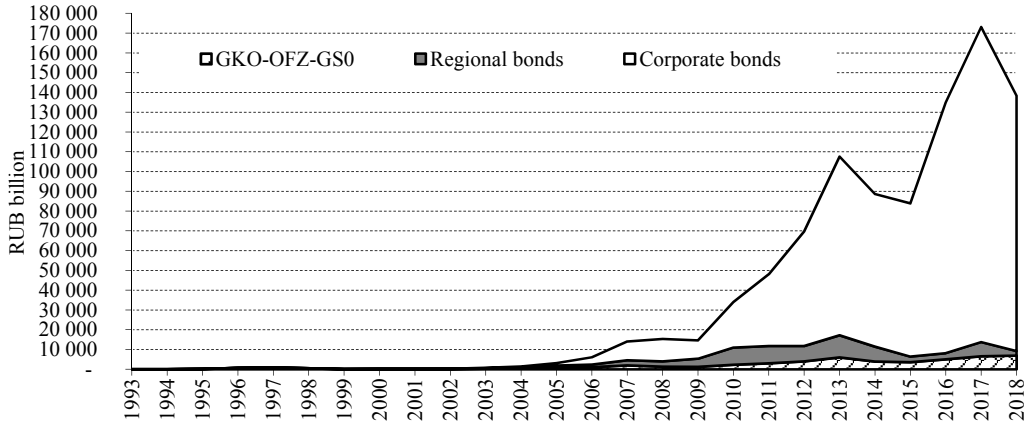


Fig. 33. Trading volumes of exchange-traded ruble-denominated bonds, including money market, 1993–2018

Source: own calculations using data from Russia's Finance Ministry and Moscow Exchange.

The money market plays an even more dominant part in overall transactions in the bond market than in the stock market. In 2018, the proportion of repo transactions in the value of exchange-traded transactions involving bonds reached 96.1 percent versus 96.0 percent in 2017 (see *Fig. 34*). The proportion of exchange-traded transactions involving bonds in 2018 stood at merely 2.3 percent versus the previous year's 2.5 percent. For reference purposes, the proportion of repo transactions and exchange-traded transactions in 2005 was 28.0 percent and 12.8 percent, respectively; the remainder of NTM transactions represented 59.2 percent. Low liquidity of exchange-traded transactions involving corporate bonds makes it difficult to employ the market value and the fair value in pricing of these instruments, thus posing accounting risks to financial organizations.

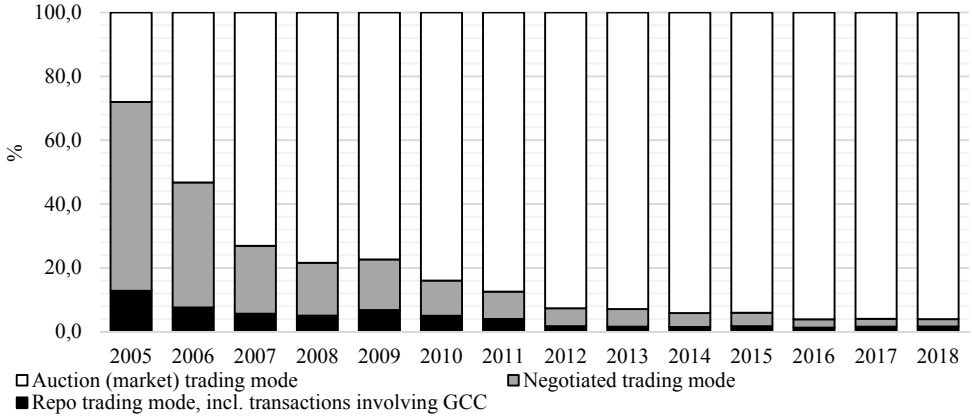


Fig. 34. Breakdown of transactions involving bonds on Moscow Exchange, 2005–2018, percent

Source: own calculations using data from the Moscow Exchange.

There were small volumes of exchange-traded transactions involving bonds; on top of that, the transactions were down 13.0 percent from RUB 6.9 trillion in 2017 to RUB 6.0 trillion in 2018 (see *Fig. 35*). The money market – repos involving bonds – was dominant in terms of volume and saw a fast growth pace. Its volume was up from RUB 0.7 trillion in 2005 to RUB 61.5 trillion in 2017, that is, a 87.9-fold increase; exchange-traded transactions involving bonds rose from RUB 0.3 trillion to RUB 4.4 trillion, or a 14.7-fold rise, during the same period. The market was driven by excessive cash liquidity generated by various factors (carry trade, refinancing through direct repos, refinancing by the Finance Ministry) at various stages of market evolution[1]. That said, the period of buoyant growth in the money market (2012–2018) was, in many ways, concomitant with *t*he period of slow economic growth in the country, that is, the increase in cash liquidity in the financial system as a growth driver for the repo market was largely led by downturn in businesses' investment activity and by businesses' accumulation of various types of cash reserves.

Volumes of repo transactions involving bonds fell 30.0 percent from RUB 61.5 trillion in 2017 to RUB 48.0 trillion in 2018 due to the bailout of some major banks that used to employ the repo mechanism for funding their operations (FH Otkrytie, Binbank, Rostbank and Promsvyazbank), Bank of Russia's winding down foreign-currency repo transactions, and slim demand for this bank funding instrument against a backdrop of rising key interest rate and in the presence of other, cheaper, sources of funding available.

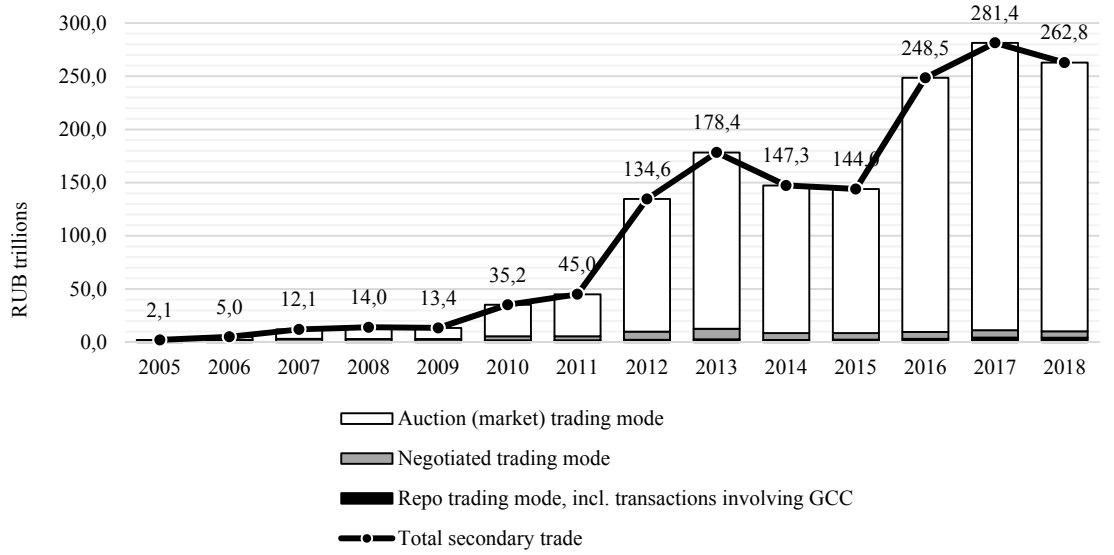
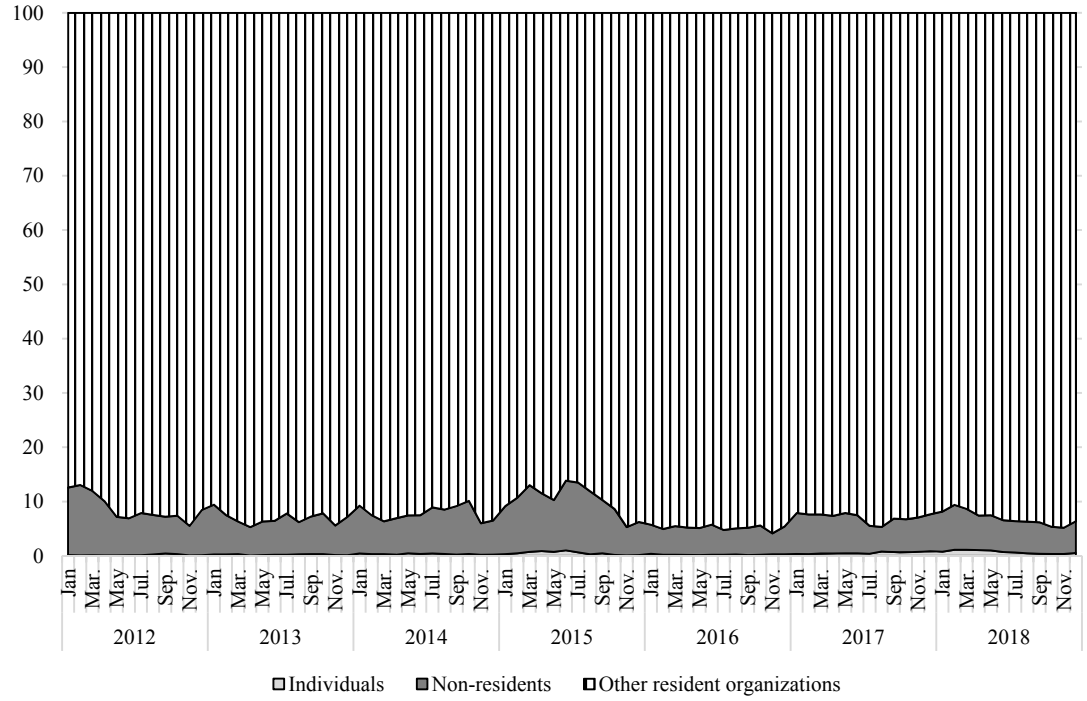


Fig. 35. Value of transactions involving bonds on Moscow Exchange, 2005–2018, RUB trillion

S*ource*: own calculations using data from the Moscow Exchange.

[1] More details are provided in the notes to *Fig. 22*.

As shown in *Fig. 36*, non-residents and domestic private investors make a relatively moderate contribution to exchange-traded transactions involving all categories of bonds (including in the money market). Furthermore, the proportion in the overall value of exchange-traded transactions involving bonds decreased from 0.7 percent in 2017 to 0.4 percent in 2018 for individuals and from 6.3 percent in 2017 to 5.9 percent in 2018 for non-residents. There is an exception to the rules – federal loan bonds (OFZ bonds) made up around a quarter of non-residents' investment[1].



Note. Due to changes in the contents of exchange-traded transactions information disclosed by the Moscow Exchange, the proportions of trading participants presented in the diagram are calculated since July 2018 by total of exchange-traded transactions and CCP-cleared transactions open to any counterparties.

Fig. 36. Breakdown of investors engaged in exchange-traded transactions involving bonds on Moscow Exchange, from January 2005 to January 2019, percent

Source: own calculations using data from the Moscow Exchange.

However, the above figures for bonds are largely incorrect when including repo transaction volumes, to which individuals and non-residents make a very moderate contribution. Perhaps, calculations that exclude the money market can count more on official figures showing that the proportion of individuals engaged in (exchange-traded and NTM) transactions involving bonds was up from 4.0 percent in 2017 (according to

[1] More details are provided in *Fig. 45*.

data from NAUFOR)[1] to 7.0 percent in 2018 (according to data from the Moscow Exchange)[2]. In 2017, OFZ-n bond placements for individuals took place. Some regions and companies also started offering their bonds to individuals. However, qualitative assessments have so far been moderate enough. More measures are needed in order to engage more individuals in the domestic market of debt funding instruments.

3.3.2. Nongovernment bond market

As of March 1, 2019, 412 corporate bonds of 181 bond issuers were listed on the Moscow Exchange. Like the stock market, this exchange-traded market segment is a highly concentrated market. As shown in *Fig. 37* and in *Table 11,* the primary corporate bond market is a highly concentrated market. In 2018, 10 and 20 largest bond issuers accounted for 58.5 percent and 78.8 percent, respectively, of the overall volume of all corporate bond issuances. The above figures are very close to those for the stock market – 66.8 percent and 80.6 percent, respectively, (see *Fig. 24*) – however, there is a big difference in the list of issuers.

The proportion of top-10 and top-20 corporate bond issuers saw a marginal decline in 10 years after the crisis – from 66.5 percent and 83.4 percent, respectively, in 2009 to 58.5 percent and 78.8 percent, respectively, in 2018.

High level of concentration of corporate bond issuers suggests that the MOEX market has not yet become a mechanism to facilitate public offering for a wide range of companies, including SMEs.

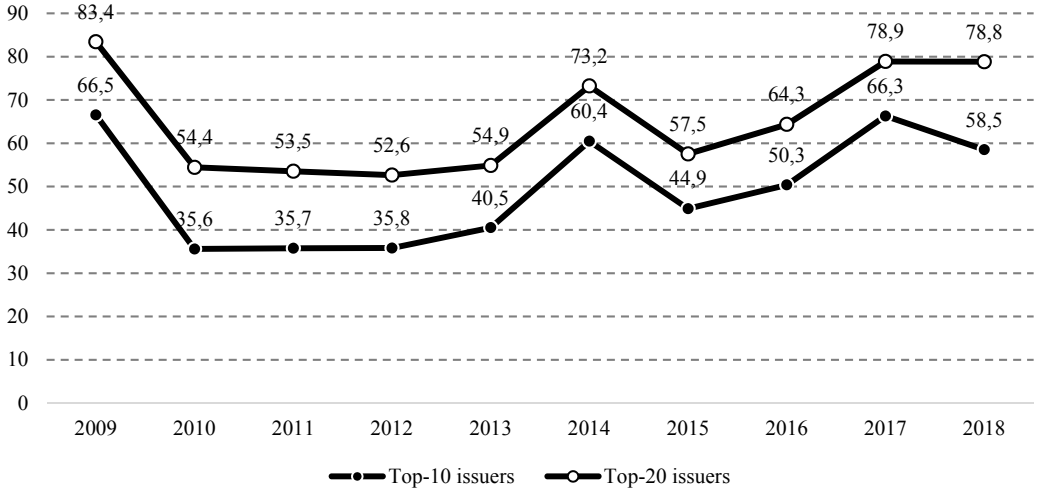


Fig. 37. Proportion of 10 and 20 largest issuers in ruble-denominated corporate bond issuances, percent

[1] NAUFOR. Russia's Stock Market: 2017. Events and Facts. Available at: URL: https://naufor.ru/download/pdf/factbook/ru/RFR2017.pdf

[2] The Moscow Exchange Press Release of February 4, 2019. Available at: URL: https://www.moex.com/n22490/?nt=106

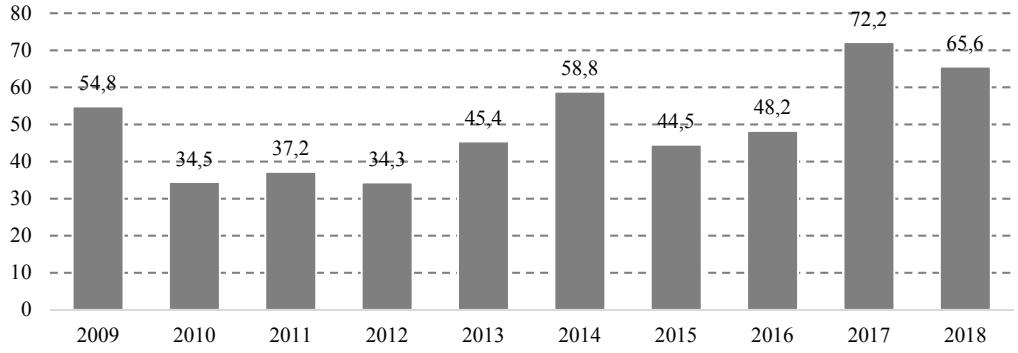
Table 11

Ten largest corporate bond issuers and their proportion in overall value of corporate bond issuances

	Issuers	2016			Issuers	2017			Issuers	2018	
		RUB billion	percent			RUB billion	percent			RUB billion	percent
1	PAO NK Rosneft	650	26.7	1	PAO NK Rosneft	1 051	36.8	1	PAO Sberbank	301	17.9
2	OAO Russian Railways	100	4.1	2	VEB.RF State Corporation for Development	126	4.4	2	OOO DOM.RF Ipotechny Agent	137	8.2
3	AO Otkrytie Holding	90	3.7	3	Peresvet Bank (AO)	125	4.4	3	OAO Russian Railways	85	5.1
4	PAO Transneft	77	3.2	4	Ipotechny Agent Fabrika ITSB	109	3.8	4	AO Russian Agricultural Bank	78	4.7
5	PAO ANK Bashneft	55	2.3	5	PAO Transneft	107	3.8	5	OOO Zhiloi Microraion	76	4.6
6	Vnesheconombank	55	2.2	6	OOO O1 Group Finance	88	3.1	6	PAO NK Rosneft	70	4.2
7	PAO Sberbank	51	2.1	7	OAO Russian Railways	85	3.0	7	Gazprombank (AO)	67	4.0
8	PAO Gazprom Neft	50	2.1	8	PAO Gazprom Neft	70	2.5	8	VTB Bank (PAO)	59	3.5
9	OOO Digital Invest	50	2.1	9	Gazprombank (AO)	65	2.3	9	AO DOM.RF	55	3.3
10	OOO Region Invest	50	2.1	10	AO Otkrytie Holding	65	2.3	10	Russian Highways State Company (Avtodor)	52	3.1
	Capitalization of all corporate bond issuances	**2439**	**100**		**Capitalization of all corporate bond issuances**	2 852	**100**		**Capitalization of all corporate bond issuances**	1 674	**100**
	Capitalization of top-10 corporate bond issuers	**1228**	**50.3**		**Capitalization of top-10 corporate bond issuers**	**1890**	**66.3**		**Capitalization of top-10 corporate bond issuers**	**979**	**58.5**

Source: own calculations using data from CBonds.

The proportion of largest companies wholly or partially owned by the government (GWPO companies) in top-20 corporate bond issuances increased in recent decade from 54.8 percent to 65.6 percent in 2018 (see *Fig. 38*). Furthermore, the proportion of GWPO companies in 2018 dropped marginally from the 2017's 72.2 percent because of the decline in NK Rosneft's corporate borrowings. The foregoing data give evidence that the exchange-traded corporate bond market is broadly used for reallocating credit resources in the market in favor of largest state-run companies.



Note. The data on GWPO companies' proportion in 2018 are preliminary data.

Fig. 38. Proportion of largest GWPO companies in top-20 ruble-denominated corporate bond issuances, percent

Source: own calculations using data from Cbonds.ru.

Markets for underwriting and advisory services are faced with weak competition when it comes to corporate and regional bond placement, as evidenced by the Herfindahl-Hirschman index (HHI) (see *Fig. 39*). Since 2009, a highly competitive market of investment-banking services covering transactions involving corporate bonds had become a moderately concentrated market, with the monthly HHI varying within 800–1800. In 2018, the HHI for the market segment of services covering corporate bonds stood at 1206. Since 2011, the market of services covering regional bond issuances varied within a range of a moderate market and a highly concentrated market. In 2018, the market fit the definition of highly concentrated market (HHI=2534). Both indices increased from 2017, suggesting that the above services are increasingly monopolized in the market.

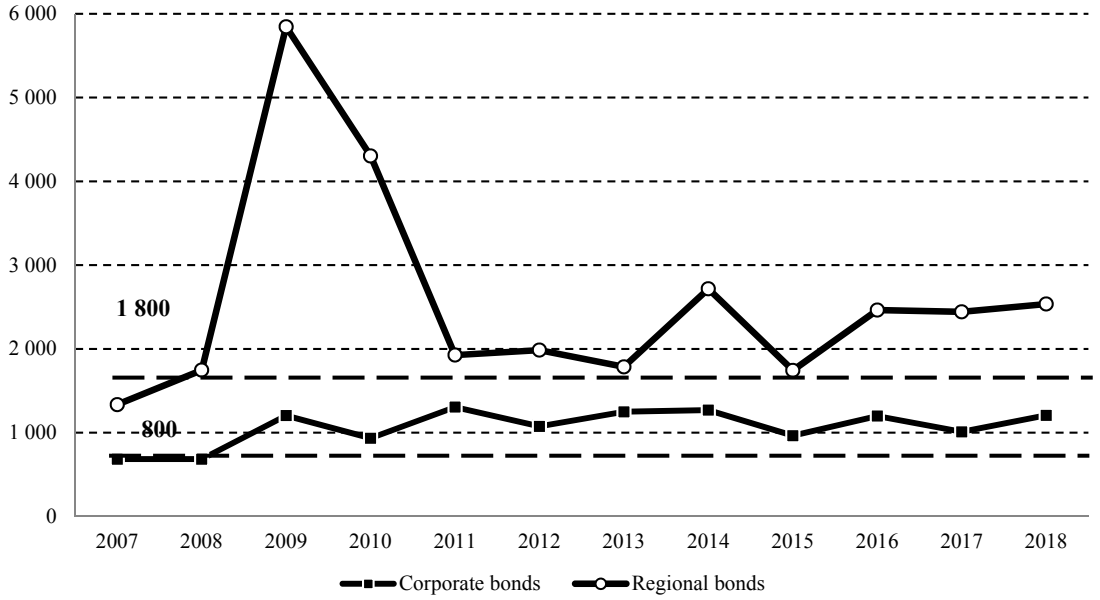


Fig. 39. Herfindahl-Hirschman index: bond issuance services for ruble-denominated corporate and regional bonds, 2007–2018

Source: own calculations using data from rankings of bond placement organizers available on CBonds.ru for 2007–2018.

2018 was the worst year in terms of investment banks' bond placement yield in Russia in recent 16 years, according to data from Refiniti agency. Banks' fee revenues stood at around USD 170 million, one-half of what they were a year earlier[1].

It was not until 2016 that Russian companies started returning actively back to the Eurobond market since sector-specific sanctions were imposed in July 2014. Russian companies raised USD 12.7 billion in 2016, USD 20.5 billion in 2017 and USD 10.9 billion in 2018 through Eurobonds, 4.8 percent less than what they raised a year earlier. In 2018, Russian companies' foreign borrowing plans were disrupted amid

[1] Gaidaev V. Commissions lack capital. Kommersant, January 15, 2019.

expectations of U.S. sanctions (since April 2018) aiming to restrict fundraising by Russia and Russian largest state-run companies and banks. The foregoing affected global investors' behavior although the sanctions had not yet been enacted in the United States.

In 2018, ruble-denominated corporate bonds were worth USD 190.9 billion, Eurobonds stood at USD 109.4 billion versus previous year's USD 195.9 billion and USD 132.5 billion, respectively (see *Fig. 40*). However, Russian companies' Eurobonds lost 39.8 percent in value – from USD 181.8 billion in 2013 to USD 109.4 billion in 2016 – after the increase in geopolitical risks since 2014. Russian domestic corporate bonds appreciated 17.0 percent in dollar terms, from USD 163.1 billion to USD 190.9 billion during the same period of time.

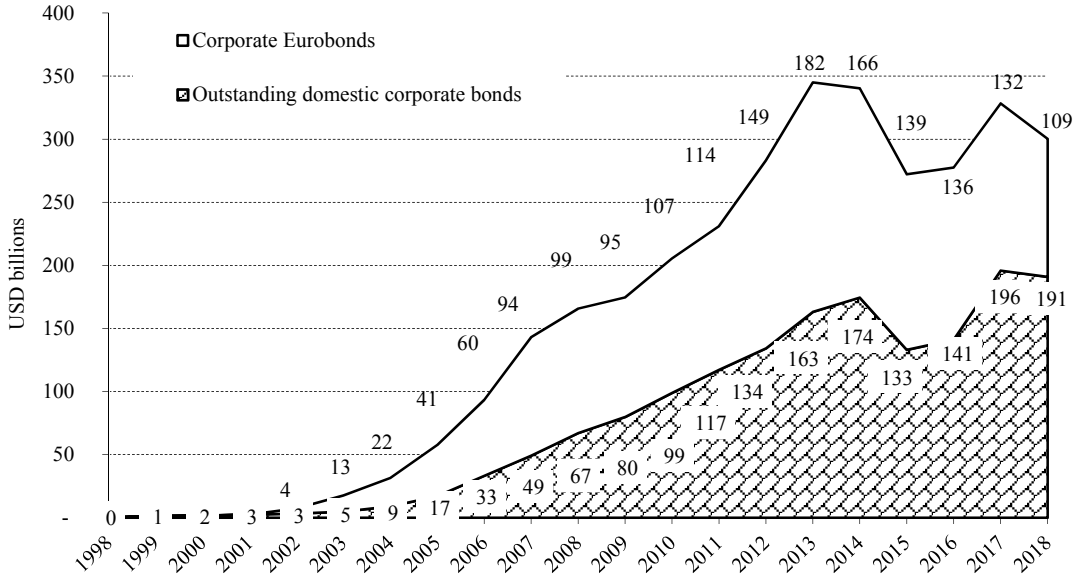


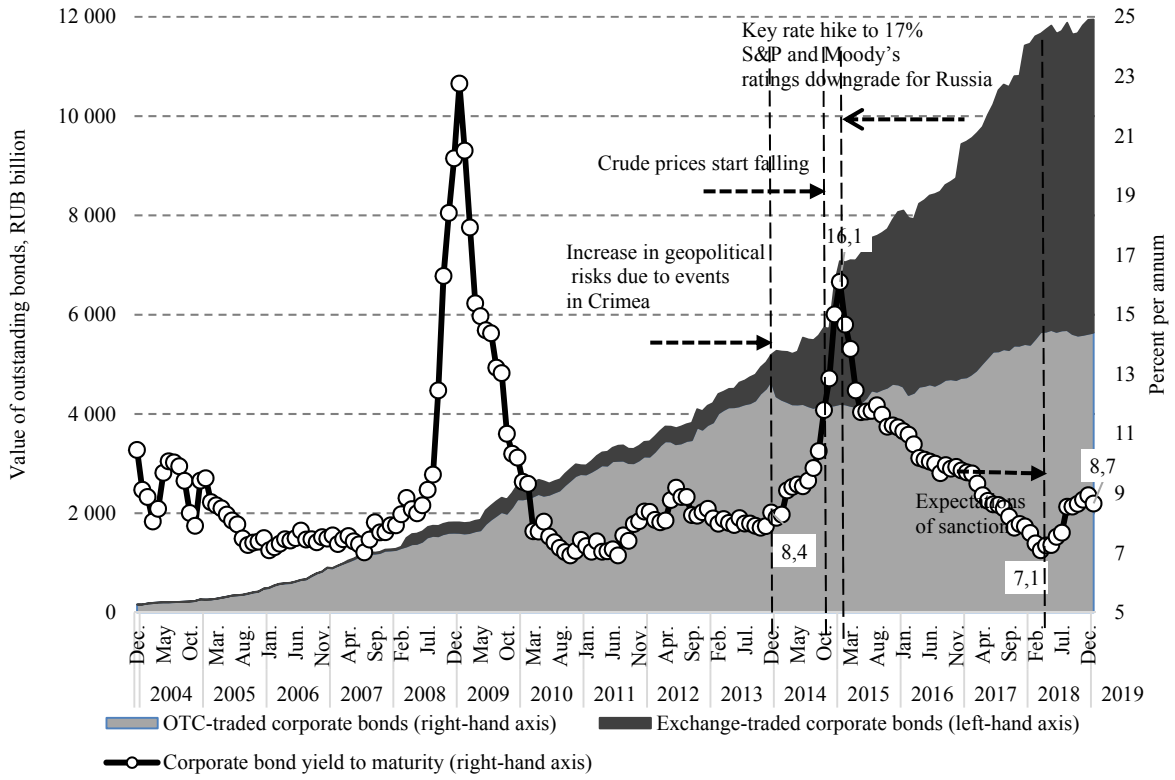
Fig. 40. Volumes of outstanding Russian corporate bonds, USD billions

Source: own calculations using data from CBonds.ru and Moscow Exchange.

Amendments to Russia's securities act came into force on October 16, 2018, whereby companies can issue so-called structural bonds with payments being subject to pre-agreed events and terms.

The average yield to maturity on ruble-denominated corporate bonds composing the IFX-Cbonds portfolio increased from 7.1 percent per annum in February 2018 to 8.7 percent per annum in December 2018 under the influence of the geopolitical risk factor and extension of sanctions in August 2018 (see *Fig. 41*).

That said, the growth in the corporate bond market since 2014 was driven by increase in OTC-traded bonds that are not quoted on the exchange. The proportion of exchange-traded ruble-denominated corporate bonds in their overall capitalization dropped to 47.2 percent in 2018 versus 50.1 percent in 2016.



* IFX-Cbonds portfolio yield to maturity (YTM).

Fig. 41. Value of outstanding ruble-denominated corporate bonds and IFX-Cbonds portfolio's yield to maturity, from December 2003 to January 2019

Source: own calculations using data from CBonds.ru

The domestic corporate bond market experienced two shocks in the period between July 2003 and December 2018, as shown in *Fig. 42*. The first shock occurred in February 2009, when the FX-Cbonds portfolio's effective yield increased to 24.8 percent per annum and the portfolio duration subsequently dropped to 0.8-year. The second shock took place late in December 2014, when the IFX-Cbonds portfolio's average yield reached 17.0 percent per annum, with a 0.7-year decline in the portfolio duration. The 2014 shock was spurred largely by sector-specific sanctions imposed in July 2014 and plummeting crude prices since September 2014.

The domestic bond market was largely stabilized since H2 2015 through monetary authorities' efforts. The IFX-Cbonds portfolio's effective yield slid to 7.24 percent per annum, while the portfolio duration was up 2.82 years, early in April 2018. The above parameters outperformed substantially those seen on December 30, 2013, when the portfolio's yield stood at 8.39 percent per annum, with a 1.99-year duration. However, from April to December 2018, interest rates on corporate debt resumed their growth, and the given indicator for corporate bond yield was up to 8.9 percent as of end-December 2018. In addition, the debt duration increased up to 3.14 years.

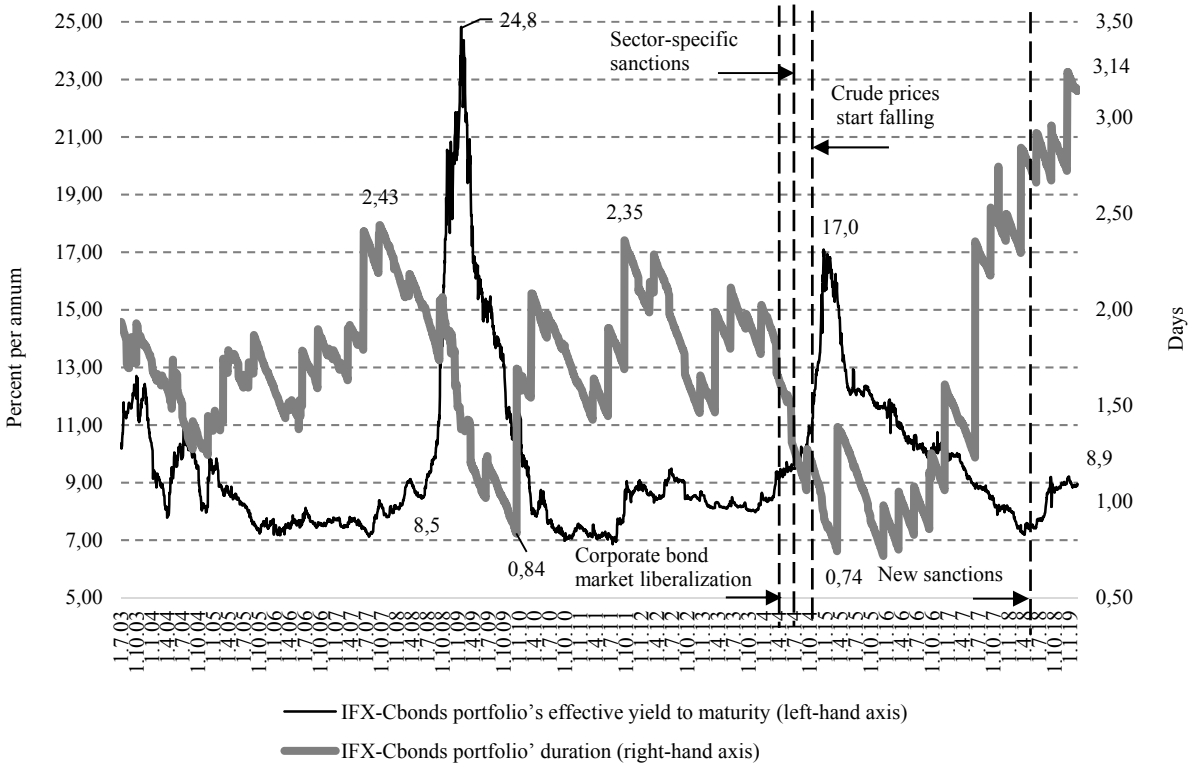


Fig. 42. Effective yield to maturity and duration of IFX-Cbonds portfolio, from July 01, 2003 to February 15, 2019

Source: own calculations using data from the Moscow Exchange, Bloomberg and CBonds.ru

Therefore, a relatively stable domestic bond market in 2018 was faced with alarming trends towards slim demand for corporate and government bond placement, non-residents' exit from the OFZ bond market in particular, rise in borrowing costs, high risk parameters amid a moderate yield rate, compared to indices of other countries.

An important criterion for the corporate bond market performance measurement is to what extent it contributes to facilitating investment in real sector companies and in the banking system. Rosstat published information, based on a business survey of corporate bond issuers, about how Russian companies invest their bonded debt in fixed capital formation. According to data from Rosstat, it appears that companies spent only a small amount of their bonded debt on fixed capital formation in the period between 2000 and 2015.

In 2015, fixed investment stood at USD 2.6 billion, or merely 6.6 percent of the total funds raised (USD 26 billion) through bonds (see *Table 12*). The above statistics lead to a conclusion that the corporate bond market had no significant influence on fixed investment and economy's growth. As noted above, corporate bonds are, in fact, a too short-term source of funding, so companies tend to use them for working capital formation and for debt refinancing.

In 2016, Rosstat stopped releasing data on the contribution of bonds as a source of fixed capital formation, which is likely a proof of the fact that the equity market has an insignificant effect on the investment size. This, however, does not rules out the problem of properly spending funds raised through corporate bonds to finance real investment and fixed investment. In dollar terms, the volume of ruble-denominated corporate bond issuances in 2018 was USD 26 billion, the smallest volume after the 2008 crisis, when bond issuances reached USD 16 billion.

Table 12

Parameters of domestic ruble-denominated corporate bond market (USD billion)

	Outstanding bonds volume	Secondary market, including repos	Bond placements	Fixed investment through bond issuance		
				USD billion	as a percent of capitalization	as a percent of total bond issuance value
2000	2	0.2	1.1			
2001	3	1	0.8			
2002	3	2	2	0.1	3.0	6.7
2003	5	8	3	0.1	2.1	3.8
2004	9	15	5	0.1	1.1	2.0
2005	17	44	9	0.3	1.8	3.3
2006	33	135	17	0.1	0.3	0.6
2007	49	371	18	0.2	0.4	1.1
2008	67	457	16	0.2	0.3	1.2
2009	80	293	29	0.1	0.1	0.3
2010	99	757	28	0.03	0.03	0.1
2011	117	1237	31	0.014	0.01	0.05
2012	134	1866	39	0.14	0.1	0.4
2013	163	2839	54	0.05	0.03	0.1
2014	174	2032	46	0.2	0.1	0.4
2015	133	1277	29	2.6	1.9	6.6
2016	141	1895	35	n/a	n/a	n/a
2017	196	2732	49	n/a	n/a	n/a
2018	191	2064	26	n/a	n/a	n/a

Source: own calculations using data from the Moscow Exchange, CBonds.ru, the Bank of Russia and Rosstat.

Therefore, the domestic corporate bond market remained stable in 2018 although it lost somehow its previous years' momentum. The issuance volume of both ruble-denominated corporate bonds and Eurobonds decreased, and borrowing costs surged about 1.6 percent point. Growth prospects for this equity market segment are largely linked to the extent to which local sources for growth through institutional investment and private savings will be created as well as foreign investment drain will be reined in down the road.

3.3.3. Government bond market

In 2018, like in 2017, the volume of the Finance Ministry's borrowings through government securities outpaced the volume of redeemed bonds, which made these debt instruments a real source of fiscal deficit financing. Net borrowings nearly halved from RUB 1270 billion in 2017 to RUB 670 billion in 2018.

The evolution of the OFZ bond structure was largely determined by the Finance Ministry's debt policy priorities and by various categories of investors. A study of Lu Y.,

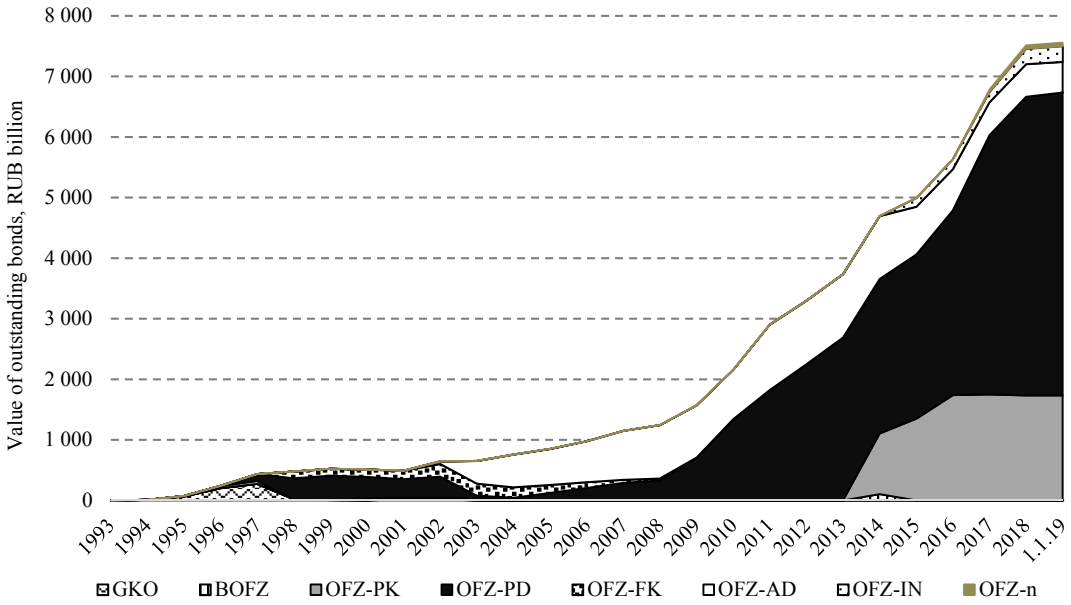
Yakovlev D. (2017)[1] defines three stages in the OFZ bond market evolution: the period until the 2008 crisis, the period from 2009 to mid-2011 and the period after mid-2011. In the period until the 2008 financial crisis, the government ran a budget surplus and therefore was not interested all that much in growth in the OFZ bond market. In that context, key sources of demand for government bonds were pension savings and banks' funds that were broadly raised using the carry trade strategy. The proportion of non-residents remained low, including basically speculative funds. Accordingly, the majority of government bond issuances were represented by OFZ-AD bonds with their parameters suitable for pension funds and OFZ-PD bonds that are rather targeted to market investors because the value of all coupons is constant and known to be as such beforehand until maturity. Less marketable OFZ-FK bonds that were used for local debt novation after the default on GKO gradually lost their relevance. In 2008, OFZ-AD, OFZ-PD and OFZ-FK bonds accounted for 70.9 percent, 26.4 percent and 2.7 percent, respectively, of government securities (see *Fig. 43*).

From 2009 until mid-2011, the Finance Ministry was interested in raising funds for fiscal deficit financing through OFZ-PD bonds that were targeted to banks with excessive liquidity. In addition, a small premium to the market of 5–10 basis point was offered when new bonds were placed[2]. Non-residents' demand for OFZ bonds was restricted due to uncertainty about the key rate. By 2011, the proportion of OFZ-AD bonds dropped to 62.8 percent, whereas the proportion of OFZ-PD bonds increased to 62.8 percent.

Since mid-2011 till now, the OFZ bond market underwent many significant changes that contributed to increasing the significance of the government securities markets and had an effect on the market structure. Key changes took place when non-residents became principal providers of liquidity in the OFZ bond market since early in 2012[3]. Non-residents' elevated demand for OFZ-PD and OFZ-PK bonds (since 2015) led to further contraction of the proportion of OFZ-AD bonds. The contraction was also spurred by a pension savings freeze (2014–2020) that trimmed pension funds' demand for OFZ-AD bonds. The decline in the proportion of OFZ-AD bonds was also good for the Finance Ministry: in 2016, the Ministry replaced OFZ-AD bonds with a nominal value of RUB 63.7 billion by OFZ-PD bonds with a nominal value of RUB 56.4 billion, thus bringing in a considerable amount of revenues to the federal budget. At the same time, inflation-indexed OFZ-IN bonds were introduced in the market in 2015 and were in high demand on the part of domestic institutional investors, and OFZ-n bonds with a focus on individuals were introduced on April 26, 2017. As a result, as of January 01, 2019, federal loan bonds with constant coupon income (OFZ-PD bonds) and variable coupon federal loan bonds (OFZ-PK bonds) made up the majority – 66.2 percent and 22.9 percent, respectively – of OFZ bond issues. Debt amortization

[1] Lu Y., Yakovlev D. Exploring the Role of Foreign Investors in Russia's Local Currency Government Bond (OFZ) Market. IMF Working Paper, No. WP/17/28, February 2017.
[2] Ibid., p. 10.
[3] Ibid., p. 14.

federal loan bonds (OFZ-AD bonds), inflation-indexed federal loan bonds (OFZ-IN bonds) and OFZ-n bonds for individuals accounted for 6.7 percent, 3.4 percent and 0.7 percent, respectively.



Note. The following are the abbreviations that are used hereinafter:
BOFZ – zero-coupon federal loan bonds;
GKO – short-term zero-coupon government bonds;
OFZ – federal loan bonds;
OFZ-AD – debt amortization federal loan bonds;
OFZ-IN – inflation-indexed federal loan bonds;
OFZ-PD – constant coupon federal loan bonds;
OFZ-PK – variable coupon federal loan bonds linked to the Ruble Overnight Index Average (RUONIA);
OFZ-n – federal loan bonds for individuals ("people's bonds").

Fig. 43. Volume of outstanding GKO-OFZ bonds, from 1993 to March 2018, RUB billion

Source: own calculations using data from Russia's Finance Ministry.

An important event was growth in OFZ-n bonds (also known as "people's" bonds) that reached RUB 56.6 billion from April 2017 to January 2019. According to the Finance Ministry, the bonds are meant to be an instrument to engage individuals in the financial market. Bond sales agents are banks, namely Sberbank of Russia and VTB. Furthermore, the Finance Ministry weighs the possibility of covering sellers' costs from the budget so that individuals pay no fees when buying the bonds[1]. Elevated inflationary expectations late in 2018 prompted the Finance Ministry to increase issues of inflation-indexed OFZ-IN bonds.

[1] Goryacheva V. Resident's collateral. Kommersant, March 4, 2019.

A key issue facing the OFZ bonds investment appeal is whether the portfolio' yield to maturity can outpace the inflation rate. Positive changes, such as decline in inflation and stabilized ruble exchange rate, allowed the OFZ Cbonds-GBI portfolio to bring back a positive real yield in March 2016 to December 2018.

In December 2018, the OFZ Cbonds-GBI portfolio' yield to maturity stood at 8.53 percent per annum, with a 4.3 percent CPI annual inflation. However, due to a 101.0 percent upsurge of inflation in January 2019 relative to December 2018, the annualized CPI was temporarily up to 12.8 percent,[1] with a 8.10 percent yield on OFZ bonds (see *Fig. 44*).

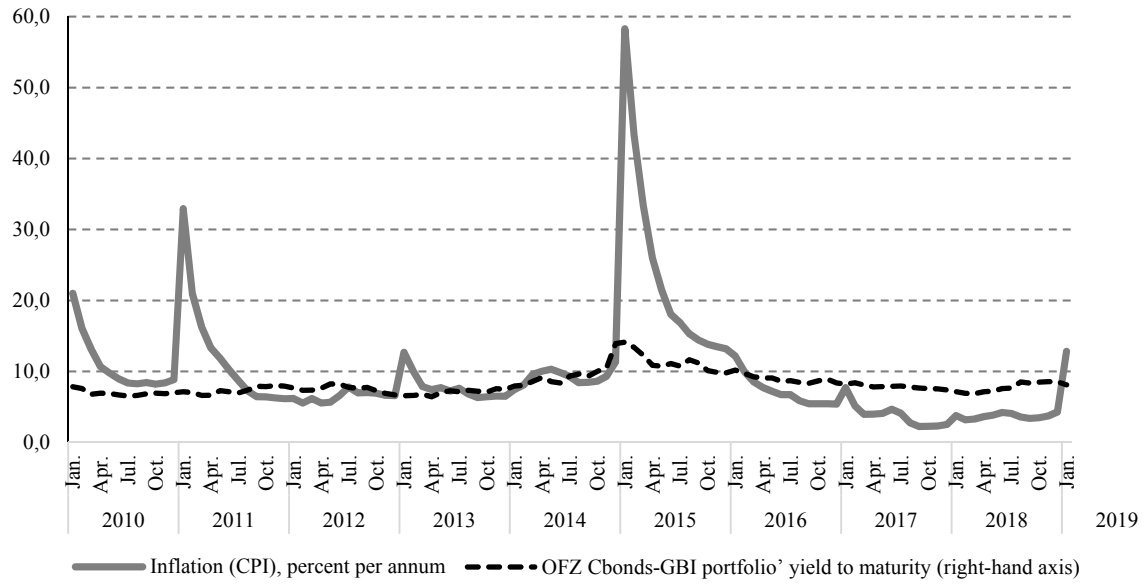


Fig. 44. Inflation and OFZ Cbonds-GBI portfolio's yield to maturity, from January 11, 2010 to January 31, 2019

Source: own calculations using data from Rosstat and CBonds.ru

Despite a complex geopolitical and macroeconomic environment, the government securities market continued to gain momentum and started playing a more important part in financing the fiscal deficit. The Russian government and the Bank of Russia managed to stabilize the foreign exchange market and the financial market over the past 3.5 years. In early 2019, the yield parameters for the OFZ bond market and the Russian Eurobond market complied more or less with the late-2013 parameters.

The opening of nominee accounts (with the central depository) for foreign clearance and settlement organizations in February 2013 encouraged an influx of foreign

[1] In contrast to a regular indicator for inflation, the annualized indicator, as calculated by the linking method on a month-to-month basis, describes the expected rate of inflation for the current year if the inflation rate that was reached in the final fiscal month of the year (in January 2019, for this case) continues. The actual rate of inflation stood at 5.0% year-on-year in January 2019, according to data from Rosstat.

investments into the internal sovereign debt market. The proportion of non-residents in the secondary OFZ bond market increased from 6.5 percent in July 2012 to 28.1 percent in May 2013 (see *Fig. 45*)[1].

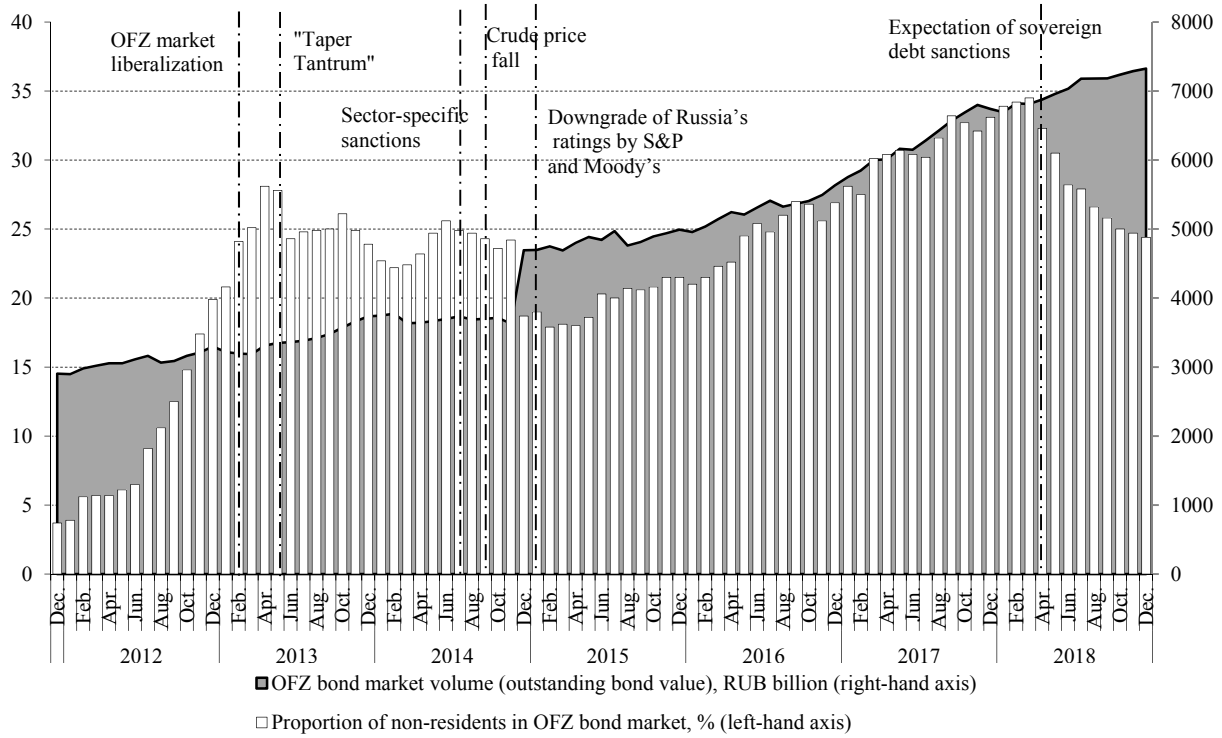


Fig. 45. Proportion of non-residents in OFZ bond market, from February 2012 to December 2018

Source: own calculations using data from the Bank of Russia and Moscow Exchange.

The proportion of non-residents saw a marginal decline since May 2013 to 24.9 percent in December 2013, driven by developments in the global financial market that were related to capital drain from emerging market economies after the U.S. Federal Reserve announced it was raising the key interest rate. A spate of events took place in 2014 to January 2015 that had an adverse effect on the Russian financial market: elevated geopolitical risks due to events in Crimea, the imposition of sector-specific sanctions in July 2014, the crude market collapse since September 2014, devaluation of the Russian ruble, the downgrade of Russia's sovereign rating by S&P on January 25, 2015 and by Moody's on February 20, 2015 and on January 26, 2015. As a result, the proportion of non-residents engaged in transactions involving OFZ bonds

[1] Based on expert evaluation, one cannot rule out the fact that prior to the OFZ bond market liberalization in February 2013 the actual proportion of OFZ bonds held by non-residents was bigger than 6.5%, as was officially reported. The problem lies in that prior to opening Clearstream and Euroclear correspondent securities accounts with the National Settlement Depository, the depository accounting system that was in place at that time did not allow for disclosing information about non-residents' investment in OFZ bonds through banks' depositories that provided foreign investment services.

dropped to 18.7 percent in January 2015. Russia's monetary authorities introduced measures to stabilize the financial and foreign exchange markets, which helped bring non-residents back to the domestic OFZ bond market. As a result, the proportion of non-residents in March 2018 increased to 34.5 percent. However, non-residents started pulling out of the OFZ bond market after statements were made about possible sanctions in April 2018 that were supposed to restrict buying of Russian government bonds. As of December 2018, the proportion of non-residents dropped to 24.7 percent[1]. In addition, as noted above, the expected restriction on purchasing Russian government securities by foreign investors had not been enacted as yet.

In this context, further prospects of growth in the domestic OFZ bond market will rely largely on successful resolution of the problem of luring domestic institutional investors and, in part, individuals to the OFZ spot market.

3.3.4. Market for units/shares held by exchange-traded funds

Attempts have been made since 2003 on the Moscow Exchange to launch an exchange-traded market for trading in units/shares held by exchange-traded funds that is similar to the successful foreign organized market for Exchange-Traded Funds (ETFs)[2]. Over the past 16 years, however, this MOEX market segment has not acquired any significance as yet, with merely RUB 12.7 billion of the 2018 overall volume of trading in units held by exchange-traded funds, which is 0.004 percent of the overall volume of trading in stocks and bonds (see *Fig. 46*). The downturn of this market segment after 2014 was due to common liquidity problems facing the exchange-traded market as well as Bank of Russia's tighter supervision over manipulations of stock-exchange quotations for units held by closed-end funds. Only 14 out of 105 ETFs eligible for listing on the exchange in 2008 were traded in December 2008, including two exchange-traded unit funds. In addition, according to recent available data from the Bank of Russia, the overall number of closed-end funds stood at 1109 and the number of open-end and interval funds was 357, as of June 30, 2018[3]. Unsuccessful attempts to establish the exchange-traded market for units held by ETFs, particularly closed-end funds with an overall net asset value of RUB 2.8 trillion, poses a material risk to their investors because the secondary market is the only possible way for closed-end funds' investors to early pull out their money.

The key difference between the MOEX exchange-traded collective-investment market project and more successful similar projects on the New York Stock Exchange, Nasdaq Stock Market, Euronext, London Stock Exchange and many other exchanges lies in attempting to include units held by classic open-end and closed-end funds in the

[1] Bank of Russia. Financial Stability Review in Q2-3 2018, No. 2(13).
[2] The market for units/shares held by ETFs became the principal market in terms of volumes of traded financial instruments on a few global stock exchanges, including, for example, NASDAQ.
[3] Bank of Russia. Review of Key Indicators of Unit Investment Funds and Joint-stock Investment Funds. Information and analytics. Q2 2018. Available at URL: https://www.cbr.ru/Content/ Document/ File/62919/review_paif_18Q2.pdf

basket of exchange-traded instruments, whereas in other countries, listed units/shares held by exchange-traded funds are governed by special regulations that cover specific risks of listing such financial instruments[1]. The same applies to special types of investment funds, such as exchange traded funds (ETFs) and real estate investment trusts (REITs). It was not until 2018 that exchange traded funds (ETFs) governed by Russian laws and regulations kicked off for the first time as part of pilot projects of asset managers, such as Sberbank Asset Management and Alfa Capital[2]. No legal framework has so far been established in Russia for funds, such as REITs, which sets back in many ways the development of a modern market for units/shares held by closed-end funds.

The Moscow Exchange runs since 2015 a market for trading in units/shares held by Ireland-registered ETFs managed by FinEx Investment Management LLP, and Luxembourg ETFs managed by Fuchs Asset Management. The exchange-traded market for trading in the above financial instruments somewhat outperforms volumes of transactions involving units held by exchange-traded funds, however, in 2018 this exchange-traded market segment also experienced a hard downturn, and the question of establishing a liquid exchange-traded market for trading in these instruments remains open (see *Fig. 46*).

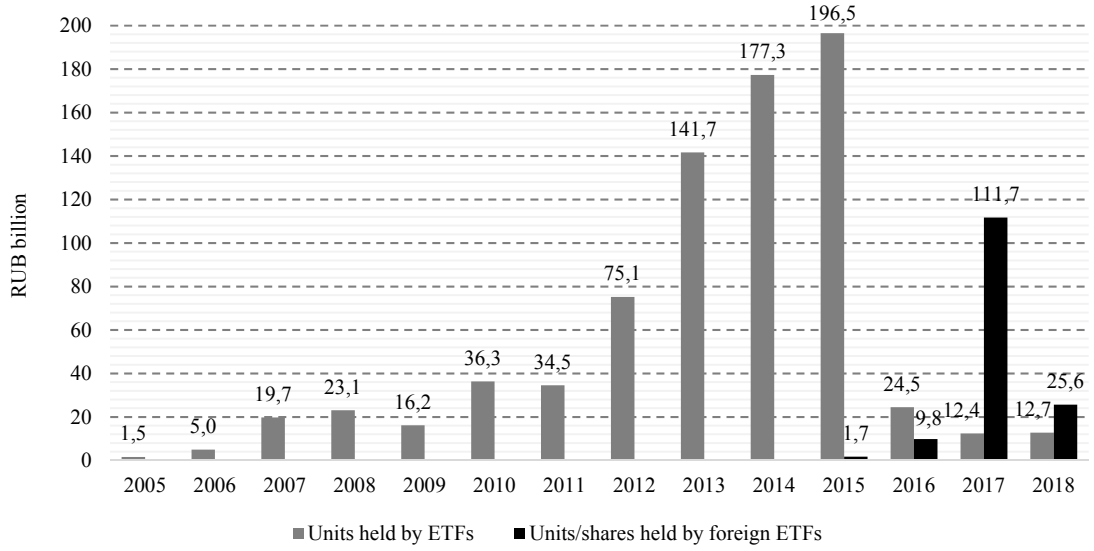


Fig. 46. Volumes of exchange-traded transactions involving units held by exchange-traded funds and units/shares held by foreign exchange-traded funds on Moscow Exchange, 2005–2018, RUB billion

Source: own calculations using data from the Moscow Exchange.

[1] More details can be found in Part 1, Economics of Investment Funds /A.E. Abramov, K.S. Akshantseva, M.I. Chernova, D.A. Loginova, D.V. Novikov, A.D. Radygin, Y.V. Sivai: under general editorship of A.D. Radygin. – M.: Delo Publishing House RANEPA, 2015.
[2] Gaidayev V. Foreign currency move to ETFs. Kommersant, November 15, 2018.

3.4. FORTS market

The recent years' negative trend towards decline in the FORTS market volume was reversed in 2018. The volume of exchange-traded futures increased 6.1 percent from RUB 77.6 trillion in 2017 to RUB 82.4 trillion in 2018; the volume of options contracts remained nearly unchanged (RUB 6.9 trillion) over the same period of time. In 2017, the futures market fell 29.1 percent, while the options market rose 18.9 percent year-on-year. The growth in the futures market in 2018 was spurred by a 312 percent increase in volumes of market contracts involving equity instruments and by a 28.5 percent rise in volumes of commodity futures. Trading in Light Sweet Crude Oil futures and in US500 index futures kicked off on the Moscow Exchange in 2018. However, trading volumes in 2018 did not reach the 2016 peak volumes. The growth in this financial market segment was hampered by a lack of major domestic institutional investors as well as because foreign portfolio investors pulled out of Russian investment assets.

The FORTS market in 2018 was driven, first of all, by the introduction of new financial instruments, such as oil, gold and S&P500 index futures. In addition, there was growing demand for index futures as a hedging tool suited for market participants amid uncertainties arising from anticipation of sanctions that triggered foreign capital drain. Excessive volatility in global financial and commodity markets also contributed to higher demand for commodity and index futures. While there was significant increase in interest-rate risks in financial markets in 2018, no noticeable progress was achieved – nor was it achieved in previous years – in the sector of interest rate futures and options. Key headwinds to their development include a lack of reliable indicators for interbank market rates as well as major investors that would be prepared to take on interest rate risks. Despite the fact that many financial organizations and nonfinancial entities are in heavy need for hedging their contracts against interest rate rise, none of the market participants is prepared to buy the risks.

In the futures market, the proportion of transactions involving index instruments increased insignificantly from 21.1 percent in 2017 to 21.9 percent in December 2018 (see *Fig. 47*). Some months saw the proportion of such contracts in the overall FORTS market transaction volume soar when the domestic equity market was faced with elevated downturn risks due to sanctions. For example, the proportion reached 30.5 percent in February and 26.2 percent in October. The same period of time saw the proportion of commodity futures rise from 26.6 percent to 31.3 percent, foreign currency futures drop from 47.4 percent to 42.6 percent, and futures on some securities fall from 5.0 percent to 4.2 percent.

No major changes in terms of transaction volume took place in the MOEX options market during the year. The proportion of commodity options picked up from 3.0 percent to 7.2 percent, the proportion of FX options increased from 23.1 percent to 39.1 percent (see *Fig. 48*). FX options constitute a high-risk speculative instrument that was much of a replacement for market participants' fading interest in forex broker services because of tighter regulatory burden on their profession. However, the proportion of index options contracts dropped from 68.5 percent to 53.0 percent.

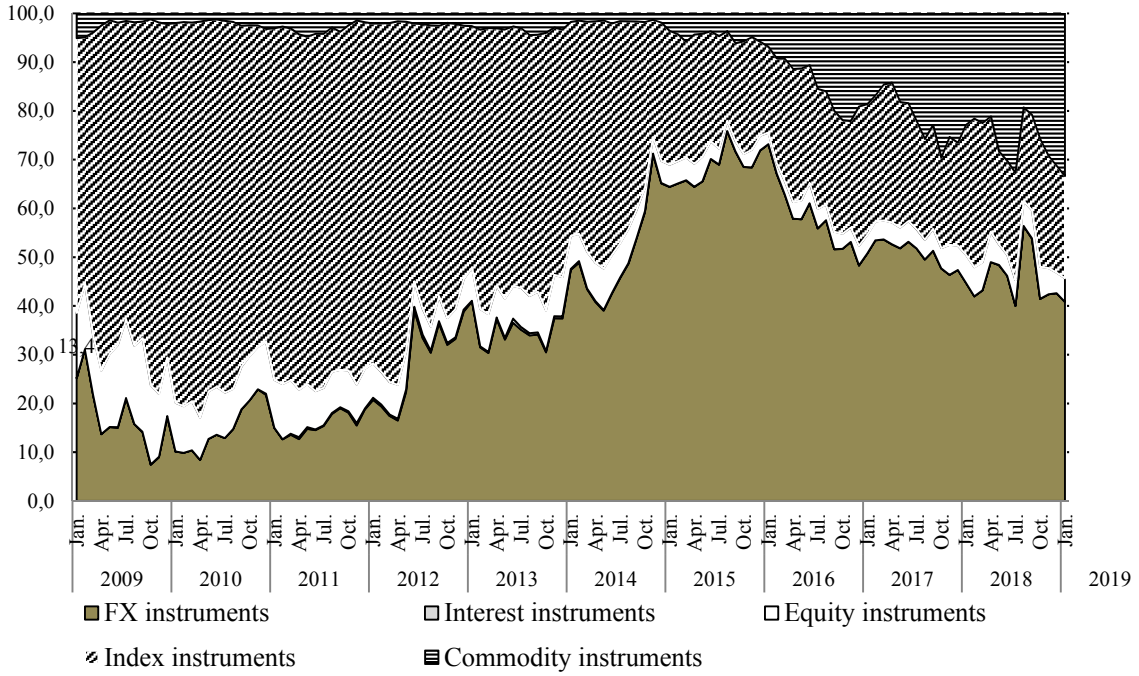


Fig. 47. Structure of MOEX futures market, from January 2009 to January 2019, as a percent of transactions value

Source: own calculations using data from the Moscow Exchange.

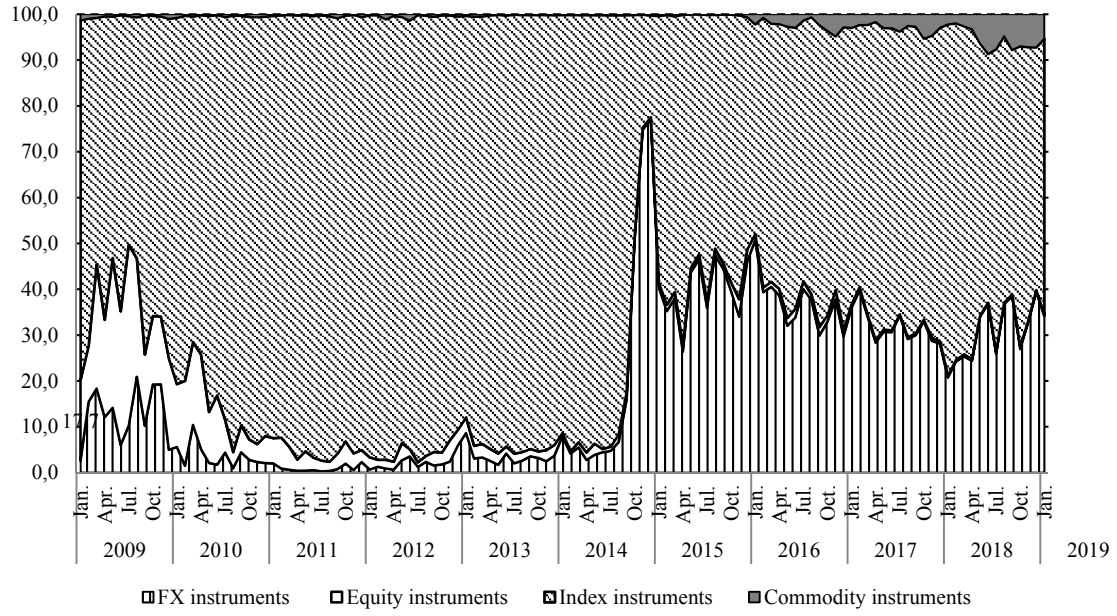


Fig. 48. Structure of MOEX options market, from January 2009 to March 2018, as a percent of transactions value

Source: own calculations using data from the Moscow Exchange.

3.5. Financial intermediaries and infrastructure

The number of professional equity market participants, including their professional licenses, continued to decline in 2018 (see *Fig. 49* and *Table 13*). The number of broker licenses decreased by 13.8 percent from 384 in 2017 to 331 in 2018, the number of dealer licenses fell 13.7 percent from 424 to 366, and the number of trust management licenses was down 17.2 percent from 279 to 231.

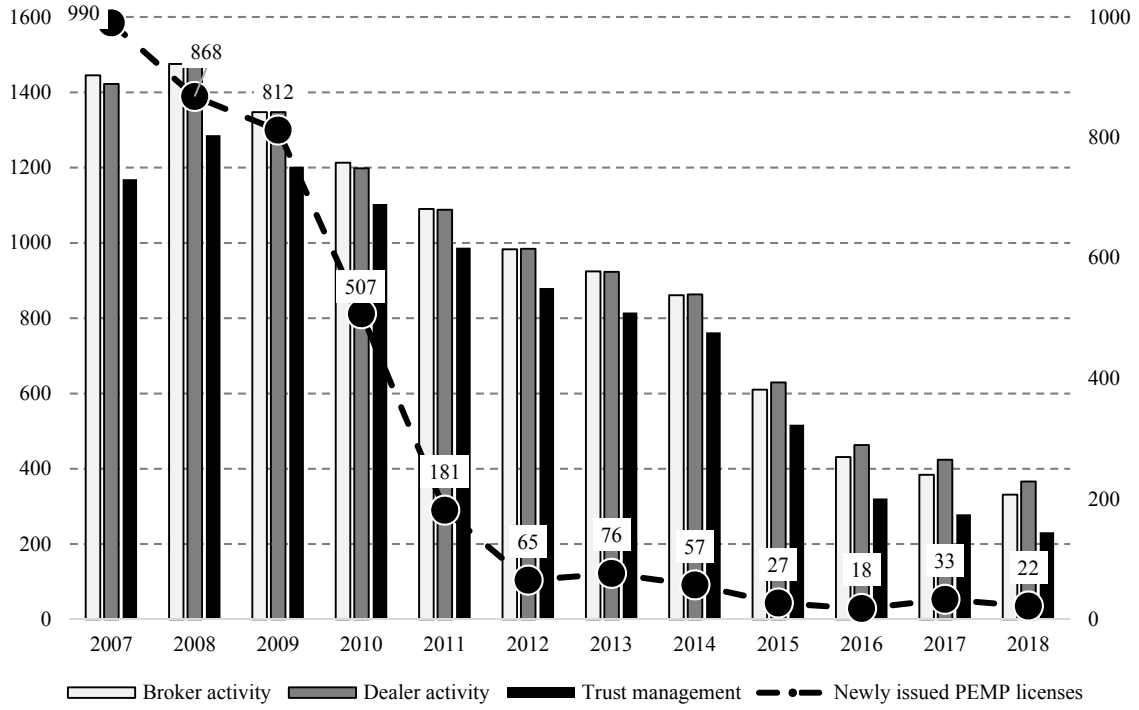


Fig. 49. Number of broker, dealer, trust management licenses (left-hand axis) and number of professional equity market participant licenses (right-hand axis) in 2007–2018

Source: own calculations using data from NAUFOR and the Bank of Russia.

The decrease in the number of PEMP licenses after the 2008 crisis was in large part triggered by the overall trend towards slowdown of the Russian economy and decline in the contribution to the economy by the equity market as a tool to facilitate and reallocate market investments. A reform of financial market regulation was undertaken, whereby a mega-regulator introduced – the Bank of Russia vested with powers, as of September 1, 2013, to exercise key functions, such as regulation and oversight over all the financial market segments. While the reform did not contribute much to a major *crackdown on* unreliable financial intermediaries in the equity market, it got the ball rolling. It follows from *Table 13* that in five years (2014–2018) since the mega-regulator

was introduced, the total number of cancelled broker licenses was 593 versus 551 licenses cancelled within 5 years between 2009 and 2013, that is, there was an increase of as little as 7.6 percent. At that time, the total number of cancelled dealer licenses increased 1.8 percent from 547 to 557, securities trust management licenses were up 24.0 percent from 471 to 584, with a 10.5 percent increase in the total number of the above three types of professional licenses from 1569 to 1734. The fact that most of the cancellations of the professional equity market participant (PEMP) license was initiated by license holders that quit the business suggests that the introduction of the mega-regulator ensured to a greater extent the consistency of reduction in the number of license holders.

Table 13

Number of broker, dealer, trust management licenses and number of newly issued professional equity market participant (PEMP) licenses in 2007–2018

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Broker licenses	1445	1475	1347	1213	1090	983	924	861	610	431	384	331
Dealer licenses	1422	1470	1347	1198	1088	984	923	863	629	463	424	366
Securities trust management licenses	1169	1286	1202	1103	987	880	815	762	517	321	279	231
New PEMP licenses issued (right-hand axis)*	990**	868	812	507	181	65	76	57	27	18	33	22

* Includes 4 types of activity, namely broker, dealer, securities trust management and depositary activities.
** According to data for 2006 from Russia's Federal Financial Markets Service (FFMS).
Source: own calculations using data from NAUFOR and the Bank of Russia.

A more serious problem is not so much cancellation of old PEMP licenses, most of which are cancelled by license holders, but a dramatic reduction in the number of new license issuances to financial organizations entering the market. According to available data, the introduction of mega-regulator led to a drastic reduction in market entries of new companies prepared to compete with existing market participants. The foregoing reveals the weakness of new market regulatory system that hampers competition through heavy administrative constraints to the entrance of new participants focusing on cutting edge fintech technologies. While 1641 various types of new licenses to conduct professional activities in securities market were issued in 2009–2013, as little as 157 (10.5 times less) licenses were issued in 2014–2018 since the mega-regulator was introduced.

Given a bounded inflow of new high-tech market players into the equity market, the broker services market remained a heavily concentrated market faced with competition constraints. The proportion of five largest brokers in the overall number of individual customers increased from 38.6 percent in 2008 to 57.2 percent in 2018, as the proportion of top-10 brokers rose from 49.9 percent to 70.5 percent (see *Table 14*).

During the same period of time, top-5 brokers saw an increase from 46.9 percent to 71.6 percent and top-10 brokers saw a rise from 62.9 percent to 90.2 percent in the

number of active customers (individuals who close at least a single transaction a month). In 2018, the proportion of top-5 and top-10 brokers in individual investment accounts was 84.6 percent and 94.4 percent, respectively.

Table 14

Proportion of 5 and 10 largest brokers in number of customer accounts, percent

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
1. Proportion in total number of broker's customers, percent												
Top-5 brokers	41.6	38.6	63.4	59.3	60.8	62.2	62.3	61.0	58.8	59.1	58.3	57.2
Top-10 brokers	51.0	49.9	75.8	73.7	75.8	78.5	78.2	76.3	72.3	71.4	68.6	70.5
2. Proportion in number of active customers, percent												
Top-5 brokers	41.9	46.9	63.0	63.8	65.2	66.8	69.1	66.0	67.6	65.9	76.7	71.6
Top-10 brokers	57.9	62.9	80.1	81.7	83.2	84.1	85.8	80.0	79.9	76.5	88.5	90.2
3. Proportion in total number of personal investment accounts (PIA), percent												
Top-5 brokers									84.2	82.3	84.0	84.6
Top-10 brokers									91.2	92.2	95.9	94.4

Source: own calculations using data from the Moscow Exchange.

Unfortunately, the Moscow Exchange does not disclose (since July 1, 2018) data – citing Bank of Russia Regulation No. 4622-U of November 27, 2017 – that it used to disclosed since 2005. The data are suitable for measuring the proportion of every trading participant in the total volume of exchange-traded transactions involving stocks and bonds. Now that the data are no longer disclosed, it impossible to assess the level of competition between brokers in the stock-exchanged equity and bond markets. The measures that restrict disclosure of public information on competition indicators for trading participants can be considered as a negative signal about trading efficiency for private investors.

Given heavy concentration of broker business in largest banks and non-bank financial companies, the competitive struggle between such companies increased considerably in 2017–2018. In 2017, Tinkoff Bank launched a new innovative product for its customers engaged in the financial market. The product is a software application whereby private investors can easily obtain information and decide to buy stocks of Russian and foreign companies. The introduction of the product tilted drastically the balance of power between largest brokers (see *Fig. 50*). The partnership between Tinkoff Bank – which held no broker license until May 2018 – and BKS Broker allowed the latter to take the lead in terms of the number of customers in the market as of January 2018 and to leave multi-year leaders, such as Sberbank of Russia and VTB, trailing behind. At the same time, it took Tinkoff Bank, as a broker license holder, as little as few months to jump into top-3 companies in terms of the number of customers, while it took major brokers years to do the same. The foregoing developments prompted Sberbank of Russia and a few other market participants to double down on their efforts to acquire new customers. Sberbank, in particular, expanded considerably its branch network for private investors in the equity market. Without going into analyzing the quality of services, note that the above case is a good illustration of strong effect of "from-the-bottom" innovations on the competition and the performance of financial intermediaries. It was this effect that triggered the 2018 increase in the number of new individuals in the equity market.

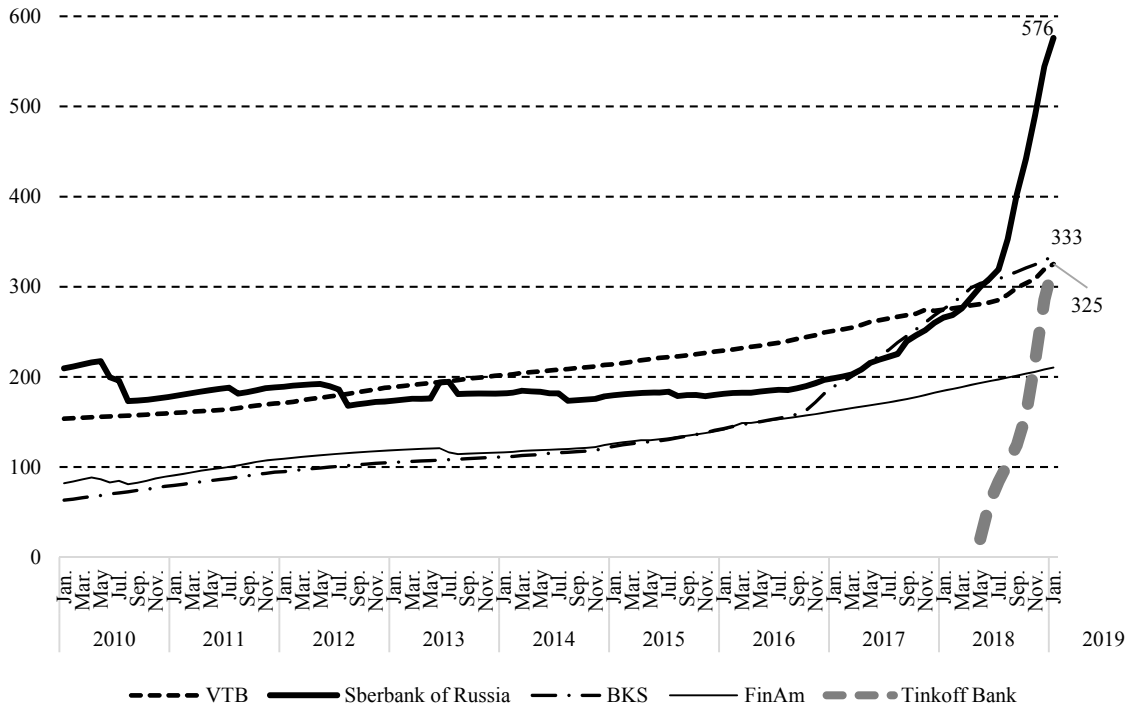


Fig. 50. Number of top-5 brokers' customer accounts

Source: own calculations using data from the Moscow Exchange.

In 2011, the MICEX stock exchange completed a merger deal with the RTS stock exchange, which had a positive impact on the Russian equity market. The deal simplified trading in the equity and FORTES markets. The merger helped concentrate all the liquidity on trading participants' accounts that is needed for transactions in the government securities market and the corporate securities market, as well as the FORTES market and the FX market within unified settlement and trading systems. The diversification of the unified stock exchange as to servicing transactions involving various cash and investment assets improved its financial soundness against a backdrop of overall decline in trading volumes on global stock exchanges and investors pulling out of risk-bearing assets.

Apart from positive changes, the RTS-MICEX merger had ambiguous effects on the domestic financial market. First and foremost, there is no more competition between the two stock exchanges, which used to be a strong driver for trading for the benefit of domestic investors and financial intermediaries.

The Moscow Exchange has an advantage over its global rivals because of diversification of its market segments. This type of business model, however, poses more risks, such as decline in market incentives to promote less marginal market segments, which currently can be witnessed in a smaller equity market's contribution to the overall trading turnover. The Moscow Exchange's structure underwent changes that were driven by factors, such as high exposure to risks and low returns on Russian securities, elevated volatility of the ruble exchange rate and financial assets, still high

level of banking system refinancing, the freeze on pension savings, and scarce sources of domestic savings. The capital market saw its proportion in the overall volume of exchange-traded transactions shrink from 13.2 percent in 2010 to 4.1 percent in January 2019 (see *Table 15*).

Table 15

Moscow Exchange structure, percent

	2010	2011	2012	2013	2014	2015	2016	2017	2018	Jan.19
Equity market	**13.2**	**10.3**	**6.5**	**5.2**	**3.6**	**3.0**	**2.8**	**4.0**	**4.7**	**4.1**
of which:										
Equities, Russian depositary receipts (RDR) and units	8.0	6.6	3.1	1.9	1.8	1.4	1.1	1.0	1.3	1.3
Bonds	5.2	3.7	3.4	3.3	1.9	1.6	1.7	3.0	3.5	2.9
Secondary trading	3.4	2.9	2.8	2.7	1.5	1.2	1.1	1.2	1.2	1.0
Equity market	1.8	0.8	0.6	0.6	0.3	0.4	0.6	1.7	2.3	1.9
Foreign exchange and money market	**72.0**	**70.6**	**80.0**	**84.3**	**85.6**	**83.3**	**83.6**	**86.5**	**84.8**	**85.7**
of which:										
Money market	33.9	41.3	48.3	50.7	45.7	38.0	44.8	47.3	44.3	46.7
Repos	31.5	38.3	45.8	44.8	32.0	26.4	34.8	38.3	36.0	37.8
Lending market	2.4	3.1	2.5	2.8	3.7	4.8	4.4	4.2	6.3	4.1
FX market	38.1	29.3	31.6	33.7	39.9	45.4	38.8	39.2	40.5	39.0
Spots	18.0	15.8	16.6	12.4	13.6	15.1	12.6	8.8	10.1	9.5
Swaps	20.1	13.4	15.0	21.3	26.3	30.3	26.2	30.3	30.4	29.5
FORTS market	**14.8**	**19.1**	**13.5**	**10.5**	**10.7**	**13.7**	**13.6**	**9.5**	**10.4**	**10.0**
Derivatives	**0.0**	**0.0**	**0.0**	**0.0003**	**0.0002**	**0.001**	**0.002**	**0.01**	**0.1**	**0.2**
Commodity market	**0.001**	**0.003**	**0.006**	**0.005**	**0.003**	**0.02**	**0.02**	**0.01**	**0.02**	**0.03**
TOTAL	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: own calculations using data from the Moscow Exchange.

In contrast, the proportion of the FX market and the money market increased from 72.0 percent in 2010 to 85.7 percent in January 2019. In addition, the period under review saw the proportion of the FX market and the money market rise from 38.1 percent to 39.0 percent and from 33.9 percent to 46.7 percent, respectively. An unstable ruble exchange rate and granting private customers of brokers and banks access to the FX market contributed to the growth in the FX market segment. The growth in the money market segment was driven by cash liquidity in banks and accelerated growth in CCP-cleared repo transactions. From January 2010 to January 2019, the proportion of transactions involving derivatives in total trading volume fell from 14.8 percent in 2010 to 10.0 percent in 2018. However, no success has yet been achieved in launching a liquid interest rate derivatives market.

The merger of the two stock exchanges helped establish a central depository on the basis of the MICEX Clearing House, National Depository Center (NDC) and Depository Clearing Company (DCC) settlement depositories. The central depository status was granted to ZAO National Settlement Depository (NSD), a Russian non-bank financial institution, under executive order No. 12-2761/PZ-I issued on November 6, 2012 by Russia's Federal Financial Markets Service (FFMS). The value of securities safekept at the NSD appreciated by 14.2 percent from RUB 39.4 trillion in 2017 to RUB 45.0 trillion in 2018.

The National Clearing Center (NCC) is another Moscow Exchange's subsidiary. The NCC provides clearing services in the equity market since November 2011 and in the

FORTS market since December 2012. The Bank of Russia recognized ZAO National Clearing Center as the sole qualified central counterparty in October 2013. The NCC's mission is to provide market participants with integrated clearing services in various financial market segments, including a unified collateral and unified positions of participants when providing them with services on all the MOEX exchange-traded markets and OTC markets.

Table 16 presents drastic changes in the structure of PAO Moscow Exchange. Following the merger in 2011, the Bank of Russia and some other government related entities owned collectively a 59.0 percent equity interest in the Moscow Exchange, with the remainder (41.0 percent) held by Russian trading participants and other residents. In 2018, non-residents increased their interest to 56.4 percent, while government related entities held an equity stake of 43.4 percent. That said, the main problem with the MOEX ownership structure is a lack of private Russian financial intermediaries that are major contributors to the turnover of transactions involving financial instruments on the Moscow Exchange.

Table 16

Shareholders breakdown on Russian stock exchanges before and after merger

	Prior to merger as of 2011		After merger as of February 1, 2012	2013	2014	2015	2016	2017	2018
	OAO RTS	ZAO MICEX							
Government – total	0.0	64.0	59.0	64.5	51.0	53.4	44.3	43.1	43.4
of which:									
Bank of Russia	0.0	28.6	24.3	24.7	12.1	11.8	11.8	11.8	11.8
Sberbank of Russia	10*	7.5	10.4	9.8	10.0	10.0	10.0	10.0	10.0
Vnesheconombank	0.0	10.5	8.7	8.0	8.4	8.4	8.4	8.4	8.4
Non-residents	0.0	0.0	0.0	14.9	25.9	36.0	52.3	56.5	56.4
Residents – private persons	90.0	36.0	41.0	20.6	23.2	10.6	3.4	0.4	0.2
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

***** ZAO IK Troika Dialog acquired by Sberbank of Russia.

Source: own calculations using open source data. The data for an equity interest held by the Bank of Russia, Sberbank of Russia and Vnesheconombank were provided in recent years' Moscow Exchange reports; the data for an equity interest held by the government and non-residents in 2013–2017 were provided by Bloomberg; the data on an interest held by OAO RTS market participants were provided in RTS's reports.

According to the data presented in *Table 17,* what's typically unique for the Moscow Exchange is that the largest national stock exchange is distinguished from world's largest stock exchanges by lacking private financial organizations in its ownership structure. Private entities' (referred to as 'Others' in the Table below) equity stake in the Moscow Exchange is next to none, whereas the state holds the biggest interest, compared to the stock exchanges presented in the Table. Such a unique MOEX ownership structure poses competition risks to not only the Moscow Exchange, but also private financial intermediaries that cannot influence MOEX strategic issues and infrastructure as well as the size of transaction costs.

Table 17

World's stock exchanges ownership structure in 2017, percent

Country	Exchange	Government	Non-residents	Others
Australia	ASX LTD	2.4	56.8	40.8
Argentina	BOLSA Y MERCADOS ARGENTINOS	0.0	74.3	25.7
Brazil	B3 SA-BRASIL BOLSA BALCAO	1.3	75.2	23.6
U.K.	LONDON STOCK EXCHANGE GROUP	1.3	62.9	35.9
Germany	DEUTSCHE BOERSE AG	0.1	93.2	6.7
Hong Kong	HONG KONG EXCHANGES & CLEAR	21.8	72.8	5.5
Greece	HELLENIC EXCHANGES - ATHENS	0.0	86.4	13.6
India	BSE LTD	16.8	63.7	19.5
Canada	TMX GROUP LTD	0.1	30.1	69.8
Kenya	NAIROBI SECURITIES EXCHANGE	0.0	93.8	93.8
Columbia	BOLSA DE VALORES DE COLOMBIA	0.0	61.3	38.7
Malaysia	BURSA MALAYSIA BHD	28.0	65.6	6.4
Mexico	BOLSA MEXICANA DE VALORES SA	0.0	98.6	1.4
UAE	DUBAI FINANCUAL MARKET PJSC	0.0	1.6	98.4
Pakistan	PAKISTAN STOCK EXCHANGE LTD	0.0	0.0	100.0
Poland	WARSAW STOCK EXCHANGE	0.0	33.4	66.6
Russia	**Moscow Exchange**	**43.1**	**56.5**	**0.4**
Romania	BURSA DE VALORI BUCURESTI SA	0.0	73.8	26.2
Singapore	SINGAPORE EXCHANGE LTD	1.3	38.8	59.9
U.S.A.	CME GROUP INC	1.0	17.5	81.5
U.S.A.	NASDAQ INC	0.7	43.4	55.9
Philippines	PHILIPPINE STOCK EXCHANGE IN	0.0	11.3	88.7
Chilie	BOLSADA COMERCIO DE SANTIAG	0.0	35.3	64.7
South Africa	JSE LTD	0.0	65.8	34.2
Jamaica	JAMAICA STOCK EXCHANG LTD	0.0	0.0	100.0
Japan	JAPAN EXCHANGE GROUP INC	10.5	50.7	38.8

Source: own calculations using data from Bloomberg.

The Moscow Exchange has in recent years been seeking to maintain a high level of dividend yield on its stocks in order to keep them attractive for foreign investors. The 2017 dividend payout ratio stood at 83 percent, the highest ratio among Russian publicly traded companies. However, high dividend payouts dampen companies' investment resources, which may take its toll on their market capitalization. This phenomenon was witnessed with the MOEX's stocks, which for the first time since November 2018 started showing a negative accumulated returns, compared with the MOEX Russia Index (see *Fig. 51*).

Therefore, financial intermediaries and the infrastructure in the domestic market started to encounter more issues of constraints to the market growth, difficulties caused by long-run foreign investment drain. They achieved certain success in acquiring private investors in past years. However, more serious institutional changes in the market, including changes aimed at enhancing the competition as a growth factor, may be needed to consolidate the success.

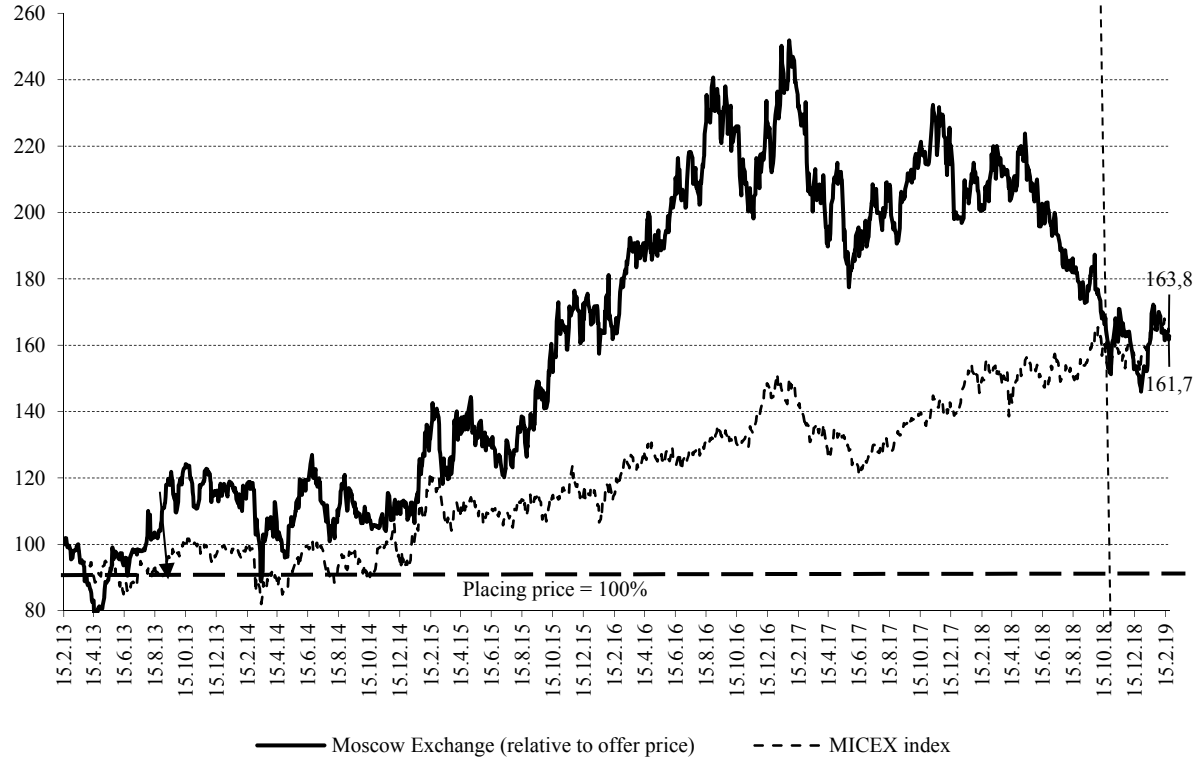


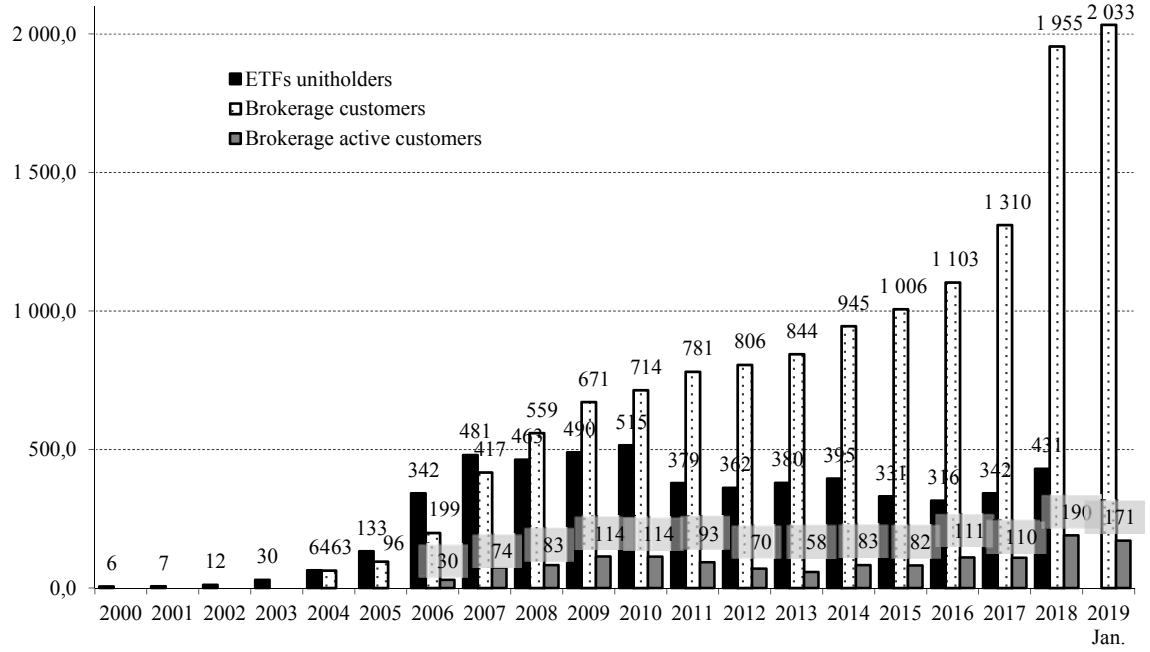
Fig. 51. MOEX stock price and MOEX Russia Index,
from February 15, 2013 to February 22, 2019
(February 15, 2013 = 100 percent)

Source: own calculations using data from the Moscow Exchange and FinAm.

3.6. Investors

3.6.1. Private investors

Fig. 52 presents data on the number of investor individual accounts opened with brokers and on the number of personal accounts in ETF unitholder registers. From December 2017 to January 2019, the overall number of brokers' retail customer accounts on the Moscow Exchange increased 56.2 percent from 1.3 million to 2.03 million. The increase was due to not only decline in the appeal of bank deposits but also the aforementioned competition between brokers for new customers. During the same period of time the number of active customer accounts with exchange-traded brokers increased 55.5 percent from 110,000 to 171,000. According to our estimates, the number of market retail investors in ETFs rose 26.0 percent from 342,000 in 2017 to 431,000 in 2018.



Note. The 2018 data on the number of market unitholders are estimated data; no data for January 2019 are available.

Fig. 52. Number of market retail customers in management companies and brokers

Source: own calculations using data from the Moscow Exchange and Expert Rating Agency.

The adoption of breakthrough amendments to the legislation made it the most prominent event in five years in the private savings sector, whereby substantial personal income tax incentives came into force since January 1, 2013 that cover income from securities held for at least three years, as well as tax incentives in force since January 1, 2015 that cover individuals' contributions to so-called personal investment accounts (PIA)[1]. Under Federal Act No. 420-FZ of December 28, 2013 "On Amendments to Article 27.5-3 of the Federal Law "On Securities Market" and to Parts 1 and 2 of the Tax Code of the Russian Federation", returns on investment in newly acquired securities shall be exempted from taxation, provided that an individual holds them within at least three years. The cap for tax incentive is set at RUB 3 million for each year in which securities (units) are held. The personal income tax incentive is not applied to incomes from dividends on shares and coupon yield payments on bonds, except where a person holds such securities indirectly through an open-end fund. The said tax incentive is therefore most beneficial for open-end ETFs unitholders investing for a longer term. Furthermore, under the Market Securities Federal Act and the Tax Code of the Russian Federation, individuals shall be entitled since January 01, 2015 to

[1] The status of these accounts is similar to the following two investment mechanisms that are commonly employed in many countries: individual retirement accounts (IRAs) in the United States, Poland, South Korea, Canada, etc, as well as individual savings accounts (ISAs) in the U.K. Given the short term of savings on IISs, this product resembles mostly ISAs rather than IRAs.

open PIAs with brokers and trust managers that are eligible for personal income tax incentives. Such accounts can be topped up to 400,000 rubles annually. Market participants' efforts in 2018 to increase the deductable amount to RUB 1 million failed.

There were 656,600 PIAs as of end-January 2019 versus 25,900 as of end-May 2015 (see *Fig. 53*), according to data from the Moscow Exchange.

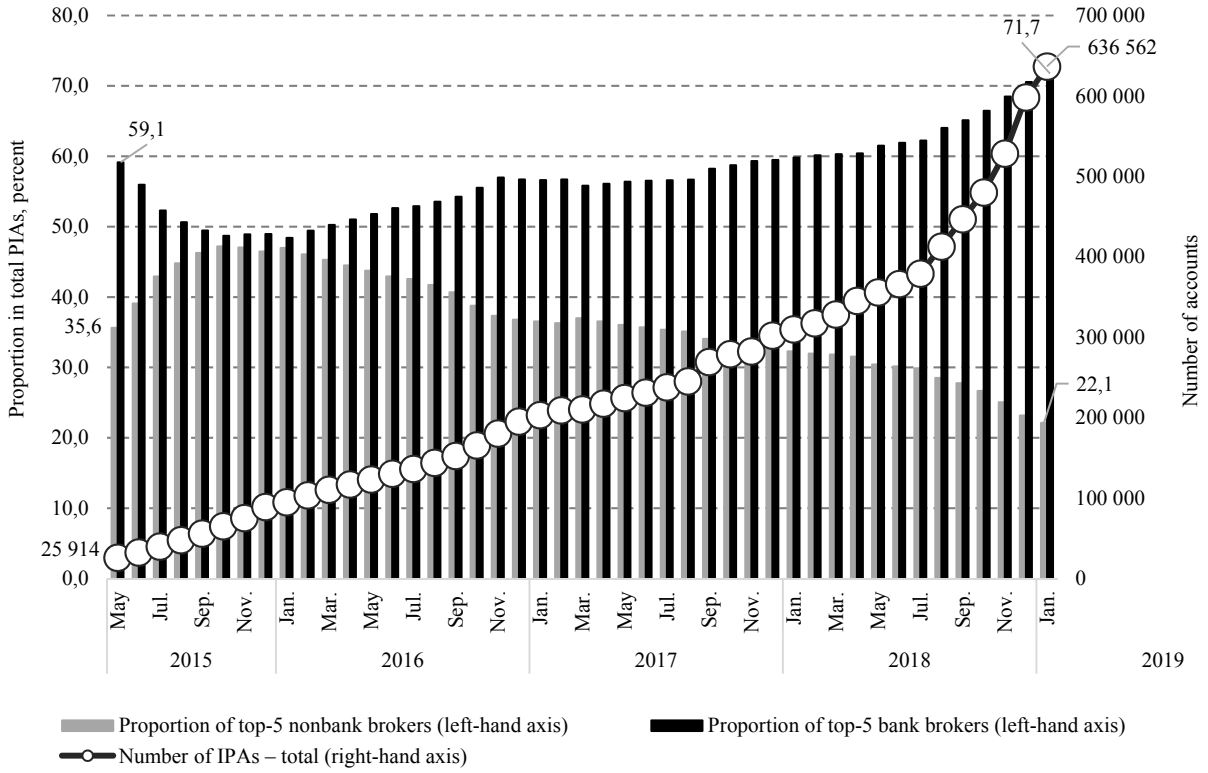


Fig. 53. Number of personal investment accounts, from May 2015 to January 2019

Source: own calculations using data from the Moscow Exchange.

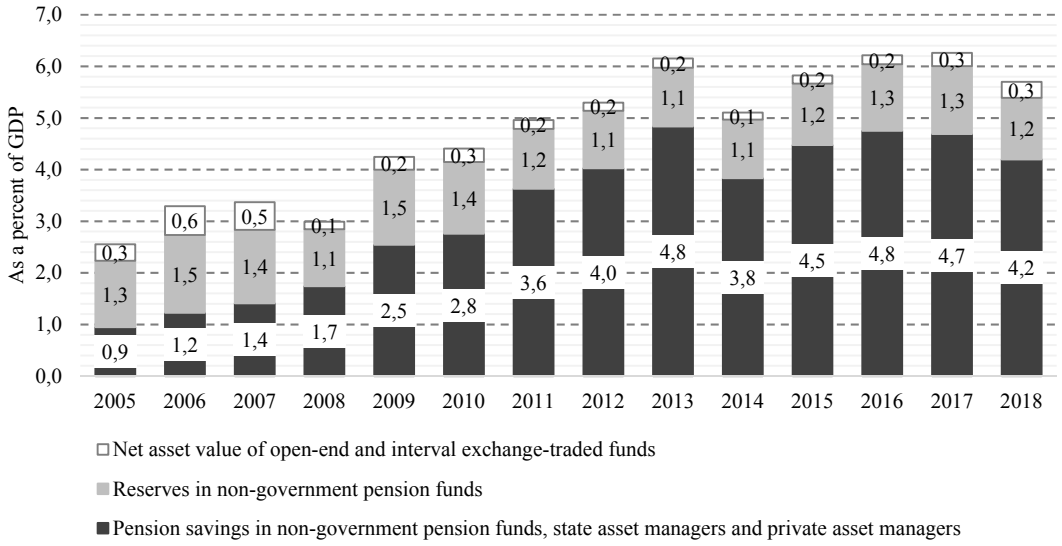
According to data from NAUFOR, in 2018 individuals deposited RUB 80 billion on broker PIAs and trust (management) PIAs, 2.8 times the previous year's amount (RUB 28 billion)[1]. Account holders transferred their assets to 45.5 percent PIAs in 2018 versus 28 percent in 2017. The foregoing suggests that financial intermediaries – administrators of such accounts – had changed their strategy from increasing total number of opened accounts to acquiring customers' tangible assets on the accounts. The proportion of customers' investment in stocks through these accounts contracted from 38 percent in 2017 to 28 percent in 2018. The proportion of corporate bonds increased from 7 percent to 11 percent, while the proportion of OFZ bonds remained at about 20 percent. Exchange-traded units held by local ETFs and foreign ETFs accounted for merely 2–3 percent of broker PIAs.

[1] Sarycheva M. Individuals bring money into the market. Kommersant, March 1, 2019.

Thus, the individuals' market trading experience and the PIA practice show that individuals are prepared to be more actively engaged in the equity market. However, inadequate development of collective investments and the pension savings freeze make it impossible to harness in full the potential of domestic savings. As a result, individuals focus most on short-term and speculative transactions in the domestic equity market, thus posing substantial risks to the given category of investors. Financial intermediaries' business models should be reformed and new standards of their performance introduced and competition in the financial services market increased in order to guide private investors towards longer-term investment strategies.

3.6.2. Domestic institutional investors

Domestic savings were not yet enough to make up for non-residents' slim demand for financial instruments of Russian issuers. In 2018, as shown in *Fig. 54*, domestic institutional investors, such as non-government pension funds, asset managers and exchange-traded funds, saw their assets continue to grow at slower pace. The principal constraints to the growth, in our view, were as follows: pension savings were kept "frozen", there were delays in drafting a supplementary pension legislation, and individuals had no confidence in the collective investment mechanisms in place. As a result, the total value of pension savings, pension reserves and the net asset value of assets held by open-end and interval funds fell from 6.1 percent of GDP in 2013 to 5.7 percent in 2018.



Note. The value of pension savings and pension reserves for 2018 is presented for the first nine months of the year.

Fig. 54. Size of pension savings, pension reserves and net asset value of assets held by open-end and interval ETFs, in 2005–2018, percent of GDP

Source: own calculations using data from Rosstat, the Bank of Russia, Investfunds.ru and Russia's National Pension Fund.

In 2018, non-government pension funds (NGPF) doubled down on their efforts to increase investment (pension savings) in government securities. The proportion of OFZ bonds in NGPF's portfolios increased from 24.3 percent to 37.5 percent from 2017[1]. The above change was caused not only by the fact that the risk-bearing yield on OFZ bonds often outperformed returns on stocks and corporate bonds, but also by "soft power" derived from monetary authorities' efforts to partially replace non-resident investment drain in the OFZ financing source structure. In particular, NGPFs increased their demand for government securities because of the need to pass Bank of Russia's stress tests.

As shown in *Fig. 55*, the August 2015–October 2018 period saw steady investment inflow into open-end and interval exchange-traded funds, with new investors brining in a total of RUB 184.4 billion of capital. The net asset value of open-end and interval exchange-traded funds during that period of time increased by 3.1 times, from RUB 104.4 billion to RUB 320.1 billion. The upturn in the retail ETF industry took place despite a lack of modern system designed to sell units via unit supermarkets and marketplace; regulator's mistakes that affected drastically the contents of publicly available ETFs financial statements; slow development of collective investment analytics; increase in the burden of administrative costs on the industry. Investors started exiting open-end and interval funds from November 2018 to January 2019, in contrast to steady investment inflows during the preceding 3.5 years.

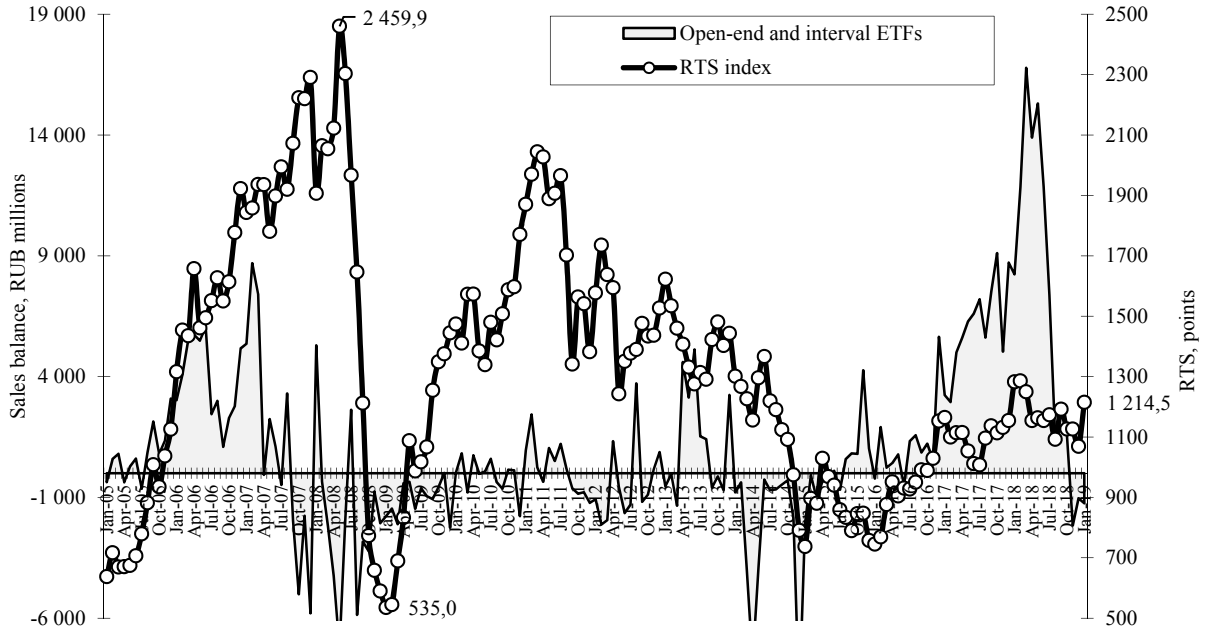


Fig. 55. Private investment cash flows into open-end and interval exchange-traded funds (RUB millions) and RTS Index, from January 2005 to January 2019.

[1] Bank of Russia. Financial Stability Review, Q2-3 2018, No. 2(13).

In *Fig. 56,* the size of accumulated cash flows into foreign (Russia-EMEA-Equity) funds as well as open-end and interval equity funds from December 2004 to December 2018 is used to compare the contribution of foreign and domestic collective investors to Russian stocks. The size of cash flows into foreign and local equity funds was roughly the same until the end of 2007, which ensured a balanced growth in this equity market segment in Russia. From 2007 until mid-2011, however, foreign investment funds saw new inflows continue rapidly to reach USD 14 billion despite temporary ups and downs during the 2008 crisis acute phase, whereas after the onset of the 2008 crisis Russian investors in equity funds were deeply frustrated by the domestic collective investment market and pulled out mostly of equity funds up until May 2017. Things changed since 2017, when foreign equity funds saw intense outflows, whereas local open-end and interval equity ETFs saw inflows.

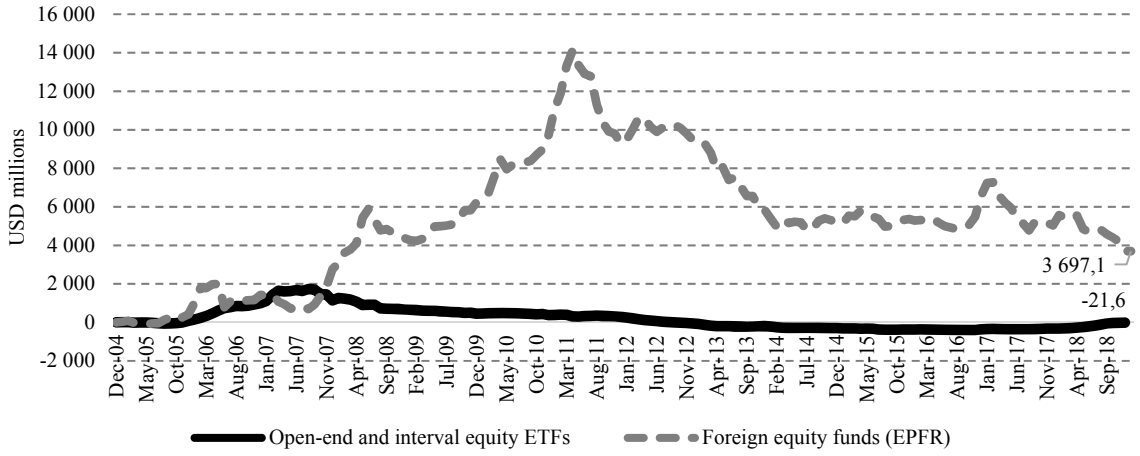


Fig. 56. Cumulative cash inflows into foreign (Russia-EMEA-Equity) funds and open-end and interval equity ETFs, from December 2004 to December 2018, USD millions (December 2004 = 0)

Source: own calculations using data from Investfunds.ru, NAUFOR and Emerging Portfolio Fund Research (EPFR Global).

Thus, given the record of private investment cash flows into foreign (Russia-EMEA-Equity) funds and into local equity funds, the objective of replacing foreign portfolio investment by domestic private savings and collective investment appears to be viable enough as long as an up-to-date ETF regulatory system is in place and administrative and other constraints to ETF promotion are eliminated. In order to make this happen, the regulator should pay as much attention to the collective investment promotion as it does now to individual pension savings projects and the marketplace.

3.6.3. Foreign portfolio investors

Foreign portfolio investors tend to behave in a similar manner in many emerging markets. Their decisions to enter or exit such funds are rather led by common cyclical

pattern and a country's weight in global stock indices than salient features of various countries' economies and issuers[1].

It follows from the data presented in *Fig. 57* that the Russian stock market encountered massive pullouts on the part of foreign funds since mid-2011, according to data from the Emerging Portfolio Fund Research (EPFR). A comparison with stocks of five largest emerging market economies – Brazil, India, China, South Korea and Indonesia – reveals that almost all of them encountered the same issue in nearly the same period of time. This means that the exit of foreign funds from Russia since 2011 was among other things led by common problems that face all the emerging market economies, such as the onset of foreign-exchange and debt crisis in Europe and the appearance of signs of the U.S. economy recovery from recent recession, which encouraged global investors to redirect their portfolio investment from emerging markets economies towards the U.S. and other advanced economies. In Russia, however, this factor was amplified by local problems, such as the adoption of a guided economic development model that was supported at that time by centralized sources of bank funding, coincident with economic deceleration and the exhausted positive effect in the equity market that was driven by a temporary stock price rebound after the 2008 crisis.

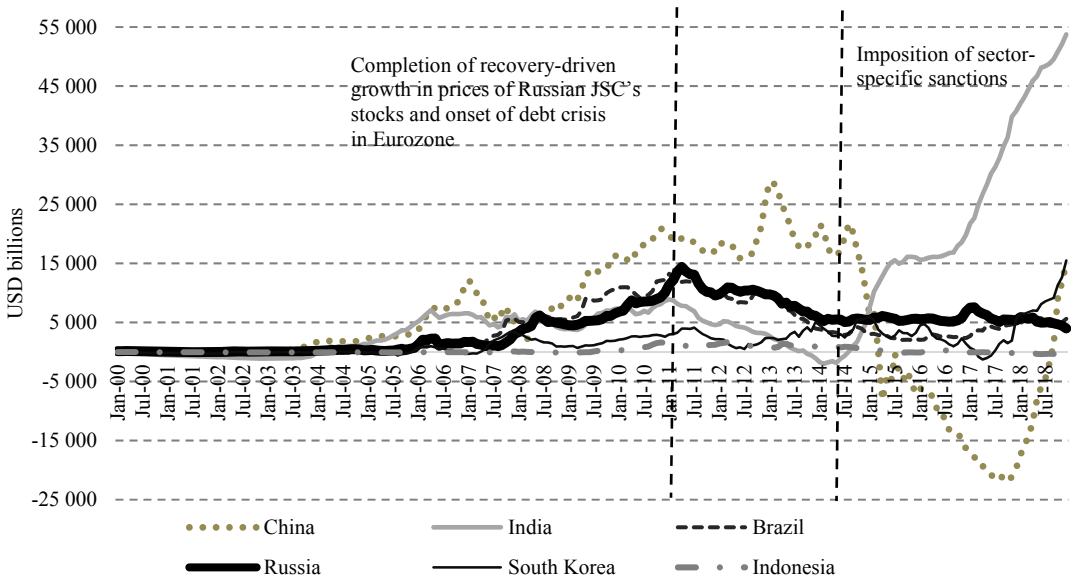


Fig. 57. Accumulated cash flows into foreign investment funds investing in stocks of selected emerging market countries, 2000–2018

Source: own calculations using data from EPFR.

[1] More details on investment strategies of these funds in Russia are provided in Abramov A. Differences in the behavior of domestic and foreign private investors in Russia's equity market. Russian Economic Developments, No. 11, 2014

The appeal of the Russian financial market for foreign investors depends largely on the country's investment climate. Russia achieved a substantial progress in the World Economic Forum's World Competitiveness Ranking (WCR). Russia moved up from 67th place in 2013 to 43rd place in 2018 (see *Fig. 58*). Russia ranked second only to China, leaving the rest of the BRICS states – Brazil, South Africa and India – trailing behind.

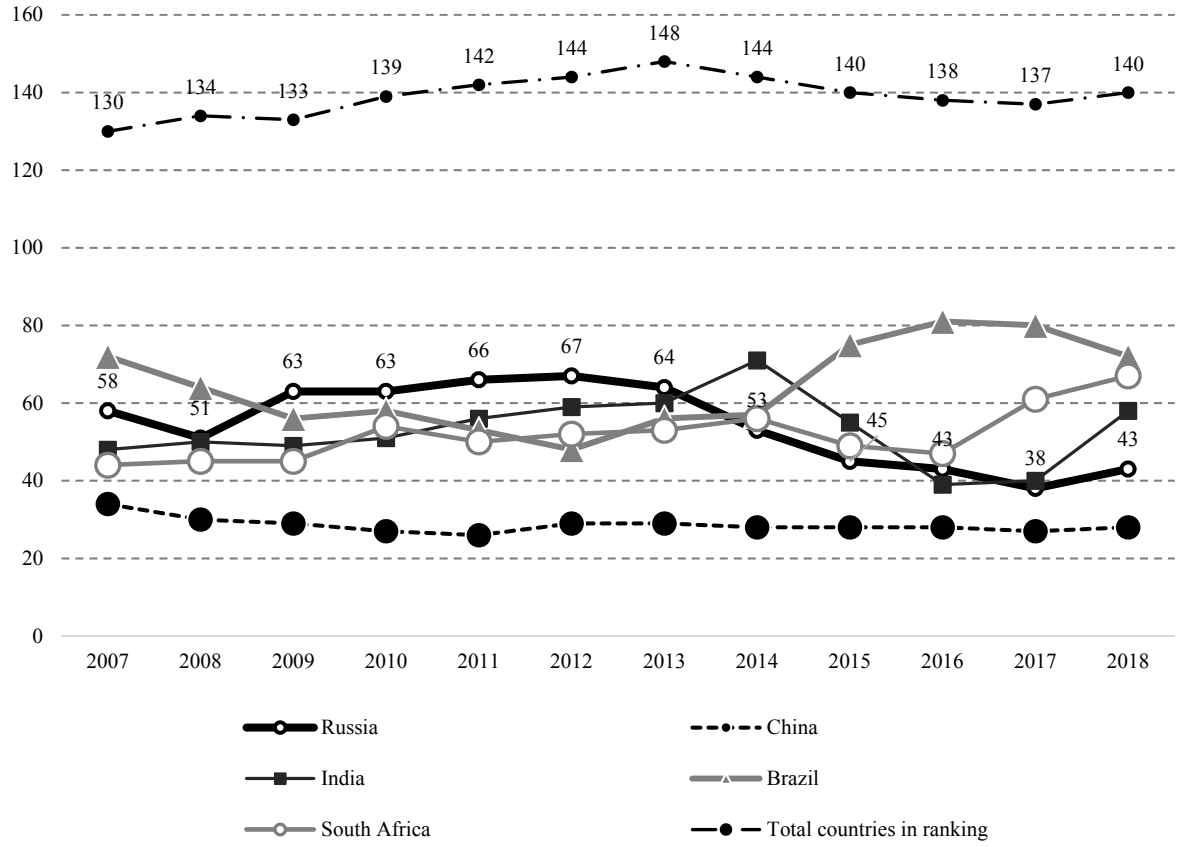


Fig. 58. BRICS countries overall global competitiveness index, according to World Economic Forum's World Competitiveness Rankings 2007–2018

Source: own calculations using data from recent year's Global Competitiveness Report published by The World Economic Forum.

In our previous Russian financial market reviews we selected a few criteria for assessing the investment climate in Russia that dampened U.S. conservative investment in Russian stocks and bonds in the mid-2000s[1]. Calpers, one of the biggest U.S. pension funds that published until 2006 a list of criteria and indicators suitable for making investment decisions in a given emerging market, was used as an example. The list

[1] Russian Economy in 2008. Trends and Outlooks. (Issue 30) – M. IET, 2009, pp. 513–516.

includes judicial independence, application of international auditing and reporting standards, degree of protection of minority shareholders' interests, financing through local equity market, soundness of banks and the effectiveness of stock exchange regulation. Unfortunately, the World Economic Forum has changed substantially its ranking method since 2018, which now makes it difficult to compare the recent WCR with previous year's rankings. We have sorted out only three – judicial independence, strength of auditing and reporting standards and soundness of banks – out of the six investment climate indicators.

One can state that Russia improved the three investment climate quality rankings when compared with the 2013 rankings (see *Table 18* and *Fig. 59*). For example, Russia moved up from 119th place in 2013 to 92nd place in 2018 in terms of judicial independence, from 107th place to 89th place in terms of strength of auditing and reporting standards and from 124th place to 114th place in terms of soundness of the banking system. Overall, the three rankings presented in *Fig. 59* lead to the conclusion that Russia came closer in terms of investment climate to the other major emerging market economies (the BRICS nations).

Table 18

Most challenging issues facing Russia's investment climate, according to World Economic Forum's World Competitiveness Ranking

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Judicial independence												
Russia	106	109	116	115	123	122	119	109	108	95	90	92
China	82	69	62	62	63	66	57	60	67	56	46	45
India	26	43	37	41	51	45	40	50	64	54	53	41
Brazil	89	68	78	76	71	71	65	76	92	79	59	79
South Africa	23	30	38	44	35	27	22	24	24	16	36	48
Strength of auditing and reporting standards												
Russia	95	108	119	116	120	123	107	106	102	103	100	89
China	102	86	72	61	61	72	80	82	80	68	71	75
India	27	30	27	45	51	44	52	102	95	64	69	63
Brazil	63	60	70	64	49	42	31	41	70	72	58	65
South Africa	6	4	2	1	1	1	1	1	1	1	30	55
Soundness of banks												
Russia	108	107	123	129	129	132	124	118	115	121	121	114
China	128	108	66	60	64	71	72	63	78	79	82	90
India	46	51	25	25	32	38	49	101	100	75	78	83
Brazil	36	24	10	14	16	14	12	13	27	38	26	22
South Africa	16	15	6	6	2	2	3	6	8	2	37	62

Source: own calculations using data from recent year's Global Competitiveness Report published by The World Economic Forum.

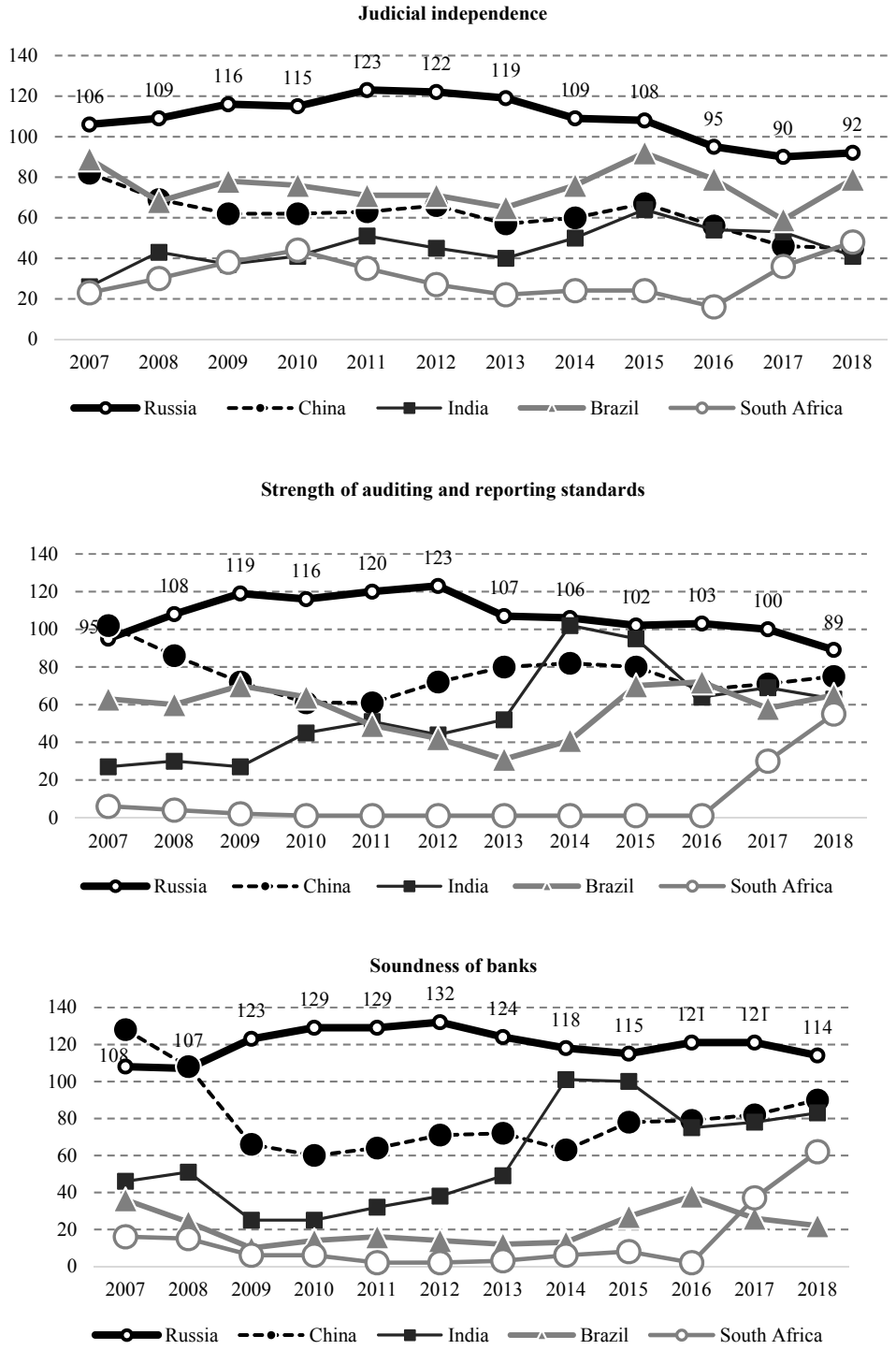


Fig. 59. WEF global competitiveness ranking of BRICS countries on selected criteria that are relevant for conservative portfolio investors' decisions

Source: own calculations using data from recent year's Global Competitiveness Report published by The World Economic Forum.

3.7. Risks facing Russia's financial market

Finally, the following is a list of most substantial risks that will face the Russian equity market in the medium term.

The biggest risk to safety of Russia's ruble-denominated savings arises from regular devaluation of the national currency. The ruble depreciation tends to follow the same pattern. Falling crude prices and capital drain lead to a sudden devaluation of the ruble, which is followed by a period (from 7 to 8 years) of stable and even stronger ruble (see *Fig. 60*). However, the problem lies in that abrupt devaluation reduces the value of ruble-denominated savings that cannot increase even amid a stable ruble.

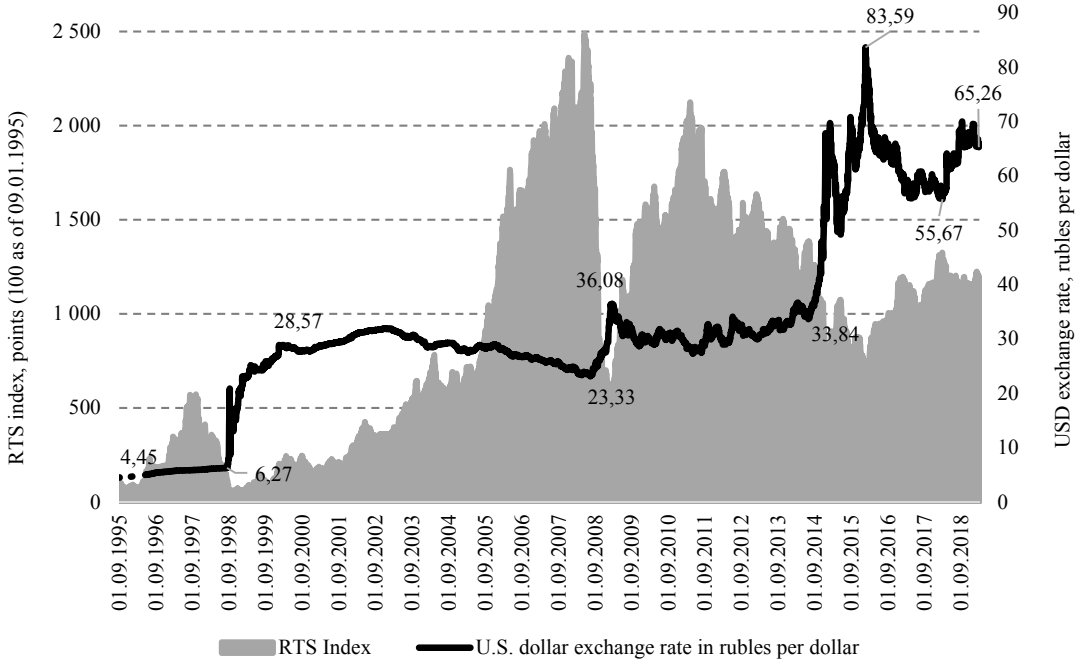


Fig. 60. RTS Index and ruble exchange rate, from September 1, 1995 to March 1, 2019

Source: own calculations using data from the Bank of Russia and Moscow Exchange.

Devaluation of the ruble is engendered by structural disproportions of the Russian economy, making the ruble reliant on external economic conditions and foreign portfolio investors' behavior.

The financial market now faces a volatile ruble driven by crude prices and the amount of foreign currency purchased for the Finance Ministry's reserve funds. As of March 1, 209, the ruble was traded at 65.26 rubles per dollar after hitting its lowest of 83.59 rubles per dollar on January 22, 2016. Risks of adverse external economic conditions to the ruble exchange rate will continue to be a concern in the medium term, because it would take long, even under the best-case economic development scenario, for structural changes to be implemented in the economy.

Prices of Russian stocks are heavily reliant on crude prices. The Coefficient of Determination (R^2) between absolute monthly RTS Index and Brent crude prices from September 1995 to February 2019 (see *Fig. 61*) stood at 0.8, suggesting that there is very close relationship between these values. Crude prices have a strong effect on the ruble's exchange rate too.

One cannot reasonably expect a rise in crude prices in the offing, the oil market demand and supply are volatile. Therefore, cyclical price movements in the oil market will highly likely occur in the medium term, which is going to be a significant source of volatility in the Russian equity market.

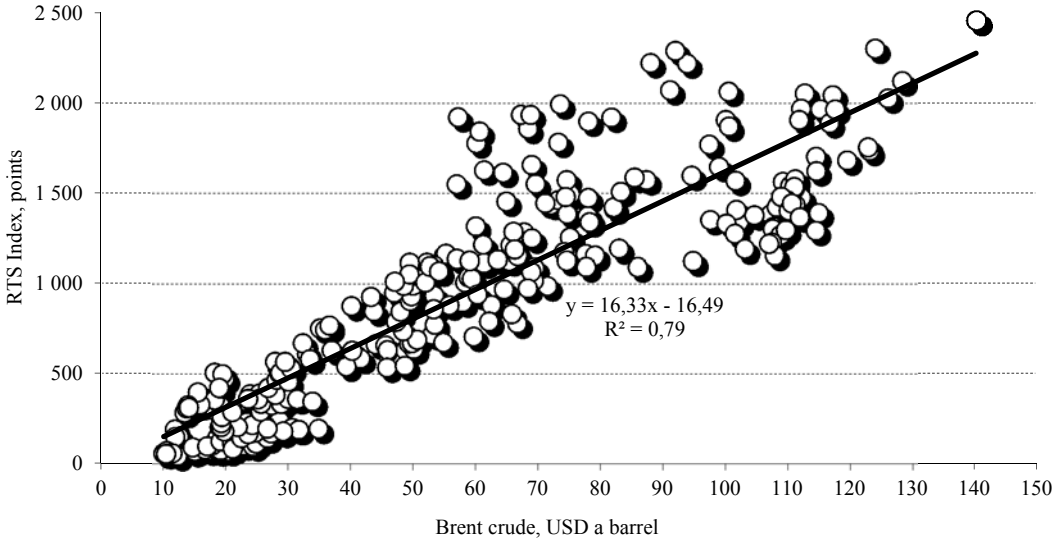


Fig. 61. RTS Index reliance on Brent crude price, from September 1995 to February 2019

Source: own calculations using data from FinAm and Moscow Exchange.

Sanctions continue to pose substantial risks to the financial market, although they have a limited effect on market participants' behavior so far. Sanctions can basically influence the financial market through borrowing restriction on Russian companies, appreciation of borrowing costs, and foreign investment outflows from the stock market. Available assessments of the impact of sanctions on the financial market differ considerably from each other, most of which, however, are measured as a percentage of the expected GDP slowdown. There are few papers that make analysis of the impact of sanctions on the financial market. For instance, the overall net capital outflow induced by sanctions was estimated at USD 58 billion in 2014 and USD 160–170 billion in 2014–2017, according to E. Gurvich and I. Prilepskiy[1]. Russian Finance Minister

[1] Gurvich E., Prilepskiy I. The impact of financial sanctions on Russia's economy. Voprosy Ekonomiki, No. 1, January 2016, p.33.

A. Siluanov said in late 2014 that Russia's loss from sanctions was estimated at around USD 40 billion a year[1].

In this context, sanctions and today's expectations of tougher sanctions crimp the borrowing capacity of Russian major companies and the state in global markets and, accordingly, the business investment activity, taking its toll on economy's growth.

Increasing risks of impending recession in global financial markets constitute one of the key risks that face Russia's equity market.

Two most commonly employed anticipatory indicators for impending recession are presented in *Fig. 62* and *63*. Where the yield spread between yields on 10-year and 2-year government bonds of developed countries approaches zero, it is generally an indication of impending recession, because the yield on longer-term bonds is generally higher in a growing economy, mirroring expectations of higher rates in the offing (see *Fig. 62*). Where the yield to maturity on 10-year government bonds starts approaching the yield on 2-year bonds, it generally indicates an elevation of bond investors' expectations of a recession, that is, inflation and interest rates will fall. The aforementioned spreads show mixed positions today, as shown in *Fig. 62*. The spreads in the U.S.A. and Japan show an all-time low in 2008–2018, while the spreads in Germany and the U.K. are far from their lowest, which suggests that a global recession is unlikely in coming months.

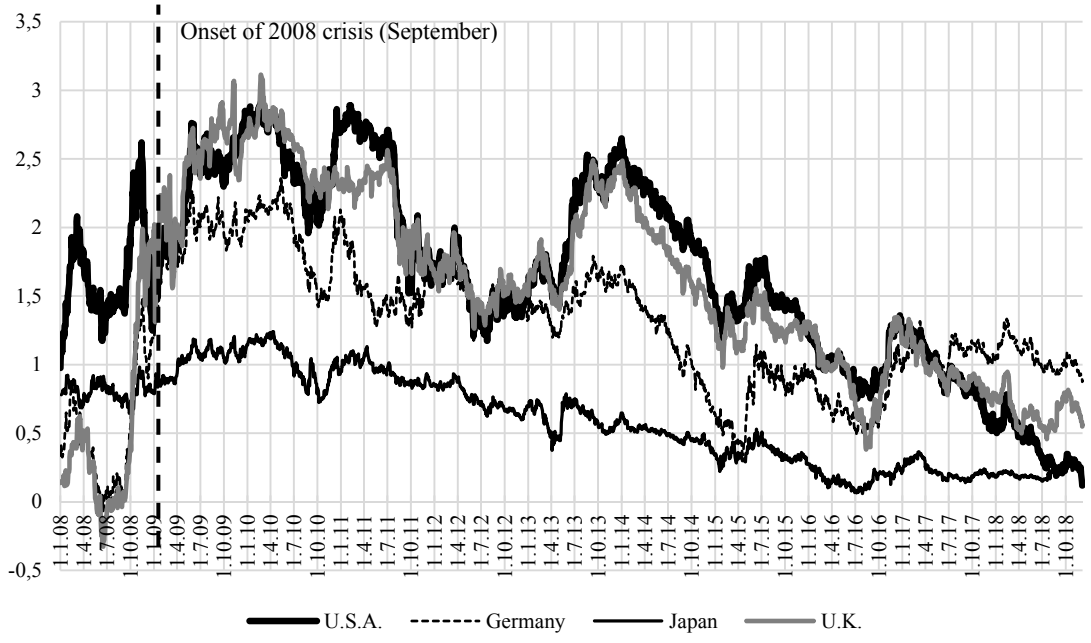


Fig. 62. Yield spreads on 1-year and 2-year government bonds in U.S., Germany, U.K. and Japan in 2008–2018, percent point

Source: own calculations using data from the Moscow Exchange and Bloomberg.

[1] Volkova O. Countersanctions against sanctions: Which is the worst? RBC Daily, March 21, 2016, p.4.

The S&P CoreLogic Case-Shiller 10-City Composite Home Price NSA Index and the S&P CoreLogic Case-Shiller 20-City Composite Home Price NSA Index had proved themselves to be one of the most important indicators that anticipated the 2008 Great Recession. The decline in these indices in June 2006 was followed by the onset of problems in the U.S. market of non-collateralized mortgage securities that led to bankruptcy of largest financial entities (see *Fig. 63*). So far, no substantial decline in the indices was seen as of December 2018, as shown in the diagram. In September (FY 18), the S&P CoreLogic Case-Shiller 10-City Composite Home Price NSA Index stood at 227.6 and the S&P CoreLogic Case-Shiller 20-City Composite Home Price NSA Index was 213.9. Both indices saw a marginal fall three months later, reaching 226.6 and 213.0, respectively, as of December 2018. That is, the indices started moving downwards, but it remains to be seen whether the decline will be steady and rapid.

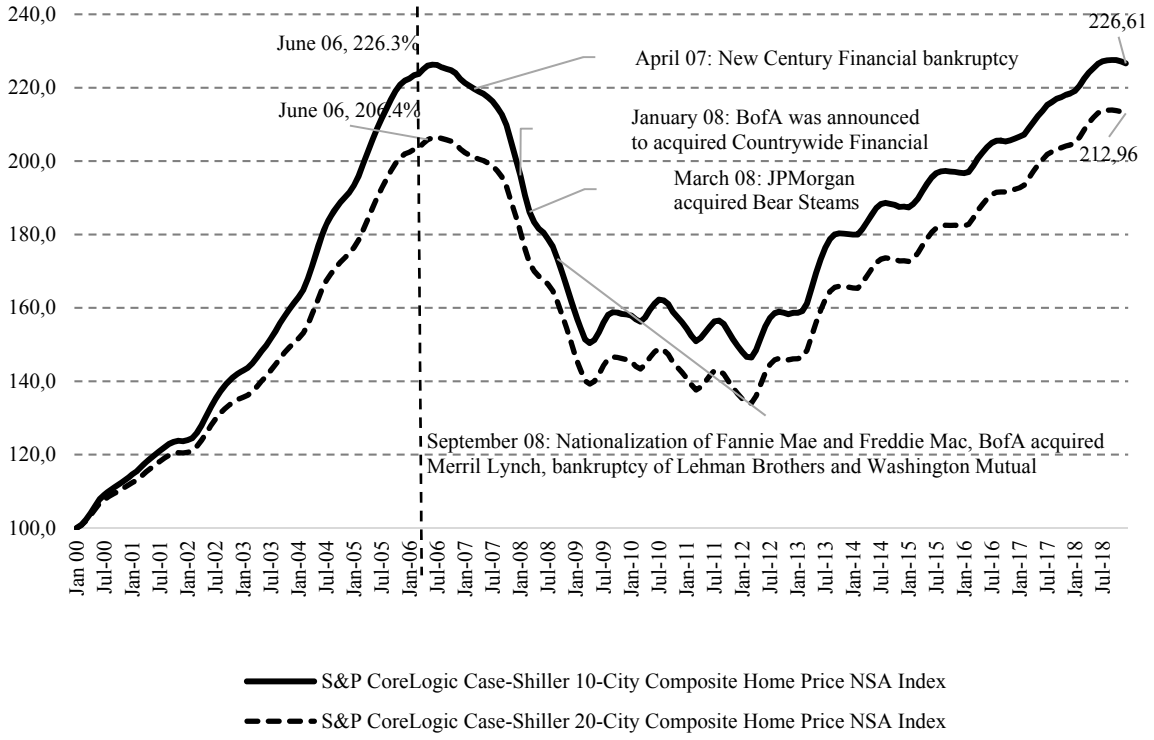


Fig. 63. S&P CoreLogic Case-Shiller 10-City Composite Home Price NSA Index and S&P CoreLogic Case-Shiller 20-City Composite Home Price NSA Index in the U.S., from January 2000 to December 2018, percent point

Source: own calculations using data from the Moscow Exchange and S&P.

Thus, despite risks of impending recession, both indicators show that a recession is unlikely in H1 2019. The U.S. Treasury Secretary said on January 29, 2019 he sees no

indications of a recession on the horizon[1]. Investors' positive expectations of the U.S. – China trade talks in March 2019, as well as positive Q1'19 financial statements of largest U.S. companies remain the factors that prop up global markets.

3.8. Municipal and sub-federal debt market[2]

3.8.1. Market development dynamics

According to the 2018 year-end data, the regional consolidated budgets and local government off-budget funds' budgets ran a surplus of RUB 512.9 billion or 0.49 percent of GDP (*Table 19*).

To compare, the regional consolidated budgets and local government off-budget funds' budgets ran a deficit of RUB 61.5 billion or 0.07 percent of GDP in 2017.

In 2018, the budgets of subjects of the Russian Federation ran a surplus of RUB 491.5 billion, urban districts' budgets ran a deficit of RUB 0.8 billion, federal-status cities' inner-city municipalities' budgets ran a surplus of RUB 0.4 billion, municipal areas' budgets ran a surplus of RUB 16.0 billion, urban and rural settlements' budgets ran a surplus of RUB 3.5 billion, local government off-budget funds' budgets ran a surplus of RUB 2.7 billion

As a comparison, in 2017, the budgets of subjects of the Russian Federation ran a deficit of RUB 15.5 billion, urban districts' budgets ran a deficit of RUB 29.5 billion, federal-status cities' inner-city municipalities' budgets ran a surplus of RUB 0.5 billion, municipal areas' budgets ran a deficit of RUB 5.4 billion, urban and rural settlements' budgets ran a deficit of RUB 1.0 billion, local government off-budget funds' budgets ran a deficit of RUB 9.6 billion (*Table 20*).

Table 19

Ratio of surplus (deficit) of the consolidated regional and regions' budgets to budget expenditure in 2007–2018, percent

Year	Regional consolidated budget*	Regions' budgets
2018	3.7	4.7
2017	-0.5	-0.2
2016	…	0.003
2015	-1.6	-1.3
2014	-4.6	-4.9
2013	-6.4	-8.1
2012	-3.0	-3.5
2011	-0.2	-0.3
2010	-1.4	-1.6
2009	-5.3	-5.3
2008	- 0.7	- 0.7
2007	0.8	0.6

* including state off-budget funds.
Source: own calculations based on the data released by the Federal Treasury.

[1] Davidson K. There Are No Indications of Recession on Horizon, Says Treasury Secretary Steven Mnuchin. The Wall Street Journal – online, Jan. 29, 2019.
[2] This section was written by Artem Shadrin, Russia's Ministry of Economic Development, Gaidar Institute.

Table 20

Ratio of surplus (deficit) of territorial budgets to budget expenditure in 2007–2018, percent

Year	Inner-city municipalities budgets in federal-status cities	Urban districts' budgets	Municipal areas' budgets	Urban and rural settlements' budgets
2018	-1.2	0.04	1.0	1.0
2017	-1.9	1.6	0.4	- 0.3
2016	1.3	-0.9	0.8	-1.5
2015	6.7	-3.0	-0.7	-0.6
2014	6.0	-2.2	-1.4	0.7
2013	-3.47	-2.61	-5.59	2.24
2012	2.26	-2.01	-0.08	1.34
2011	6.15	-2.10	1.13	0.64
2010	-1.12	-1.16	-0.11	1.72
2009	-0.63	-3.32	-1.88	2.63
2008	-1.47	1.09	-0.26	2.72
2007	5.34	1.23	-0.04	2.34

Source: own calculations based on the data released by the Federal Treasury.

As of January 1, 2019, the consolidated budget (including local government off-budget funds) of 16 subjects of the Russian Federation and the city of Baikonur ran a deficit (59 regions and the city of Baikonur in 2017). The overall deficit amounted to RUB 64.0 billion, or 2.8 percent of the revenue side (RUB 194.8 billion in 2017, or 2.4 percent of the revenue side of budgets that ran a deficit).

The median budget deficit value stood at 0.8 percent relative to a given budget revenue. The highest ratio of budget deficit to budget revenue was recorded in the Republic of Mordovia – 14.2 percent, Khabarovsk Territory – 7.0 percent, and Sakhalin region – 5.0 percent. St. Petersburg accounted for more than 21.8 percent or over RUB 42.5 billion of the total consolidated budget deficit, the Khanty-Mansi Autonomous District accounted for around 8.9 percent or more than RUB 17.3 billion

Moscow region accounted for nearly half – 46 percent of the total regions' consolidated budget deficit or RUB 31.1 billion, Khabarovsk Territory accounted for 16 percent or RUB 10.3 billion, Sakhalin region accounted for 13.3 percent or RUB 8.5 billion, and the Republic of Mordovia accounted for 11.0 percent or RUB 7.0 billion (*Table 21*).

Table 21

Execution of consolidated budgets of subjects of the Russian Federation in 2018

	Budget revenues, rubles in billions	Budget deficit (surplus), rubles in billions	Deficit (surplus) to revenues ratio, percent	Borrowing to revenues ratio, percent	Net borrowing to revenues ratio, percent	Redemption costs to revenues ratio, percent	Net borrowings to deficit (surplus), percent
1	2	3	4	5	6	7	8
Central Federal District							
Belgorod Region	130.6	-7.7	-5.9	5.7	-2.3	8.0	38.7
Bryansk Region	79.7	-2.2	-2.8	6.5	-1.9	8.4	67.3
Vladimir Region	87.4	-1.0	-1.1	2.9	-0.7	3.6	60.8
Voronezh Region	161.4	-12.1	-7.5	31.7	-1.8	33.4	23.6
Ivanovo Region	57.6	-2.6	-4.6	31.3	-1.2	32.5	25.9
Tver Region	87.5	-6.0	-6.8	24.1	-0.9	24.9	12.8

Cont'd

1	2	3	4	5	6	7	8
Kaluga Region	97.6	-11.6	-11.9	2.0	-1.2	3.3	10.4
Kostroma Region	43.3	-1.2	-2.8	48.8	-1.8	50.5	62.5
Kursk Region	78.5	-1.3	-1.6	27.2	0.4	26.7	-24.8
Lipetsk Region	88.4	-5.9	-6.7	5.2	-1.1	6.3	16.4
Moscow Region	773.5	31.1	4.0	6.5	4.2	2.3	105.0
Orel Region	48.0	-0.2	-0.4	50.4	-0.2	50.6	42.8
Ryazan Region	76.5	-1.9	-2.5	10.1	-1.5	11.7	61.5
Smolensk Region	60.2	-2.5	-4.2	47.8	0.1	47.7	-1.6
Tambov Region	64.2	0.6	1.0	20.2	1.7	18.5	171.0
Tula Region	108.8	-3.1	-2.9	7.9	0.3	7.6	-11.8
Yaroslavl Region	93.4	2.1	2.2	57.9	1.7	56.2	75.2
City of Moscow	2 614.6	-58.4	-2.2	0.0	-0.2	0.2	7.5
City of Baikonur	4.1	0.0	0.5	0.0	0.0	0.0	0.0
Total	**4 755.3**	**-84.0**	**-1.8**	**7.2**	**0.4**	**6.8**	**-21.5**
North-West Federal District							
Republic of Karelia	66.0	-4.2	-6.3	25.9	-5.9	31.9	94.2
Republic of Komi	113.6	-11.1	-9.8	19.1	-8.3	27.4	85.3
Arkhangelsk Region	114.9	-3.2	-2.8	67.1	-4.5	71.6	160.9
Vologda Region	104.3	-15.0	-14.4	13.8	-2.8	16.6	19.5
Kaliningrad Region	137.0	-2.4	-1.7	19.2	0.1	19.1	-4.2
Leningrad Region	188.6	-14.7	-7.8	0.1	-0.1	0.1	0.7
Murmansk Region	98.3	0.3	0.3	47.7	-0.1	47.8	-30.4
Novgorod Region	44.6	-0.6	-1.4	22.3	0.4	21.9	-26.5
Pskov Region	43.4	-0.4	-0.8	42.6	0.2	42.4	-29.3
St. Petersburg	669.8	-10.1	-1.5	0.0	-0.7	0.7	47.0
Nenets Autonomous District	24.6	-1.8	-7.4	17.5	-5.4	22.9	72.4
Total	**1 605.0**	**-63.1**	**-3.9**	**14.7**	**-1.7**	**16.4**	**43.4**
Southern Federal District							
Republic of Kalmykia	18.4	0.1	0.5	48.4	0.6	47.8	117.2
Krasnodar Territory	377.8	-16.4	-4.3	19.7	-0.8	20.5	18.8
Astrakhan Region	67.3	-7.2	-10.7	14.7	-8.3	23.0	77.3
Volgograd Region	149.0	-2.0	-1.3	15.4	-0.9	16.3	69.1
Rostov Region	263.2	-8.0	-3.0	2.3	-3.4	5.8	112.7
City of Sevastopol	44.1	-3.8	-8.7	0.0	0.0	0.0	0.0
Republic of Crimea	196.1	0.0	0.0	0.0	-0.2	0.2	-3 187.2
Republic of Adygea (Adygea)	28.4	-0.3	-1.0	5.5	0.1	5.4	-8.3
Total	**1 144.3**	**-37.6**	**-3.3**	**10.8**	**-1.7**	**12.5**	**51.4**
North-Caucasus Federal District							
Republic of Dagestan	148.6	-12.3	-8.2	6.6	-0.5	7.1	6.3
Kabardino-Balkar Republic	44.4	-2.0	-4.5	92.3	-4.2	96.5	93.3
Republic of Northern Ossetia-Alania	40.9	-0.5	-1.3	13.3	-0.5	13.8	37.1
Republic of Ingushetia	29.7	-0.4	-1.3	6.7	-0.4	7.1	29.9
Stavropol Territory	157.7	-6.9	-4.4	27.2	-2.0	29.2	45.9
Karachay-Cherkess Republic	31.1	-0.1	-0.3	23.8	-0.4	24.2	125.4
Chechen Republic	96.3	-0.4	-0.4	0.0	-0.2	0.2	53.7
Total	**548.7**	**-22.5**	**-4.1**	**19.8**	**-1.2**	**21.0**	**28.5**
Volga Federal District							
Republic of Bashkortostan	289.0	-24.6	-8.5	0.5	-1.0	1.5	12.0

Cont'd

1	2	3	4	5	6	7	8
Republic of Mariy-El	38.4	-0.4	-1.2	13.9	-0.4	14.4	37.2
Republic of Mordovia	49.7	7.0	14.2	52.4	13.7	38.7	96.7
Republic of Tatarstan (Tatarstan)	366.6	-5.6	-1.5	1.3	-0.1	1.4	5.4
Udmurt Republic	104.1	-1.8	-1.7	57.3	-1.9	59.3	111.2
Republic of Chuvashia – Chuvashia	72.2	-2.0	-2.7	11.5	-1.6	13.1	58.4
Nizhniy Novgorod Region	232.1	-9.3	-4.0	35.2	-0.1	35.2	1.4
Kirov Region	80.7	-1.6	-2.0	40.5	-1.1	41.6	55.7
Samara Region	234.5	-16.5	-7.1	15.1	-3.9	19.0	55.1
Orenburg Region	134.0	-12.4	-9.2	11.3	-2.0	13.3	22.0
Penza Region	79.6	-0.2	-0.2	19.9	0.6	19.4	-239.5
Perm Territory	189.2	-3.8	-2.0	13.3	0.1	13.2	-6.8
Saratov Region	138.0	-5.4	-3.9	17.7	-1.3	19.1	34.3
Ulyanovsk Region	79.5	-0.7	-0.8	26.9	0.2	26.7	-24.3
Total	**2 087.7**	**-77.3**	**-3.7**	**17.1**	**-0.6**	**17.8**	**17.6**
Urals Federal District							
Kurgan Region	56.7	0.3	0.5	11.9	0.8	11.0	153.6
Sverdlovsk Region	355.7	-10.0	-2.8	21.4	-0.8	22.3	28.7
Tyumen Region	246.7	-36.9	-15.0	0.0	0.0	0.0	0.0
Chelyabinsk Region	249.1	-13.0	-5.2	3.9	-0.2	4.1	4.3
Hanty-Mansiysky Autonomous District – Yugra	358.9	-41.1	-11.4	0.9	-1.0	1.9	8.9
Yamal-Nenets Autonomous District	250.3	-46.0	-18.4	0.0	-3.2	3.2	17.6
Total	**1 517.4**	**-146.7**	**-9.7**	**6.3**	**-1.0**	**7.3**	**10.0**
Siberia Federal District							
Republic of Tyva	36.4	-0.8	-2.3	10.8	-0.8	11.6	34.7
Altai Territory	149.6	-8.8	-5.9	0.0	-0.1	0.1	0.9
Krasnoyarsk Territory	326.1	1.1	0.4	17.3	1.3	16.0	358.7
Irkutsk Region	233.1	-13.8	-5.9	4.4	-2.5	6.9	42.9
Kemerovo Region	238.2	-36.0	-15.1	2.8	-9.3	12.1	61.2
Novosibirsk Region	215.9	-7.0	-3.2	41.3	-0.7	42.0	20.7
Omsk Region	126.4	-2.6	-2.1	88.8	-2.1	90.8	100.4
Tomsk Region	90.5	0.4	0.4	44.5	0.6	44.0	130.6
Republic of Altai	25.0	0.2	0.8	3.6	-0.3	3.9	-31.8
Republic of Khakassia	49.4	-2.5	-5.1	10.0	-5.4	15.4	106.0
Total	**1 490.7**	**-69.8**	**-4.7**	**21.8**	**-2.0**	**23.8**	**43.6**
Far East Federal District							
Republic of Buryatia	80.4	0.3	0.3	45.3	0.9	44.4	264.0
Republic of Sakha (Yakutia)	275.7	-12.5	-4.5	10.8	0.0	10.9	0.8
Primorsky Territory	171.2	-17.0	-9.9	3.7	-0.5	4.2	5.2
Khabarovsk Territory	146.6	10.3	7.0	33.9	6.1	27.8	86.5
Amur Region	78.8	-0.6	-0.7	10.0	-0.3	10.3	45.1
Kamchatka Territory	96.9	-1.6	-1.7	3.1	-0.9	4.0	54.2
Magadan Region	42.3	1.1	2.7	59.5	2.6	56.9	97.2
Sakhalin Region	168.5	8.5	5.0	0.0	0.0	0.0	0.0
Jewish Autonomous Region	14.5	0.5	3.4	23.0	0.8	22.2	23.7
Chukotka Autonomous District	37.9	-0.4	-1.1	0.0	-1.2	1.2	108.1

Cont'd

1	2	3	4	5	6	7	8
Zabaikalsky Territory	87.4	-0.4	-0.5	23.3	-0.6	23.8	114.7
Total	**1 200.2**	**-11.9**	**-1.0**	**15.2**	**0.6**	**14.5**	**-65.4**
Total Russian Federation	***14 349.4***	***-512.9***	***-3.6***	***12.3***	***-0.6***	***12.9***	***16.8***

Source: own calculations based on the data released by the Federal Treasury.

In 2018, the consolidated budgets of 69 subjects of the Russian Federation ran a surplus (compared to 36 regions in 2017). These regions ran an overall budget surplus of RUB 576.9 billion, or 1.9 percent of their budgets' revenue side (RUB 133.3 billion, or 4.8 percent of the budget revenue side, in 2017). The median budget surplus value stood at 3.1 percent relative to the budget revenue side.

The biggest ratio of surplus to the consolidated budget revenues was recorded in Yamal-Nenets AO – 18.4 percent, Kemerovo region – 15.1 percent, Tyumen region – 15.0 percent and Vologda region – 14.4 percent.

Kemerovo region – around 10.8 percent, Vologda region – 8.2 percent. In 2017, Kemerovo region accounted for 15.5 percent of the overall surplus of regional budgets that ran a surplus, and Krasnodarsky Territory – 13.2 percent, and Yamal-Nenets AO – 11.2 percent.

In 2018, Moscow accounted for 10.1 of the total surplus of the regional budgets or RUB 58.4 billion, Yamal Nenets AO – 8.0 percent or RUB 46.0 billion, Khanty-Mansi AO – 7.1 percent or RUB 41.1 percent, Tyumen region – 6.4 percent or RUB 36.9 billion, and Kemerovo region – 6.3 percent or 36.0 billion.

3.8.2. Borrowing structure

According to the data released by the Russian Finance Ministry, the debt accumulated by the subjects of the Russian Federation in 2018 contracted by RUB 109.1 billion to RUB 2.206,3 billion as the debt accumulated by municipalities rose by RUB 3.9 billion to RUB 371.9 billion (*Table 22).*

Table 22

Volume and structure of debt of the subjects of the Russian Federation and debt of municipalities as of January 2018 and 2019

Type of debt instruments	State ebt volume of RF subject, RUB million			Municipalities debt volume, RUB million		
	2018	2019	increase/decrease 2018 to 2017, percent	2018	2019	increase/decrease 2018 to 2017, percent
Government securities	548 519.6	551 363.6	0.5	21 068.9	18 123.9	-14.0
Loans issued by credit institutions, foreign banks and international financial organizations	666 961.2	636 015.2	-4.6	241 222.1	256 539.0	6.3
Public budget loans from other budgets of the budgetary system of the Russian Federation	1 010 337.7	939 977.0	-7.0	90 429.9	86 464.1	-4.4
Government guarantees	81 535.6	71 504.9	-12.3	15 253.2	10 730.9	-29.6
Other debt instruments	8 050.3	7 452.7	-7.4	6.1	5.5	-9.8
Total	**2 315 404.5**	**2 206 313.3**	**-4.7**	**367 980.1**	**371 863.4**	**1.1**

Source: own calculations based on the data released by the Federal Treasury.

Regions and municipalities borrowed in 2018 a total of RUB 1,769.8 billion. The top-ranked borrowers were Omsk Region – RUB 112.2 billion, Novosibirsk Region – RUB 89.2 billion, Nizhny Novgorod Region – RUB 81.6 billion, Arkhangelsk region – RUB 77.1 billion, Sverdlovsk Region – RUB 76.3 billion, and Krasnodar Territory – RUB 74.5 billion.

Securities issues accounted for 4.9 percent of the total consolidated regional budgets, loans from higher-level budgets (budget loans) constituted 31.6 percent thereof, loans from commercial banks amounted to 63.5 percent thereof.

Total net debt of the consolidated regional budget was negative and constituted – RUB 86.4 billion (RUB 10.4 billion in 2017). The highest ratio of net debt to budget revenues was recorded in the Republic of Mordovia – 13.7 percent, and Moscow region – 4.2 percent.

Largest net borrowers were: Moscow region – RUB 32.6 billion, Khabarovsk Territory – RUB 8.9 billion, and the Republic of Mordovia – RUB 6.8 billion.

Table 23

Regional and local budgets net borrowing, as percent of GDP

Год	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Net borrowing by sub-federal and local governments Including:	0.17	0.29	0.74	0.51	0.21	0.33	0.61	0.53	0.33	0.10	-0.01	-0.08
repayable loans from budgets of different levels	-0.01	0.03	0.33	0.37	0.15	0.01	0.06	0.24	0.21	0.21	0.02	-0.07
Sub-federal (municipal) bonds	0.08	0.17	0.24	0.07	-0.11	0.06	0.12	-0.01	-0.01	0.04	0.11	…
Other borrowings	0.10	0.09	0.17	0.07	0.17	0.26	0.43	0.30	0.13	-0.15	-0.14	-0.01

Source: own calculations based on the data released by the Federal Treasury.

Regions had their accumulated debt reduced to the maximum extent by repaying more for outstanding debt instruments compared to new fundraising, were: Kemerovo region – by RUB 22.1 billion, Samara region – by RUB 9.1 billion, and Rostov region – by 9.0 billion.

3.8.3. Domestic bond issues

Twenty one subjects of the Russian Federation and 2 municipalities had their bond prospectus registered in 2017 (as compared with 34 regions and 3 municipalities which issued bonds in 2017). The following regions had their bond prospectus registered with Russia's Ministry of Finance in 2017: St. Petersburg, Krasnoyarsk, Krasnodar, Kamchatka and Khabarovsk Territories, Udmurt Republic, Republic of Sakha (Yakutia) and Karelia, Sverdlovsk region, Magadan region, Samara region, Orenburg region, Tomsk region, Novosibirsk region, Lipetsk region, Yaroslavl region, Nizhny Novgorod region, Irkutsk region, Moscow region, Kirov region, city of Novosibirsk and city of Tomsk.

In 2018, the amount of placed bonds was RUB 86.9 billion, which was a decrease in comparison with 2017 (RUB 215.3 billion) by 2.5-fold in nominal terms. Thus, sub-

federal and municipal bond issues saw a YoY reduction from 0.23 percent to 0.08 percent of GDP (*Table 24*).

Table 24

Amount of issued sub-federal and municipal bonds, as percent of GDP

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Issue	0.26	0.43	0.41	0.25	0.10	0.19	0.23	0.16	0.12	0.19	0.23	0.08
Погашение	0.18	0.26	0.16	0.18	0.21	0.13	0.12	0.17	0.13	0.15	0.13	0.08
Net financing	0.08	0.17	0.24	0.07	-0.11	0.06	0.12	-0.01	-0.01	0.04	0.11	…

Source: own calculations based on the data released by Russia's Ministry of Finance.

The top-ranked bond issuers were: Krasnoyarsk Territory – RUB 240 billion or 27.6 percent of total domestic bond issue, Republic of Sakha (Yakutia) – RUB 11.5 billion or 13.2 percent, Krasnodarsky Territory and Nizhniy Novgorod region – RUB 10.0 billion each or 11.5 percent each.

Hence, the top-4 issuers accounted for 363.8 percent of the total regional and municipal bonds placed (*Table 25).*

Table 25

Sub-federal and municipal bond placement in 2018

Subject of the Russian Federation	Amount issued, rubles in millions	Issuer's percentage of total amount issued, percent	Amount issued to domestic borrowing ratio, percent
Central Federal District			
Lipetsk region	3 000.0	3.5	65.4
Yaroslavl region	3 000.0	3.5	5.6
North-West Federal District			
Nenets Autonomous District	1 374.1	1.6	31.9
South Federal District			
Krasnodar Territory	10 000.0	11.5	13.4
Volga Federal District			
Nizhniy Novgorod region	10 000.0	11.5	12.3
Samara region	8 000.0	9.2	22.6
Urals Federal District			
Sverdlovsk region	5 000.0	5.8	6.6
Siberia Federal District			
Krasnoyarsk Territory	24 000.0	27.6	42.6
Novosibirsk region	5 000.0	5.8	5.6
Tomsk region	998.3	1.1	2.5
Far East Federal District			
Republic of Sakha (Yakutia)	11 500.0	13.2	38.5
Khabarovsk Territory	4 073.9	4.7	8.2
Kamchatka Territory	1 000	1.2	33.8
Russian Federation – Total	**86 946.4**	**100.0**	**4.9**

Source: own calculations based on the data released by Russia's Federal Treasury.

The highest level of securitization was observed in Lipetsk region – 65.4 percent, and Krasnoyarsk Territory – 42.6 percent.

In 2018, the amount of bonds issued by subjects of the Russian Federation and municipalities exceeded by merely RUB 23.5 million the amount of redeemed securities, while in 2017 – RUB 97.0 billion (*Table 26*).

Table 26

Net borrowing in the domestic market for sub-federal and municipal bonds, rubles billion

	Consolidated regional budget	Regional budgets	Municipal budgets
2018			
Net borrowings	0.02	2.96	-2.94
Attracted funds	86.95	86.84	0.11
Principal repayment	86.92	83.88	3.04
2017			
Net borrowings	97.03	91.43	5.60
Attracted funds	215.33	205.21	10.12
Principal repayment	118.30	113.77	4.53
2016			
Net borrowings	31.98	26.70	5.29
Attracted funds	160.51	153.66	6.85
Principal repayment	128.52	126.96	1.56
2015			
Net borrowings	-5.81	-7.11	1.29
Attracted funds	98.45	94.25	4.21
Principal repayment	104.27	101.36	2.92
2014			
Net borrowings	-9.24	-7.41	-1.83
Attracted funds	111.49	110.09	1.40
Principal repayment	120.73	117.50	3.23
2013			
Net borrowings	77.61	75.45	2.16
Attracted funds	154.64	149.64	5.00
Principal repayment	77.03	74.19	2.84
2012			
Net borrowings	38.17	36.80	1.38
Attracted funds	119.85	115.95	3.90
Principal repayment	81.68	79.16	2.52
2011			
Net borrowings	-58.20	-57.11	-1.09
Attracted funds	55.05	53.37	1.69
Principal repayment	113.25	110.48	2.77
2010			
Net borrowings	29.77	28.61	1.16
Attracted funds	111.11	105.85	5.25
Principal repayment	81,33	77,24	-4,09

Source: own calculations based on the data released by Russia's Federal Treasury.

Most of the regions that issue bonds on a regular basis continued doing so in 2018 (*Table 27*).

Table 27

Sub-federal and municipal bonds prospectus registration in 2007–2018

Issuer	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
1	2	3	4	5	6	7	8	9	10	11	12	13
Subjects of the Federation												
Krasnoyarsk Territory	*	*	*	*	*	*	*	*	*	*	*	*
Nizhniy Novgorod Region	*	*	*	*	*	*	*	*	*	*	*	*
St. Petersburg	*	*		*	*	*	*	*	*	*	*	*
Tomsk Region	*	*		*	*	*	*	*	*	*	*	*
Republic of Sakha (Yakutia)	*	*		*	*	*	*	*	*	*	*	*
Yaroslavl Region	*	*		*	*	*	*	*	*	*	*	*
Samara Region	*	*	*		*	*	*	*	*	*	*	*

Cont'd

1	2	3	4	5	6	7	8	9	10	11	12	13
Belgorod Region		*				*	*	*	*	*	*	*
Orenburg Region						*	*	*	*	*	*	*
Republic of Karelia	*	*	*	*	*	*	*	*		*	*	*
Novosibirsk Region	*						*	*		*	*	*
Sverdlovsk Region				*	*	*		*		*	*	*
Irkutsk Region	*	*	*			*			*	*	*	*
Moscow Region	*	*								*	*	*
Krasnodar Territory	*			*		*			*		*	*
Magadan Region							*	*			*	*
Lipetsk region	*	*				*	*	*			*	*
Republic of Udmurtia	*	*		*	*	*	*	*	*	*		*
Khabarovsk Territory												*
Kirov Region												*
Kamchatka Territory												*
Komi Republic		*		*	*		*	*	*	*	*	
Khanty-Mansi AD			*				*	*		*	*	
Omsk Region							*	*		*	*	
Yamal-Nenets AD										*	*	
Tambov Region										*	*	
Volgograd Region.	*	*	*	*	*	*	*	*	*		*	
Republic of Chuvashia	*	*	*		*	*	*	*			*	
Mariy-El Republic						*	*	*			*	
Kemerovo Region							*				*	
Ivanovo Region	*				*						*	
Ulyanovsk Region	*	*									*	
Nenets AO											*	
Kursk region											*	
Kaliningrad region											*	
Saratov region											*	
Oryol region											*	
Karachay-Cherkess Republic											*	
The Republic of Mordovia							*	*	*	*		
Republic of Khakassia				*		*	*	*	*	*		
Stavropol Territory		*			*	*	*	*		*		
Tyumen Region										*		
Tver Region	*	*	*	*	*	*	*	*				
Voronezh Region	*					*	*	*				
Smolensk Region							*	*				
Leningrad Region							*	*				
Republic of Bashkortostan	*				*	*	*	*	*			
Tula Region						*	*	*	*			
Kostroma Region.	*				*		*					
City of Moscow		*	*	*			*					
Kaluga Region	*	*			*	*						
Vologda Region					*	*						
Ryazan Region				*		*						
Republic of Buryatia					*							
Murmansk Region				*								
Penza Region	*	*										
Kurgan Region		*										
Republic of Kalmykia	*											
Republic of Kabardino-Balkaria												
Briansk region												

Cont'd

1	2	3	4	5	6	7	8	9	10	11	12	13
Sakhalin region												
Primorsky Territory												
Municipalities												
City of Novosibirsk				*	*	*	*	*	*	*	*	*
City of Tomsk	*	*		*		*		*	*	*	*	*
City of Nizhniy Novgorod											*	
City of Omsk								*		*		
City Volzhsky, Volgograd region								*				
City of Krasnoyarsk	*	*	*	*	*	*						
City of Kazan	*		*	*	*							
City of Krasnodar				*	*							
City of Ufa				*								
City of Elekrostal, Moscow region	*		*									
Smolensk			*									
Lipetsk	*	*										
Magadan	*	*										
Bratsk		*										
Novorossiysk		*										
Yekaterinburg	*											
Klin district, Moscow region	*	*										
Noginsk district, Moscow region	*	*										
City of Blagoveshensk	*	*										
City of Cheboksary		*										
City of Balashikha, Moscow region		*										
Odintsovo district, Moscow region	*											
City of Astrakhan	*											
City of Briansk	*											
City of Voronezh	*											
City of Orekhovo-Zuevo, Moscow region	*											
City of Yaroslavl	*											
City of Voronezh	*											
City of Yuzhno-Sakhalinsk												
City of Novocheboksarsk												
City of Angarsk												
Vurnarsky district, Republic of Chuvashia												
City of Shumerlia, Republic of Chuvashia												
City of Barnaul												
City of Perm												
City of Kostroma												
City of Arkhangelsk												
City of Dzerzhinsky												

Source: Ministry of Finance of the Russian Federation.

3.9. Russia's banking sector[1]

3.9.1. Dynamics of the number of credit organizations

As of January 1, 2019, the Russian banking system numbered 484 credit organizations. A year earlier then number stood at 542. During the year the number decreased by 58 organizations. Six years ago at the beginning of 2013, the number of credit organizations exceeded one thousand (1094).

The Bank of Russia policy aimed at clearing the banking sector has triggered a reduction of the number of banks in operation. Over this period, the Bank of Russia withdrew more than 400 banking licenses. From late 2014 the policy aimed at withdrawing from the market those credit organizations which do not satisfy the requirements of the regulator coincided with the deterioration of the situation in the Russian economy and the imposition of international sanctions on major Russian banks. Correspondingly, already from 2014 the rate of banking license revocation has increased. When in 2013, around 4–5 banks on average per month lost their licenses then in 2014 the rate of banking license revocation increased to 7 lending organizations per month, and during the time of peak manifestations of crisis in the Russian economy and financial system seen in 2015–2016 on average 8 credit organizations per month lost the right to continue their banking activity. The number of revoked banking licenses peaked in 2016: the number of revoked licenses during that year hit 97. Moreover, 2016 saw the peak on the aggregate amount of the bank assets of the banks which lost their banking licenses: RUB 1.7 trillion or 2.0 percent of the overall volume of the banking sector assets.

At the same time, the regulator withdrew small banks from the market. For example, even when the number of revoked licensed peaked in 2015–2016, the average size of bank assets did not exceed RUB 19 billion at the moment of license revocation.

In 2017, when looking at the dynamics of banking license revocation one can assume that the situation in the banking sector was improving. The Bank of Russia phased down only of fifty-one lending organizations during the year – half of what was seen in 2016 (*Table 28*). Average assets of a bank with revoked license in 2017 went up notably (RUB 19.1 billion against RUB 11.9 billion a year earlier). However, total assets of banks which lost licenses contracted to RUB 974 billion or 1.2 percent of the overall volume of banking sector assets.

Table 28

Отзывы банковских лицензий в 2013–2018 гг.

	2013	2014	2015	2016	2017	2018
Number of banks with revokes licenses.	29	86	93	97	51	60
Average volume of assets of banks with revoked license, RUB bn.	10.5	5.1	11.9	11.9	19.1	7.4
Total amount of assets of banks with revoked licenses, RUB bn.	304.8	441.2	1108.4	1159.1	974.0	445.3

[1] This section was written by M. Khromov, Gaidar Institute, RANEPA.

Decline of the number of revoked licenses registered in 2017 most likely was due to other circumstances mainly to the burden of the system of deposit insurance. Already from mid-2015, payments to depositors of banks that lost licenses was financed mainly from the Bank of Russia credit line allocated to the Deposit Insurance Agency.

In 2018, the Bank of Russia somewhat increased the rate of banking licenses revocation. During the year, already 60 banking licenses were withdrawn. At the same time, the size of a bank loosing in 2018 the right to exercise the banking activity dropped to RUB 7.4 billion. Total volume of assets of such banks came to RUB 445 billion or 0.52 percent of the overall volume of assets of the banking sector (*Fig. 64*).

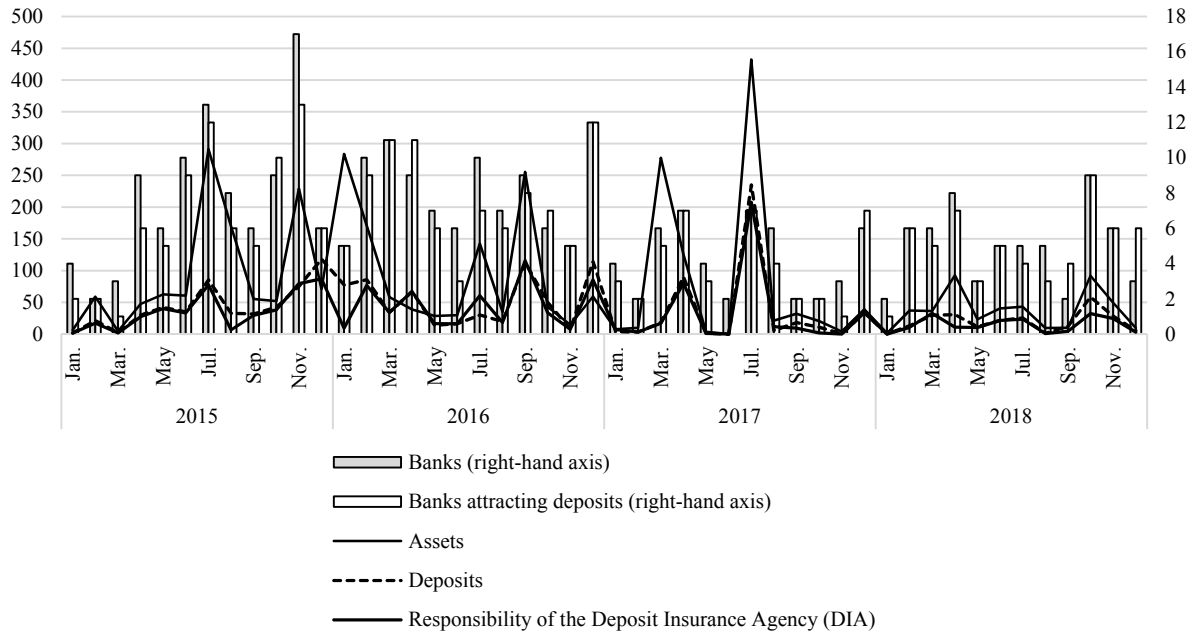


Fig. 64. Main indicators of the banks whose licenses were withdrawn

Source: Bank of Russia

Another type of regulation – bank resolution procedures – practically were not exercised in 2018. Following the bank resolution procedures applied towards a number of large banks in 2017 (Bank Otkrytie FC, Binbank, and Promsvyazbank) the Bank of Russia took some time off and in 2018 this mechanism of regulation was applied solely once regarding Asia-Pacific Bank.

Thus, in 2018, the Bank of Russia paid attention to smaller banks. This is attested to by the average amount of assets of the lending organizations which lost licenses last year. Lack of new cases of the bank resolution procedures demonstrates adequate state of the large banks.

3.9.2. Banking sector financial performance

Bank profit in 2018 notably improved against 2017. Growth of net interest profit and the yield of regular bank operations was a positive factor. In 2018 as a whole, balance–

1.5 percent, and the return of equity profit of Russia's banking sector amounted to RUB 1,345 billion, return on assets (ROA) (ROE) came to 15.8 percent in annual terms.

Compared to 2017, banking income went up by RUB 600 billion. The banking sector profitability has also moved up notably. A year earlier, ROA stood at 1.0 percent, and ROE at 9.4 percent.

The structure of the main profit components in the banking sector in 2018 is presented in *Table 29.*

Table 29

Main profit components in banking sector, RUB billion

	2016	2017	2018
Profit, total	929	785	1345
Net interest income	1624	1669	2113
Net commission income	853	886	1078
Operation with loan loss provisions	-665	-1433	-1200
Organization costs	-1456	-1447	-1686
Other net income	573	1110	1040

Source: Bank of Russia.

The structure of the banking sector financial performance compared to the same period of the previous year has undergone the following changes.

Main positive trend – growth of income from the main banking operations. Net banking interest income went up in 2018 by RUB 444 billion in comparison with 2017 or by 27.0 percent and net commission income – by RUB 192 billion (up 22 percent).

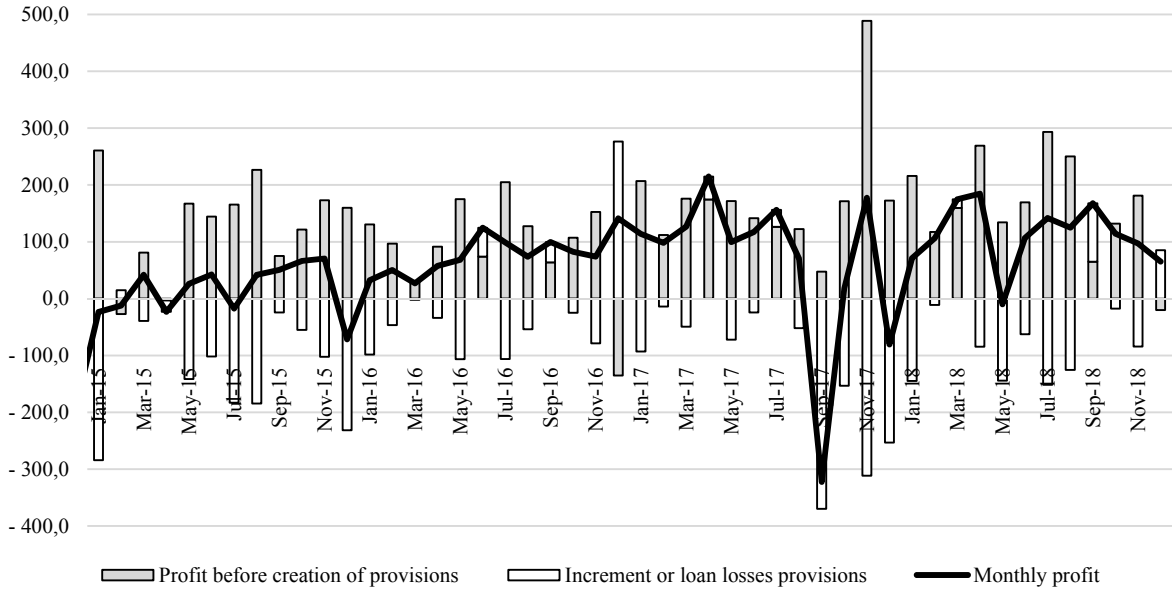


Fig. 65. Principal components of banking income, billions of roubles

Source: Bank of Russia.

Among other components of net interest income one should mention a rather dynamic growth (RUB 450 billion, nearly by 30 percent) of proceeds from retail lending which is a rather natural result of recovery growth of the retail lending portfolio (see below chapter 3.9.4).

Also notably increased fee-based income – by RUB 314 billion or by 27 percent.

Decrease of contributions for loan loss provisions, which raised banking income in 2018 by RUB 233 billion can be seen as a one-time factor. A significant volume of reserves registered in 2017 was due to the launch of the bank resolution procedures against three large private banks. This confirmed the fact that in 2017 issues related to the quality of the bank assets has rather local character. In 2018, the reserves growth against specified deposit liabilities and at the year end the ration of reserves to total bank assets somewhat decreased from 8.1 to 8.0 percent (*Fig. 65*).

3.9.3. Corporate lending

In 2018, Russian banks issued new corporate loans worth RUB 38.4 trillion up 17 percent from the previous year (*Fig. 66*). Large corporate lending segment was growing faster. This category of borrowers in 2018 received new loans to the tune of RUB 38.2 trillion. Small and medium-size business received in 2018 new loans to the tune of RUB 6.8 trillion, which exceeds the 2017 level by 11 percent. Volume of large business lending have already notably exceeded pre-crisis maximum seen in 2014 when the large business received corporate loans to the tune of RUB 30.9 trillion. At the same time, small and medium-size business lending volumes seen in 2013 amounting to RUB 8.1 trillion have not been reached yet. The share of small and medium-size corporate borrowers in the lending market decreased from 22 percent in 2013 to 15 percent at the year-end 2018.

Growing volumes of new corporate loans resulted in the increased growth of the total amount of corporate debt to bank. In 2018, the debt volume went up by RUB 2.3 trillion or by 7.8 percent. In terms of nominal volume this is comparable with the increment of the bank debt for three previous years (RUB 2.6 trillion).

At the same time, increment of loan debt concentrates in the segment of large business. Debt of small and medium-size business before banks was falling for four years in a row starting from 2014. In 2018 for the first time since 2013, the volume of small and medium-size debt did not fall but increased by 1 percent.

Thus, the bank lending market exhibits clear trend of large corporate predominance in recent years. This is owing to the quality of credit portfolio in the corresponding market segments. Lending to small and medium-size business remains a much risker business than corporate lending to large business. The share of outstanding debt of large borrowers at the year-end 2018 constituted 5.6 percent of the total volume of extended loans to the large business. The share of outstanding debt of small and medium-size business remained at 12.4 percent at the year-end 2018.

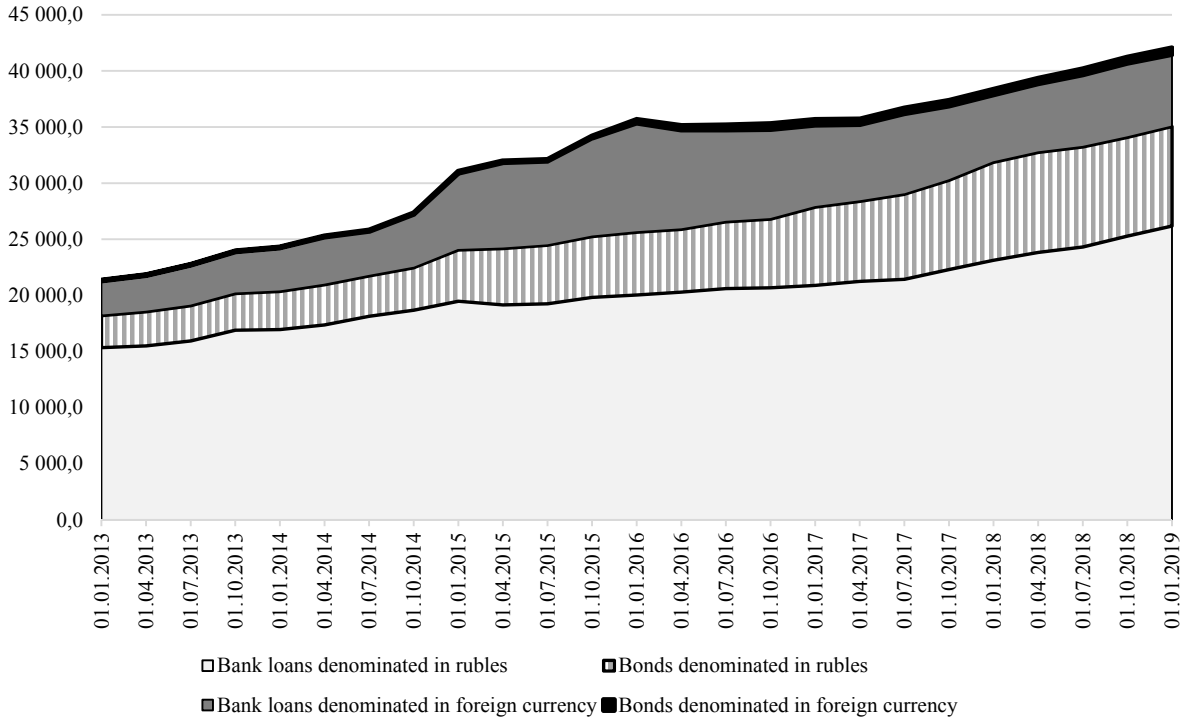


Fig. 66. Main elements of corporate debt in the domestic market, RUB billion

Source: Bank of Russia

3.9.4. Retail lending

Retail bank lending again becomes an incentive instrument for economic growth. In 2018, the retail bank lending market has been developing quite dynamically. All major segments of the lending market have been affected by it. Nominal debt indicators and loans issuance have hit new peaks. Reduction of interest rates and growth of new loans extension have determined a positive net contribution of the bank lending in the disposable household income.

During the year, retail debt on bank loans moved up by RUB 2.74 trillion, which amounts to 21.7 percent of the overall debt as of the beginning of 2018. This is a two-fold increase on the relevant period of the previous year. Then the growth of the households' loan debt to banks amounted to merely RUB 1.39 trillion or 12.3 percent of its value as of the beginning of 2017. As a result, households' overall debt volume to banks amounted to a new record-high value and was equal to RUB 15.4 trillion as of January 1, 2019.

In 2018, the retail bank lending market has also grown markedly regarding new loans extension in comparison with the previous year. During the year, banks extended new retail loans totaling RUB 12.4 trillion up 35 percent against 2017 (RUB 9.1 trillion). It is obvious that in the entire period of existence of the Russian banking market, 2018 saw

the new maximum attained as regards the volume of new loans. The previous maximum was hit precisely in 2017.

The pattern of retail loans extended to individuals keeps shifting towards residential loans. For example, in 2018, banks extended to individuals RUB 3.0 trillion worth of housing loans, a 49% increase against 2017. In 2018, the share of new housing loans amounted to 24% in the overall volume of bank loans extended to households, while in 2017 it did not exceed 22%.

Due to the fact that housing loans have a longer period of repayment as compared to other loans to individuals, their share in the total debt volume is higher than in the newly extended loans. Based on the results of 2018, housing loans accounted for 43% (RUB 6.4 trillion) of the total debt volume (RUB 14.8 trillion). A year before, this index was equal to 42%.

Based on the results of 2018, annual growth rates of the loan debt (on the relevant period of the previous year) amounted to 22.3 percent and 23.1 percent for the overall volume of loans and housing loans, respectively. Higher growth rates of the loan debt have affected all the market segments. In 2017, growth rates of retail lending were more moderate: the debt on housing loans and consumer loans rose by 15.1 percent, and 11.0 percent, respectively (*Fig. 67*).

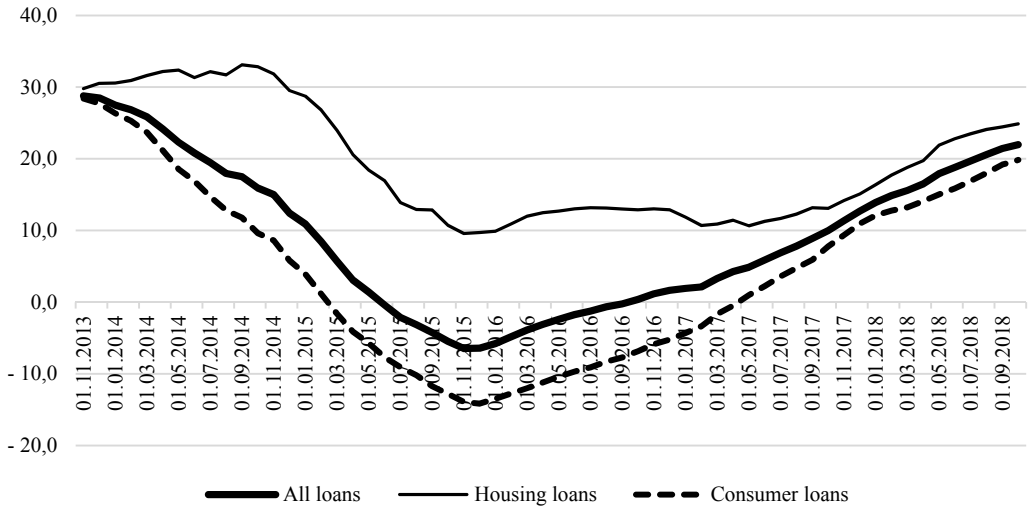


Fig. 67. Growth rates of retail bank loans, percent change compared with the corresponding date of the previous year

Sources: Bank of Russia, own calculations.

The recovery of the retail lending market is evident not only in the nominal terms, but also in terms of comparison with the value of households' cash income.

At 2018 year-end, the overall loan debt exceeded 26.7 percent of the annual amount of households' cash income. This indicator is also an all-time high. the overall loan debt exceeded 25% of the volume of households' cash income. A similar phenomenon was observed only for a few months late in 2014.

The volume of new loans relative to the volume of cash income has also exceeded the previous maximums. As in 2013 when the volume of new loans amounted to 20% of the value of cash income. At 2018 year-end, this indicator amounted to a bit over 21 percent.

In 2018, the debt growth lags slightly behind the level of 2012–2013 when the correlation between the loan debt and cash income was at the level of 5.0%–5.5%, while in 2018 this indicator exceeded 4.7% of the annual volume of households' cash income. This can be explained by the fact that a substantial reduction of interest rates on retail loans stimulates refinancing of previous loans. Consequently, loan debt growth is lagging behind the rate of extension of new loans.

A return to the positive net contribution of a bank loan to households' disposable cash income has become a key result of the loan market development in 2018. This indicator is determined as the difference between growth in households' loan debt to banks and the volume of interest payments on loans. In a situation where growth in the loan debt exceeds the value of interest payments, households receive additional funds from the banking sector, thus gaining more disposable cash resources (*Fig. 68*).

During the past three years (from 2015 to 2017), households paid more interest to banks than received new loans, less the repaid ones, from them. In such a situation, fewer financial resources became available to households and the extent of consumer spending decreased.

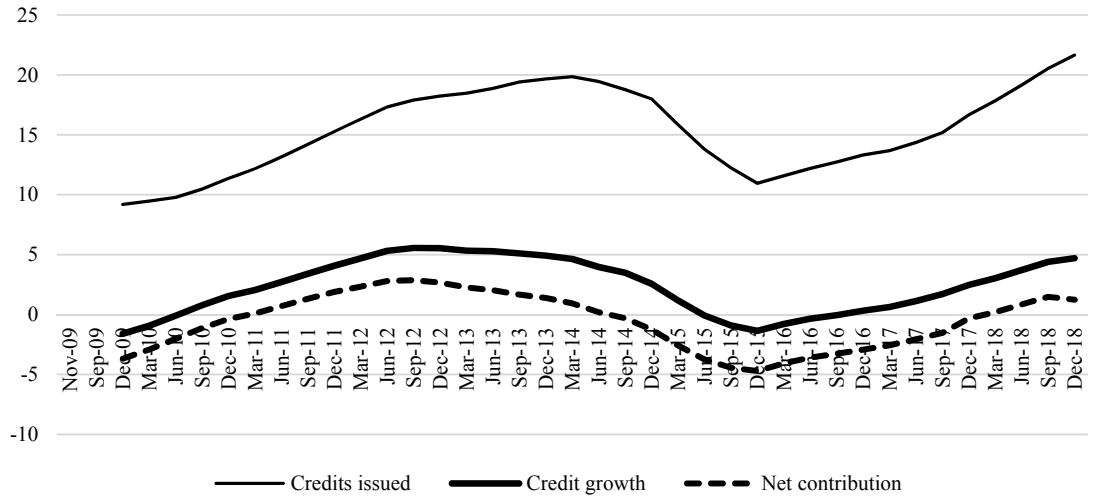


Fig. 68. Lending to households, percent change on cash income for four quarters

Sources: Bank of Russia, the Federal State Statistics Service, and own calculations.

In 2018, the bank loan has regained its role in stimulating growth in households' expenditures. Based on the results of the three quarters of 2018, the net contribution of bank lending to households' disposable cash resources could be estimated at 1.2% of their cash income. Those additional financial resources were spent by households both on underpinning ultimate consumption and investments in housing taking into account

the fact that the importance of housing loans in the overall volume of the loan market has greatly increased. In either case, it can be stated that a bank loan has a stimulating role to play in promotion of economic growth.

3.9.5. Banking passives

In 2018, retail accounts and deposits increased RUB 1,782 billion, or by 6.8 percent. Retail ruble accounts and deposits in Russian banks saw an increase of nearly Rb 2 trillion year to date. At the same time, deposits held in foreign currencies decreased in dollar terms by USD 4.8bn during the same period

The period since 2018 has seen slow pace of growth in retail bank deposits: excluding deposit outflows during the same period of 2014, 2018 saw the slowest dynamics over the entire period of monitoring (*Fig. 69*).

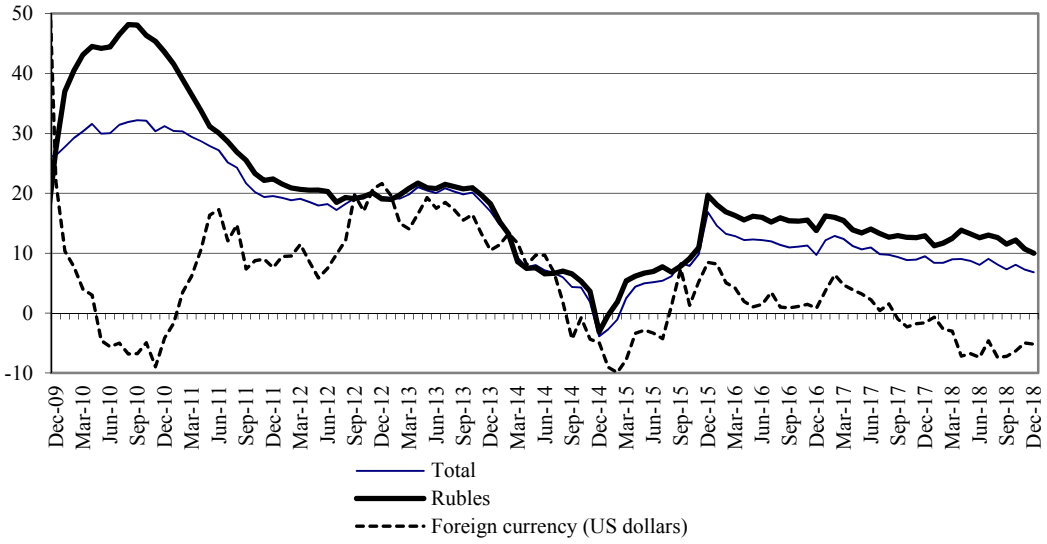


Fig. 69. Growth rates in bank deposits over 12 months, percent

Sources: Bank of Russia, own estimates.

Thus, the primary source of bank liabilities – retail accounts and deposits – has since 2018 been exhibiting an extremely sluggish dynamics. Russian households have accelerated their savings against the backdrop of active growth in credit liability to banks for maintaining an acceptable level of consumption amid stagnating real income.

Another critical component of the resource base of Russian banks – corporate accounts and deposits – increased during 2018 by RUB 2.0 trillion, or by 9.4 percent. This is a bit more against the previous year (RUB 1.7 trillion, or 8.3 percent) (*Fig. 70*).

Increased growth of corporate resources in the banking sector in 2018 was due to the growth of time deposits growth in contrast to current accounts.

For instance, in balances on corporate current and settlement accounts in banks increased by RUB 216 billion, or by 2.7% percent, practically the same was seen a year earlier (RUB 204 billion, or 2.5 percent).

Corporate fixed deposits volume increased at a higher pace – by RUB 1.788 billion, or by 13.5 percent. Meanwhile, I 2017 the increment of this component corporate resources moved up by RUB 1,406 billion, or by 11.6 percent.

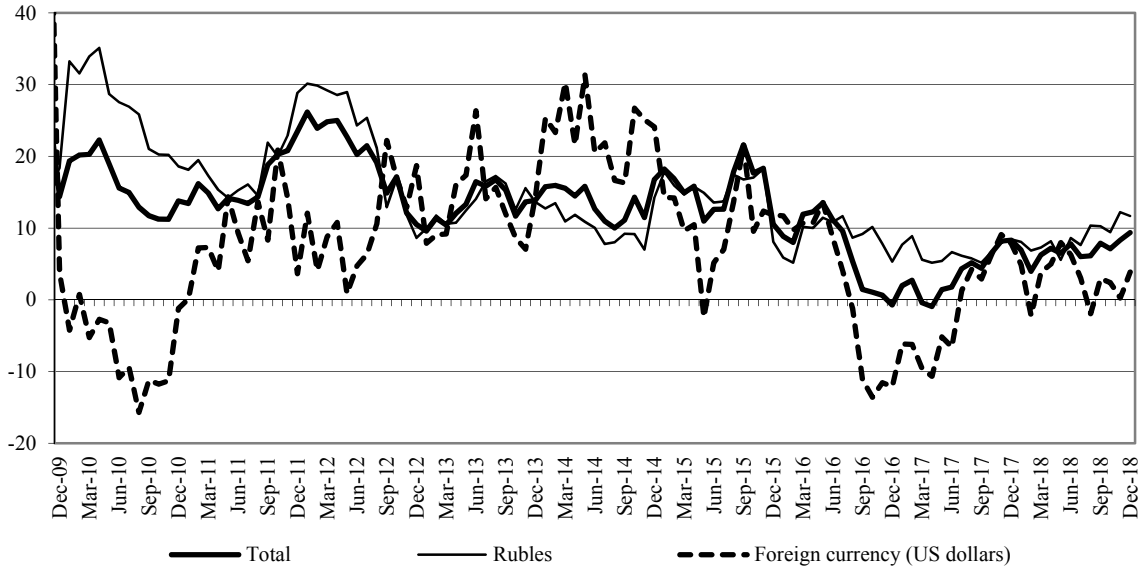


Fig. 70. Growth rates of non-bank organizations over 12 months, percent

Sources: Bank of Russia, own calculations.

Such combination in the dynamics of certain elements of corporate resources seems negative.

The recovery, since 2017, of growth in Russian corporations' term deposits with banks is indicative of a lack of sufficient number of attractive investment projects. The stagnation of current accounts is an economic activity indicator reflecting that the economy is faced with an overall unstable dynamics

An extra adverse factor for the dynamics of the resource base of Russian banks was the ongoing reduction of liabilities to non-residents. Over 2018, foreign liabilities of the Russian banking sector were reduced by nearly by RUB 733 billion, or by USD 13 billion. However, the reduction of foreign liabilities of Russian banks was overall offset by repayment of their foreign assets. During 2018, foreign assets of the banking sector contracted by nearly USD14 billion.

Therefore, in 2018 the Russian banking sector so far can count on only two principal domestic sources – households and legal entities in approximately equal proportions. In comparison with 2017, there was a small shift in favor of corporate resources.

The increase in banks' debt to the central bank (+RUB 591 billion year to date) amid structural liquidity surplus appears to be the result of regulator's efforts to rescue a few big credit institutions and can hardly become a firm basis for the provision of lending to bank customers.