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The review provides a detailed analysis of main trends in Russia's economy in 2014. The paper contains 6 big sections that highlight single aspects of Russia's economic development: the socio-political context; the monetary and credit spheres; financial sphere; the real sector; social sphere; institutional challenges. The paper employs a huge mass of statistical data that forms the basis of original computation and numerous charts.

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Russian Money Markets and Financial Institutions in 2014

3.1. Market recovery from the crisis

3.1.1. Comparing the two crises' parameters in Russia

In 2014, Russia was hit by a new round of financial crisis manifesting itself in the national currency devaluation, capital flight and sagging stock market. The RTS (Russian Trading System) Index has been moving along a W-shaped pathway since 2008, which is most typical of countries whose financial crises are associated with deep disproportions in economy, for example, in South Korea since 1989 or in the U.S. innovation marketplace since 1999. As of 31 January 2015, the RTS Index was 30.0% below the pre-crisis peak level of May 2008 and, kept searching for new lows. In January 2009, the Index dropped to 21.8% below the 2008 peak level.

It took the RTS Index much longer to rebound from its lowest value than it did during the crisis in 1997–1998 (see *Table 1*). It took the RTS Index 58 months to recover from the crisis in the late 1990s. The Index, instead of recovering, has been searching for new lows for 72 months since May 2008.

Table 1

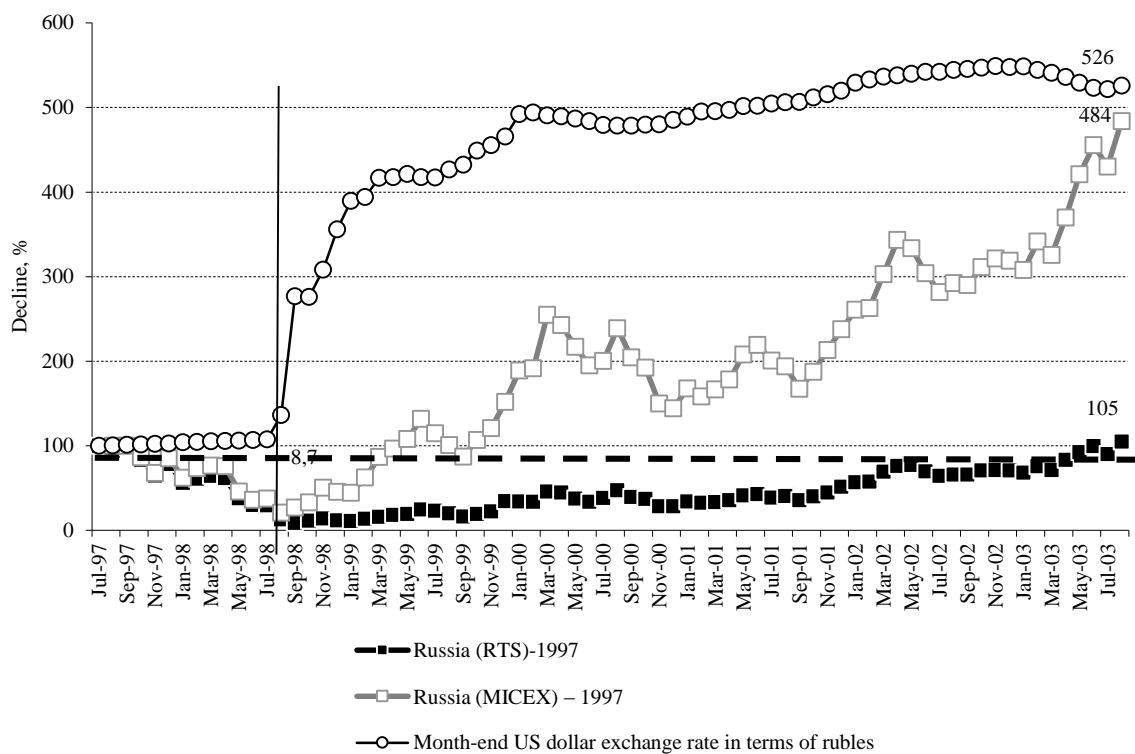
**Financial crises in Russia in 1997–1998 and 2008–2009
and subsequent market rebound
(as of 31 January 2015)**

	Crisis 1997–1998	Crisis 2008–2009
1. Fall from a peak level		
1.1. Depth, %		
RTS Index	-91.3	-78.2
MICEX Index	-73.0	-68.2
1.2. Duration, months		
RTS Index	14	8
MICEX Index	13	6
2. Rebound, months		
RTS Index	58	72
MICEX Index	8	74

Source: based on the data obtained from the Moscow Exchange.

The differences in depth between the ruble devaluation during the crises of 1997–1998 and 2008–2009 are responsible for different rebound dynamics of the RTS Index and the MICEX Index. The MICEX Index rebounded at a faster rate than the RTS Index after the over 5-fold depreciation of the ruble¹ in 1998, because the equity shares in the MICEX Index portfolio are denominated in rubles, whereas the equity shares in the RTS Index portfolio are denominated in US dollars (see *Fig. 1*). The MICEX Index returned to the pre-crisis level as early as May 1999, i.e., within just eight months after it hit the “bottom” of the crisis. It took the RTS Index 58 months to recover from the lowest value during the crisis.

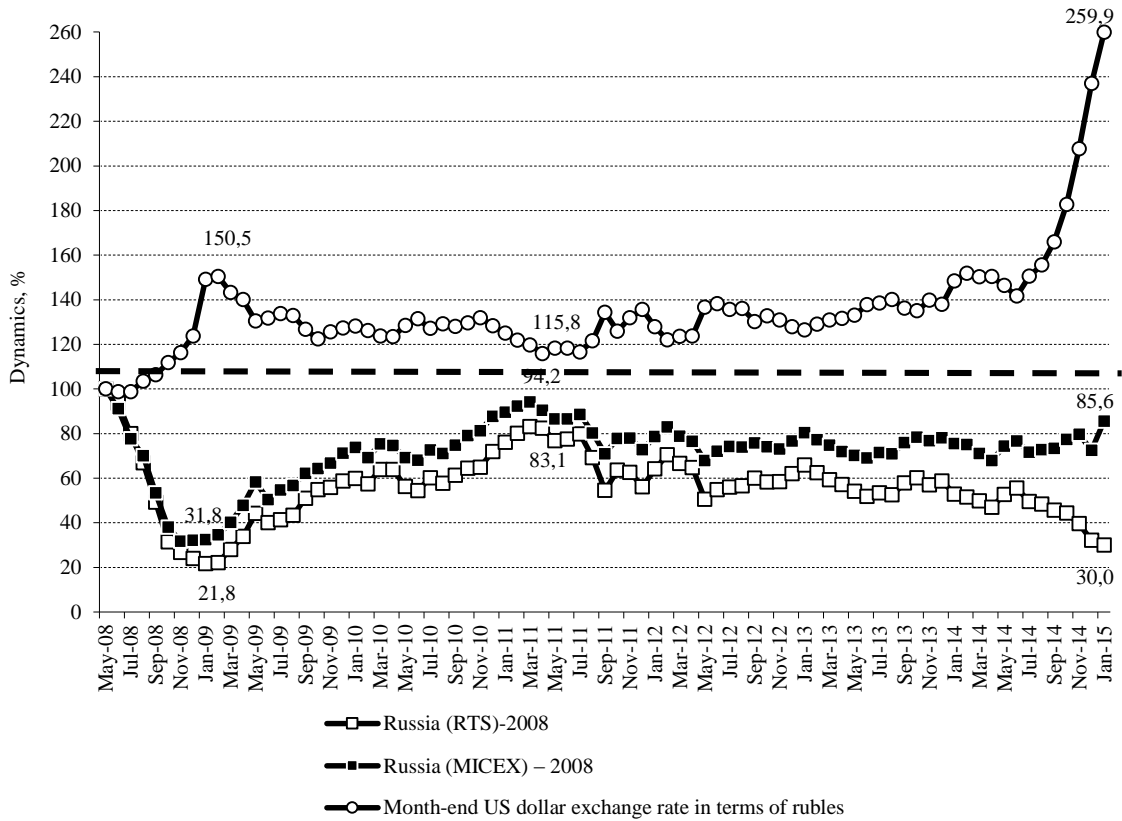
¹ Within 1998 and 2003.



Source: based on the data obtained from the Moscow Exchange and the Bank of Russia.

Fig. 1. Changes in the US dollar exchange rate, RTS Index and MICEX Index during the crisis of 1997–1998 (July 1997 = 100%)

In the period between 2008 and 2009, the ruble devaluated 50% (see Fig. 2). However, by April 2011, the ruble exchange rate strengthened again so that it dropped only 15.8% of the pre-crisis level. The ruble’s depreciation has resumed since May 2011. In January 2015, the US dollar exchange rate reached 61.70 rubles per US\$, up 159.9% compared with that seen in May 2008. The accelerated since August 2014 devaluation of the ruble again determined various recovery rates for the MICEX and RTS indices. As of January 2015, the MICEX Index reached 85.6% of the peak level seen in 2008, while the RTS Index managed to reach as little as 30.0%.



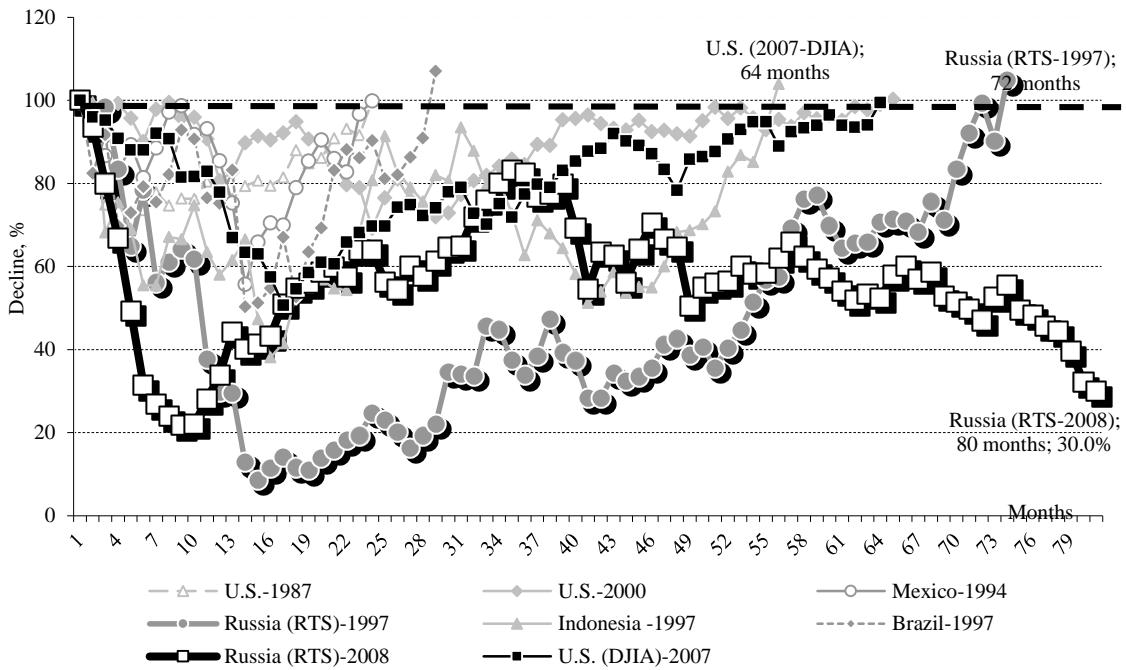
Source: the calculations are based on the data provided by the Bank of Russia and the Moscow Exchange.

Fig. 2. Changes in the US dollar exchange rate, RTS Index and MICEX Index in the period between May 2008 and January 2015 (May 2008 = 100%)

3.1.2. Long-term and short-term financial crises

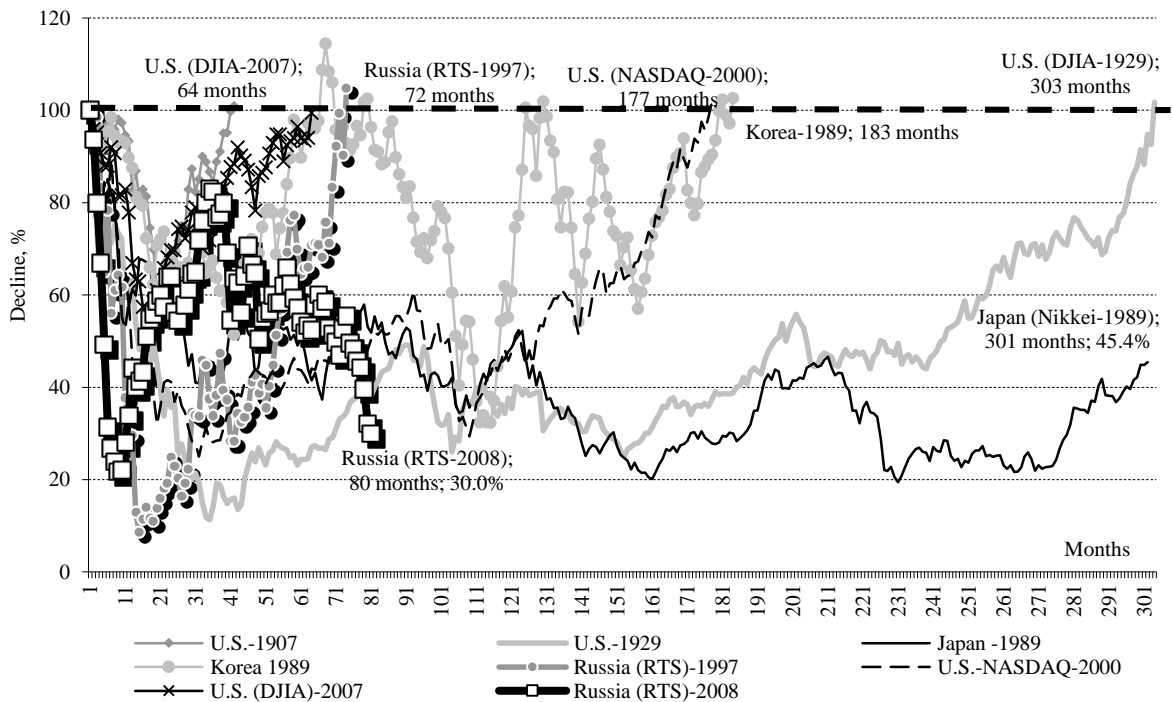
The lingering downtrend in the RTS Index has already hit a record of 6.7 years against the backdrop of worldwide major short-term financial crises (the United States in 1987, 2000 and 2007, Mexico in 1994, Indonesia and Brazil in 1997) with a recovery period of 5 to 6 years (see Fig. 3). This allows the recovery process which has been lingering since 2008 in the Russian stock market to be classified as downtrend with a relatively long-term recovery period.

The current crisis in Russia is still insignificant in terms of duration against the backdrop of worldwide major long-term financial crises (see Fig. 4). The duration of two most prominent W-shaped crises – the equity shares of companies in South Korea and the equity shares of NASDAQ in the United States – was 183 and 177 months, respectively. At the same time, the NASDAQ didn't see full recovery until 2014. It took the Dow Jones Industrial Average (DJIA) 303 months to recover from the Great Depression 1929. The Japanese NIKKEI-225 is most likely to break this record in May 2015, as in January 2015 the index failed after 301 months to reach the peak level of 1989. The unexpectedly long period of recovery in the Russian stock market is largely determined by a more structural than cyclical nature of the current economic crisis in Russia.



Source: author's calculations based on the data from the Moscow Exchange and www.finance.yahoo.com.

Fig. 3. Depth and duration of short-term financial crises worldwide as of 31 January 2015 (peak level = 100%)



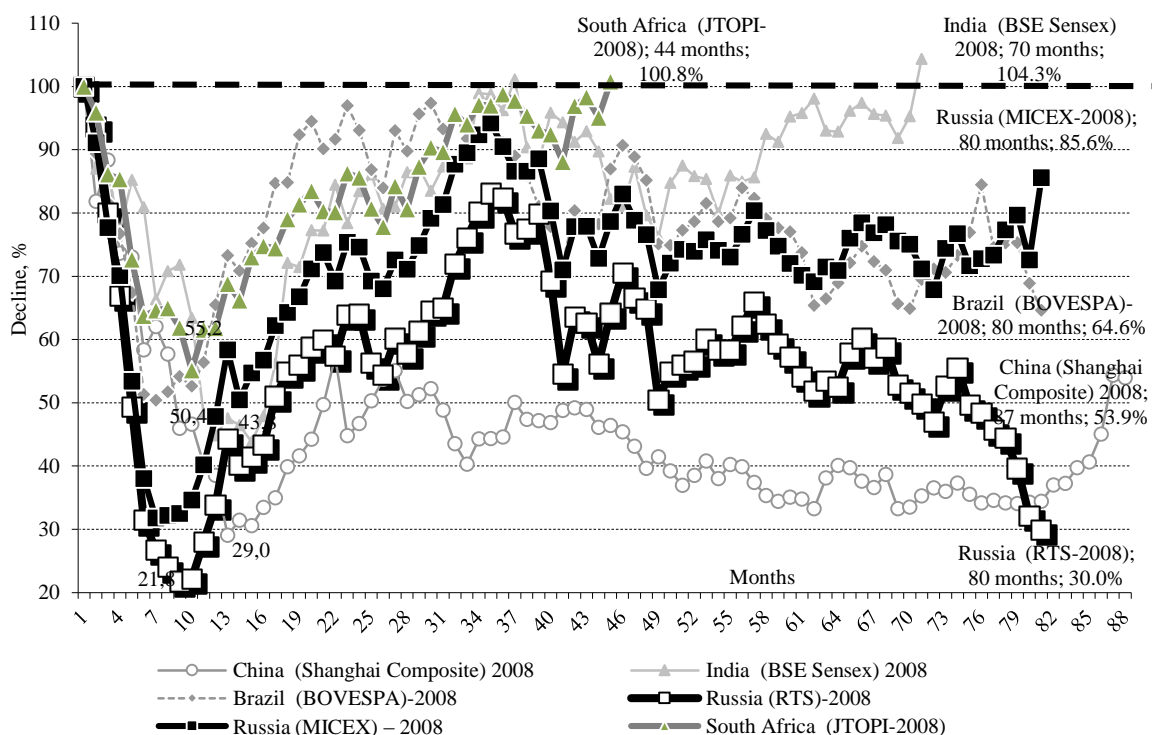
Source: author's calculations based on the data from the Moscow Exchange and www.finance.yahoo.com.

Fig. 4. Depth and duration of long-term financial crises worldwide as of 31 December 2014 (peak level = 100%)

3.1.3. Specific recovery features in the markets of BRICS countries

The crisis 2008 triggered drastic changes worldwide, resulting in that the factor of global saving glut¹, which previously led to redistribution of foreign investment in favor of BRICS countries, has now created a reverse trend. For example, the UNCTAD expects investment flows to move in reverse in the years to come, i.e., from developing and emerging economies towards developed countries².

As of January 2015, however, Russian stock indices showed a lowest performance figures even against the backdrop of BRICS countries (see Fig. 5). After the crisis in 2008, the JTOPI (Johannesburg Stock Exchange) and the BSE (Sensex Bombay Stock Exchange) managed to catch up with the pre-recession peak levels within 44 and 70 months, respectively. It took the Brazilian Bovespa 80 months to reach 64.6% of the pre-crisis lowest value; it took the Shanghai Stock Exchange Index (China) 87 months to reach 53.9% of the pre-crisis lowest value. Over a period of 80 months, the Russian FX RTS Index plunged deep to reach the lowest values, 30.0% of the pre-crisis peak level, among the BRICS markets. The Ruble MICEX Index managed to stay at 85.6% because the ruble depreciated 71.9% against the US dollar in 2014.



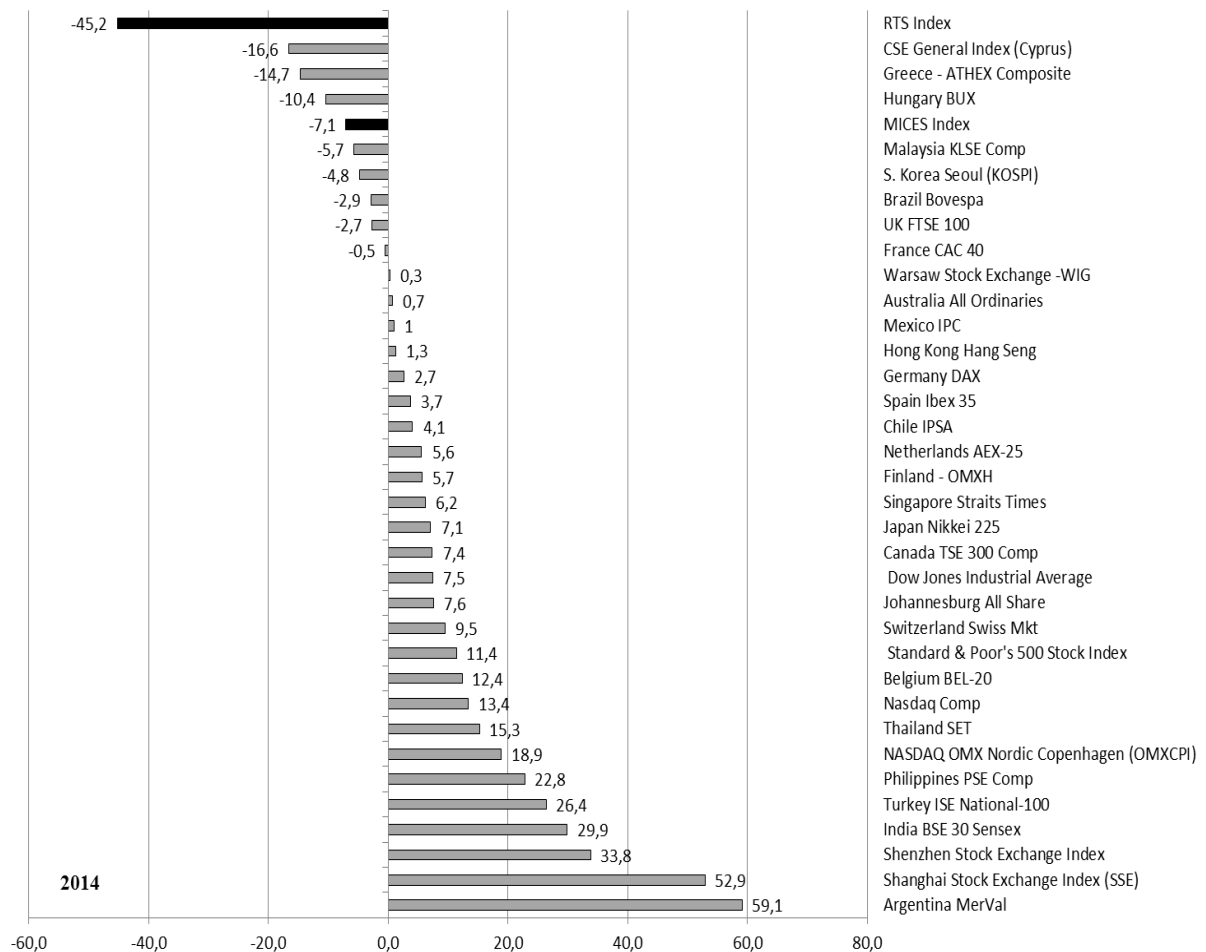
Source: the calculations are based on the data from The Wall Street Journal and Thomson Reuters Eikon.

Fig. 5. Depth and duration of the current financial crisis in BRICS countries as of 31 January 2015 (peak level = 100%)

¹ The Global Saving Glut and the U.S. Current Account Deficit. Remarks by Governor Ben S. Bernanke At the Homer Jones Lecture, St. Louis, Missouri. April 14, 2005: <http://www.federalreserve.gov/boarddocs/speeches/2005/20050414/default.htm>

² World Investment Report 2014: Investing in the SDGs: An Action Plan UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT (UNCTAD), 2014.

In 2014, the Russian stock market turned out to be a record holder, show the deepest plunge (see Fig. 6). The RTS Index plunged by 45.2% compared with 14.7% for the Athens Stock Exchange Index and 16.6% for the Cyprus Stock Exchange Index. The MICEX Index dropped by 7.1% during the same period.

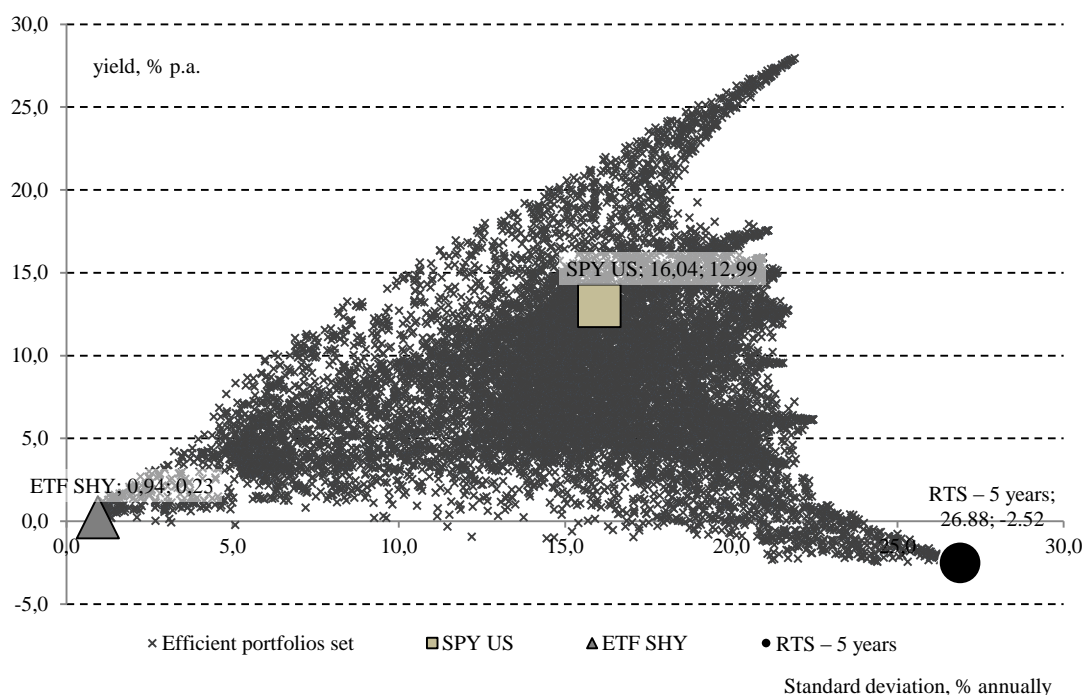


Source: the calculations are based on the data from The Wall Street Journal and Thomson Reuters Eikon.

Fig. 6. Global indices yield in 2014, % p.a.

The RTS Index portfolio has shown the lowest performance result on the yield-risk criterion over the past 5-year period compared with other world popular investment strategies (see Fig. 7). Nineteen various investment strategies over the 5-year period ending on 20 October 2014 were used for this purpose. The following instruments were included into the list of investment strategies: SPY US Equity (fund's name – SPDR S & P 500 ETF) – S&P500 Index; ILF US Equity (iShares Latin America 40 ETF) – Latin-American companies' equity shares; SHY US Equity (iShares 1–3 Year Treasury Bond ETF) – U.S. government bonds with a duration of 1–3 years; VB US Equity (Vanguard Small-Cap ETF) – small capitalization companies' equity shares; IGE US Equity (iShares North American Natural Resources ETF) – global resources; SLYV US Equity (SPDR S&P 600 Small Cap Value ETF) – small capitalization/value companies' equity shares; LQD US Equity (iShares iBoxx \$ Investment Grade Corporate Bond ETF) – corporate bonds of U.S. issuers with a high investment rating; IEF US Equity (iShares 7–10

Year Treasury Bond ETF) –U.S. government bonds with a duration of 7–10 years; IWN US Equity (iShares Russell 2000 Value ETF) – value shares; IVW US Equity (iShares S&P 500 Growth ETF) – growth shares; EFA US Equity (iShares MSCI EAFE ETF) – emerging market companies’ equity shares; GLD US Equity (SPDR Gold Trust) – gold; IYT US Equity (iShares Transportation Average ETF) – transport companies’ equity shares; IBB US Equity (iShares Nasdaq Biotechnology ETF) – biotech companies’ equity shares; CAC Index – French shares index; FT-100 Index – an index including UK companies’ equity shares; NKY Index – index NIKkei225 (Japan); DAX Index – an index including German companies’ equity shares; RTSI Index – the RTS Index (Russia), FX¹. A point of Index RTS describing yields and risk of Russian major issuers’ equity shares denominated in US dollars on a set of 5-year portfolios corresponds to the values of minimal yield and maximum risk, i.e., 2.5% p.a. and 26.9%, respectively, of all (!) possible combinations of 19 index funds.



Source: author’s calculations based on the data from Bloomberg.

Fig. 7. Yields and risks of a set of portfolios based on made up of 19 index funds (ETFs), over a 5-year period, as of 20 October 2014

3.2. Russian stock market competitive power

3.2.1. Stock markets’ liquidity

The 2008 crisis also resulted in the repositioning of stock market liquidity centers. The recovery of major global markets to the pre-recession values of stock indices was not accompanied by the recovery in trading volumes in stock exchanges for the first time over many decades (see Table 2). In 2014, volumes of trading in equity shares in U.S. stock exchanges accounted for as little as 65.5% of the volumes seen in 2007, while volumes of trading in equity shares in

¹ The values of respective indices were used for the calculations for the stock markets in France, Germany, Japan, the United Kingdom and Russia, because historical data on the respective ETFs was limited.

the London Stock Exchange, Euronext (Europe), and the German stock exchange accounted for 66.4%, 43.1% and 43.7%, respectively.

The foregoing global trend was triggered by the drastic changes that took place in stock exchanges in the mid 2000s, which produced mixed effects. Massive commercialization of exchanges turned them from entities, where market players by themselves set trading and settlement rules, into business entities seeking profits by introducing some technologies and innovations, including the high frequency trading (HFT). This spurred growth in the number of exchanges and stock market fragmentation. In 2008, 13 exchanges and alternative trading systems were operating instead of the two traditional exchanges in the United States¹.

In 2005, the U.S. Securities and Exchange Commission (SEC) adopted the so-called Regulation National Market System, or Reg NMS pursuant to Section 11A of the Securities Exchange Act of 1934. The document entered into force in 2007 and introduced a “best bid” requirement for investor bids as part of the National Best Bid and Offer (NBBO). According to some experts, the Reg NMS allowed high frequency brokers to obtain insider information about common market players’ bids for the front running purpose, allowing extra profits to be generated from having information about common customers’ bids². Under the circumstances, it has become profit-making for major market players to establish the so-called dark pools, i.e. alternative trading systems for accumulating securities buy/sell bids of, above all, common investors.

In 2014, according to the data from World Federation of Exchanges, in United States, the share of transactions with equity shares in the BATS Global Markets, an alternative trading system, reached 46.8% of the trading volumes in the NYSE and NASDAQ. In Europe, the trading volume in the alternative trading system BATS Chi-x Europe accounted for 90.8% the turnover in the London Stock Exchange in the same year. At the same time, the share of HFT in total volume of transactions with securities saw a fast growth. In the United States, for example, the share of HFT in the volume of transactions with equity shares increased to 55% in 2012³ from 35% in 2007⁴. According to the ESMA estimates, in European trading systems, the share of transactions qualified as HFT stood at 43%⁵ on average per 100 issues of companies’ equity shares in nine EU member-countries in May 2013.

According to the U.S. Investment Company Institute (ICI), the high frequency trading practice can make the mutual fund industry be exposed to severe risks⁶, because it involves confidential information about large trading orders and applies the market manipulation practice through front running.

Since 2013, the HFT practice has been under the focus of regulators in many countries. The high frequency trading and sophisticated trading algorithms give rise to numerous questions

¹ Lewis M. Flash Boys: A Wall Street Revolt / Michael Lewis; Translated from English – M.: Alpina Publisher, 2015, p. 51.

² Lewis M. Flash Boys: A Wall Street Revolt / Michael Lewis; Translated from English – M.: Alpina Publisher, 2015, pp. 127– 133.

³ Strasburg J., Patterson S. High-Speed Traders Race to Fend off Regulators. WSJ, December 27, 2012.

⁴ Gerig Austin. High frequency Trading Synchronizes Prices in Money markets. SEC. DERA Working Paper Series. Jan. 21, 2015; the publication is available at <http://www.sec.gov/dera/staff-papers/working-papers/dera-wp-hft-synchronizes.pdf>

⁵ ESMA Economic Report. High frequency trading activity in EU equity markets. Number 1, 2014, p.4. The publication is available at http://www.esma.europa.eu/system/files/esma20141_-_hft_activity_in_eu_equity_markets.pdf

⁶ Investment Company Institute’s (ICI) Letter of 10 April 2010 to the SEC, containing proposals on the securities market structure. The Letter is published at the ICI’s official website at: <http://www.ici.org/pdf/24266.pdf>

and concerns¹, said Mary White, a new head of the U.S. Securities and Exchange Commission (SEC, U.S.), at Senate hearings.

Table 2

Dynamics of the value of on-exchange transactions with equity shares in major stock exchanges in 2007–2014 (2007 = 100%)²

	2007	2008	2009	2010	2011	2012	2013	2014
U.S. (NYSE and NASDAQ)	100	120.1	72.6	71.0	71.7	54.2	54.3	65.5
China (two stock exchanges)	100	63.0	128.9	132.8	106.9	81.8	124.9	198.0
Japan (Tokyo Stock Exchange and Osaka Stock Exchange)	100	87.3	61.2	63.2	66.3	57.5	103.9	86.8
United Kingdom	100	89.0	62.9	63.5	65.7	50.8	51.7	66.4
Euronext	100	84.7	42.7	44.5	47.1	34.8	36.7	43.1
Germany	100	95.5	45.1	48.4	52.3	37.9	39.7	43.7
Hong Kong	100	77.3	70.1	74.1	71.5	54.7	65.5	75.3
Canada	100	105.3	75.5	83.0	93.5	82.3	83.2	85.4
Australia	100	77.5	57.9	77.1	86.8	67.9	63.9	58.6
Russia (MICEX – on-exchange transactions)	100	89.0	77.3	75.5	95.2	55.8	44.0	46.0
Russia (MICEX – all trading modes)*	100	116.5	74.7	92.4	142.5	127.5	123.6	119.2
NASDAQ OMX Nordic Exchange	100	84.5	48.8	52.6	58.0	41.1	43.8	50.6
Total as per member of the World Federation of Exchanges (WFE)	100	100.8	69.5	70.7	70.7	54.8	61.3	87.4

* Market and negotiated repo transactions, repo, Classica and Standard market sectors.

Source: author's calculations based on the data from World Federation of Exchanges, the London Stock Exchange and the Moscow Exchange.

Regardless the 2011 consolidation of the Russian exchanges, the volume of on-exchange transactions with equity shares in the Moscow Exchange failed to reach the pre-crisis levels. In 2014, the volume accounted for as little as 46.0% of the level seen in 2007. With all trading modes being considered, the volume of transactions with equity shares in 2014 reached 119.2% of the pre-crisis level. Additionally, total volume of transactions is nothing but indicative of a faster than normal growth in fundraising for the purpose of transactions with equity shares in the Exchange, rather than reflects real capital flows. However, the reasons for slow growth in volumes of on-exchange transactions in the Moscow Exchange differ from the reasons in its foreign counterparts. The former are associated with the ongoing after 2008 stagnation of prices of Russian equity shares, low trading activity of domestic investors and non-residents.

The volume of HFT transactions in the Moscow Exchange was approximately similar to that recorded in major European exchanges. According to Bank of Russia's money market review, in 2011, HTS transactions accounted for about a half of the Forcs (futures & options) market the trading volume. According to the data from *Expert* journal, trading robots concluded about 40% of the total transactions in the stock market in 2012, and robots accounted for 97% of the total orders³. The issues of adverse bearing of on-exchange HFT trading haven't yet been noticeable in Russia. This can be explained not only by a poor development of domestic conservative investors, but also low liquidity in the market itself. There is a series of restrictions on those involved in HFT imposed in the Exchange, such as a maximum limit on traders' transactions in the derivatives market and above normal tariffs on too active market players. It is telling that traders using no robots for trading⁴ have been awarded as winners for the second

¹ Strasburg J., Patterson S. Trading Clamps Spur Lobby Effort. WSJ, March 24, 2013.

² Including transactions with securities of foreign issuers on the trading floor of the respective exchanges.

³ Obukhova E. A robot exchange wins. *Expert*, No. 37, 17–23 September 2012.

⁴ <http://investor.moex.com/ru/winners.aspx>

consecutive year in the regular *Best Private Investor* (BPI) contest held in the Moscow Exchange.

However, with possible growth of the share of domestic long-term investors in on-exchange trading volumes, given the negative experience of global stock exchanges, a special emphasis should be given to how HFT strategies may impact the investment costs of this category of investors. As we showed in the money market review 2013, the results of 2011 BPI contest¹ showed that high frequency traders with more than 3,000 transactions daily had a distinct advantage over other market players in terms of profits. The distribution of revenue of high frequency traders was shifted to the right, i.e., to above average-level results, the bias was 3.6. Regulatory and oversight bodies and self-regulated organizations shouldn't ignore the nature of such advantages, because studies of the phenomenon in foreign markets show that it may result from the practice qualified as insider trading and front running².

3.2.2. Stock market's capitalization

Unlike the majority of global financial centers experiencing growth in capitalization in 2012–2014 (see *Table 3*), the value of Russian companies decreased to 34.4% in 2014 compared with 2007. This was the second after 2008 lowest decline in capitalization, when the fall was as deep as 26.4% of the 2007 level.

Such a substantial decline in the capitalization of Russian companies in 2014 was triggered by the ruble devaluation, foreign capital outflow driven by the ruble's devaluation and Western sanctions, the deficit of domestic investment resources because of, among other things, the pension assets “freeze” in 2013–2014.

Table 3

Domestic market capitalization dynamics in 2007–2014 (2007 = 100%)

	2007	2008	2009	2010	2011	2012	2013	2014
U.S. (NYSE and NASDAQ)	100	58.3	76.7	87.9	79.5	94.9	122.2	133.9
China (Shanghai SE)	100	38.6	73.2	73.5	63.8	68.9	67.6	106.4
Japan (Tokyo Stock Exchange)	100	71.9	76.3	88.4	76.8	80.3	104.9	101.1
United Kingdom	100	48.0	72.5	80.5	75.2	78.3	86.3	91.7
Euronext	100	49.8	68.0	69.4	57.9	67.1	84.9	78.6
Germany	100	52.8	61.4	67.9	56.3	70.6	92.0	82.6
Hong Kong	100	50.1	86.8	102.1	85.1	106.7	116.8	121.8
Canada (TMX Group)	100	47.3	76.7	99.3	87.4	94.2	96.7	95.8
Australia (Australian SE)	100	52.7	97.2	112.0	92.3	106.8	105.2	99.3
Russia *	100	26.4	57.3	91.7	72.9	71.8	69.3	34.4
NASDAQ OMX Nordic Exchange	100	45.3	65.8	83.9	67.8	80.1	102.1	96.3

* The calculations are based on the data on 2007–2013 from S&P.

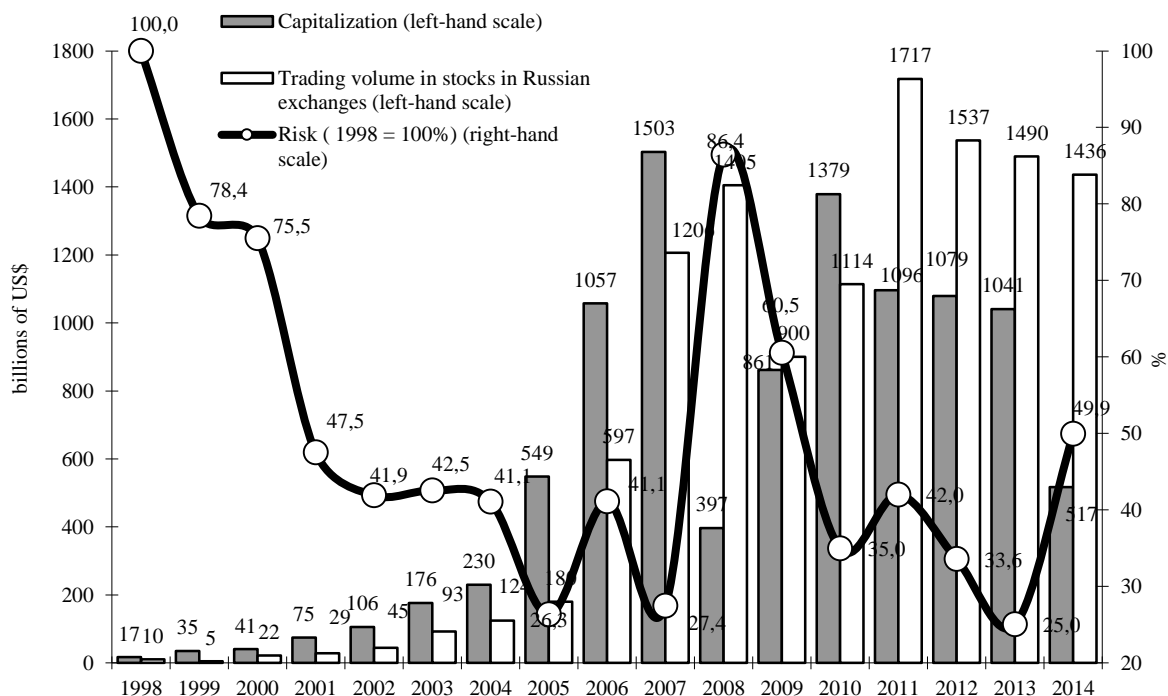
Source: the calculations are based on the data from World Federation of Exchanges and Finam company.

Capitalization of Russian joint-stock companies amounted to \$517bn in 2014 compared with \$1041bn in 2013 (see *Fig. 8*). Capitalization of equity shares accounted for 27.7% of GDP in 2014 compared with that of 49.7% in the preceding year, 2.8 times less than the 76% projected

¹ Russia's economy in 2013. Trends and Outlooks. (Issue 35) – M.: Gaidar Institute, 2014, pp. 106 – 109.

² For more details on HFT adverse impact on investors refer to the papers of the following authors: Arnuk Sal, Saluzzi Joseph. *Broken Markets: How High Frequency Trading and Predatory Practices on Wall Street Are Destroying Investor Confidence and Your Portfolio*. New Jersey, FT Press, 2012; Patterson Scott. *Dark Pools: The Rise of the Machine Traders and the Rigging of the U.S. Stock Market*. New York, Crown Publication Group, 2012; Lewis M. *Flash Boys: A Wall Street Revolt* / Michael Lewis; Translated from English – M.: Alpina Publisher, 2015.

by the Ministry of Finance for 2014 in a State Program called the Regulation of Money markets, Insurance and Banking which was drawn up late in 2012. The total capitalization of Russian issuers appeared to be less than that of a world's largest Apple Inc. alone, which amounted to \$647.4bn at 2014 year-end.



Source: the calculations are based on the data from the Moscow Exchange and S&P with regard to capitalization.

Fig. 8. Russian stock market capitalization, liquidity, and volatility in 1998–2014

At the same time, unlike the trend prevailing in 2011–2012, no major Russian issuers changed their jurisdiction in favor of other countries in 2013–2014. On the contrary, a few Russian companies incorporated in other countries (e.g., RUSAL) announced that they might change their jurisdiction in favor of Russia¹ in response to executive authorities' tightened countermeasures against offshore taxation schemes in 2013. A reverse trend might be seen in the years to come, i.e. companies operating in Russia would probably return back under the national jurisdiction in response to the amendments adopted in 2014 to the Tax Code for Russia, concerning the taxation of controlled foreign companies (CFC) and revenue of foreign organizations.

Facing financial problems, Russian issuers were forced in 2014 to delist from foreign exchanges. In 2014, Russian developers such as HALS Development and Rose Group were delisted from the London Stock Exchange². Representatives of Russian TCS bank stated that the receipts of TCS Group Holding might be delisted from the London Stock Exchange³. Russian major issuers such as VTB and Rosneft⁴ have confronted with difficulties in the London Stock

¹ Elkova O., Ermakova A., Loginov V. Business sets course for de-offshorization. Izvestia, 19 December 2013

² Geraschenko E. Public developers fall out of love with London, 21 November 2014.

³ Zhelobanov D., Petrova O. Tinkoff is leaving undervalued. Vedomosti, 1 December 2014.

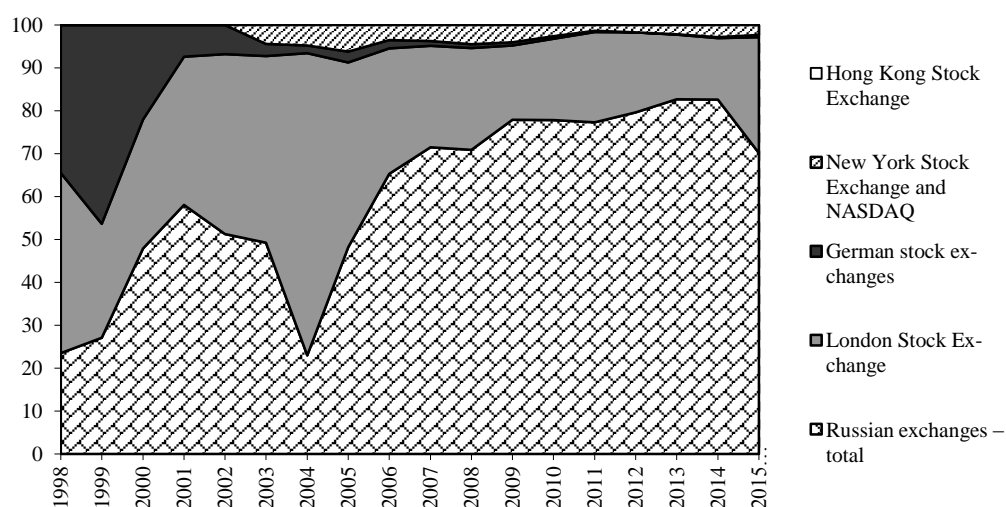
⁴ Eremina A., Papchenkova M., Serov M., Starinskaya G. Lost in transfer. Vedomosti, 11 November 2014.

Exchange, as a result of the Western sanctions restricting additional issuance of depository receipts by converting them into equity shares.

The total volumes of on-exchange trading under all trading modes in the Moscow Exchange decreased to \$1436bn in 2014 from \$1490bn. in 2013, or by 3.62%. The turnover in exchange's stock market had been declining for three consecutive years. In 2014, the volatility of equity shares, measured by the standard deviation of RTS Index daily movements, increased noticeably compared with the preceding year, accounting for 49.9% of the 1998 level. This implies that in 2014 the volatility of Russian companies' equity shares was even a bit higher than that in 2001 when the ratings, including the sovereign one, for all Russian issuers were set below the investment-grade level.

3.2.3. Competition with foreign stock exchanges

Judging by the total volume of trading in equity shares under all trading modes in 2014, the Moscow Exchange managed to maintain its position as the key authority on trading in equity instruments (shares of stock and depository receipts) of Russian issuers (see *Fig. 9* and *Table 4*). The share of Moscow Exchange in trading in the foregoing shares of stock and depository receipts increased to 82.6% in 2013 from 71.1% in 2013. The share of the London Stock Exchange, the German Stock Exchange, and two largest U.S. stock exchanges increased insignificantly. However, these relatively good figures for the Moscow Exchange include repo transactions with shares of stock which formerly fall into the money market category. Net of repo transactions, the share of Moscow Exchange in the total volume of trading in equity instruments of Russian issuers increased to 45.4% in 2014 from 43.6% in 2013. Therefore, the conclusion for on-exchange transactions is other ways – the share of Russian exchange isn't prevailing.



Source: author's calculations based on the data from Russian and foreign stock exchanges.

Fig. 9. The share of stock exchanges in trading volumes of Russian JSC's equity shares

Table 4

The share of stock exchanges in trading volumes of Russian JSC's equity shares, %

	2000	2005	2010	2011	2012	2013	2014	Jan.2015
Moscow Exchange core market	36.0	38.1	69.9	72.1	70.3	70.5	82.6	70.1
Moscow Exchange Classical and conventional markets (the former RTS)	11.9	2.0	7.9	5.2	1.9	0.6	0.0	0.0
Others	0.0	8.1	0.0	0.0	0.0	0.0	0.0	0.0

Russian exchanges – total	47.9	48.2	77.8	77.3	72.2	71.1	82.6	70.1
London Stock Exchange	30.1	43.1	19.0	21.1	26.2	27.0	14.3	27.0
German stock exchanges	22.0	2.6	0.6	0.3	0.0	0.0	0.2	0.5
New York Stock Exchange and NASDAQ (U.S.)		6.2	2.6	1.4	1.5	1.9	2.8	2.3
Hong Kong Stock Exchange			0.0	0.0	0.0	0.0	0.0	0.0
Equity shares and depositary receipts – total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: author's calculations based on the data from Russian and foreign stock exchanges.

The devaluation of the national currency, sanctions against Russia in the European and U.S. money markets, the downgraded sovereign and corporate rankings by international credit rating agencies, the deficit of domestic investment resources resulted in that IPO-SPO transactions with equity shares involving Russian companies were actually frozen in global markets in 2014, while this type of transactions saw a growth in activity. Only three noticeable IPO-SPO transactions involving companies operating in Russia were closed during the reporting year: Lenta Ltd., Russia's second-biggest hypermarket chain registered in the Virgin Islands, went public through an IPO at \$952.4m in the London Stock Exchange, Qiwi Plc, a Cyprus company, SPO at \$319.0m in the NASDAQ, and OJSC Moscow Exchange SPO, which raised \$469m through the sale of a block of shares, 11.7% of the charter capital, held by the Bank of Russia. Therefore, in 2014, the total volume of IPO-SPO of Russian companies amounted to \$1.7bn, of which transactions in the Moscow Exchange accounted for merely \$0.5bn, or 29.4%.

In 2013, companies operating in Russia raised \$9,0bn through IPO-SPO. Furthermore, the principal part of national issuers' public sale of equity shares took place in the Moscow Exchange. It was projected in the State Program that in 2014 volume of transactions through IPO of equity shares will amount of Rb 1.2 trillion, equaling \$30bn at the average US dollar exchange rate during the same year.

However, in 2014, the Moscow Exchange failed to cope with a trend towards reduction in the number of national issuers of listed equity shares, as well as the number of issues of equity shares of stock traded in the regulated security market. According to the reports from CJSC SE MICEX¹, the number of issuers of equity shares in the Exchange decreased to 255 in 2014 from 272 in 2013, or by 6.3%; the number of issues declined to 315 from 336, respectively, or by 6.3%. The number of issuers of corporate bonds decreased to 260 in 2014 from 269 in 2013, or by 3.3%; the number of issues increased to 581 from 555, respectively, or by 4.7%; the number of issuers of exchange-traded bonds increased to 139 in 2014 from 135 in 2013, or by 3.0%; the number of issues increased to 395 from 356, respectively, or by 11.0%. The number of issuers of regional bonds increased to 47 in 2014 from 46 in 2013, or by 2.2%; the number of issues to 112 from 105, respectively, or by 6.7%. For the period under review, the number of bonds and Eurobonds issued on behalf of the Russian Federation contracted to 45 from 52, or by 13.5%. According to the data from the World Federation of Exchanges (WFE), the number of companies listed in the Moscow Exchange in 2014 was 254 compared with 262 in 2013, down by 3.1%.

Substantial changes in the legal status of joint-stock companies were introduced by the amendments (effective 1 September 2014) to the Civil Code of the Russian Federation. The division into open-end and close-end JSCs was replaced by public and non-public requirements for joint-stock companies. Under the amendments, the entitlement to raise capital in the stock market is to be granted exclusively to corporations which will go public. This regulation may

¹ <http://moex.com/a137>

stimulate joint-stock companies, which haven't yet decided to go public, to change their opinion with a fundraising perspective in the future.

The process of permitting the issue of foreign securities in the Moscow Exchange was more successful amid the reduction in the number of issuers and issues of Russian equity shares. The number of issues of securities of foreign issuers in the Exchange increased to 65 in 2014 from 28 in 2013, while the number of issuers raised to 36 from 9, respectively.

Hence, the Moscow Exchange has more potential to attract the capital of a bigger number of Russian companies to the open market. This indeed is hard to be achieved while facing the falling market and international sanctions, however, the unfavorable external factors which may persist for several years require that a stronger emphasis be placed on domestic investment resources which should be used to design a more efficient mechanism of attracting capital to the domestic market from, above all, medium-sized businesses, innovation firms and organizations, in the field of import substitution.

3.2.4. Moscow Exchange performance results

The transaction on consolidation of the MICEX Exchange and the RTS Exchange was closed in 2011. In June 2012, the exchange annual shareholders meeting approved a new name for the consolidated exchange: OJSC Moscow Exchange MICEX-RTS, or OJSC Moscow Exchange. The consolidation of the RTS and MICEX made it quite simple for market participants to close transactions in the stock market and derivatives market, thereby allowing the entire liquidity to be concentrated on trading participants' accounts which (the liquidity) is intended to carry out transactions in the government securities market and corporate securities market, as well as the derivatives market and FX market within unified settlement and trading systems. Diversification of the new stock exchange in servicing transactions with different monetary and investment assets enhanced its financial sustainability amid falling trading volumes in stock markets globally and investors fleeing risk-bearing assets.

The consolidation of the two exchanges allowed NDC's settlement depositories and DCC Central Depository to be established on the basis of MICEX Clearing House. This status was granted to the National Settlement Depository (NSD), a non-bank credit institution, closed-end joint-stock company, pursuant to the Executive Order of Russia's Federal Money Markets Service (FFMS) of 6 November 2012 No. 12-2761/PZ-I. The Federal Law of 07 December 2011 No. 414-FZ *On the Central Depository* entered into full force on 1 January 2013. The law provides for opening central depository accounts with a special status for registrars of joint-stock companies. The assignment of central depository functions to the NSD implies that it has to take on such a demanding challenge as opening nominee accounts of actually all open-end joint-stock companies in Russia. Regrettably, the NSD doesn't publish regular statistics on the performance of its functions. The depository's report in 2013 shows that it opened nominee accounts in the registers of more than 1200 issuers as of 12.31.2013. According to the data from the Russian National Association of Securities Market Participants (NAUFOR), a total of 31,400 incorporated companies (JSCs) were operating in Russia in 2013. This is indicative of that there is still a lot of work to do to place Russian equity shares within the scope of central depository. Additionally, this area of Central Depository's activity should, in our opinion, be more transparent for the general public.

The emergence of central depository has raised substantially the level of credibility of global investors and international settlement systems in the custody of assets invested in Russian securities and settlements for respective transactions therewith. According to the U.S. Securities and Exchange Commission Rule No. 17f7 under the Investment Company Act 1940, the NSD

was granted the official status of “eligible securities depository” for maintaining assets of major U.S. institutional investors. In the central depository, inter-custodial nominee accounts of major global settlement systems, Euroclear Bank S.A./N.V. (Euroclear) and Clearstream Banking S.A. (Clearstream), as well as central depositories of Armenia, Belarus, Kazakhstan and Ukraine were opened. The opening in February 2013 of accounts of Euroclear and Clearstream with the central depository and the commencement of respective operations with public securities raised a great deal of non-resident funds in the OFZ market (more details can be found in section 3.4.1. herein). Euroclear and Clearstream accounts have since February 2014 been available for non-residents’ transactions with corporate and regional bonds held in the NSD. Non-residents’ resources have become available since 7 July 2014 for the equity shares of Russian joint-stock companies via the foregoing Clearstream accounts¹. Hence, the strategic alliance of Euroclear and Clearstream has made it much simpler for foreign investors to have a technological access to Russian issuers’ securities traded in the Moscow Exchange. At the same time, however, this has increased risks of the domestic market dependence on the behavior of this group of investors.

In 2014, a reform of the corporate information system was launched in the Russian stock market following the amendments to the Federal Law *On the Securities Market* made by Federal Law of 21.07.2014 No. 218-FZ *On Amendments to Certain Legal Acts of the Russian Federation*. The NSD was largely involved in the development of the amendments. The reform is intended to make it possible for shareholders to attend the general meeting of shareholders by forwarding an electronic document to the central depository, without having to obtain a depository proxy in the form of paper document. The introduction of modern standards of electronic document management and the involvement of accounting institutions in undertaking corporate actions will help improve the protection of rights of all categories of shareholders on the part of issuers. According to NSD Chairman of the Board Astanin E., this measure will provide investors with equal rights irrespective of the place of residence, which should create a new incentive for foreign investors to come to the Russian stock market².

Amendments regarding the procedure for announcement and payout of dividends came into force on 1 January 2014 under a new version of Article 42, Federal Law of 12.26.1995. No. 208-FZ *On Joint-Stock Companies*. The amendments provide that the registry of companies whose equity shares are listed in the Exchange shall be closed not sooner than 10 days and not later than within 20 days after the date of general meeting of shareholders passing the final resolution on dividend payout. This solution harmonizes the practice of dividend payment regulation with the currently applicable standards in international markets, providing for transparent terms of influencing the price of equity shares by resolutions regarding dividend distribution and changes in the price of equity shares on the ex-dividend date.

In 2014, the NSD offered its customers the possibility to undertake repo transactions with the Bank of Russia against a basket of securities. It is interesting to note that such transactions are closed through an OTC (Bloomberg) rather than on-exchange system³. In this scheme, the NSD performs the functions of clearing and collateral management. In other words, it was for first time that market participants have received the opportunity to access an alternative OTC system through the exchange infrastructure. This measure is important in terms of viability of

¹ Euroclear has postponed until an indefinite date the introduction of a service providing foreign customers with direct access to the internal stock market (Tsareva L. A market of direct speculations. 8 July 2014).

² Tsareva L. Voting at par value. Kommersant, 16 June 2014.

³ Tsareva L. CBR streamlines the trading. Kommersant, 25 June 2014.

creating a competitive environment in organizing trading in money markets and simultaneously centralizing the settlement and clearing infrastructure.

Since 6 February 2013, the NSD has been performing the functions of repository, registering OTC transactions with different off-exchange financial instruments. At present, these instruments are represented mostly by swap and repo transactions. The establishment of these entities was provided for the decisions of G-20 in Pittsburg in 2009 as a measure designed to counteract systemic risks. In September 2014, the Bank of Russia recognized the NSD as systemically important repository. This implies that it keeps more than a half of the market data on transactions subject to registration in the repository¹.

In 2014, the NSD's equity reached Rb 9.5bn compared with Rb 3bn in 2013, i.e. up 30.1%. The value of securities held in the NSD increased to Rb 28.0 trillion in 2014 from Rb 21.8 trillion in 2013, i.e. up 14.7%.

The Moscow Exchange has another subsidiary CJSC JSCB National Clearing Centre (NCC). The NCC has been carrying out clearing operations in the stock market since November 2011 and in the derivatives market since December 2012. In October 2013, the Bank of Russia recognized CJSC JSCB National Clearing Center as sole qualified central counterparty. The NCC has a strategic goal of providing participants in different segments of the money market with an integrated clearing service allowing for the use of a unified collateral and introduction of unified positions of the participants while servicing them in all stock markets of the Moscow Exchange and over-the-counter markets. The Moscow Exchange Group has recently been focusing on the capitalization of NCC. The clearing center's equity tripled within two years to Rb 39.6bn in 2014 from Rb 13.2bn in 2012.

The NCC had the key objective in 2013–2014 to provide guarantees for trading participants in all segments of the Moscow Exchange's money market while migrating to a new settlement cycle without having to pre-deposit securities for on-exchange transactions, i.e. to T+2 settlement cycle. According to the data from the Moscow Exchange, T+2 transactions with equity shares and units of unit investment funds increased to Rb 10.0 trillion, or 97.2% in 2014 from Rb 3.3 trillion, or 38.0% of the total volume of on-exchange transactions with equity shares in 2013. CCP repo transactions, i.e. transactions with the participation of central counterparty (CCP), have been available in the Exchange since February 2013. According to the data from the Moscow Exchange, CCP repo transactions in the bond market increased in volume to Rb 25.0 trillion, or 13.7% in 2014 from Rb 3.8 trillion, or 1.8% of the total volume of repo bond transactions in 2013. Hence, in 2014, the meaningful interaction between all infrastructural entities of the Moscow Exchange Group resulted in the migration to an up-to-date settlement system in the stock market, with NCC guaranteed settlement, as well as NCC guaranteed transactions increased noticeably in the bond repo segment of the money market. At the same time, the construction of a system of guaranteed settlements in such a risk-bearing market segment as bond repos is yet far from being completed.

The following key developments took place in the Moscow Exchange Group in 2014:

- in January, a new version of Trading in Securities Rules in the Moscow Exchange's stock market entered into force;
- in February, ETF trading based on the index of equity shares of Chinese companies MSCI China and publishing of indicative quotations for swap transactions were introduced;
- in March, a memorandum of money market cooperation with the Korea Exchange was signed;

¹ Moiseev S. Repository transformation. Depositarium, No. 5 (135) 2014, p. 12.

- in April, the interdealer repo instruments were expanded by virtue of depository receipts and foreign companies' equity shares; publishing of the calculation of a new Russian market volatility indicator, RVI Index was introduced.

- in May, the product line of standardized derivatives was expanded by virtue of introducing new underlying assets such as the euro and the yuan;

- in June and July, CCP repo instruments were expanded; new exchange listing rules entered into force, under which the number of quotation lists was reduced to three from six, resulting in a substantially expanded list of equity shares included into the top quotation list, i.e., available for investment NGPFs and margin trading¹; trading participants were provided with the possibility to close interdealer repo transactions with 97 issues of Russian Eurobonds; the trading and clearing platform was upgraded whereby market participants can maintain a single trading position in transactions in the derivatives and FX markets and withdraw funds prior to daily settlements from the exchange through intermediate clearing²;

- in August, the range of instruments in the derivatives market was broadened again –trading in settlement futures on the US\$/Ruble exchange rate started;

- in September, futures trading in the equity shares of OJSC Magnit and OJSC Moscow Exchange, in RVI volatility, as well as in Russia's Eurobonds started in the derivatives market; a new version of the listing rules entered into force, enabling the exchange to initiate the inclusion of outstanding foreign securities into the third level of listing;

- in October, trading in corporate Eurobonds started in the stock market, while the number of bond issues reached 25; the exchange entered into a cooperation agreement with the Bank of China, which is intended to facilitate mutual settlements in the national currencies of the two countries;

- in November, trading in the British Pound (GBP) and the Hong Kong dollar (HKD) commenced in the FX market; the exchange chose the DataSpace as principal provider of data center (DC) services;

- in December, a system of indicative quotations, MOEX Board, was launched; FX market participants were provided with the possibility to obtain a new status of “general clearing member”, thereby making a division between the trading participant status and the clearing member status.

According to Deputy Chairman of the Board, the Moscow Exchange, Andrey Shemetov³, the exchange had no such large-scale plane in 2014 as it did in 2013, when the infrastructural breakthrough took place in the Exchange, namely the migration to T+2 settlements, the establishment of central depository, the commenced migration to settlements with centralized clearing in the repo segment, the launching of trading in physical gold and derivatives. This however is quite reasonable in terms of the need to provide conditions for robust performance of new technologies and products. The exchange saw a noticeable increase, to 7 in 2015 from 3 in 2013, in the number of technical glitches. The exchange experienced a serious failure on 30 July 2014, halting for two hours trading in equity shares⁴. To prevent such issues, “an optimal blend of innovative swiftness and costs we pay for operational continuity of the exchange” should be found, said Bank of Russia First Deputy Chairman Sergey Shvetsov.⁵

¹ Orlova Y.. Moscow Exchange shuffles the shares. Vedomosti, 3 June 2014.

² Tsareva L. Moscow Exchange upgrades its platform. Kommersant, 27 May 2014.

³ Shemetov A., Deputy Chairman of OJSC Moscow Exchange: “We dislike a dead calm”. Cbonds Review, April 2014.

⁴ Orlova Y. The Exchange makes a siesta for brokers. Vedomosti, 31 July 2014.

⁵ Tsareva L. The commodities market faces a “nuclear glitch”. Kommersant, 15 October 2014.

In 2014, the Moscow Exchange's ownership structure (see *Table 5*) underwent further serious changes. Until July 2014, organizations controlled by the Russian Federation held more than 50% of the total MOEX voting shares. This means that the exchange was a state-controlled company¹. However, pursuant to Part 14, Article 49 of the Federal Law of 07.23.2013 No. 251-FZ *On Introducing Amendments to the Russian Legislation in Connection with the Transfer of Powers to Regulate and Oversee the Securities Markets to the Central Bank*, the Bank of Russia is obliged to dispose until 1 January 2016 of its shareholding in the Moscow Exchange and the St. Petersburg Currency Exchange.

For the purpose of the foregoing requirement, as initiated by the Bank of Russia, the general meeting of shareholders of 26 June 2014 elected former Russia's Prime Minister Aleksey Kudrin the Chairman of MOEX Supervisory Board (Board of Directors). Kudrin replaced Bank of Russia First Deputy Chairman Shvetsov S.A.²

The Moscow Exchange held SPO of its equity shares on 2 July 2014, following the Central Bank of Russia's sale of 11.7% of its stake in MOEX through international market placement. More than 267 million common shares were sold to the exchange at Rb 60 per share, a total of Rb 16.04bn³. The transactions resulted in that MOEX's free float increased to more than 50%, one of the highest on the Russian market⁴.

According to mass media, the Russian Direct Investment Fund (RDIF) and large foreign investment funds⁵ were the key buyers of MOEX's equity shares during the SPO. As a result, a new ownership structure developed in the Moscow Exchange by the end of 2014. It is seen in *Table 5* that government entities (including the subsidiary of the exchange itself) accounted for near 41.8% of the voting shares (39.6% + 2.2%). Using the data on 12.31.2014 from Factiva, we managed to calculate that foreign institutional investors, including the Chinese investment company, the EBRD and U.S. mutual funds, accounted for at least 29.5% of the MOEX voting shares. This is the second largest, not consolidated though, group of shareholders. Hence, Russian private banks and investment companies accounted for 28.7% of the MOEX voting shares.

Table 5

The Russian exchanges' shareholding structure prior to and after the consolidation

	Prior to the reorganization of the two stock exchanges		After the consolidation: OJSC MICEX-RTS as of 01.02.2012 ⁶	After IPO: Moscow Stock Exchange as of 15.02.2013 – evaluation ⁷	As of 12.05.2014 ⁸	Evaluation as of 31.12.2014
	OJSC RTS	CJSC MICEX				
Bank of Russia		28.6	24.3	22.5	23.7	12.1
Sberbank of Russia		7.5	10.4	9.6	10.0	10.0

¹ The same was also reported in the Consolidated Intermediate Condensed Financial Statement of the Non-bank Credit Institution, CJSC National Settlement Depository as of 30 June 2014 and six months of 2014, p. 20. https://www.nsd.ru/common/img/uploaded/files/disclosure/hyear/NSD_IFRS_cons_1HY_2014.pdf

² RBC, 26.06.2014 Kudrin is elected as Chairman of the Moscow Exchange Supervisory Board.

³ Pursuant to the provisions set forth in Article 2 of the Federal Law of 10.07.2002 No. 86-FZ *On the Central Bank of the Russian Federation (Bank of Russia)*, under which the property of the Bank of Russia is federal property, a question arises as to whether this transaction can be regarded as privatization deal.

⁴ The Moscow Exchange official statement of 2.07.2014. The Moscow Exchange shares are more than 50% free float.

⁵ RBC. 1 July 2014, Russian Direct Investment Fund (RDIF) may buy half of the central bank's stake in the Moscow Exchange: <http://top.rbc.ru/economics/01/07/2014/933930.shtml>

⁶ Mazunin A., Rudenko P., Khvostik E. Exchange capital has flown off westbound. *Kommersant*, 13 March 2012

⁷ According to the data from the Moscow Exchange as of 16.01.2013, as well as the information of MOEX major shareholders published in the *Kommersant* statistics column on 18 February 2013.

⁸ OJSC Moscow Exchange MICEX-RTS Quarterly Report for Q4 2014.

VTB		7.1	6.1	5.6	3.8	3.8
VEB		10.5	8.7	8.0	8.4	8.4
Gazprombank		6.2	5.4			
Russian Direct Investment Fund (RDIF)		1.3	1.3	4.6	4.4 ¹	5.3
The share of government entities	0	61.1	56.1	50.3	50.3	39.6
MICEX-Finance		2.8	2.8	5.5	2.3	2.2
Chinese investment company (Chengdong Investment Corporation)				5.4	5.6	5.6
EBRD				5.8	6.1	6.1
Other shareholders	89.0	27.9	32.9	33.0	35.7	46.5
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: based on the data obtained from the Bank of Russia, publications in Vedomosti and Kommersant newspapers.

Such changes in the MOEX shareholding structure are exposed to certain risks for the Russian stock market's sustainability and competitive power, especially amid a possibly long-term effect of Western sanctions against Russia. This isn't even the case of the state having ceased to hold a controlling stake. The state is still the major shareholder amid the dispersed MOEX capital structure. Furthermore, amendments to the law on securities imposing a limit on a stake (5%) in the MOEX for private entities are very likely to be adopted in 2015. The main risk concerns the weakening of domestic private financial institutions' role as MOEX shareholders. The above normal imbalance towards exchange projects focused primarily on non-residents may have an adverse bearing on the advancement of domestic financial institutions and institutional investors. At present, despite the fact that private Russian financial institutions hold as little as some 28.7% of stake in the Exchange, they accounted in January 2015 for near 61.5% and 44.3% of on-exchange trading volume in the stock market and corporate bond market, respectively, based on our calculations.

An illustration of this is the ETF segment being a top priority development project for many exchanges. In the Russian Federation, such funds can be established following the adoption of Federal Law of 28.07.2012 No. 145-FZ *On Amendments to Certain Legal Acts of the Russian Federation*. To date, however, no such unit investment funds established under the Russian jurisdiction have emerged in the Moscow Exchange. Instead, the exchange has accepted and undertaking intensive public marketing of ETFs established by a foreign company and under a foreign jurisdiction.

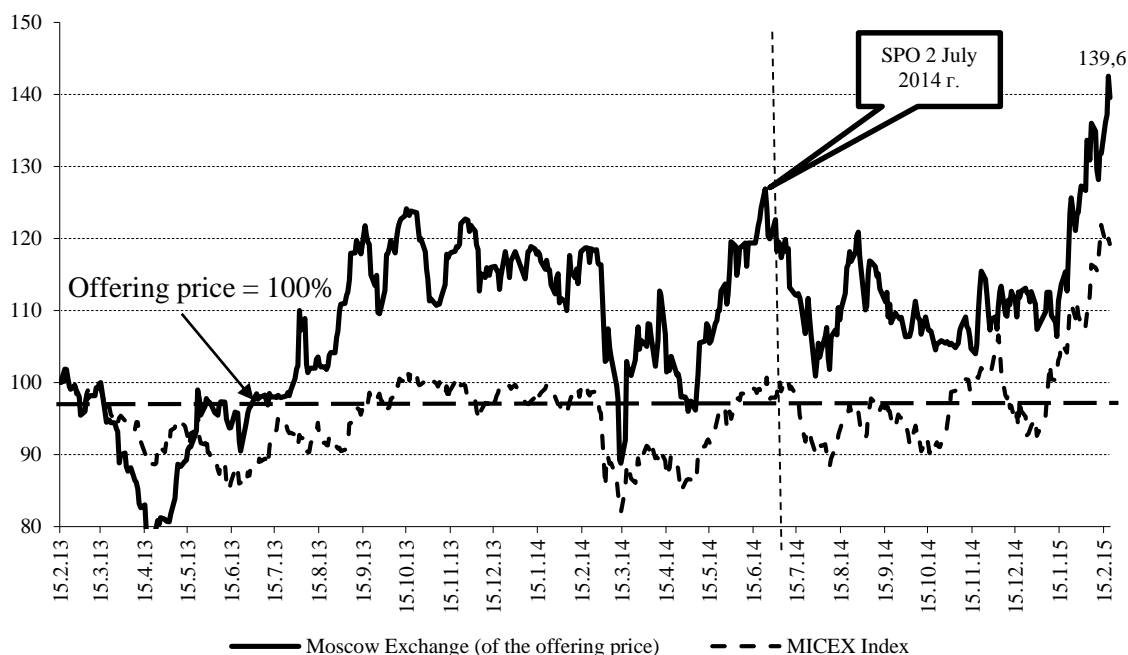
Changes in the capitalization of any public company is a criterion of its successful development. The MOEX total capitalization at the moment of SPO transactions on 2 July 2014 was \$4.0bn compared with \$4.2bn at the moment of IPO, 4 February thru 15 February 2013, and \$4.6bn of total capitalization of the OJSC RTS and CJSC MICEX exchanges early in 2011 until the consolidation. Early in 2012, according to the estimates of the Bank of Russia and the Exchange Board of Directors, the MOEX was assumed to reach a capitalization of \$6bn by the end of the year.²

In the period between 4 and 15 February 2013, the Moscow Exchange held an IPO which raised Rb 15bn, or \$500m. Although the price was announced within a range of Rb 55–63 per share, the actual price was set at the bottom of price range, i.e. Rb 55. (see *Fig. 10*). On the initial trading day of 15 February 2013, the MOEX equity shares were undervalued 0% against the offering price. A small undervaluation on the initial trading day of Russian JSC's IPO is often indicative of the overvaluation of equity shares during IPO. Later this may often result

¹ RDIF nearly doubles its stake in the Moscow Exchange. Vedomosti, 9 July 2014.

² Interfax-AFI. Stock exchange's pre-IPO self-evaluation. Kommersant, 26 March 2012

in a many-year negative surplus return on equity shares against the base index¹. However, the long-term yield of MOEX equity shares was steadily higher than the yield of the MICEX Index two years after the IPO.



Source: the author's calculations based on the data from the Moscow Exchange and Finam Investment Company.

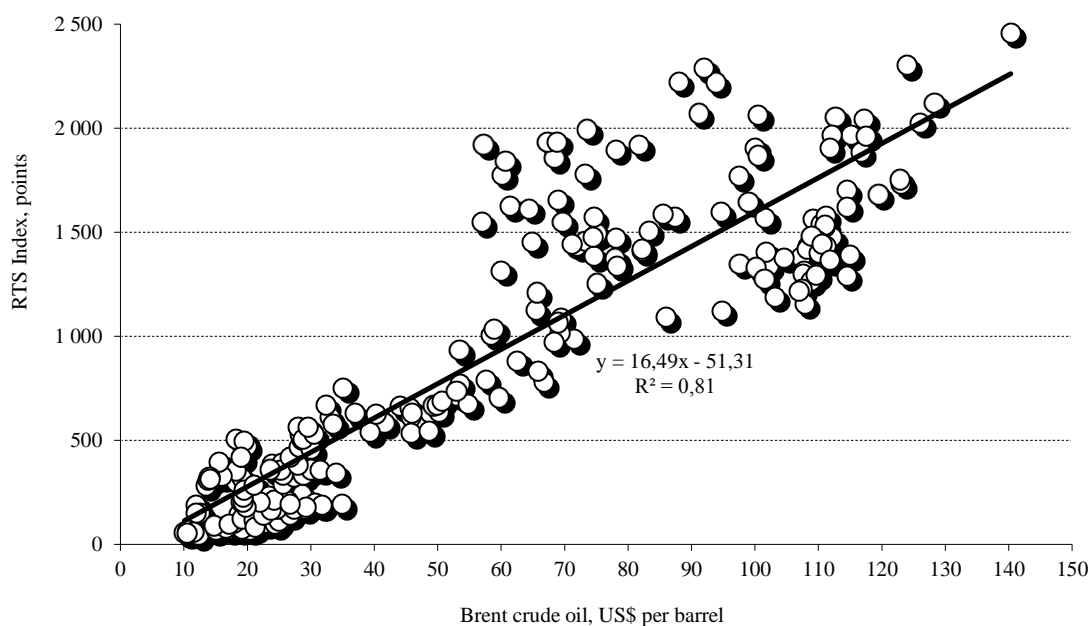
Fig. 10. Dynamics of quotations in the Moscow Exchange and MICEX Index in the period between 15 February 2013 and 19 February 2015 (15.02.2013=100%)

3.3. Stock market of Russian equity shares

3.3.1. Stock market reliance on global price trends

It is a well-known fact that the stock market of Russian equity shares depends largely on crude oil prices. The determination coefficient (R^2) between absolute monthly values of the RTS Index and Brent crude oil prices in the period between September 1995 and January 2015, as shown in Fig. 11, is 0.81, being indicative of very close relationship between these indicators.

¹ Abramov A. E. Russian companies' IPO-SPO problems. Economic and political situation in Russia. Gaidar Institute for Economic Policy, No. 10, 2012, pp.58-54.4.



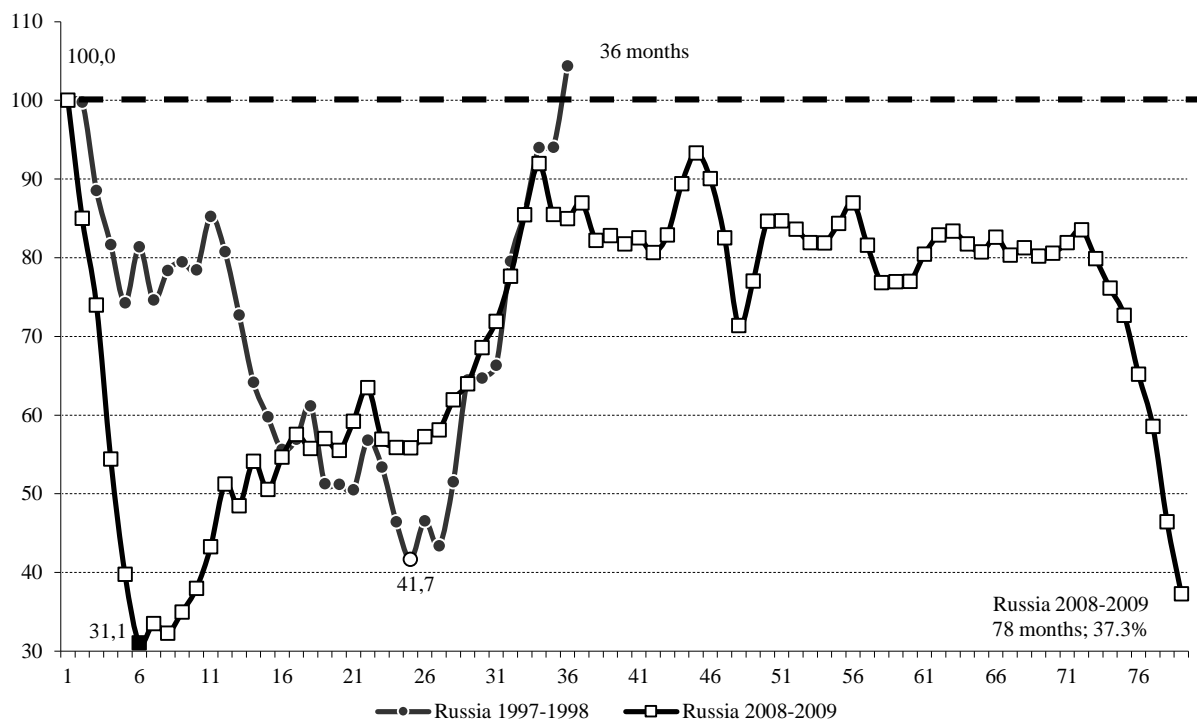
Source: the calculations are based on the data supplied by the IMF International Financial Statistics (IFS) and the Moscow Exchange.

Fig. 11. The relationship between RTS Index and Brent crude oil prices in the period between September 1995 and January 2015

International financial institutions and the Ministry of Economic Development of Russia anticipate the world to enter into a period of relatively low crude oil prices in the years to come. The anticipation is determined by slower growth rates in the global economy compared with those seen early in the 2000s, as well as the introduction of new power saving technologies and shale oil and gas production. The latter facilitated the reconstruction of the market principles of investment in oil and gas production, which were largely undermined by the above normal expansion of public capitalism in countries exporting energy resources.

Having reached a monthly average peak value of \$133.90 per barrel in July 2008, the crude oil prices have to date been moving along the W-shape pathway. Within a 5-month period since July 2008, the prices hit a bottom of 31.1% of the pre-crisis peak level (see Fig. 12). Then it took the prices 28 months to rebound to 92.0% of the peak level; during the rest 38 months, they fell slowly to 83.5% of the peak level; within just seven months between July 2014 to January 2015, crude oil prices saw a new collapse to 37.3% of the peak level seen in July 2008.

All in all, compared with 1997–1998 when the crisis in Russia was caused by an imbalanced fiscal and monetary policy rather than low crude oil prices, a longer and deeper slump of crude oil prices was seen in July 2008 to January 2015 compared with the pre-crisis level. In the period between 1997 and 1998, crude oil prices fell to 41.7% of the pre-crisis peak level and it took them 36 months to rebound. In the period between July 2008 and January 2015, crude oil prices dropped twice to 31.1% and 37.3%, and haven't yet recovered within 78 months from then, and the recovery period is most likely to keep lingering for another few years. This is indicative of the current crisis in Russia having a structural rather than cyclical nature, which implies that the money market will not resume a steady growth unless deep structural reforms in the Russian economy are undertaken.

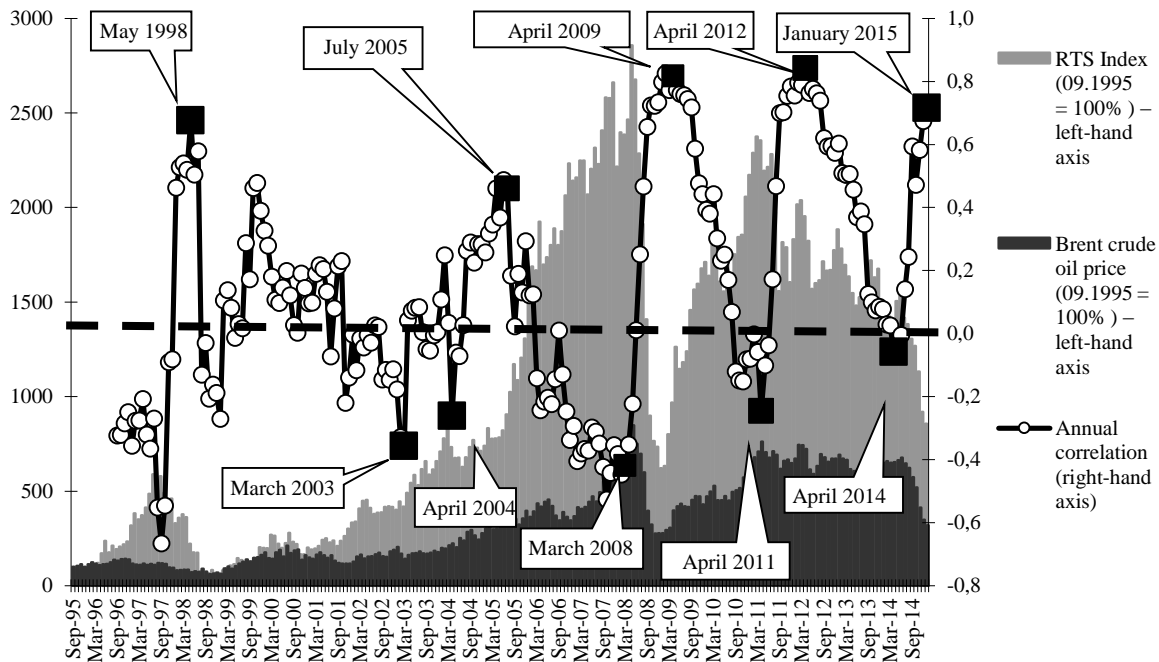


Source: based on the data obtained from the IMF IFS.

Fig. 12. Fall and rebound of Brent crude oil prices in times of financial crises in Russia (price peak level =100%) as of January 2015

The relationship between stock indices and crude oil prices is better described by analysis of relative changes to the same. Fig. 13 shows the results of changes in the correlation coefficient between monthly relative changes in the RTS Index and Brent crude oil prices within 12-month period. The moving correlation curve has a peculiarity reflecting the strengthening or weakening of relationship between the two indicators with a 1-year lag. The correlation curve of changes in the RTS Index and crude oil prices is cyclic. The correlation coefficient declines and becomes negative as the index moves towards its pre-crisis peak level. This means that crude oil prices and the index unexpectedly began to change in opposite directions. Positive correlation between changes in the index and crude oil prices recovers during the stock market collapse. The correlation again tends to move to minus one (-1) upon the completion of acute phase of the crisis.

It is interesting to note that the trend reversal, when crude oil prices and foreign portfolio investment begin to move in opposite directions, fell often on April and March in various years. We cannot give a single explanation of this paradox. As may be supposed, it is in these months that the IMF releases its world economic outlooks (WEO) which many countries consider a most reliable source for 2-year projections of GDP growth. It is in these months that the professional community provides its opinion on changes in forecasts for economic growth and oil demand, which then transform into portfolio investors' annual strategies focused on emerging markets, including Russia.



Source: the calculations are based on the data from the IMF IFS and MICEX-RTS.

Fig. 13. Correlation between changes in the RTS Index and Brent crude oil prices in the period between September 1995 and January 2015

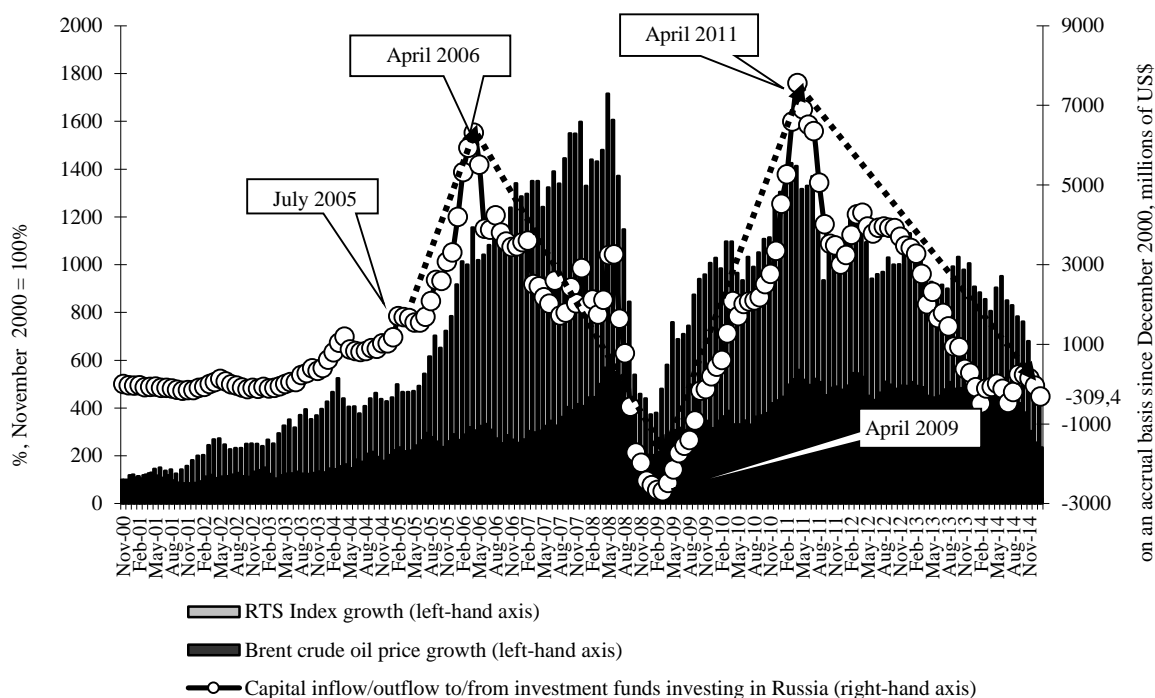
The dynamics of correlation curve has over the recent decade been distinguished by six periods:

- between the early 2000s and July 2005, when the correlation coefficient advanced from -0.2 to 0.5 , while crude oil prices and the RTS Index were growing in the same direction;
- between July 2005 and April 2008, when the correlation coefficient declined from 0.5 to -0.5 , while crude oil prices and the RTS Index advanced as a whole, however oil quotations declined in H2 2006 and H1 2007;
- between April 2008 and April 2009, when the correlation coefficient advanced from -0.5 to 0.8 , it was a period of collapsing prices of crude oil and JSC's equity shares;
- between April 2009 and April 2011, when the correlation coefficient fell from 0.8 to -0.2 , whereas crude oil prices increased moderately, and the RTS Index saw a drastic recovery growth;
- between May 2011 and April 2012, when the correlation coefficient increased to 0.8 as prices of crude oil and Russian JSC's equity shares went down in general;
- between May 2012 and April 2014, when the correlation index saw a new decline to -0.1 : the RTS Index was falling predominantly, while the crude oil price remained relatively stable;
- between May 2012 and January 2015, when the correlation index increased to 0.7 : the RTS Index and crude oil prices dropped simultaneously.

3.3.2. Stock market dependence on foreign portfolio investors

The cyclical nature of correlation of changes in prices of crude oil and Russian companies' equity shares can be explained by a strong impact of outflow/inflow of foreign portfolio investments on the dynamics of prices of stock of shares, as recorded by the Emerging Portfolio Fund Research (EPFR). This factor is highly competitive with the dynamics of crude oil prices in

terms of having impact on prices of Russian equity shares, as evidenced by the data presented in Fig. 14.



Source: the calculations are based on the data from IFS IMF, the Moscow Exchange and EPFR.

Fig. 14. Growth in the RTS Index and Brent crude oil prices, money inflow/outflow to/from funds investing in Russia, as calculated on a cumulative total in the period between November 2000 and January 2015

Getting back to the aforementioned six periods during which the nature of relationship between changes to the RTS Index and dynamics of crude oil prices, cumulative investment analysis of foreign investment funds specializing in investment in Russia allows this phenomenon to be explained.

Growth in the correlation coefficient index and crude oil prices early in the 2000s – July 2005 was associated with the fact that within that period both factors effecting the dynamics of the stock market – crude oil prices and cash inflow to foreign investment funds investing in Russia – moved in opposite directions. Crude oil prices increased, portfolio investment saw cash inflow, the RTS Index grew steadily. It is shown in Table 6 that special-purpose funds received \$1,5bn of investment funds in the period between November 2000 and June 2005.

Table 6

Capital inflow/outflow to/from foreign investment funds investing in Russian equity shares, according to the EPFR data

	Inflow (+)/ outflow (-) of money from investment funds, millions of US\$
November 2000 – June 2005	1538
July 2005 – April 2006	4769
May 2006 – March 2009	-9005
April 2009 – April 2011	10255
May 2011 – January 2015	-7871

Source: the calculations are based on the data from the EPFR resource.

The correlation coefficient declined to -0.5 in the period between July 2005 and April 2008 in response to opposite dynamics of crude oil prices and foreign portfolio investments. In the period between July 2005 and April 2006, investment funds investing in Russia received \$4.8bn of new investments despite growth in volatility of crude oil prices (see *Table 6* and *Fig. 14*). Upsurge of short-term investment inflow can be explained by investment rankings international agencies awarded for Russia. FITCH published its ranking on 17 November 2004 and S&P on 31 January 2005. However, a sharp reversal in preferences of those who invested through foreign investment funds was recorded in the period between April 2006 and April 2008, when investment funds investing in Russia saw an intensive cash outflow despite steady growth in crude oil prices. The growth of RTS Index slowed down significantly as a result of portfolio investment outflow, whilst crude oil prices kept growing.

In the period between April 2008 and April 2009, the correlation coefficient increased up to 0.8 in the period of stock market meltdown. At that time collapse in crude oil prices was accompanied by accelerated withdrawal of money from foreign investment funds investing in Russia. Therefore the RTS Index dropped at the same period.

The correlation coefficient of RTS Index and crude oil prices dropped again to -0.2 in the period between April 2009 and April 2011 in response to that the outgrowth in the RTS Index was based mostly on active cash inflow in foreign investment funds against a moderate growth in crude oil prices.

Foreign investment funds received \$10,2bn of new investment at the same period.

The correlation coefficient of index and crude oil prices recovered in the period between May 2011 and April 2012, because the factors of crude oil prices and foreign investment resumed to move in the same direction. Crude oil prices declined and investors withdrew their investments from investment funds. The correlation disappeared in the period between May 2012 and January 2014, because crude oil prices remained stable while investment funds kept seeing cash outflow. In the period between May 2011 and January 2014, the RTS Index itself saw a downtrend following cash outflows from funds investing in Russia.

In the period between April 2014 and January 2015, the correlation of crude oil prices and the index began to grow again. Crude oil price went down at that time, collapsing since July, followed by mostly portfolio investment outflow. It wasn't until September to November that cash inflow to funds investing in Russia was noticed, followed by another outflow seen in December 2014 and January 2015.

The graph of variance in accumulated cash flows at foreign investment funds specializing in investment in Russia *Fig. 14* shows that principal changes to the behavior of foreign investors took place in May 2006 and in May 2011. According to the data presented in *Table 6*, special-purpose foreign investment funds saw an outflow of funds of \$9,0bn in May 2006 – March 2009 and a \$7.9bn in May 2011 – January 2015. Even though these assessments were doubled given a possible similar behavior of asset managers of regional and global investment funds which reduced their investment in Russia, it appears that shock changes to prices of equity shares in the Russian market can result in gradual withdrawal of sums equal to a 1–2-day stock trading volume in the Moscow Exchange.

The factors that predetermine adverse changes in the behavior of global portfolio investors in emerging markets were explained by IMF experts in the Global Financial Stability Report, September 2011¹. They used the EPFR data regarding the flows in special-purpose equity in-

¹ IMF. Financial Stability Report. September 2011, pp. 11– 18. Available on www.imf.org.

vestment funds worldwide, in Asia, Latin America, Europe, Middle East and developed economies in the period between January 2005 and May 2011. The survey shows that the inflows/outflows were basically influenced by the following key factors:

- official forecasts of real GDP growth rates¹ (with a plus “+”);
- volatility of GDP growth rate forecasts (with a minus “-”);
- volatility of the exchange rate of foreign currencies (with a minus “-”);
- stock market volatility indicator – Volatility Index (VIX) (with a minus “-”).

Indicators of interest rates and currency regulations appeared to be less important factor.

The foregoing factors can be regarded as forward-looking indicators of financial crises which are used by managers of portfolio investment funds specializing in investment in specific markets. The results of the IMF’s study shows that the hardest shock in terms of maximum cash outflow (\$4.4bn) from investment funds investing in countries located in Europe, Middle East, and Africa, occurred exactly in June 2006. It is in this month, as shown in *Fig. 14*, that saw a reverse trend in the behavior of investors in funds investing in Russian JSCs’ equity shares. Under the circumstances, the downgrade trend of the forecast for GDP growth in the second half of the year in most significant developed and developing economies² which was noted in the IMF World Economic Outlook (WEO) in April 2006, as well as VIX index³ turbulences beginning with Q2 2005, could serve as signals for withdrawal from portfolio investment. Up-surges in volatility of forecasts of GDP growth rate and prices of equity shares reflected experts’ and market’s concern about disproportions in countries’ trade balance, mounting crisis in the U.S. mortgage securities market, and other factors which eventually resulted in the recession of 2008.

These studies help understand a relatively simple model of behavior of those who invest in foreign investment funds specializing in investment in the Russian stock market. By investing in Russia, they are aiming to entering the market when the price of local companies’ equity shares is low and timely leave the market at first signs of falling crude oil prices and devaluation of the ruble. They receive signals from, for example, the Consensus Economics information system which makes consensus projections of certain key macroeconomic and financial indicators of various countries with a 24-month depth (two years) based on the forecasts of analysts at major investment banks. The GDP growth forecast is most significant one. The moment of significant changes to the forecast for the current year or the year to come is a signal of a new trend in the behavior of investors. For example, if forecasts show a substantial decline, investors begin to withdraw their funds from investment funds investing in Russia. Investors’ behavior will change as soon as they receive a signal of potential increase in economic growth in Russia and the major developed countries. This creates the cyclic nature of the behavior of unit-holders of foreign investment funds investing in Russia, as clearly seen in *Fig. 14*.

3.3.3. Money market segments in the Moscow Exchange

Low return on Russian equity shares after 2008 coupled with higher volatility of the exchange rate and Bank of Russia’s support to the national banking system through the mechanism of repo transactions and FX swaps had a substantial effect on the changes in the Moscow

¹ GDP growth and volatility projections were calculated on the basis of the data available at the Consensus Economics database

² World Economic Outlook (WEO), April 2006, Fig. 1.8. Available at www.imf.org.

³ R. Rajan. *Lines of Fracture* (M., Delo Publishing House, 2011, p. 272) that between Q2 2005 and Q2 2007 the two-year implied volatility of S&P500 option price – market expectations of volatility in prices of shares for two years – was 30-40% higher than short-term one-month volatility

Exchange's market structure. Over the past four years the share of stock market in the total volume of on-exchange transactions has decreased from 13.2% to 4.1%, including that of transactions with equity shares, depository receipts and units – from 8.0% to 2.0%. (see *Table 7*). Likewise, the share of derivatives market declined from 14.8% to 11.9%. In contrast, the share of FX and money market increased to 84.0% in 2014 from 72.0% in 2010, including that of repo trading to 35.6% from 31.5% and FX swaps to 29.3% from 20.1%. These changes reflect a trend towards the weakening role of capital market versus the monetary market and refocusing the internal financial system on shorter-term sources of financing of banks and the real sector of economy.

Table 7

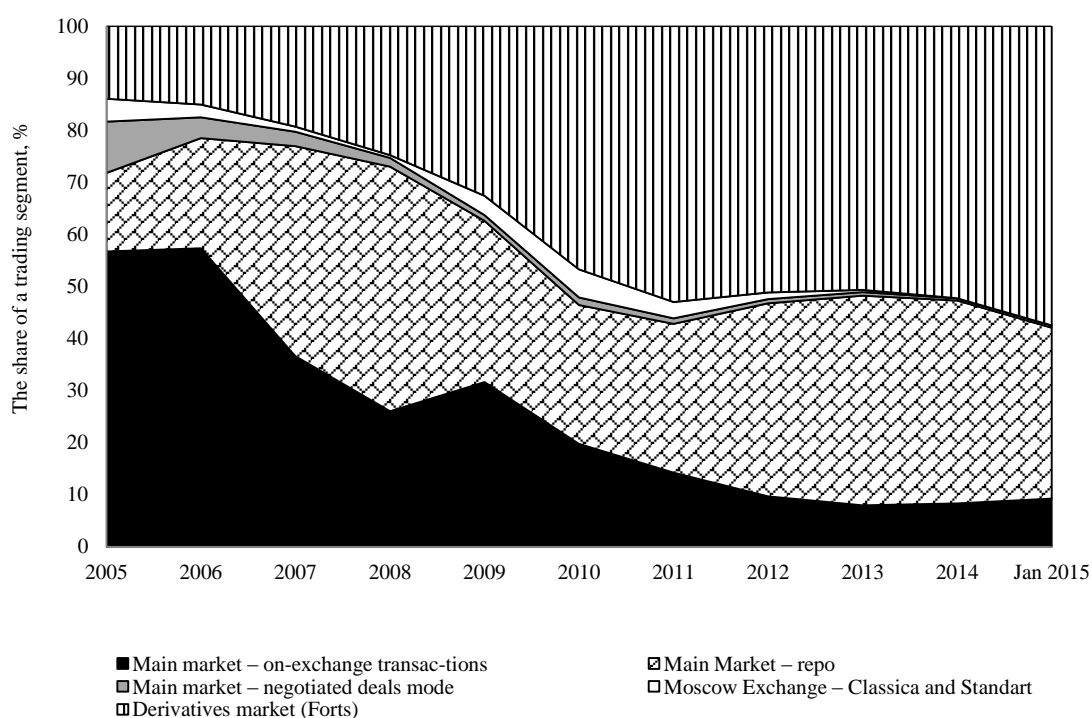
The Moscow Exchange structure, %

	2010	2011	2012	2013	2014
Stock (equity) market	13.2	10.3	6.5	5.3	4.1
Including:					
Stocks, depository receipts and fund units	8.0	6.6	3.1	1.9	2.0
Bonds	5.2	3.7	3.4	3.4	2.1
Secondary trading	3.4	2.9	2.8	2.8	1.7
Securities market	1.8	0.8	0.6	0.6	0.4
FX and money market	72.0	70.6	80.0	83.8	84.0
including:					
Money market	33.9	41.3	48.3	49.1	39.7
REPOs	31.5	38.3	45.8	46.2	35.6
Lending market	2.4	3.1	2.5	2.9	4.1
FX market	38.1	29.3	31.6	34.7	44.4
Spot transactions	18.0	15.8	16.6	12.8	15.1
Swap transactions	20.1	13.4	15.0	22.0	29.3
Derivatives market	14.8	19.1	13.5	10.8	11.9
Commodity market	0.0	0.0	0.0	0.0	0.0
TOTAL	100.0	100.0	100.0	100.0	100.0

Source: Moscow Exchange, the Q4 2014 quarterly report.

Fig. 15 and *Table 8* show changes to the structure of various trading modes in the Russian exchange, including transactions in the derivatives market. In 2014, the share of market segments of on-exchange trading such as the main stock market and the derivatives market increased to 8.4% and 52.2%, respectively, from 8.0% and 50.7% in 2013. It is the derivatives market that was growing most noticeably during the three final months of 2014, because of market participants' efforts to hedge against plummeting equity shares. However, neither the main nor the derivatives market segments managed in 2014 to reach the share in the total volume of on-exchange trading which they had in 2011, prior to the consolidation stock exchanges RTS and MICEX.

The four key trends were markedly prevailing during a longer period of time, from 2005 to 2014: the share of on-exchange transactions with equity shares declined to 8.4% from 56.7%; the share of derivatives market increased to 52.2% from 13.9%; and the share of repo transactions with equity shares raised to 39.0% from 15.1%; the stock market's "Classica" and Standard segments gradually ceased to exist in the Exchange, their share shrinking to 0.0% from 4.4%. The foregoing leads to the conclusion that, on the one hand, the stock market became less fragmented and hence more efficient following the consolidation of exchanges. On the other hand, the shrinkage of the underlying asset market segment to 8.4% is exposed to risks of distorted collateral value in repo transactions and in the derivatives market.



Source: author's calculations based on the data from Russian exchanges.

Fig. 15. The structure of Moscow Exchange's stock market and forts market in the period between January 2005 and January 2015

Table 8

The structure of stock market and derivatives market in the Moscow Exchange in the period between January 2005 and January 2015

	2005	2010	2011	2012	2013	2014	Jan 2015
Main market – on-exchange transactions	56.7	19.8	14.3	9.7	8.0	8.4	9.3
Main market – repo transactions	15.1	26.7	28.6	37.1	40.3	39.0	32.8
Main market – negotiated deals mode	9.8	1.5	1.1	0.8	0.7	0.4	0.5
Moscow Exchange – Classica and Standart segments	4.4	5.4	3.1	1.3	0.4	0.0	0.0
Derivatives market (Forts)	13.9	46.7	53.0	51.1	50.7	52.2	57.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: author's calculations based on the data from Russian exchanges.

The long-term growth in the segment of repo transactions with equity shares raises a special concern, whereby brokers implement risk-bearing strategies of raising cash resources to maintain liquidity and marginal lending for their customers. According to the estimates published in mass media, arbitrage in the repo stock market was a reason behind the problems faced in 2012 by Renaissance Bank, a Russian large investment bank, which led to the change of controlling shareholder¹. A small share of on-exchange transactions creates risks of manipulations with the value of equity shares used for calculating stock indices and other underlying assets for the derivatives market. In an attempt to prevent manipulations with prices of underlying assets while calculating the futures expiration price, the Bank of Russia had to issue an order on 15 December 2014, under which the Moscow Exchange was instructed to suspend trading of some of

¹ Tofanyuk E. Walking in Africa. Forbes, No. 1 (106), 2013, pp. 100 – 101

trading participants' customers found to be geared towards affecting the price of underlying assets while estimating the price of futures contracts expiration in 2013–2014¹.

The share of on-exchange transactions with equity shares in the Moscow Exchange reached 21.8% in January 2015 compared with 13.7% in 2013. A certain decline in the volumes of repo transactions in 2014 – early in 2015 is attributed to the fact that market participants needed less fundraising through the repo market as the value of equity shares was slumping. Market transactions also were supported by a program designed to maintain liquidity in the stock market, under which the Exchange provides material incentives to market makers represented by both brokers and their customers. In 2013, according to experts' estimates, market makers' turnover was 15–20% T+2 transactions with equity shares², while the support program charged about a quarter of the Exchange fee charged from brokers³. In 2014, the Exchange took a series of measures aimed at narrowing the scope of persons entitled to the reward and tightened the market support requirements. As a result, according to the Exchange's estimates, market-makers' budget in 2014 was less than that in the preceding year⁴.

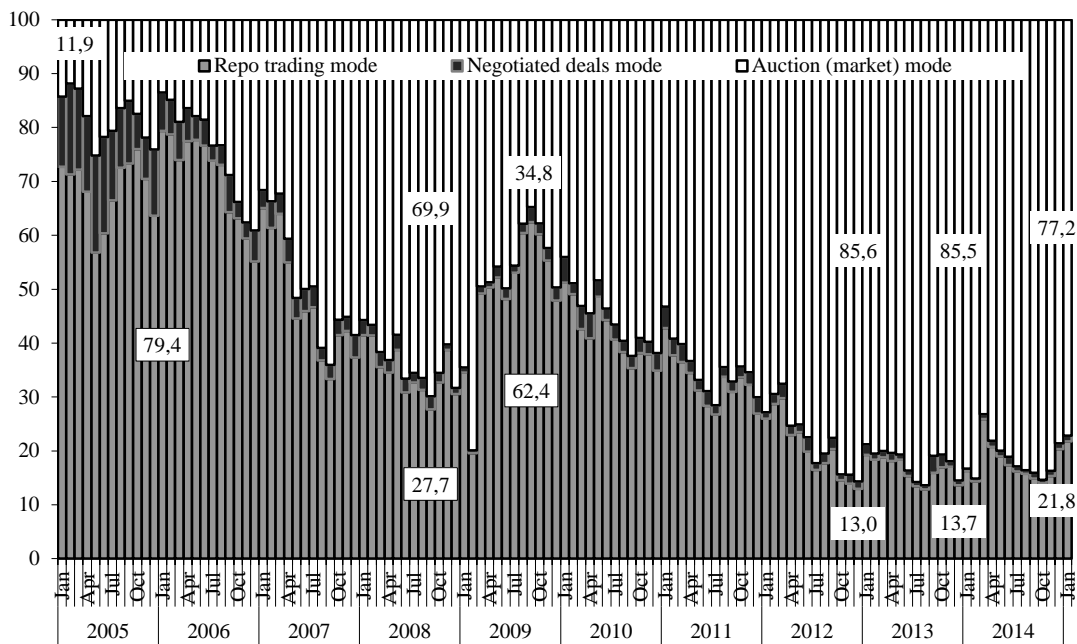
It is seen from *Fig. 17* that in 2014, with a stable average volume per transaction compared with the preceding year, there was a pronounced uptrend as to the number of transactions. On-exchange transactions with equity shares grew up most in number in March and December 2014, i.e. when geopolitical risks were as high as possible and the ruble's devaluation was in the acute phase. In March and December 2014, the RTS Index lost 18.3% and 40.1%, respectively, the highest monthly values during 2014. At the same time, the stable average value of transactions with equity shares is implicitly indicative of that the spot market in 2014 saw no increase in trading on the part of high frequency traders and their customers.

¹ Kuznetsov I., Tsareva L., Gaidayev V. Losing in trading. *Kommersant*, 16 December 2014

² Orlova Y., Kazmin D. Moscow pulls trading from London. *Vedomosti*, 10 December 2013

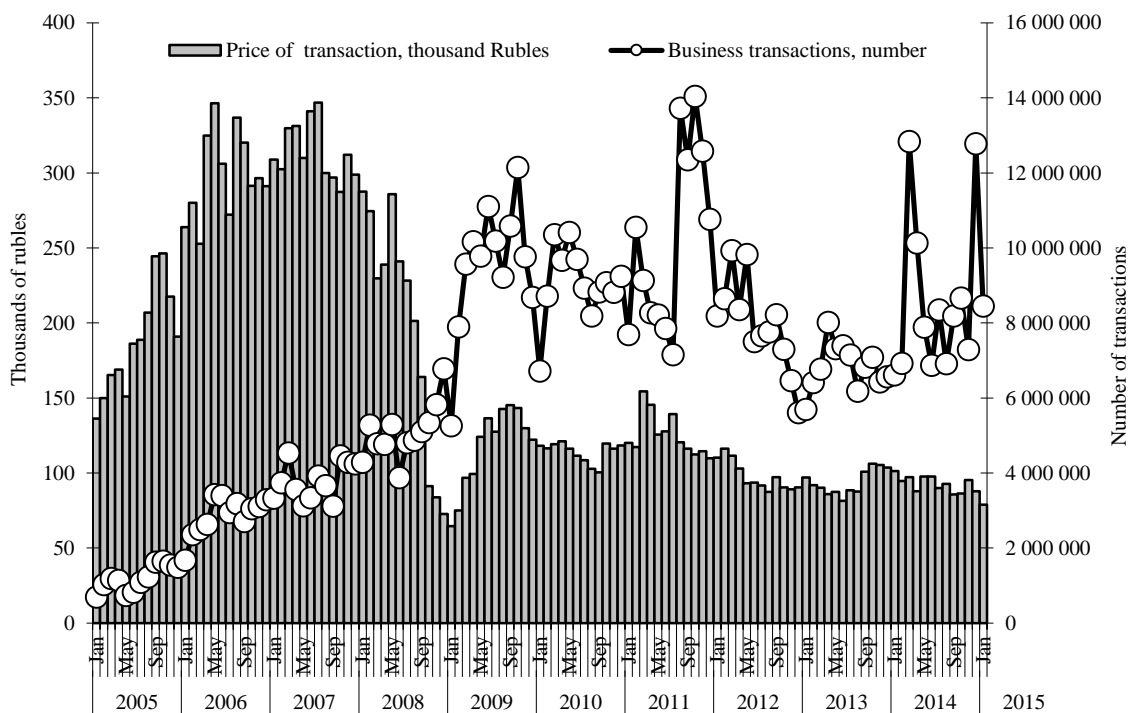
³ Kuznetsov I., Gaidayev V. A quarterless fee. *Kommersant*, 25 August 2013

⁴ Orlova Y. The exchange is saving. *Vedomosti*, 23 July 2014



Source: author's calculations based on the data from the Moscow Exchange.

Fig. 16. The structure of trading in stocks in the MOEX main market, %



Source: author's calculations based on the data from the Moscow Exchange.

Fig. 17. Trading in stocks in the MOEX main market

3.3.4. Competition between market participants in the domestic stock market

In 2013, government entities kept strengthening their position in the stock market, being manifested by growth in the share of state-run financial organizations in stock trading volumes, increasing their role in managing the Moscow Exchange, expanding the powers vested with the Bank of Russia and the Ministry of Finance of Russia in the field of regulation and compliance monitoring.

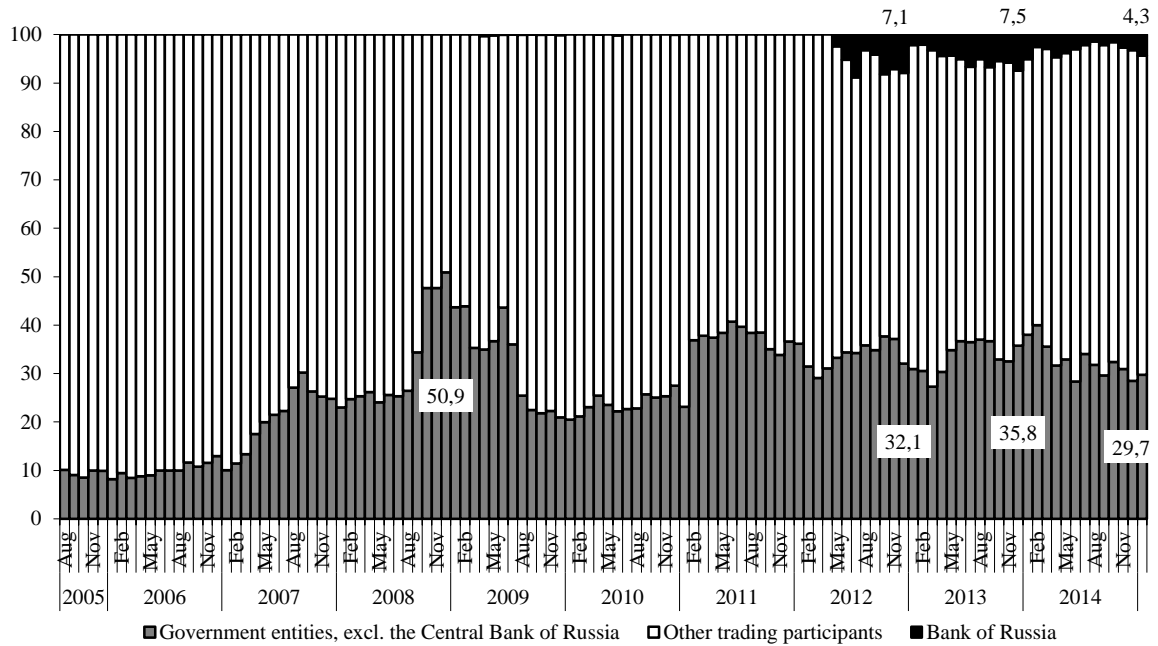
Fig. 18 presents the results of stock transactions of the Bank of Russia, state-run banks and related entities in the MOEX main market¹. This market segment saw a visible growth in the activity of public players during the acute phase of the crisis, September 2008 – July 2009. In December 2008, the share of government entities in the volume of stock on-exchange transactions increased to 50.9%, which was mostly determined by the fact that a few major participants (KIT Finance, Svyazbank) were facing financial problems and fell under control of state-run banks, as well as Vnesheconombank implemented a stock market support program financed with Rb 175bn received on a repayable basis from the National Welfare Fund. When the market was recovering, the share of state-run banks and their subsidiaries and affiliates in the volume of stock on-exchange transactions declined, but resumed growth in February 2011, reaching 36.1% in December 2011, which can be explained by Sberbank of Russia acquiring Troika Dialog (Sberbank CIB), an investment company). In 2012, the share of state-run financial institutions increased, however, the Bank of Russia entered the MOEX stock market in May 2012 and accounted for 7.1% of the value of transactions in December 2012. In December 2013, the share of state-run financial institutions increased to 35.8%, while that of the Bank of Russia stood at 7.5%. In January 2015, the share of government entities shrank to 29.7%, while that of the Bank of Russia decreased to 4.3%, amid the sale of securities by private investors.

Fig. 19 shows the data on Herfindahl-Hirschman Index (HHI)² for each of the MOEX market segments in the period between January 2005 and January 2015. According to the estimates of the Federal Antimonopoly Service (FAS), the market is low concentrated if HHI being less than 800, moderately concentrated if $800 < \text{HHI} < 1800$, and highly concentrated if HHI is more than 1800³. In 2014, the HHI on transactions in the MOEX main stock market was stable at about 500, i.e. this market segment was low concentrated. At the same time, HHI measures for transactions with various categories of bonds remained within the range of a moderately concentrated market. Only occasionally did the HHI for regional bonds move to the range of highly concentrated market. A trend of noticeably worsening HHI measures for a series of financial instruments is being observed in a relatively long-term horizon of 10 years. In 2010, regional bonds left the range of low concentrated market, and corporate bonds did the same in 2012. This implies that market participants have been reducing in number, and large participants have been accounting for an increasingly bigger part of trading volumes.

¹ Vnesheconombank, VTB, VTB Capital, VTB24, Gazprombank, Sberbank, KIT Finance, Svyazbank, Bank of Moscow, Transcreditbank, and Sberbank CIB since 2011.

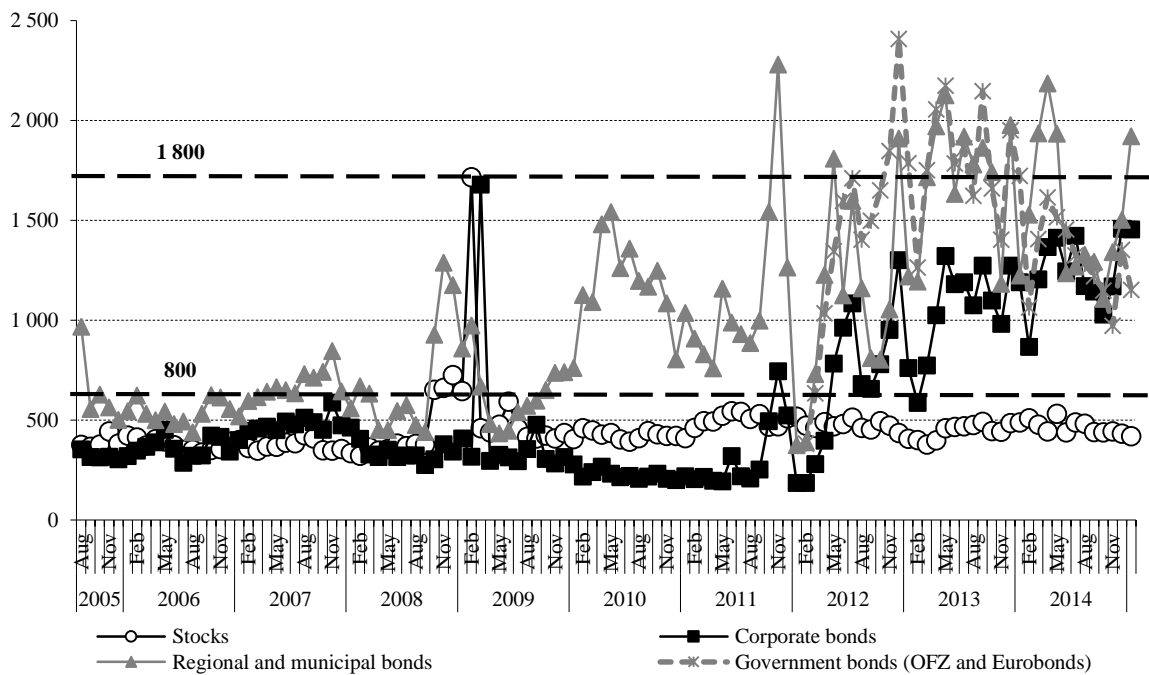
² The Herfindahl-Hirschman Index (HHI) is a commonly accepted measure of market concentration. The HHI is calculated by squaring the interest rate in terms of trading volume of each participant and totaling the obtained results: $\text{HHI} = (D1)^2 + (D2)^2 + \dots + (Dm)^2$, where D_i is i -participant's market share expressed in percent; $i = 1, 2, \dots, m$.

³ See section 2.6.4. of the guidelines on the procedure for analyzing and evaluating the competitive environment in the financial service market approved by the Order of 31.03.2003, No 86 of the Russian Federation Ministry for Antimonopoly Policy and Support of Entrepreneurship.



Source: author's calculations based on the data from the Moscow Exchange.

Fig. 18. The share of private and public brokers in stock trading volumes in the Moscow Exchange in the period between August 2005 and January 2015, %



Source: author's calculations based on the data from the Moscow Exchange.

Fig. 19. The Herfindahl-Hirschman Index: by volume of secondary trading in the MOEX main market (all trading modes)

The decline in active on-exchange trading of private investors and the growth in the role of government entities in the money market, which enjoy privileges from monetary authorities in

fundraising, raises the question of staying in business for many private companies, such as brokers and asset managers. In this respect, the Bank of Russia's initiative to relax equity requirements to securities market professional participants has an important positive impact on the development of industry. Pursuant to the Bank of Russia Regulation of 21.07.2014 No. 3329-U *On Equity Requirements to Professional Securities Market Participants and Asset Managers of Investment Funds, Unit Investment Funds and Non-Government Pension Funds*, in force since 1 September 2014, reduced to Rb 3m from Rb 35 the minimum capital requirements for dealers and brokers which don't use customer assets, to Rb 15m from Rb 60m for depositories. The minimum capital requirements for brokers using customer assets were reduced to Rb 15m from Rb 35m, for securities managers to Rb 5m from Rb 35m, provided that they are members of a CPO which approved and agreed business practice standards with the Bank of Russia. For non-member prime brokers and securities managers, the minimum equity capital requirements were retained at Rb 35m and Rb 60m, respectively. On 18 February 2015, the Board of Directors of National Association of Securities Market Participants (NAUFOR) approved the final version of basic professional practice standards in the securities market and sent them to the Bank of Russia for consideration. This is indicative of the existing CPOs' endeavors to switch as soon as possible to a new business practice to be able to meet the requirements of the Bank of Russia.

It, however, is insufficient to simply release the above normal administrative pressure on financial institutions other than banks. Professional participants in the securities market have been reducing in number for six consecutive years since 2009 (see *Table 9*). As of 27 February 2015, the number of brokers declined to 787 from 885 in 2013, or by 11.1%, dealers to 798 from 888, or by 10.1%.

Table 9

The number of professional market participants in the stock market

	2007	2008	2009	2010	2011	2012	2013	2014
The number of organizations licensed for:								
1. Brokerage	1445	1475	1335	1213	1090	983	885	787*
Changes, as a percentage of the previous period	0.8	2.1	-9.5	-9.1	-10.1	-9.8	-10.0	-11.1
2. Acting as dealer	1422	1470	1337	1198	1088	994	888	798*
Changes, as a percentage of the previous period	2.0	3.4	-9.0	-10.4	-9.2	-8.6	-10.7	-10.1

* as of 27.02.2015

Source: based on the data obtained from the RFMS Russia and the Bank of Russia.

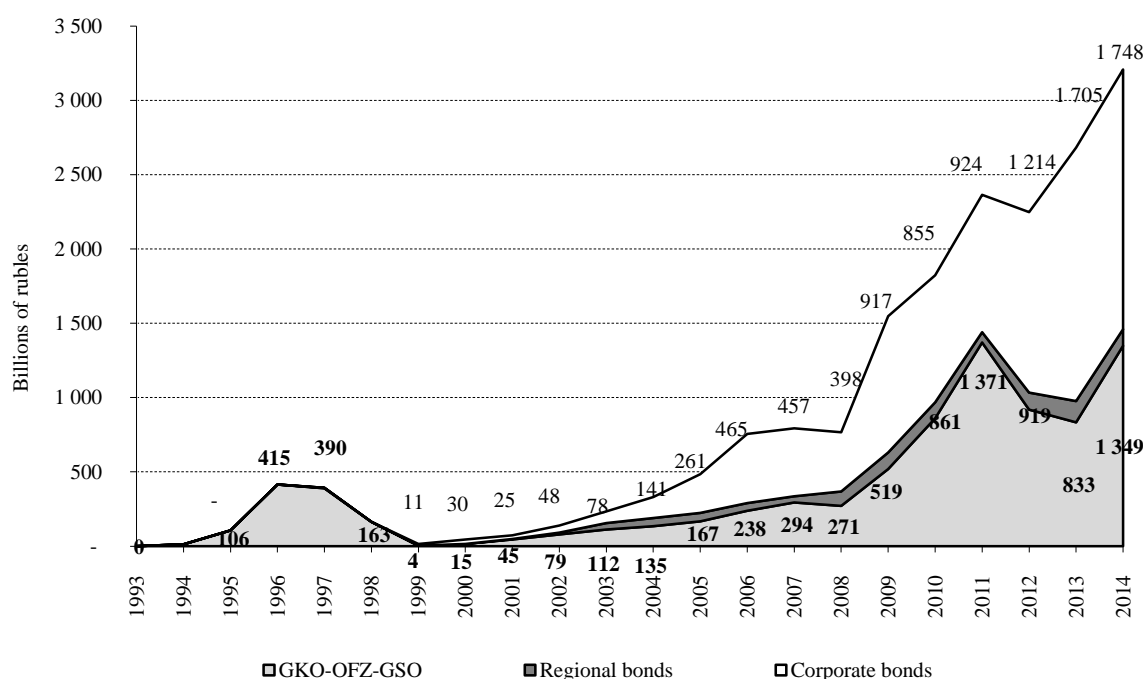
3.4. Ruble-denominated bond market

3.4.1. Government securities market

The year of 2014 was tough for the federal securities market. The introduction of international sanctions limited the opportunities for new external fundraising, while the volatile domestic money market weakened the demand for ruble-denominated OFZs and resulted in higher interest rates on loans. New assets such as pension assets ceased to inflow to the domestic public debt market, because the funded component of retirement benefits was frozen in 2014–2015. Not only did the liberalization in February 2013, making the OFZ market available for non-residents by opening Euroclear and Clearstream accounts with the NSD amid the restricted access to Russian government securities for European and U.S. investors, fail to attract non-

resident assets, but it rather increased the risks of unexpected outflow of non-resident assets from OFZ.

In 2014, the size of OFZ-GSO issuance increased to Rb 1349bn from Rb 833bn in 2013 (see Fig. 20), or by 61.9%. However, the size of OFZ on-market issuance was as little as Rb 157.9bn compared with Rb 398.5bn provided for by the Public Debt Management Policy of the Russian Federation for 2013–2015¹. The major part of OFZ issuance accounted for by OTC issues used for strengthening the capital of large banks through the Deposit Insurance Agency (DIA)². In an effort to make government securities more attractive for investors, Russia’s Finance Ministry decided in 2014 to issue OFZs with a variable coupon, allowing government securities to be offered in a volatile market with a higher yield subsequently declining in the mid run.



Source: based on the data obtained from the Moscow Exchange and cBonds.

Fig. 20. Placement volumes of ruble-denominated bonds in 1993–2014

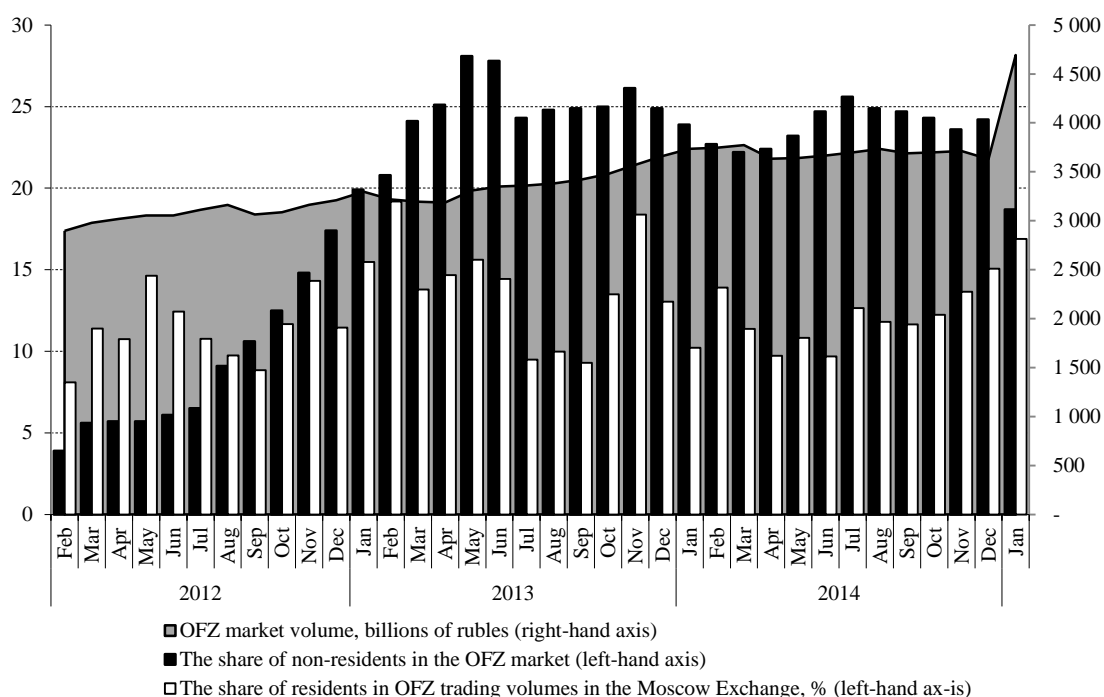
According to the Bank of Russia, the opening, early in 2013, of nominee accounts for foreign settlement and clearing organizations with the Russian central depository spurred a substantial inflow of foreign investment to the domestic public debt market. The foreign investment base is diversified enough and includes participants with a big variety of investment strategies³. In 2013, the share of non-residents in the OFZ bondholder structure reached 24.9%. Such a rapid growth in the share of non-residents in the OFZ market was unexpected even for the Ministry of Finance. According to the Public Debt Management Policy of the Russian Federation for 2013–2015 (p. 25), the foregoing value was expected to increase to as little as 10% in the mid run and to 25% in the long run.

¹ Published on: http://www.minfin.ru/performance/public_debt/policy/

² Biyanova N., Voronova T. Who is going to receive a trillion. Vedomosti, 15 January 2015

³ The Central Bank of the Russian Federation. Money Market Review, Q4 2014, p.22.

Risks of non-resident assets outflow from OFZ increased considerably late in 2014, amid sanctions and in expectation of the three world leading rating agencies to lower below the investment-grade level the sovereign rating for the Russian Federation. On 26 January 2015, S&P lowered the sovereign credit rating below the investment-grade level for the Russian Federation, to BB+/negative, whereas Moody's and Fitch in January decided not to change the investment rating for Russia, with a negative outlook though. Those developments resulted in no mass sales of OFZs. Despite that the share of non-residents in the OFZ bondholding structure contracted to 18.7% in January 2015 from 24.2% in December 2014, it resulted in higher volumes of OFZ, including OTC issues, rather than the sales of government securities by foreign investors.

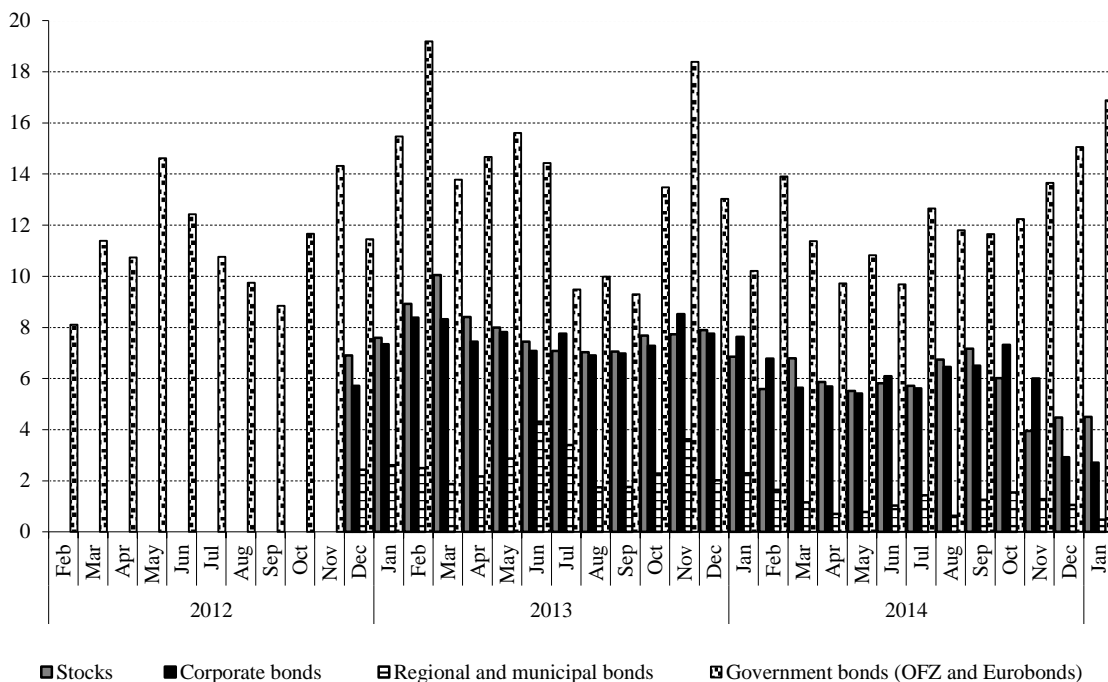


Source: The Bank of Russia and author's calculations based on the data from the Moscow Exchange.

Fig. 21. The share of non-residents in the OFZ market in the period between February 2012 and January 2015

In 2014, the share of the same 12 non-resident banks in the volume of secondary government bond market was noticeably higher than that of the same financial organizations calculated for the secondary stock market, corporate bond market and regional bond market in the Moscow Exchange (see Fig. 22). This is indicative of that many non-residents still pay more interest in the government bond segment of the Exchange. At the same time, corporate, regional bonds and equity shares saw the opposite trend. The share of non-residents trading in the secondary corporate bond market contracted to 2.7% in January 2015 from 7.8% in 2013, while the share of non-residents trading in regional bonds and equity shares declined to 0.5% from 2.0% and to 4.5% from 7.9%, respectively. This implies that non-residents paid less interest in 2014 in transactions with Russian non-government securities, despite the fact that such transactions were technically simplified for foreign investors by infrastructural organizations as part of inter-custodial interaction with Euroclear and Clearstream, as well as through the amendments to the Russian legislation regarding the participation of non-residents in corporate events of Russian

issuers. In our opinion, a more stable domestic market is supposed to provide for a heavier reliance on the resources of domestic investors in the stock market.

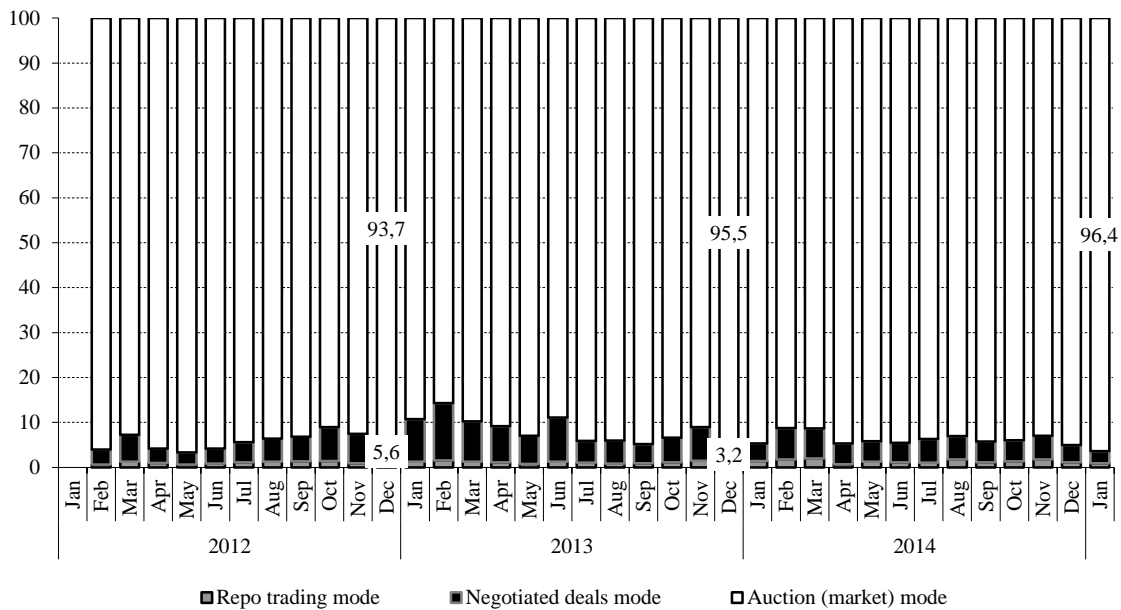


Source: author's calculations based on the data from the Moscow Exchange.

Fig. 22. The share of non-residents in securities trading volumes in the Moscow Exchange in the period between February 2012 and January 2015, %

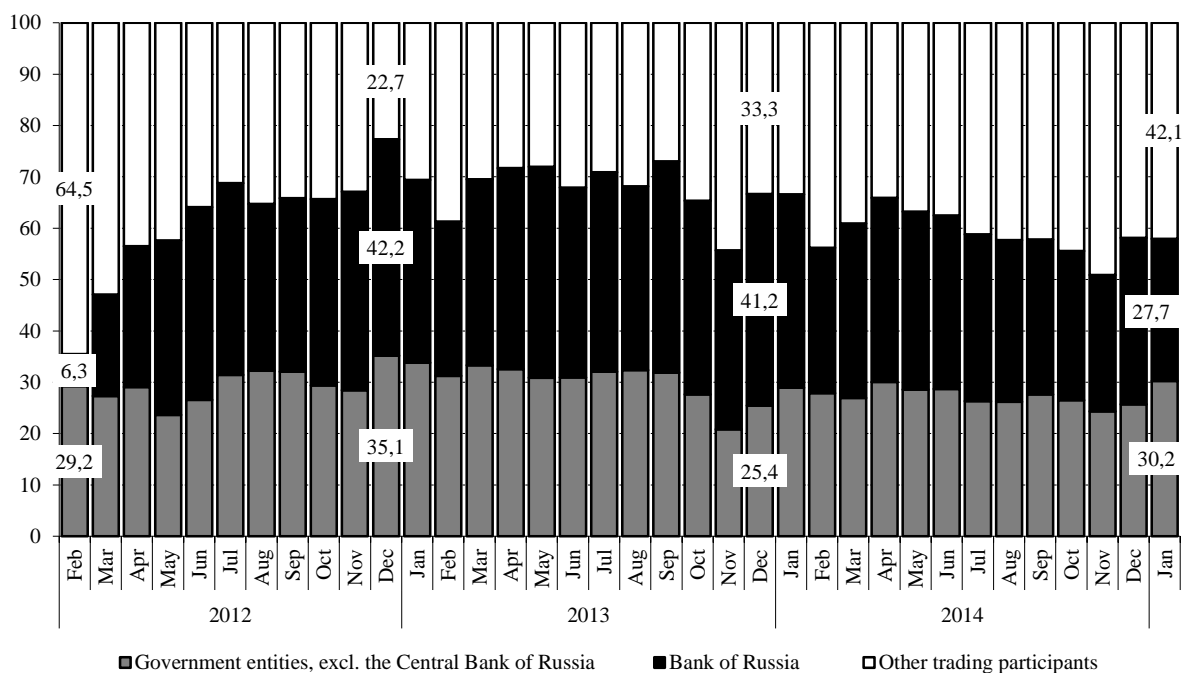
The data on different modes of transactions employed in the government bond market in the period between 2012 and 2014 was made available through MOEX statistics. In its previous money market reviews the Bank of Russia only disclosed information of the size of market (auction) transactions and operations as part of the negotiated OFZ trading mode. It is seen from the data presented in Fig. 23 that the share of repo transactions in the government bond market was 96.4% in January 2015. Market transactions accounted for as little as 0.9% of the trading turnover. In this situation, it is unclear what market transactions' function is as such, whether the information about them is sufficient to provide an objective market information about OFZ and Eurobond market parameters.

Fig. 24 shows data on the share of government entities and the Bank of Russia in the on-exchange federal bond market, which the Moscow Exchange has been disclosing since February 2012. Here, in January 2015, government entities and the Bank of Russia accounted for 27.7% and 30.2%, respectively, of the on-exchange transactions with government securities, as part of all trading modes. The share of private financial entities increased to 42.1% in January 2015 from 33.3% in December 2013. This can be explained by the fact that amid high volatility in the market in 2014, the Bank of Russia's refinancing through repo transactions was distributed more ratably among banks of various categories. At the same time, the largest state-run banks were a little bit less active in this market segment, as they could use alternative channels of refinancing in the Bank of Russia as lending against non-marketable assets and recapitalization through OFZ contributions to the equity.



Source: author's calculations based on the data from the Moscow Exchange.

Fig. 23. The structure of trading in federal bonds in the Moscow Exchange in the period between February 2012 and January 2015, %

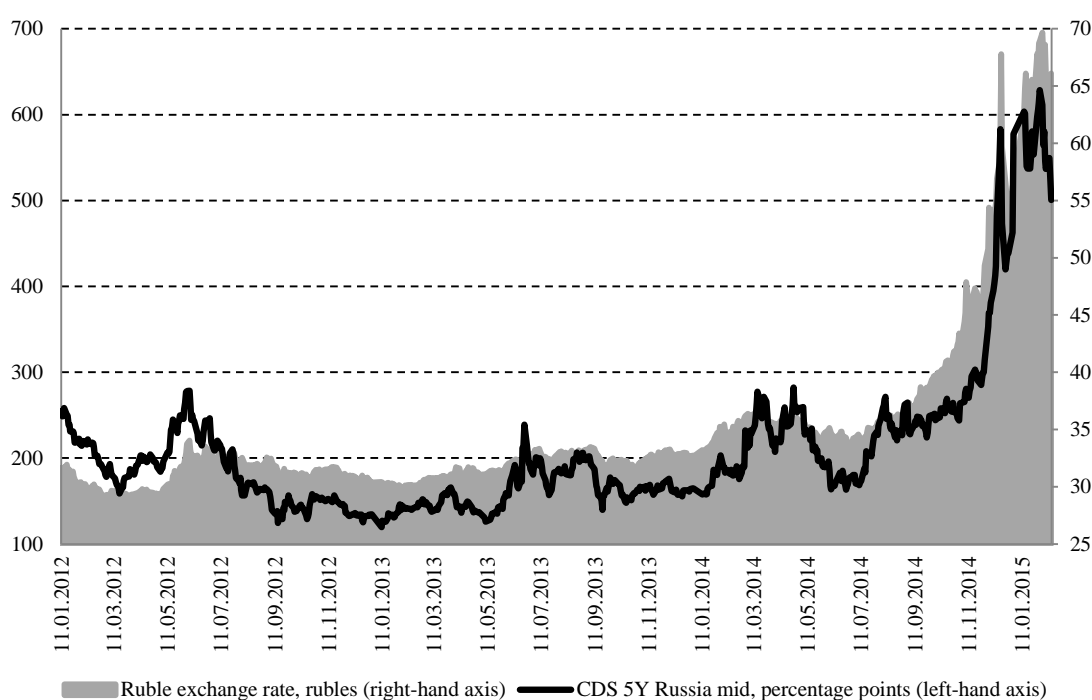


Source: author's calculations based on the data from the Moscow Exchange.

Fig. 24. The share of private and public brokers in volumes of trading in federal bonds (OFZs) and Russia's Eurobonds in the Moscow Exchange, %

The diagram in Fig. 25 shows that fundraising conditions for Russia deteriorated seriously in 2014, the dynamics of ruble's exchange rate is compared with the growth in price of credit

default swaps (CDS)¹ for Russia sovereign bonds maturing in five years. The geopolitical risks relating to the events in Ukraine in H1 2014 had no strong impact on the sovereign debt market. In the period between 12.31.2013 and 07.11.2014, the US dollar's exchange rate increased to Rb 33,84 from Rb 32,73 per US\$, or by 3.4%; the CDS price increased to 173.3 from 164.6 basis points, or by 5.3%. However, the ruble exchange rate plummeted, followed by the growth in price of CDS on Russia's debt, after the introduction of sanctions limiting the refinancing of FX-denominated liabilities of Russian issuers and hence boosting the capital outflow from Russia, and the start of falling crude oil prices in July 2014, leading to their collapse in the fourth quarter. In the period between 07.11.2014 and 01.31.2015, the US dollar's exchange rate increased to Rb 68,73 from Rb 33,84 per US\$, or doubled, while the Russia 5Y CDS price jumped up to 613.4 b.p. from 173.3 b.p., or by 3.5 times. In February 2015, the monetary authorities managed to slightly stabilize the ruble, thereby reducing slightly the CDS price.



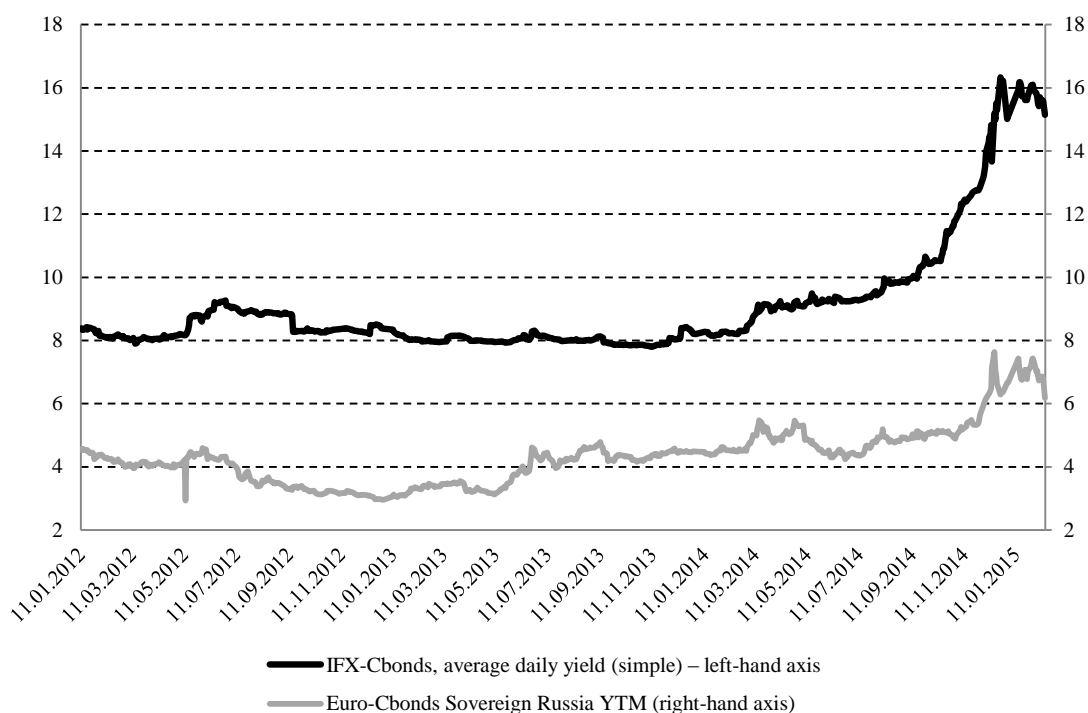
Source: author's calculations based on the data from CBonds.

Fig. 25. The value of CDS Russia 5Y and the US dollar exchange rate in 2012 – February 2015

The depreciation of the national currency and the growth in credit risks of Russian issuers resulted in the eyes of foreign investors in the growth in value of fundraising in the debt market (see Fig. 26). The yield on Russia's 5-year sovereign Eurobonds increased to 7.34% p.a. as of 01.31.2015 from 4.48% p.a. as of 31.12.2013, or by 1.6 times; the yield of most liquid ruble-denominated corporate bonds, which is measured by the IFX-bond Index calculated by Interfax and CBonds, increased to 15.92% p.a. from 8.24%, or by 1.9 times, during the same period. Furthermore, the value of ruble-denominated yield in the domestic debt market relies largely

¹ Credit default swap is an insurance premium against a given issuer's default. CDS is the issuer's credit risk indicator.

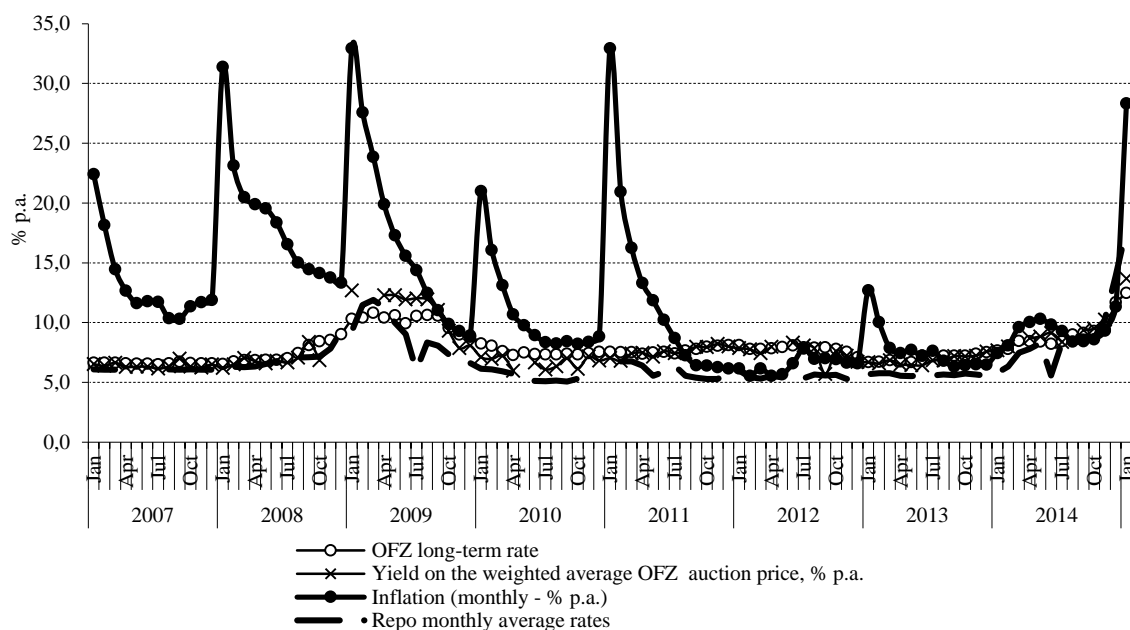
upon the Bank of Russia key rate which was 17.0% p.a. in the period between 15 December 2014 and 2 February 2015, and has been 15.0% p.a. since 2 February 2015 to date.



Source: author's calculations based on the data from CBonds.

Fig. 26. Average (simple) yield of Russia's Eurobonds and ruble-denominated bonds of Russian companies in the period between 2012 and January 2015, % p.a.

It was expected in the Public Debt Management Policy of the Russian Federation for 2013–2015 (p. 25) that an increase in the share of foreign investors in OFZs will inevitably reduce their yield by a percentage point. This was the case in 2012, when the share of non-residents in the OFZ market increased most. Inflation increased in 2012, reaching 6.6% compared with 6.1% in 2011, whereas the average monthly long-term OFZ rate declined in December 2012 to 7.10% p.a. instead of 8.10% in the preceding year (see Fig. 27). A different trend was seen in 2013. Despite the ongoing but subdued growth in the share of non-residents in the OFZ market, lower inflation to 6.5%, the OFZ long-term rate increased to 7.53% p.a. in December 2013 from 7.10% p.a. in December 2012. In 2014, with an annual inflation of 11.4%, the OFZ long-term rate increased to 12.48% p.a. in January 2015 from 7.53% p.a. in December 2013. In 2015, successful implementation of the national debt management policy in terms of generating more budget revenue through OFZ bonds will hinge largely on whether or not the monetary authorities can cope with the never-before-seen inflation upsurge in January–February 2015 and end up with the 12.4% year-end target inflation, as planned by Russia's Ministry of Economic Development.



Source: author's calculations based on the data from the Bank of Russia, the Ministry of Finance and the Rosstat.

Fig. 27. Average monthly rates in the OFZ market and inflation, % p.a.

3.4.2. Corporate bond market

Since the 2000s, ruble-denominated corporate bonds have been a most dynamically developing segment of the Russian stock market. In the period between 2000 and 2014, such outstanding bonds increased in value to Rb 6.623bn from Rb 46bn, or to 9.3% from 0.6% of GDP.

The size of corporate bond market depends largely on the liquidity of banking system which in turn was driven by different factors in different times. In that context, several stages can be distinguished in the development of corporate bond market: moderate liquidity (January 2001 – July 2004); carry trade (August 2004 – March 2009); recovery from the crisis (April 2009 – December 2012); state expansion (since 2013 to date)¹. In the period of moderate inflation, the Russian money market just started its recovery from the shocks induced by the crisis 1997–1998; Russia's sovereign ratings were below the investment-grade level; the source of liquidity in the bond market was non-residents' assets formally frozen on C-type accounts² and domestic corporate investors. The period of "carry trade" began after Moody's, Fitch and S&P awarded an investment-grade sovereign rating for Russia in 2004–2005. This allowed Russian banks and foreign investment funds to actively borrow short-term assets denominated in foreign currencies in global markets at a relatively low interest rate, and then invest these assets in high-yield ruble-denominated assets, above all, bonds. Later, the carry trade strategy became a cause of the banking crisis whose acute phase occurred late in 2008 – early in 2009³. In the period of

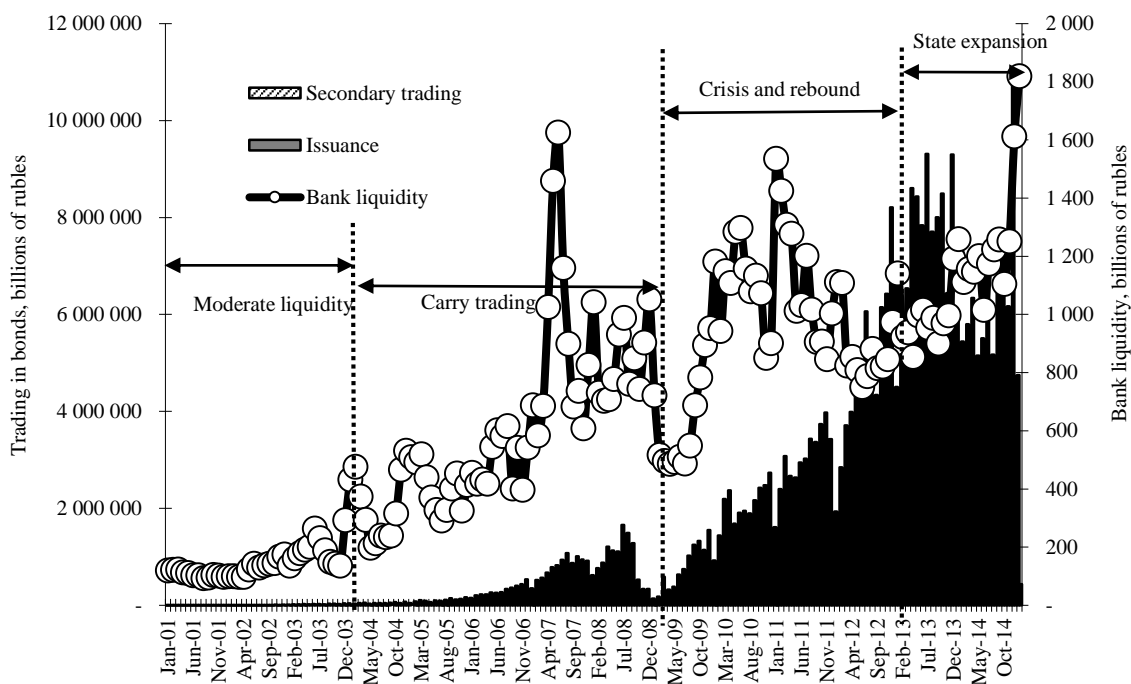
¹ Chronologically, more emphasis is put on the point at which a given new model of financing began to have an effect on the bond market, rather than on that at which it began to be employed.

² Non-residents' money was held on these accounts, which they received in the process of GKO-OFZ novation. The money transfer outside the Russian Federation was limited for within a certain period. By way of exception, the money was allowed to be used to acquire corporate bonds of certain bond issuers.

³ This strategy created disproportions in the value of ruble-denominated assets and banks' liabilities denominated in foreign currencies. With crude oil prices falling and the ruble devaluing, banks' assets depreciated while the liabilities denominated in foreign currencies remained intact. This tends to lead to the so-called liquidity crisis of

recovery from the crisis 2008–2009 till the end of 2012, the banking system had a limited access to “cheap money” in global markets and a moderate level of its refinancing from the Bank of Russia. During the “state expansion”, the Bank of Russia increased drastically refinancing of the banking system, thereby boosting the internal corporate bond market. However, the corporate bond market experienced a serious slowdown manifesting itself in drastic reduction in the size of market issuances amid the ruble’s devaluation triggered predominantly by external factors late in 2014 – January 2015, regular growth in 2014 of the CBR key rate, ending up with 15% p.a..

In 2014, the size of ruble-denominated corporate bond issuances totaled Rb 1747.6bn compared with Rb 1705.2bn in 2013, i.e. the growth in the value of respective transactions was equal to as little as 2.5%. However, Rb 625bn was accounted for by OTC bond issuance of OJSC Rosneft on 11 December 2014, whose bonds were purchased by a group of large banks presumably through refinancing by the Bank of Russia. Net of these issuances, the size of corporate bond issuances in 2014 would be as little as Rb 1122.6bn, i.e., it would be 34.2% less than that of similar transactions in 2013. The volume of trading in the MOEX secondary corporate bond market in 2014 increased to Rb 6623.0bn compared with Rb 5189.3bn in 2013, or by 27.6%. The growth was determined mostly by repo transactions enabling banks to be refinanced by the Bank of Russia.



Source: author’s calculations based on the data from the Bank of Russia and the Moscow Exchange.

Fig. 28. Trading in corporate bonds and banking liquidity in the period between January 2001 and January 2015

Therefore, the primary segment of debt market will not be able to recover in the mid run, unless the FX market is stabilized and, indeed, a visible progress in coping with inflation is achieved. This will allow the Bank of Russia to gradually lower its key rate, thereby enabling

the banking system, which nevertheless was avoided in 2008– 2009 though aggressive involvement of the Bank of Russia as lender of last resort.

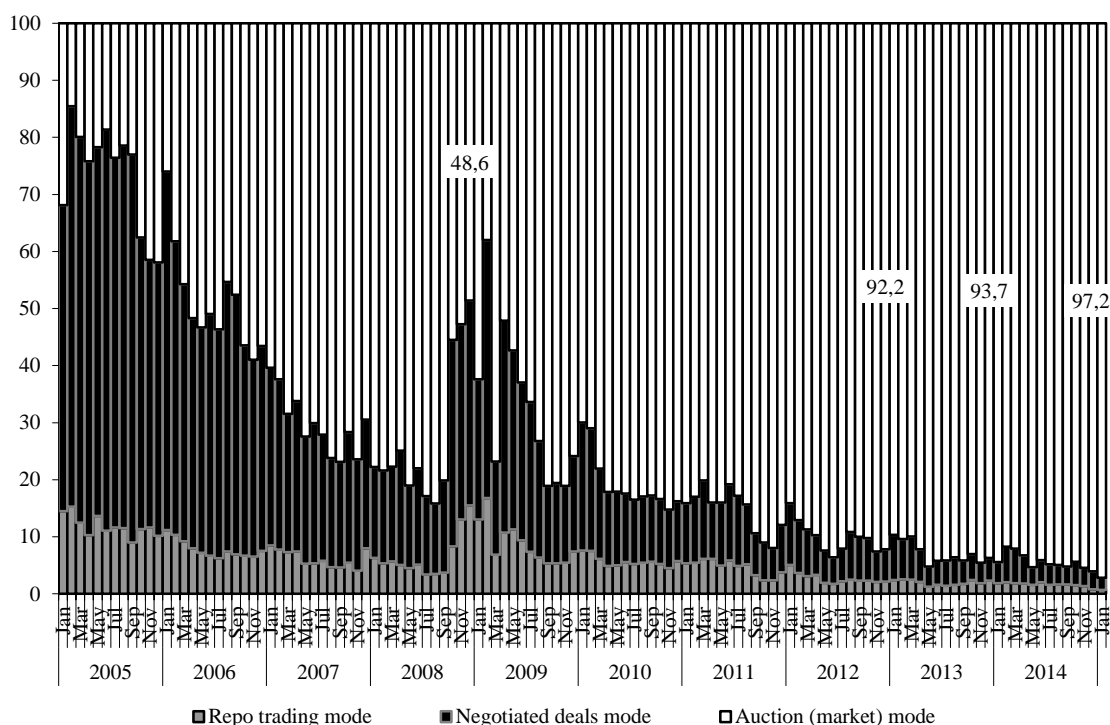
real sector companies to issue corporate bonds. However, the corporate debt market participants has a longer-term objective of making the market less dependent on the scope of banking system refinancing by the Bank of Russia and refocusing it on the assets of foreign investors and domestic market participants. The latter suggests that corporate bonds should be made more appealing for domestic institutional and retail investors, including individual investment account holders.

The problem of fundraising from domestic investors has increasingly becoming more relevant for the ruble-denominated bond market while Russian bond issuers are facing unstable international market. Banks have so far been the prevailing source of fundraising in this bond market, but the share of banks has been shrinking. The share of banks in the corporate bondholding structure declined to 21.2% in 2013 from 30.9% in 2012. The share of pension assets in the value of corporate bonds held by asset managers, including VEB, increased to 11.7% in 2013 from 7.6% in 2012. In 2013 Unit investment funds accounted for 1.2% of the corporate bondholding structure, while pension assets and reserves in non-government pension funds (NGPF) accounted for 7.7% and 3.8%, respectively, insurance reserves for as little as 0.8%. Therefore, banks and domestic institutional investors accounted for as little as 46.4% of sources of ruble-denominated corporate bonds.

Ruble-denominated corporate bonds have since February 2014 been available for non-residents through Euroclear and Cleanstream accounts with the NSD. At present, the share of operations of banks providing services to non-residents in the MOEX secondary corporate bond market is 3% or less. Given currently prevailing expectations of the ruble's devaluation, the opening a technological gateway for non-residents' operations with internal corporate bonds in 2014 resulted in no growth of their share in this stock market segment, which instead dropped substantially. Regretfully, the amendments which were adopted in 2014 to the Federal Law *On the Securities Market* and intended to ease the access of corporate Eurobonds to the domestic market, in particular, by replacing the obligation to translate Eurobonds issue prospectuses into Russian with a simple description of the terms of offering, heightened seriously the uncertainty in the MOEX corporate bond market segments. Furthermore, the uncertainty was caused by the lack of an adequate mechanism of disclosure of traditional corporate bond issue prospectuses in the Exchange. Therefore, after the sanctions were imposed and the ratings for many corporate bond issuers were lowered below the market grade, domestic private investors had insufficient possibilities to evaluate the risks of covenants embedded into the terms of corporate bond offering in the event of adverse conditions for ratings and other developments concerning the practice of Russian issuers.

The fact that the corporate bond market has been turning into a money market instrument as opposed to the long-term nature of corporate bonds themselves shows that the structure of corporate bond transactions in the Moscow Exchange (see *Fig. 28*). In January 2015, the share of repo transactions in the value of on-exchange corporate bond transactions reached a absolute record of 97.2%, increasing the values seen in 2013 and 2014. At the same time, only 0.7% corporate bond transactions were market transactions. Such a drastic decline in the percentage of on-exchange transactions raises substantially the risks of soundness of corporate bond pricing while closing transactions in the Exchange. Our studies of the factors influencing yield spreads of ruble-denominated corporate bonds which were carried out in 2013 for The National Securities Market Association (NSMA) show that fundamental factors such as issuer's credibility, issuer financial performance indicators and liquidity of bond issues have no significant effect on the size of spreads on corporate bonds. The lack of on-exchange corporate bond transactions casts doubts on the soundness of decreasing coefficients used by the Bank of Russia for

determining the collateral value of these securities when banks are refinanced through repo transactions. With such a ratio of on-exchange transactions and corporate bond repo transactions, Bank of Russia's refinancing of banks turns into a tool designed to encourage banks to increase illiquid assets, given a relatively short-term base of their funding through deposits and fundraising. This creates liquidity risks for the banking system when, for example, the central bank will have to substantially curtail its refinancing volumes due to foreign exchange rate or inflation problems.

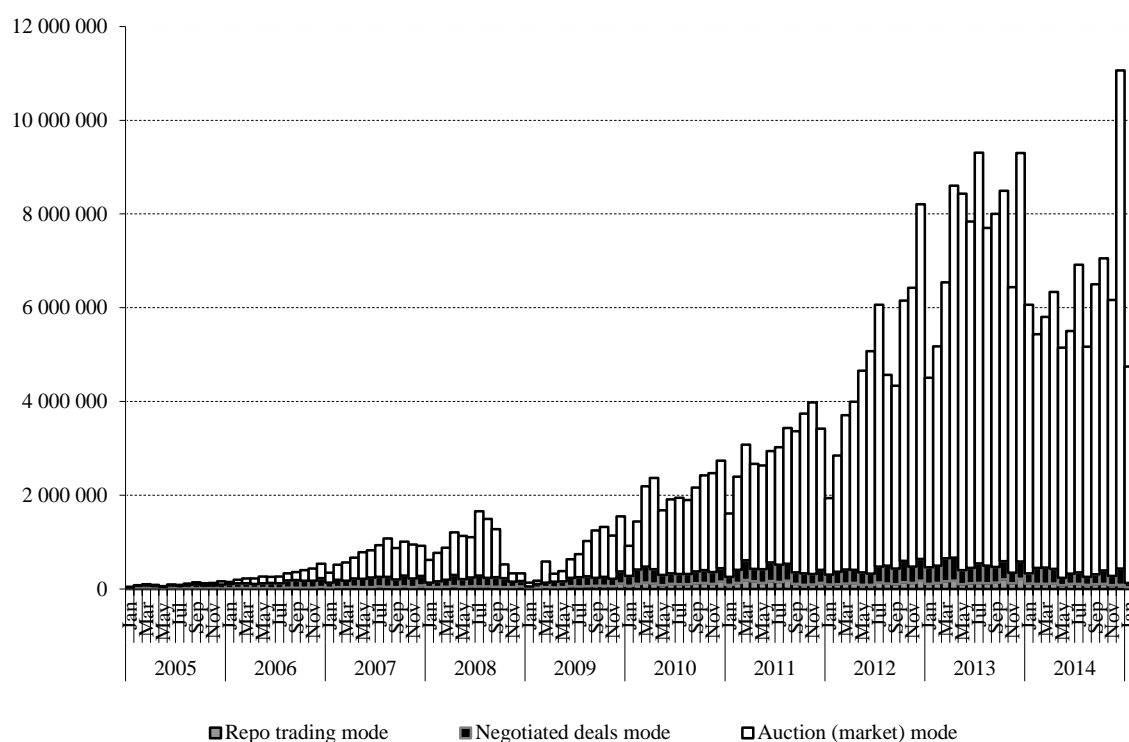


Source: author's calculations based on the data from the Moscow Exchange.

Fig. 29. Corporate bond trading structure in the Moscow Exchange, %

In 2014, the share of corporate bond repos increased as the total size of corporate bond secondary market declined in the Exchange. The volume of these transactions dropped to Rb 77.1 trillion in 2014 compared with Rb 90.3 trillion in 2013, or by 14.6%. Repo transactions were responsible for most of the decline. In 2014, repo transaction total volume contracted to Rb 72.9 trillion compared with Rb 84.1 trillion in 2013, or by 13.3% (see Fig. 30). The abnormally big size of repo transactions in the Exchange in December 2014 resulted from a chain of non-transparent OJSC Rosneft bond offering transactions in the Exchange. Large banks, which purchased Rb 625bn of OTC bonds of the state-run oil company, received the respective amount of refinancing from the Bank of Russia on the date of bond offering through the MOEX trading system. Overall, however, one can say that the decline in volume of the corporate bond market offerings in 2014 was triggered by the decline in volume of banking system refinancing against corporate bonds. Under the circumstances, the Bank of Russia had to broaden the range of

securities against which loans were issued through repo transactions, as well as more intensively use the mechanism of lending to banks against non-marketable assets¹.



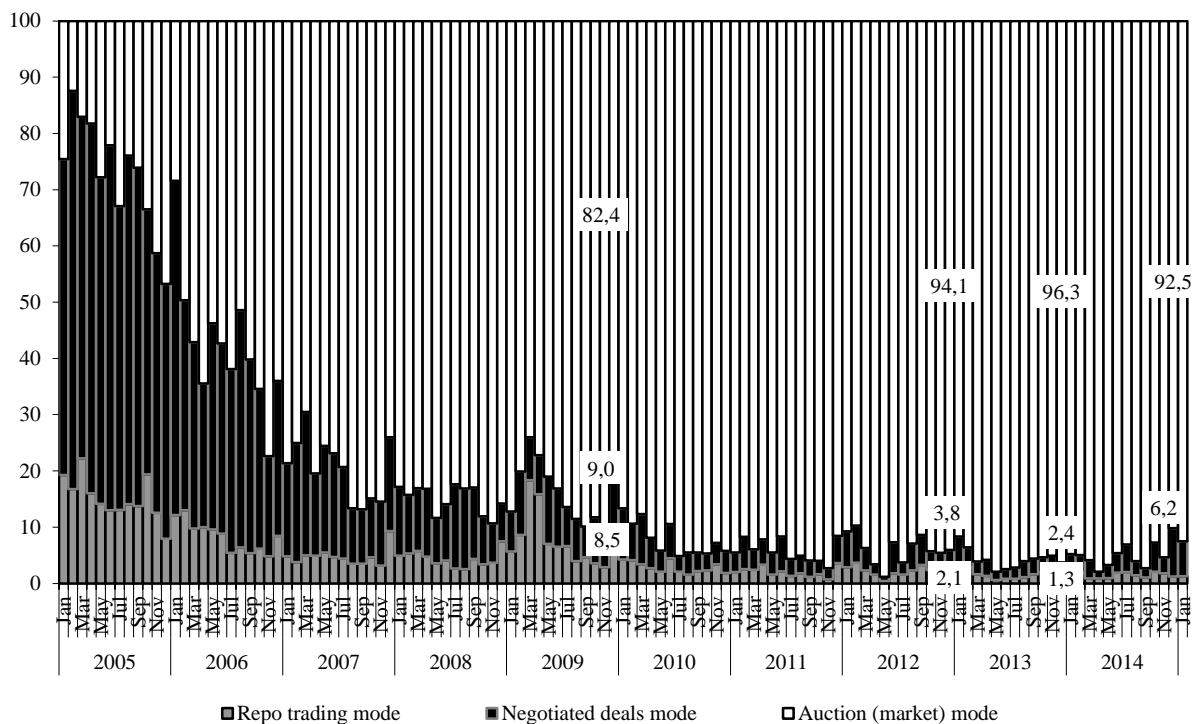
Source: author’s calculations based on the data from the Moscow Exchange.

Fig. 30. The value of trading in corporate bonds in the Moscow Exchange, millions of rubles.

The MOEX regional bond market faced similar problems of contraction of the share of on-exchange transactions (see Fig. 31). In January 2015, the share of on-exchange transactions in this market segment was as little as 1.3%, while the share of repo transactions reached 92.5% and that of OTC transactions as part of the negotiated deals mode stood at 6.2%. Such a combination of market and OTC transactions also raises the question of soundness of the market evaluation of regional bonds against which the Bank of Russia issues loans through repo transactions.

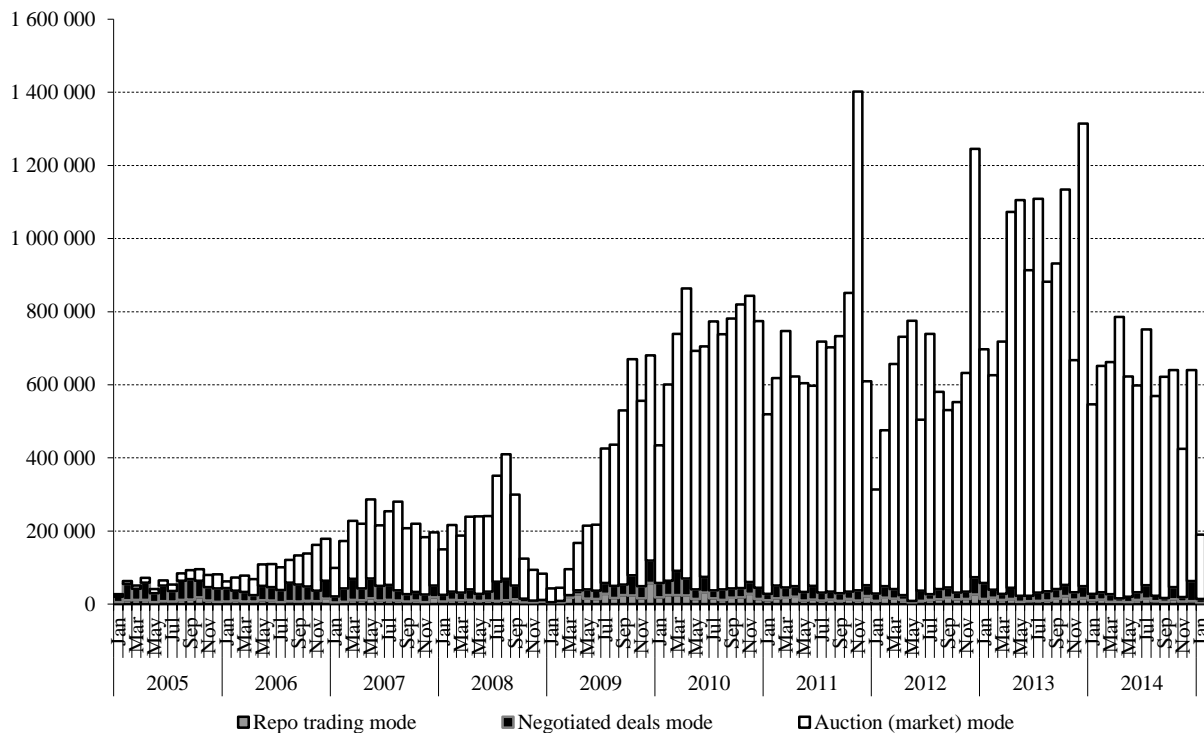
The role of repo transactions with regional bonds in 2014 increased as the MOEX secondary regional bond market saw the decline in size. The volume of such transactions decreased to Rb 7.5 trillion in 2014 compared with Rb 11.2 trillion in 2013, or by 33.0%. Repo transactions were responsible for most of the decline, with their total value declining in 2014 to Rb 7.1 trillion compared with Rb 10.7 trillion in 2013, or by 33.6% (see Fig. 32).

¹ It is noteworthy that the very term “collateral” is conventionalized with regard to repo transactions and lending against non-marketable assets, because such transactions provide the Bank of Russia with no advantage in recovering its loans if borrowing banks go bust.



Source: author's calculations based on the data from the Moscow Exchange.

Fig. 31. The structure of trading in regional bonds in the Moscow Exchange, %

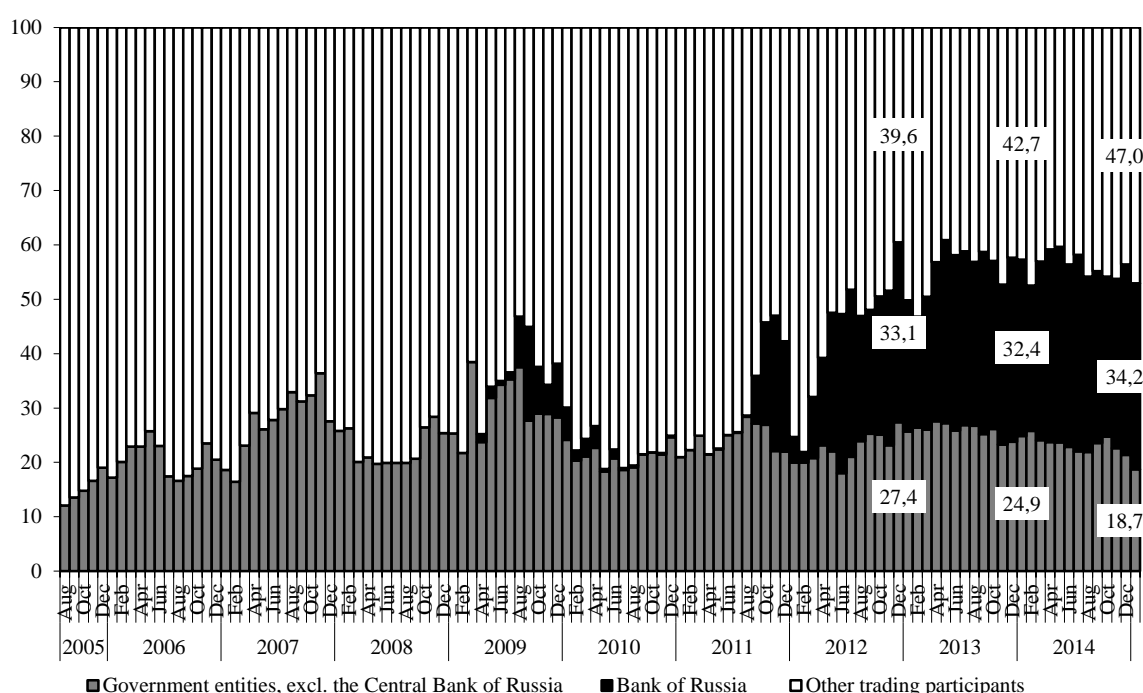


Source: author's calculations based on the data from the Moscow Exchange.

Fig. 32. The value of trading in regional bonds in the Moscow Exchange, millions of rubles.

3.4.3. Competition in the corporate and regional bond markets

Fig. 33 provides analysis of various groups of trading participants' (private and state-run financial institutions¹, the Bank of Russia) contribution to the size of on-exchange trading in corporate bonds in the Moscow Exchange under all trading modes, including market, negotiated and repo transactions. In January 2015, government entities and the Bank of Russia accounted for 18.7% and 34.2%, respectively, of the size of on-exchange trading in corporate bonds, compared with 24.9% and 32.4% in December 2013. The scope of the Bank involvement in transactions in the corporate bond market exceeded largely its activity volumes during the crisis of 2008–2009. A certain decline in the share of government entities compared with 2013 is attributed to the fact that Bank of Russia's lending to the banking system through repo transactions was distributed more evenly between various trading participants. Additionally, large state-run banks had the opportunity to obtain Bank of Russia loans against non-marketable assets amid the repo market contraction caused by limits on their security.



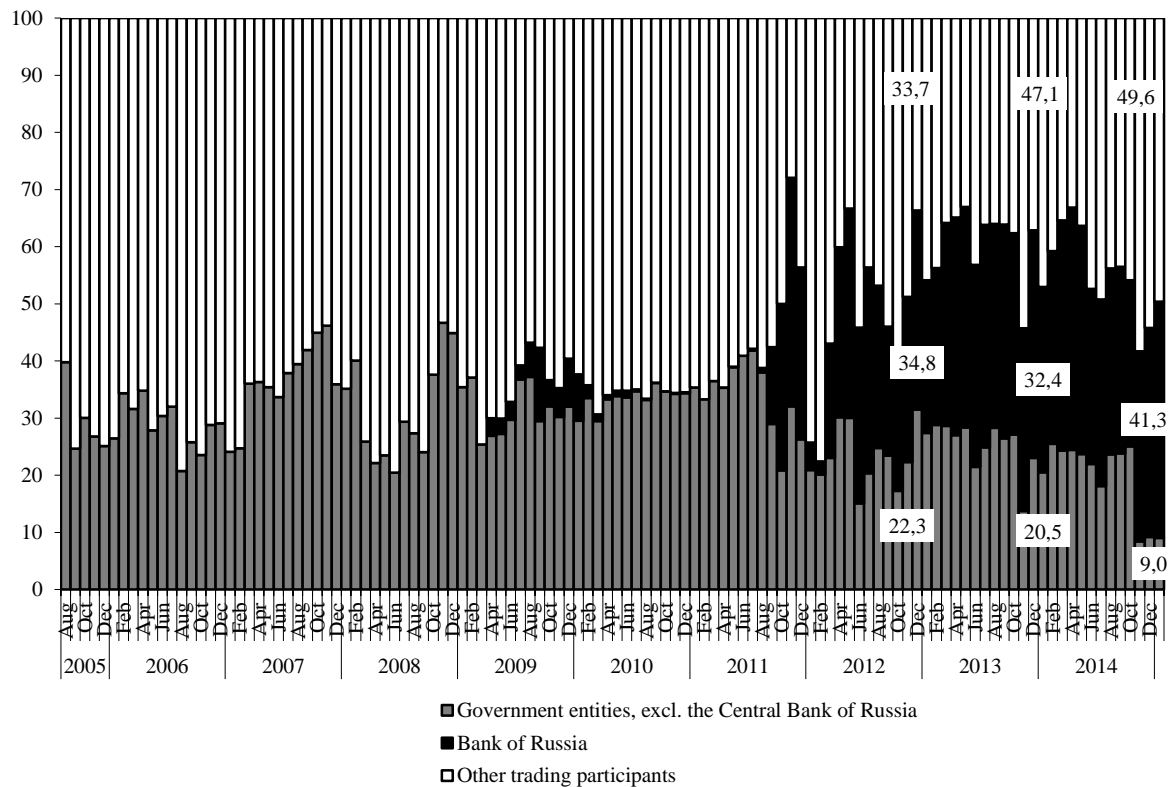
Source: author's calculations based on the data from the Moscow Exchange.

Fig. 33. The share of private and public brokers in volumes of trading in corporate bonds in the Moscow Exchange, %

Fig. 34 reflects the share of state-run financial institutions and the Bank of Russia in the volume of on-exchange trading in regional bonds. In 2012, it was even bigger than in the Exchange corporate bond market. In December 2013, the share of government entities and the Bank of Russia in regional bond transactions reached 20.5% and 32.4% respectively. In 2014, with a considerable decline of the share of government entities, above all, Sberbank of Russia, to 9.0%, or by 2.3 times, the share of Bank of Russia increased to 41.3%. As a result, the market share of private financial institutions in 2014 increased slightly to 49.6% compared with 47.1% in the preceding period. In that case, however, there was no any substantial growth in the share

¹ The list of state-run entities is available in section 3.3.4.

of private business entities compared with government entities. With the contracting regional bond market, these securities became less useful for state-run banks for refinancing through repo transactions, because they had the opportunity to obtain Bank of Russia loans secured by non-marketable assets.



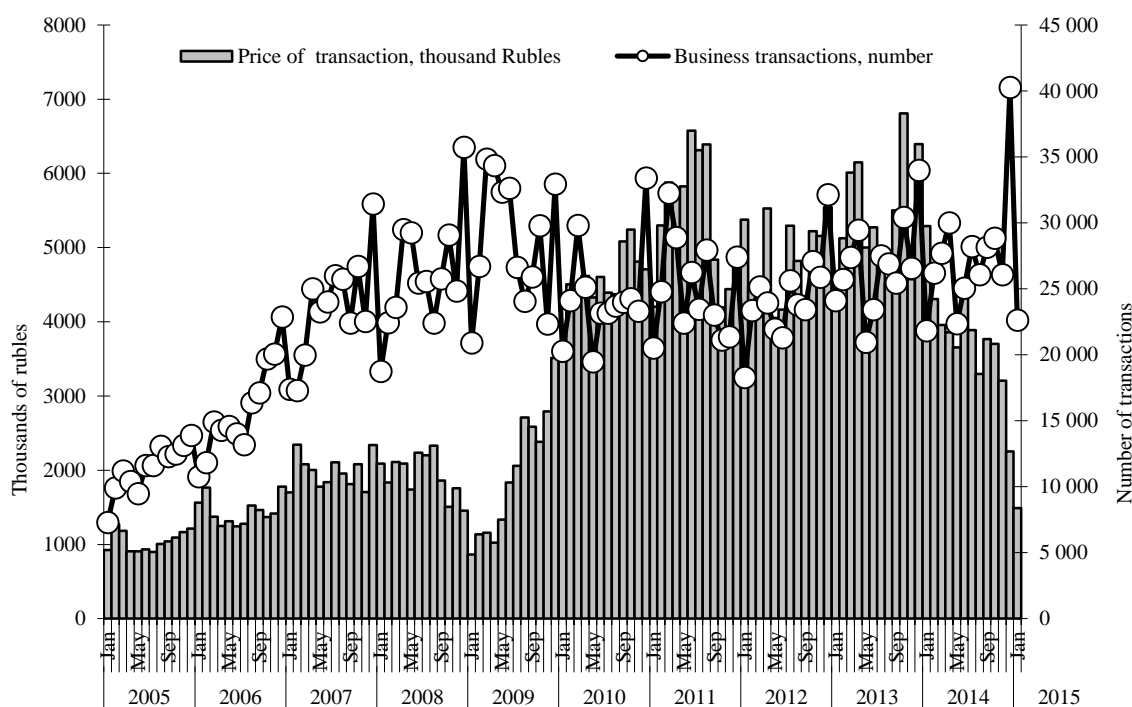
Source: author’s calculations based on the data from the Moscow Exchange.

Fig. 34. The share of private and public brokers in volumes of trading in regional bonds in the Moscow Exchange, %

Concentration characteristics of the secondary corporate bond market in the Moscow Exchange saw a severe deterioration in the period between 2012 and 2013 (see Fig. 19 in section 3.3.4). The Herfindahl-Hirschman Index (HHI) for transactions in the secondary corporate bond market has exceeded 800 points since May 2012. The HHI on corporate bonds has since then been ranging within 800 and 1800 points, which means that this market segment shifted from low concentration to moderate concentration. The regional bond market in the Moscow Exchange is more concentrated compared with the corporate bond market. In 2012, it was within a range of moderate concentration, according to the HHI criteria, the regional bond market was highly concentrated most of the time in 2013, with HHI showing over 1800 points. In 2014, it returned to the moderate concentration level.

Fig. 35 presents data on the number of transactions and the value of a corporate bond transaction in anonymous trading in the Moscow Exchange. Similar to the market segment of trading in equity shares (see Fig. 17 in section 3.3.3), the period of 2013–2014 saw a trend towards stabilizing the number of on-exchange corporate bond transactions and the average volume of a transactions. In 2014, however, on-exchange corporate bond transactions saw a considerable

reduction in size to Rb 1.4m in January 2015 from Rb 6.3m in December 2013, i.e., they reduced to the size seen during the acute phase of crisis in 2008. Such an odd trend in the market segment of corporate bond transactions can be attributed to the contraction in trading by non-residents whose transactions were predominantly of large size, to 4.6% in December 2014 from 5.6% in December 2013¹. Physical persons began to play a more important role in this market segment. These exchanges allow for inaccurate assessment of the role in this market segment, however, it is known that with a total reduction of the size of on-exchange corporate bond transactions to Rb 1.4 trillion in 2014 from Rb 1.9 trillion in 2013, or by 26.3%, the volume of physical persons' buy/sell transactions with such bonds remained basically unchanged, Rb 0.5 trillion annually, in 2013–2014. These facts suggest that the role of non-residents increased considerably in the volume of on-exchange corporate bond transactions in 2014.

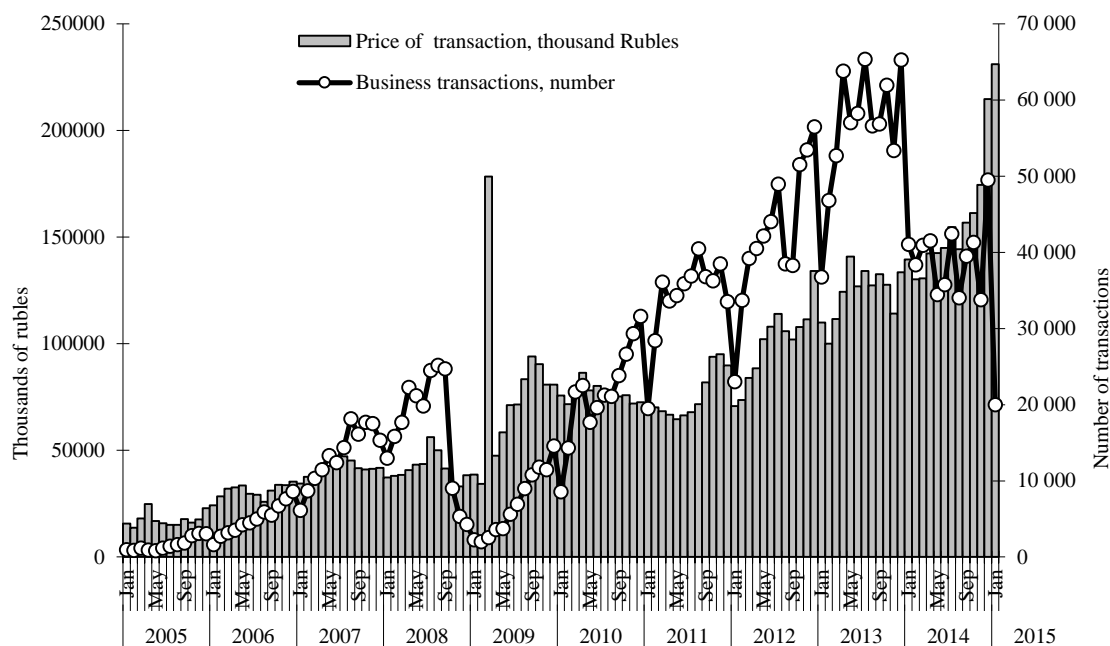


Source: author's calculations based on the data from the Moscow Exchange.

Fig. 35. On-exchange trading in corporate bonds in the Moscow Exchange

In 2014, the MOEX segment of corporate bond repo transactions saw an opposite trend compared with market transactions. The number of transactions reduced considerably to 49,500 in December 2014 from 65,200 in December 2013, while the average value of transactions increased to Rb 134.5m from Rb 94.4m, respectively, or by 42.5% (see Fig. 36). This suggests that the number of repo transactions reduced amid the decline in market offerings of corporate bonds, however, large state-run and private banks had advantages in this market segment.

¹ Author's calculations based on the data from the Moscow Exchange.



Source: author's calculations based on the data from the Moscow Exchange.

Fig. 36. Corporate bond repos in the Moscow Exchange

In post-crisis period, large state-run companies began to play the key role in the primary corporate bond market. In 2013, 24 issuers with most sizable corporate bond issues accounted for 59.4% of the total issuance of corporate bonds, and state-run companies accounted for 47.7% of the total issuance of corporate bonds among these issuers (see *Table 10*). In 2014, the dominance of government entities in the primary corporate bond market became even stronger: 24 issuers with most sizable bond issuances accounted for 76.7% the value of bond issuances, and among these issuers, state-run companies accounted for 59.7%.

According to various indicators of concentration of corporate bond issues, as shown in *Table 10*, two trends were observed in 2013–2014: higher concentration of major bond issuers including state-run companies' bond issues. For example, the share of 10 issuers with the largest corporate bond issues was 60.4% in 2014 compared with 40.5% in 2013, of which the share of state-run companies in total corporate bond issuance volumes increased from 27.9% in 2012 to 36.8% in 2013. This implies that corporate bond market has increasingly been strengthening the financial positions of state capitalism in competition with the private sector. It is easier for state-controlled companies to bargain with potential investors, most of which are state-run banks and other entities. Such transactions are closed through state-controlled organizers of issues and underwriters. The more state-run companies become over credited, the more aggressive they are in the domestic corporate bond market. A case study is OJSC Rosneft ruble-denominated bonds issued in December 2014 and January 2015 with direct participation of the Bank of Russia in the respective transactions.

Table 10

Concentration of ruble-denominated corporate bond issuers in 2009–2014

	Top-5 bond issuers		Top-10 bond issuers		Top-24 issuers		Total in the market
	Total	including government bonds	Total	including government bonds	Total	including government bonds	
2009							
billions of rubles	440	390	610	441	803	513	917
Share, %	48.1	42.5	66.8	48.1	87.8	55.9	100.0
2010							
billions of rubles	177	147	304	200	513	317	855
Share, %	20.6	17.2	35.4	23.4	59.9	37.1	100.0
2011							
billions of rubles	241	191	389	309	642	405	1089
Share, %	22.0	17.5	35.7	28.4	58.9	37.2	100.0
2012							
billions of rubles	265	265	429	334	690	443	1199
Share, %	22.1	22.1	35.7	27.9	57.8	36.9	100.0
2013							
billions of rubles	550	550	705	640	1035	830	1741
Share, %	31.6	31.6	40.5	36.8	59.4	47.7	100.0
2014							
billions of rubles	875	827	1051	934	1334	1038	1739
Share, %	50.3	47.6	60.4	53.7	76.7	59.7	100.0

Source: author's calculations based on the data from www.cBonds.ru, www.rusbonds.ru and the Moscow Exchange.

Year by year the corporate bond market has increasingly been servicing cash flows between government entities. State-run companies borrow from government entities. The secondary market is also maintained mostly by state-run banks in conjunction with the Bank of Russia. Furthermore, state-run investment banks have been mostly acting as underwriters and investment advisors in placing corporate bonds (see *Table 11*). In 2007, state-run banks acted as underwriters for 36.3% of corporate bond issues (in terms of value). In 2013, their share increased to 60.1%, whereas it dropped slightly to 53.1% in 2014. A similar situation was observed with investment and banking services in the regional bond market. In 2007, the share of public lead managers of regional bond issues was 14.2% in terms of value. It increased to 51.9% in 2013 and to 73.2% in 2014.

Table 11

The share of public and private financial institutions in the market of internal bond issue organizers in Russia

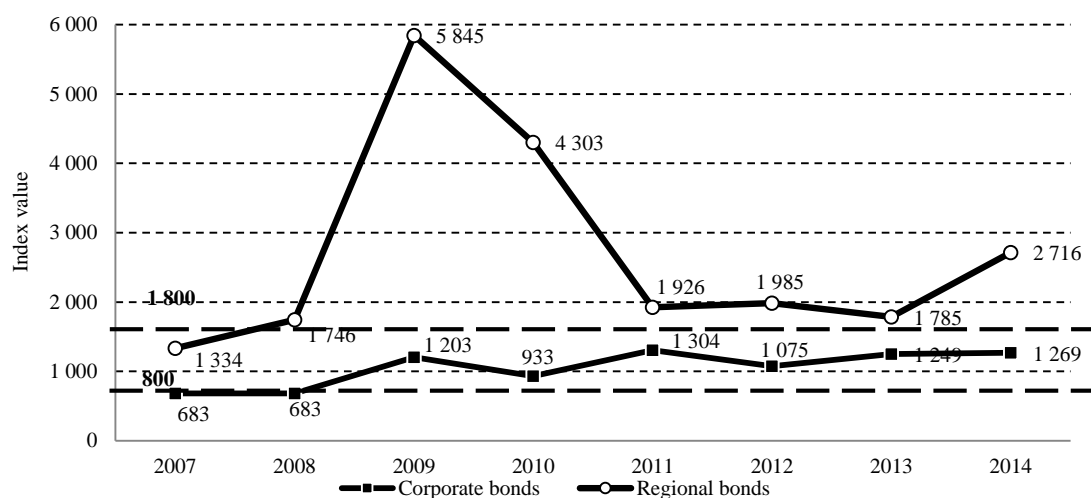
	Bond issue organizers:					
	corporate bonds			regional bonds		
	Public financial institutions	Private financial institutions	Total	Public financial institutions	Private financial institutions	Total
1	2	3	4	5	6	7
2007						
millions of rubles	169 668	298 302	467 970	7 551	45 481	53 032
Share, %	36.3	63.7	100	14.2	85.8	100
2008						
millions of rubles	219 892	249 900	469 792	42 227	29 716	71 943
Share, %	46.8	53.2	100	58.7	41.3	100
2009						
millions of rubles	620 044	373 978	994 022	133 325	22 511	155 836
Share, %	62.4	37.6	100	85.6	14.4	100

Cont'd

1	2	3	4	5	6	7
2010						
millions of rubles	393 743	461 292	855 035	86 613	28 288	114 901
Share, %	46	54	100	75.4	24.6	100
2011						
millions of rubles	620 698	374 146	994 844	7 767	46 177	53 944
Share, %	62.4	37.6	100	14.4	85.6	100
2012						
millions of rubles	734 697	502 831	1 237 528	61 925	57 637	119 562
Share, %	59.4	40.6	100	51.8	48.2	100
2013						
millions of rubles	1 033 849	686 894	1 720 743	79 980	74 259	154 239
Share, %	60.1	39.9	100	51.9	48.1	100
2014						
millions of rubles	621 007	548 729	1 169 736	81 283	29 705	110 988
Share, %	53.1	46.9	100	73.2	26.8	100

Source: based on the data obtained from the rankings of bond issue organizers www.cBonds.ru in 2007–2014

The Herfindahl-Hirschman Index (see Fig. 37) shows a inadequate level of competition in the markets of underwriting and advisory services in terms of placing corporate and regional bonds. Since 2009, the market of investment and banking services within the corporate bond market has turned from a highly concentrated into a moderately concentrated, when monthly HHI measures fall within a range of 800 to 1800. In 2014, HHI was 1269 in the segment of corporate bond services.



Source: based on the data obtained from the rankings for bond issue organizers published at www.cBonds.ru in 2007–2014.

Fig. 37. The Herfindahl-Hirschman Index: issuance services for ruble-denominated corporate and regional bonds in 2007–2014

Since 2011, exclusive of 2013, the market of regional bond services has been steadily concentrated with the HHI above 1800. In 2013, it fell into the category of moderately concentrated market, with the HHI measuring 1785, and HHI increased sharply to 2713 in 2014. The market of regional bond underwriting services again moved back to the high concentration area. The

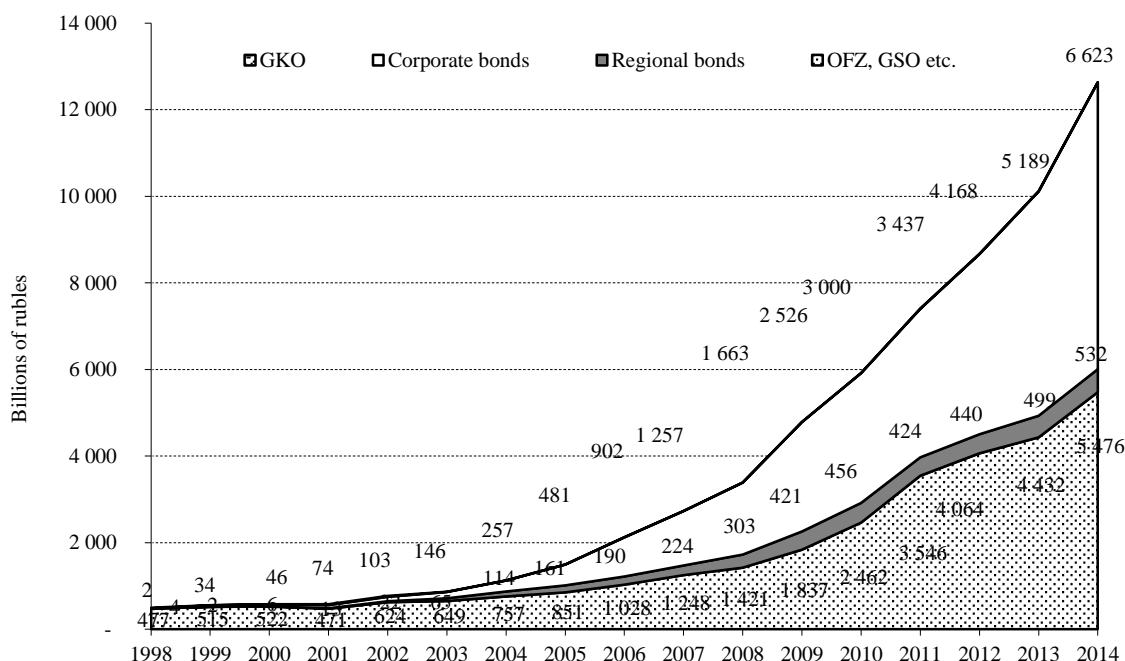
foregoing raises the question of the need to enhance the role of anti-monopoly regulation in the securities market.

3.5. Stock market contribution to economic growth

3.5.1. Corporate bonds and economic growth

The Bank of Russia is developing two different mechanism of refinancing of banks. Repo transactions help develop mostly the bond market; a bank can raise capital against weekly bonds it purchases at a rate below the interest rate on loans issued by the bank. Lending secured by non-marketable assets allows banks to obtain longer-term resources for an average of one month against the conventional pledge of previously issued loans. At the same time, in 2014, mechanisms of refinancing banks against investment loans, as well as infrastructural and concession bonds and mortgage loans were worked out. These processes represent efforts to find most efficient ways of refinancing of the banking system with a view to promoting investment supply and hence an economic growth.

The long-term experience in the corporate bond market allows their effect on investment and economic growth to be assessed more correctly. The capitalization of ruble-denominated bond market increased to Rb 12.5 trillion in 2014 from Rb 0.6 trillion in 2000, or by 20.8 times. The corporate bond market was growing faster than other ruble-denominated bonds. Their total capitalization increased to Rb 6.6 trillion in 2014 from Rb 46bn in 2000, or by 143.5 times.



Source: based on the data obtained from the Ministry of Finance and Cbonds.ru.

Fig. 38. Volumes of outstanding ruble-denominated bonds, billions of rubles

It is not obvious, however, that the corporate bond market has a positive effect on economic growth and hence on the repo mechanism. This, in particular, can be seen in Rosstat's official statistics of the role of capital raised by companies through corporate bond issuances as source

of investment. *Table 12* shows parameters of the ruble-denominated corporate bond market in 2000-2014, expressed in dollars.

In 2012, fixed investment, according to Rosstat's official statistics, accounted for as little as Rb 4.2bn of the total corporate bond issuance of Rb 1214.2bn, or 0.35% of the capital that companies raised through bond issuance. In 2013, fixed investment accounted for as little as Rb 1.9bn of the annual total corporate bond issuance of Rb 1705.2bn, or 0.11% of the capital that companies raised through bond issuance during that year. Within the first nine months of 2014, fixed investment accounted for Rb 5.3bn of the annual total bond issuance of Rb 1747.6bn, or 0.30% of the bonds placed. These statistics lead to the conclusion that the corporate bond market supported by the Bank of Russia through repo transactions has no noticeable effect on fixed investment and economic growth. Perhaps, corporate bonds which are supported through funding from the money market are *de facto* too short-term sources of financing of companies, therefore the latter prefer to use corporate bonds to finance their working capital and refinance old debts. The foregoing raises the question of seeking alternative ways of refinancing the banking system by the Bank of Russia so that banks become really interested in this mechanism for financing long-term projects of real sector companies, which have a positive effect on economic growth.

Table 12

**Parameters of the ruble-denominated corporate bond market
(billions of US\$)**

	Capitalization	Secondary market including repo	Bond placements	Bond placement contribution to the equity		
				billions of US\$	the same, as a percentage of capitalization	the same, as a percentage of bond placement volume
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	0.1*	0.1	0.2

* January–September 2014

Source: author's calculations based on the data from the Moscow Exchange, cBonds, the Bank of Russia and the Rosstat.

3.5.2. The share offer IPO effect on the economy

Compared to corporate bonds, the sale of equity shares through IPO and SPO is a more efficient instrument of obtaining working capital loans. The reason for this is that the capital raised through IPO is of longer-term. *Table 13* shows the parameters of Russian companies' equity market, which show that share offer IPOs were held more frequently in 2006 and 2007, when companies raised \$17.0bn and \$33.0bn, respectively. Companies spent on fixed assets 18.8% of the capital raised through IPOs/SPOs in 2006 and 10.9% of the capital raised in 2007.

In certain years, for example, in 2008, companies spent 110.5% of IPO-raised capital, and 117.6% in 2009. This is because a part of the fixed investment was raised by companies through closed subscription rather than IPO/SPO.

In 2013, \$3.1bn, or 34.4%, of \$9.0bn total public offerings of were spent on fixed capital financing. Within the first nine months of 2014, \$1.4bn¹, or 82.7%, of \$1.7bn total public offerings were spent on fixed capital financing, according to our estimates. A part of the capital raised in the stock market was spent on repurchasing the business from its former owners, re-finance debts and service acquisition & merger (A&M) transactions, including major shareholding acquisition. Yet, the size of IPO and real capital investment through equity share issuance is much smaller than that of A&M transactions. In the period between 2000 and 2014, the value of IPOs/SPOs of Russian companies totaled \$102.2bn, whilst that of A&M transactions was \$1005.0bn., or by 9.8 times.

Table 13

**Parameters of the stock market of Russian companies' equity shares
(billions of US\$)**

	Capitaliza- tion	Secondary market in- cluding for- eign ex- changes	IPO of eq- uity shares	IPO contribution to the equity			A&M trans- actions vol- ume
				billions of US\$	the same as a percentage of capitalization	the same as a percentage of IPO volume	
2000	41	47	0.5	0.2	0.5	40.0	5
2001	75	49	0.2	0.1	0.1	50.0	12
2002	106	87	1.3	0.2	0.2	15.4	18
2003	176	188	0.6	0.2	0.1	33.3	32
2004	230	541	3	0.1	0.0	3.3	27
2005	549	374	5.2	3.2	0.6	61.5	60
2006	1057	914	17	3.2	0.3	18.8	62
2007	1503	1687	33	3.6	0.2	10.9	126
2008	397	1983	1.9	2.1	0.5	110.5*	110
2009	861	1156	1.7	2.0	0.2	117.6*	56
2010	1379	1431	6.3	2.4	0.2	37.9	56
2011	1096	2222	11.3	2.6	0.2	23.1	79
2012	1079	1931	9.5	3.1	0.3	32.6	135
2013	1041	1801	9.0	3.1	0.3	34.4	163
2014	517	1739	1.7	1.4**	0.3	82.7	64

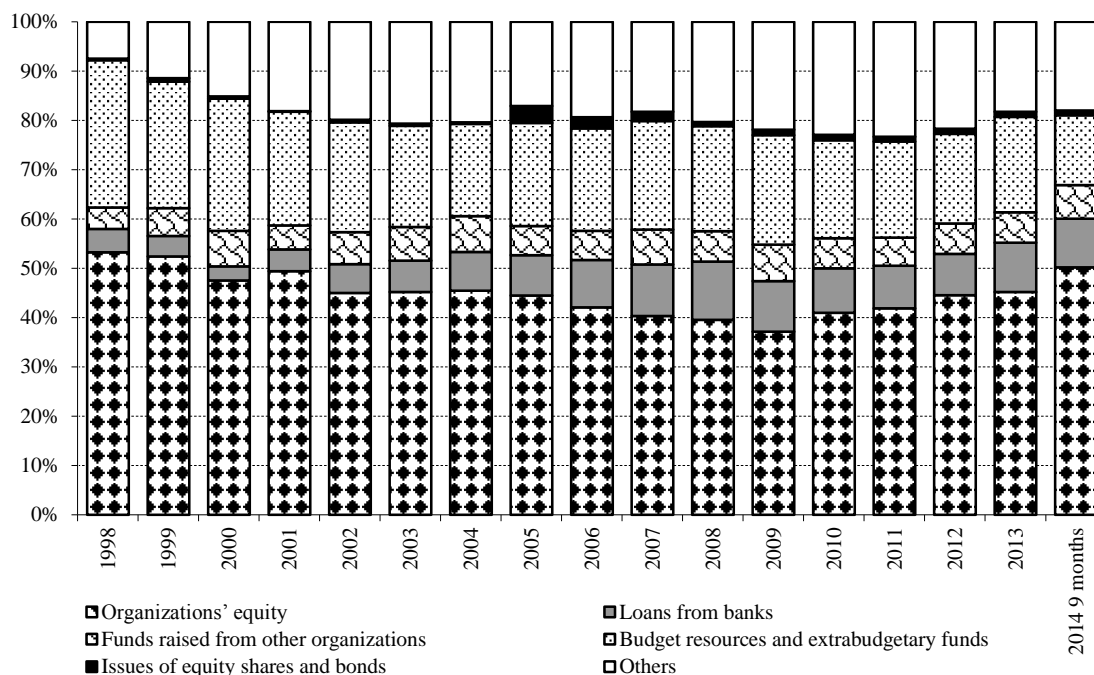
* the value is more than 100%, because a part of fixed capital investment might be through private subscription of equity shares;

** January-September 2014

Source: author's calculations based on the data from the Moscow Exchange, cBonds, the Bank of Russia and the Rosstat.

The capital raised by companies through public offering of equity shares and corporate bonds and subsequently spent on fixed assets accounts for a small part of the sources of fixed investment financing. This is supported by the data of the sources of fixed investment financing presented in Fig. 39.

¹ This Rosstat's figure is somewhat arguable, because transactions involving sales of equity shares to their former shareholders prevailed in all of the three largest IPO/SPO (\$1.7bn) of Russian companies in 2014, except Qiwi Plc SPO, of which \$80bn were raised by the company, which could theoretically be spent on fixed investment.



Source: the calculations are based on the data from the Rosstat.

Fig. 39. The structure of sources of fixed investment

In the period between 2000 and 2014, the share of capital raised through public sales of bonds and equity shares in the sources of fixed capital financing varied within a range of 0.1% in 2001 and 3.4% in 2005. It was 1.0% in 2013 and within the first nine months of 2014.

3.6. Investors in the Russian stock market

3.6.1. Domestic institutional investors

Sustainable and solvent institutional investors are needed to increase the personal savings rate and raise long-term resources, as in the case of state reserves. A relatively poor development level of institutional investors in Russia (see Table 14) is the key issue for the Russian money market. The initial stage of the pension reform resulted in slower growth in pension assets by virtue of allowing the insured persons to choose between a zero rate and 6% contributions to the funded component of retirement benefit, as well as a temporal suspension of pension asset formation in 2014–2015.

In 2014, the going-public process for non-government pension funds (NGPFs) managing mandatory pension assets was launched, and these funds joined the pension asset safety guarantee system, and comprehensive audits of their financial sustainability was performed. According to the data from the National Association of Non-Government Pension Funds (NAPF), as of 25 February 2015, 61 of 90 NGPFs specializing in compulsory pension insurance went public, they account for 93.7% of insured persons and 94.0% of pension assets. Twenty four of these NGPFs, accounting for 72.2% of insured persons and 71.1% of pension assets, joined the deposit guarantee insurance system. Even though the decision was made to temporarily suspend accruing pension assets within two years, in 2013, 5.8 million persons in 2013 and 2.3 million in 2014 applied for the migration to NGPFs from the Pension Fund of Russia. The accumulated by these persons' pension assets may not be transferred from NGPFs until NGPFs complete their accession to the pension asset safety guarantee system. If such transfers are made, then, as

estimated by the NAPF, in 2015 the amount of pension assets in NGPFs will exceed that in the Pension Fund of Russia. Our studies show that most countries, except Argentina and Hungary, have to date managed to overcome the negative attitude towards the prospects of pension assets and keep heading this way in successful development of their pension schemes. In 2015, Russia will have to decide the fate of the funded pension scheme and the role of non-government pension funds in this scheme.

Compared to other countries, including large emerging economies, all of the three types of institutional investors (pension and mutual funds, insurance companies) are poorly developed in Russia. Russia's banking system is ranked average on the value of commercial banks' assets as a percentage of GDP (see *Table 14*). Russia is ranked 64th of 67 countries covered by the statistics on mutual funds' assets; 53rd of 67 countries on the size of self-supporting pension funds; 47th of 50 countries on insurance companies' assets. In 2013, the value of assets of open-end and interval unit investment funds in Russia accounted for 0.2% of GDP; pension assets and reserves for 5.8% of GDP; insurance companies' reserves for about 1.2% of GDP, commercial banks' assets for 85.8% of GDP. Furthermore, Russia is ranked 100th of 168 countries for which the World Bank discloses data on the percentage of commercial banks' assets of GDP, i.e., Russia is a strong average performer among emerging markets.

Table 14

**Institutional investors and banks in Russia
(based on the average values in 2001–2013)**

	Number of countries in samples of the Investment Company Institute, OECD and World Banks on average in 2001–2012	Russia's place in samples on average in 2001–2012	As a percentage of GDP	
			The average over the past decade (2004–2013)	2013
Open-end investment funds' assets *	67	64	0.3	0.20
Autonomous pension funds' accumulations and reserves **	67	53	2.9	5.8
Insurance companies' reserves ***	50	47	0.9	1.2
Commercial banks' assets ****	168	100	67.2	85.8

* Russia – open-end and interval unit investment funds (UIFs);

** Russia – pension accumulations and reserves;

*** Russia – insurance reserves;

**** Net of development banks.

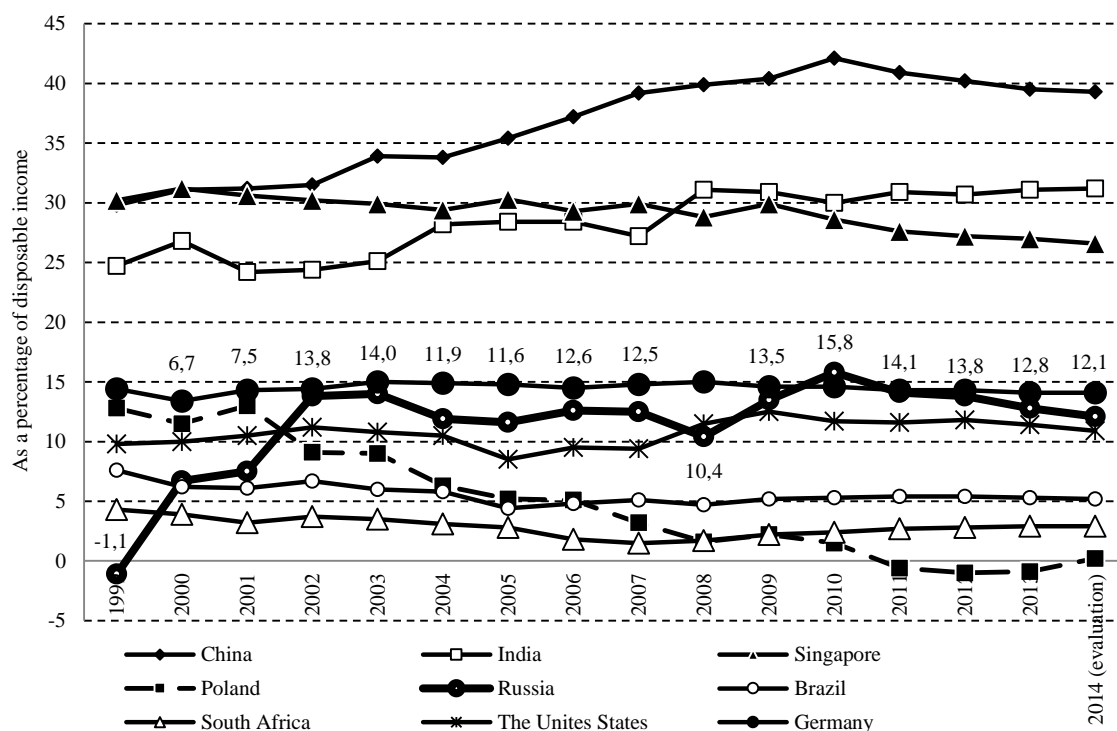
Source: author's calculations based on the data from Investment Company Institute, resources www.stat.org OECD, www.econ.worldbank.org World Bank and IFS IMF.

In order to keep investment at an active level, Russia should catch up with the backlog of development of institutional investors. This implies that reliability and strengthening of the banking system should be in the focus of attention in banking, while the development policy aimed at enhancing the efficiency of companies being trustworthy to individuals should be carried out regarding pension funds, insurance companies, open-end and interval unit investment funds. Therefore, competition should be encouraged in the market of financial services and investors should be protected, i.e., this is what is normally attributed to the regulatory rather than supervisory function of the state.

3.6.2. Domestic individual investors

In order to take economy on growth path, Russia should maintain high domestic savings rates. There is a potential for growth in saving through enhancing the household savings rate.

The official statistics show that Russian households save about 10–12% of their income (see Fig. 40). The ratio of household savings rate to disposable incomes is much higher in the countries leading in economic growth and modernization (China, India, Singapore, Hong Kong). Indeed, these countries differ from Russia in social and demographic situation, but it has to be admitted that any major modernization project is intended to rely upon domestic financial resources. This has become even more relevant in 2014 amid sanctions that have closed down Russian companies and banks from foreign capital markets.



* according to Rosstat's data, net of savings in deposits denominated in foreign currencies and savings in foreign exchange.

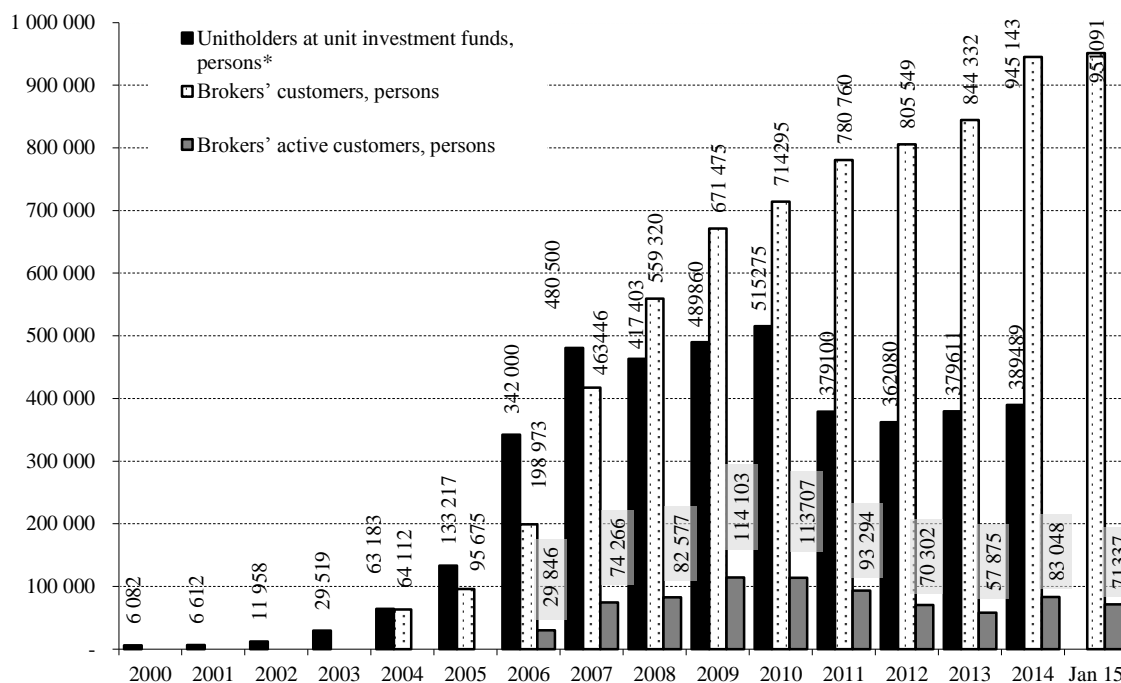
Source: the calculations are based on the data from Euromonitor International.

Fig. 40. Households saving rate, as a percentage of disposable income

Fig. 41 presents data on the number of individual investor accounts opened with brokers and the number of personal accounts in the register of unit holders of unit investment funds (UIFs). A total of about one million brokers' private customers were registered with the Exchange in 2014, of which only 83,000 were active customers, i.e., they closed at least a single transaction monthly through the Moscow Exchange. In 2014, the developed over the past few years downtrend in the absolute number of brokers' active customers and slower growth in the total number of brokers' customers registered with the Exchange was overcome. Annual growth in the number of registered customers was 112,200 persons in 2009, only 42,800 in 2010, 66,500 in 2011, 24,800 in 2012, 38,800 in 2013, and 100,800 in 2014. The number of brokers' active customers dropped from 114,100 persons in 2009 to 54,600 in January 2014. However, the number increased to 71,300 as of January 2015. The prevailing for the past few years downtrend in the number of brokers' active customers testified that the current model of customer acquisition in the Russian stock market had run its course. The model provided for the acquisition of customers seeking short-term profits, whereas in all developed countries, large brokers' key customers

are predominantly long-term private investors. The outflow of brokers' customers was largely determined by the Russian stock market's slow recovery from the crisis.

The inflow of new 100,000 brokers' customers in 2014, including more than 25,000 active ones might be triggered by a new inflow of speculative investment focusing on carry trade and playing with growth recovery of Russian equity shares.



* Expert Rating Agency's data for 2013 still remains to be published.

Source: author's calculations based on the data from the Moscow Exchange, the National League of Asset Managers (NLMC) and Expert RA.

Fig. 41. The number of market retail customers covered by asset managers and brokers

The adoption of revolutionary amendments to the applicable legislation, introducing (effective 1 January 2013) substantial personal income tax allowances in taxation of returns on securities held for a period of at least three years, as well as allowances (effective 1 January 2015) on individuals' contributions to the so-called individual investment accounts (IIA) became the most remarkable event in the realm of private savings in 2013¹.

Under the Federal Law of December 28, 2013, No. 420-FZ On Making Amendments to Article 27.5-3 of the Federal Law On the Securities Market and Parts 1 and 2 of the Tax Code of the Russian Federation, returns from investment in newly purchased securities will be exempted from taxation to the extent that a physical body holds such securities for a period of three years and beyond. At present, all returns which individuals generate from investment in securities – through unit investment funds (UIFs), trust management, or direct holding through broker's accounts – are subject to personal income tax at a 13% rate. The maximum amount to

¹ Judging by the status, these accounts resemble two investment arrangements which are popular in many countries, namely individual retirement accounts (IRAs) which are used extensively in the United States, Poland, the Republic of Korea, Canada, etc., as well as individual savings accounts (ISAs) which are widely used in the United Kingdom.

be deducted from the tax base is Rb 3m per each year of shareholding (unitholding). The personal income tax allowance is not applied to income as dividends on equity shares and coupon payments on bonds, except in cases where a person is holding securities indirectly through an open-end unit investment fund. For this reason it is unitholders at open-end unit investment funds specializing in long-term investment who will benefit most from this tax allowance.

Furthermore, a concept of individual investment accounts which private investors will be able to open with brokers and asset managers from 2015 was introduced into the Federal Law *On the Securities Market* and the Tax Code of the Russian Federation. Russia's nationals may have only one agreement to maintain a IIA. This account can be credited up to Rb 400,000 on an annual basis. The IIA holder may choose one of the two available options of investment deduction. The first option suggests that when a IIA is closed not earlier than after three years from the opening date, the investor is entitled to a tax exemption of 13% of total contributions made. The second option makes no provision for tax deduction from contributions, however, when the IIA is balanced, the entire amount paid to the PIA holder is exempted from personal income tax.

In our opinion, both tax allowances provide strong incentives for private investors investing in securities for a period of at least three years. According to the data from the Moscow Exchange, as of the end of February 2015, brokers opened 10,200 individual investor accounts (IIA) within less than two months, and, according to our estimates, about 1,500 accounts were opened with asset managers. The initial success of a new product despite high volatility in the money market was determined by a fortuitous combination of circumstances concerning its introduction in addition to the effectiveness of fiscal incentives. Early in 2015, the stock market of Russian issuers hit the bottom, after which the RTS Index began to show a steady growth. Another reason for the new product being highly appealing for investors is no regulation of the composition and structure of private investor portfolios formed on IIA basis. In particular, these accounts were allowed to be used for acquiring foreign securities, with IIAs as trust management accounts investors were entitled to invest in bank deposits under softer terms than those of banks' regular customers. Finally, active marketing by financial institutions and the Moscow Exchange, which are running short of new products and services for their customers, played an important role in promoting the new product early in 2015.

3.6.3. Foreign conservative investors

Major foreign institutional investors' behavior towards the Russian stock market still remains conservative. This conclusion is supported by the data on investment in Russian JSCs equity shares by California Public Employees' Retirement System (Calpers), U.S. largest public pension fund whose assets increased unexpectedly to \$956m in the 2014 fiscal year from \$528m in 2013 (see *Table 15*)¹.

Table 15

Calpers investment in depositary receipts and equity shares (equity securities) of Russian companies, millions of US\$.

	2009*	2010*	2011*	2012*	2013*	2014*
Gazprom	144.7	46	55.1	154.4	56.4	264.6
Lukoil	189.1	93.5	80.6	78.7	68.2	86.1
Mechel	9.1	1	1.8	9.8	0.6	2.9

¹ Calpers' voluminous investment reports provide no region-specific data on investment in equity shares. Therefore, while analyzing its investment in the equity shares of Russian issuers, analysts have to manually go through the list of all global investment in equity shares, which is published in the pdf format.

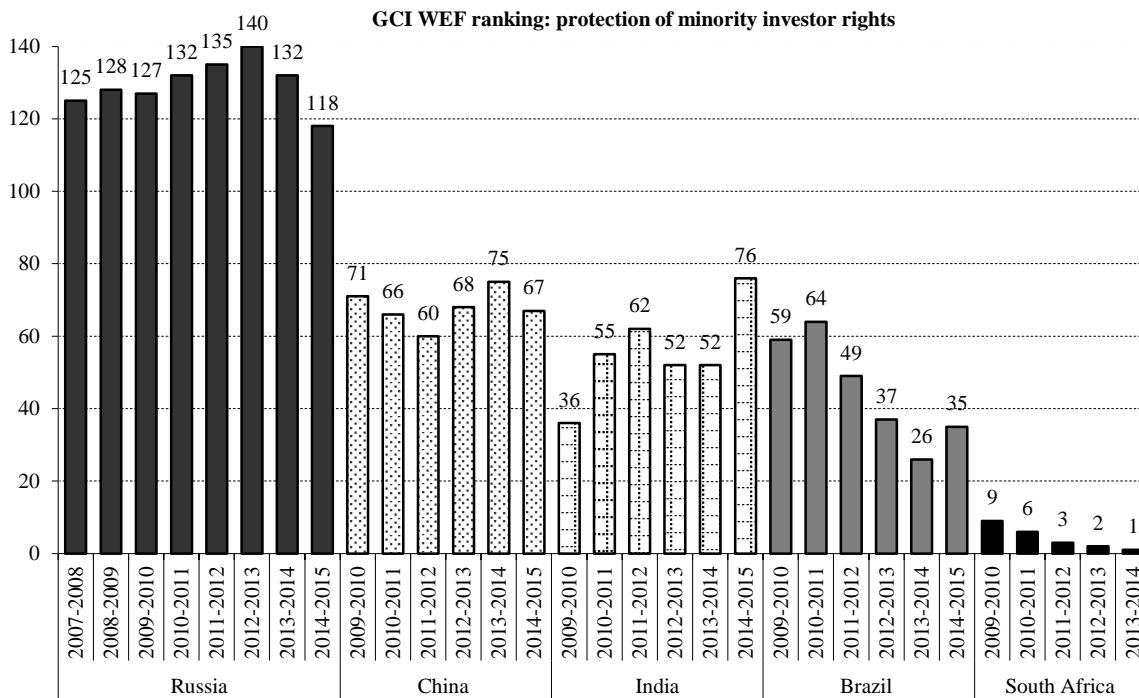
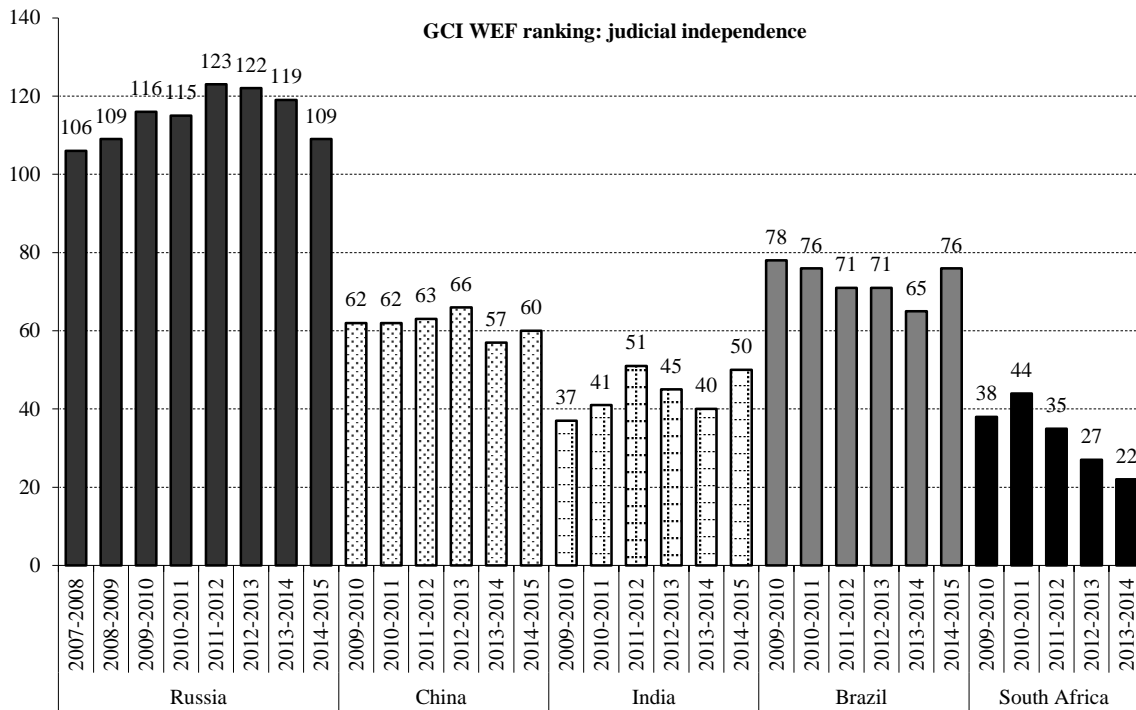
Norilsk Nickel	4.6	1.4	14.3	12.1	0.0	31.5
OAO Novatek		20.6	10.4	45.4	36.2	67.3
JSC Novorossiysk Commercial Sea Port	10.3	8.4	7.7	6.3	4.4	0.1
Rosneft	11.4	31.4	15.7	59.7	26.4	39.1
		5.5	2.3	5.8	0.0	5.6
Rostelecom		3.4	1	16.4	14.0	6.4
Sberbank of Russia	5.5	30.8	9.3	53.7	114.3	157.7
Severstal	7	4.7	7	9.4	6.5	4.4
Sistema JSFC	9.7	3.8	62	71.9	50.3	59.3
Surgutneftegaz	4.5	20.5	18.9	23.5	21.7	16.1
Wimm-Bill-Dann		20.2	2.2	0	0.0	0.0
Magnit		7.3	15.5	37.5	38.7	80.5
Magnitogorsk Iron and Steel Works		6.1	2	2.8	1.8	1.1
VTB	31.6	6.9	14.3	22.8	12.5	12.8
LSR Group		2.9	4.4	4.5	4.1	6.5
Other OJSCs			12.9	60.1	72.0	114.7
Russian companies' equity shares – total	427.4	314.4	337.4	674.8	528.0	956.6
Equity securities purchased in domestic and external markets – total	122 281.2	80 728.6	91 776.3	117 640.8	112 299.4	153 947.7
The share of Russian companies' equity shares in the Calpers portfolio	0.35	0.39	0.37	0.57	0.47	0.62
The share of Russian companies' equity shares in global capitalization	1.23	1.80	2.51	2.31	1.97	1.62

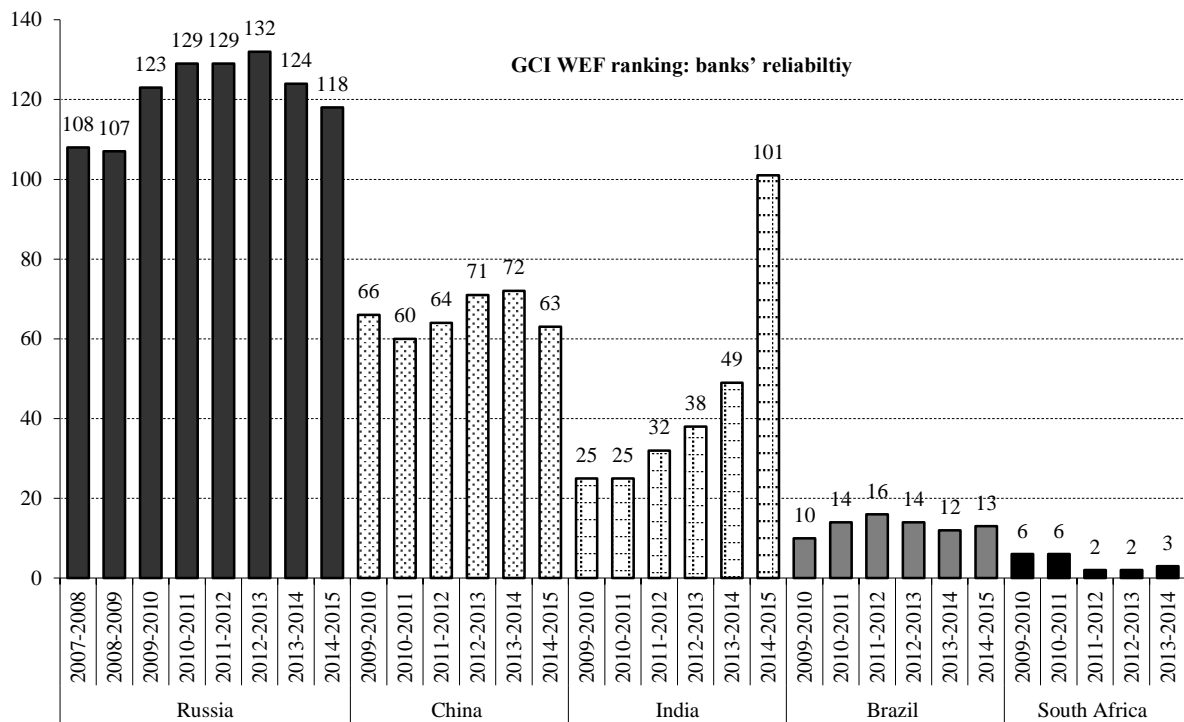
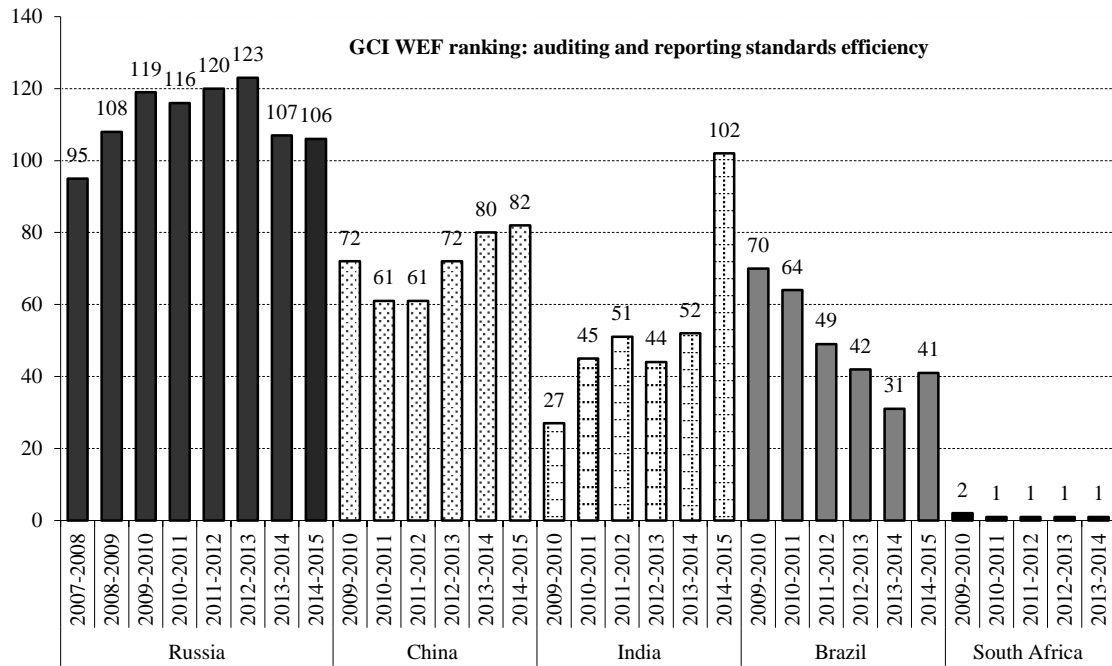
* fiscal year ending in June; detailed information on the Calpers portfolio composition and structure which is available on the Calpers official website is posted with about a year's lag, most probably with a view to preventing copying the portfolio strategy of the pension fund.

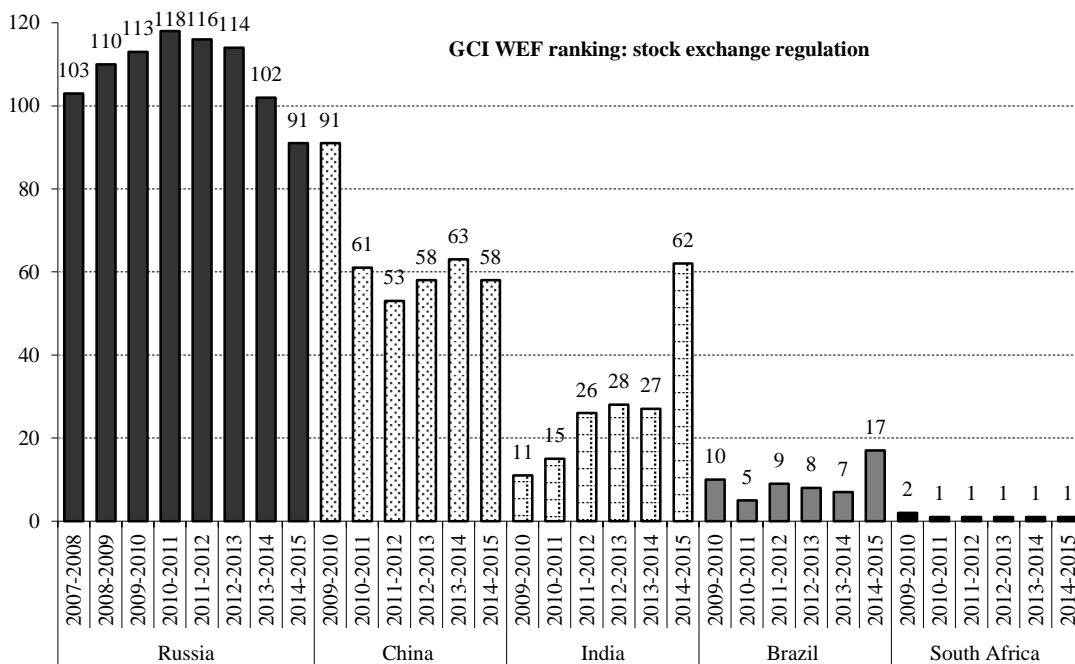
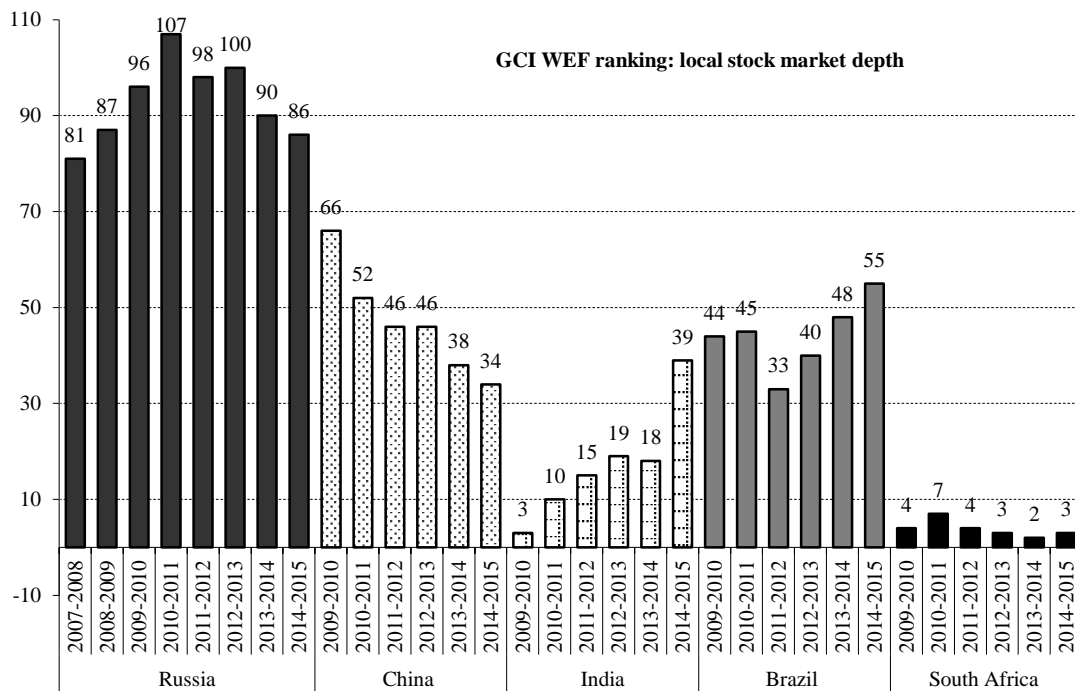
Source: based on the data obtained from Calpers investment reports for a few years.

Calpers investment in Russian companies' equity shares is subject to limits. The investment increased from \$427m, or 0.35% of the pension fund's portfolio of stocks, in 2008 to \$956m, 0.62% of the pension fund's portfolio, in 2014. To compare, Russian companies' equity shares accounted for 1.23% of global capitalization in 2008, and 1.62% in 2014. In spite of the fact that the weight of Calpers Russian equity securities portfolio is undervalued, the 2013 investment report dated 07.01.2014 shows a noticeable growth in investment in Russian equity shares. Perhaps, this could be explained by upgraded competitiveness indices for Russia, as noticed at the World Economic Forum (WEF), and the fact that the effect of international sanctions against Russia and Russia's major companies, as well as risks of the ruble's devaluation didn't manifest themselves until the second half of the year.

It was not until 2008 that Calpers began to invest in depositary receipts and equity shares of Russian JSCs. Within many years prior to 2008 Calpers employed a method of investment rankings for emerging markets to see whether such markets are eligible for investment. Russia has long been ranked as an emerging market, but such markets were not eligible for investment by the Californian pension fund. In 2007, Calpers decided not to follow strictly to this method, allowing portfolio managers in emerging markets to decide whether or not to invest in equity shares of some of other issuers. However, analysis of the previous method allowed us to highlight the key factors which for many years prevented Calpers from investing in Russia. These factors and their assessment using the method of global competitiveness ranking of the World Economic Forum are shown in *Fig. 43*.







Source: World Economic Forum's Global Competitiveness Ranking for several years.

Fig. 42. BRICS countries in the World Economic Forum's Global Competitiveness Ranking on a series of criteria eligible for making decisions by conservative portfolio investors

Russia has been lagging behind the markets of other BRICS's countries in addressing the most challenging issues such as judiciary independence, protection of minority investors, auditing and reporting standards, stock market depth, effectiveness of stock exchange regulation, and reliability of banks. However, according to the ranking for 2014–2015 published in September 2014, Russia has advanced noticeably in catching up with other BRICS, improving its rankings on all of the six criteria. For example, Russia moved up to 109th from 119th on judiciary independence in the ranking 2014–2015. Within a year Russia improved its ranking on the following criteria: to 106th from 107th on the application of international auditing and reporting standards; to 118th from 132rd on protection of minority investors; to 86th from 90th on the availability of financing in the local stock market; to 118th from 124th on reliability of banks; to 91st from 102nd on the effectiveness of stock exchange regulation. Quite unexpectedly the 2014–2015 rankings on the foregoing criteria were downgraded considerably for Brazil and India, while the rankings for the latter were lowered most.

We also analyzed the investment in Russian securities by the Norwegian Government Pension Fund Global, or NGPF-G, a largest foreign investor. Unlike U.S. Calpers, NGPF-G falls under the category of sovereign pension funds which have no commitments to specific participants of the pension system. The NGPF-G is known as a largest portfolio investor in Russian securities.

It is shown in *Table 16* than NGPF-G's investment in the equity shares of Russian companies (\$2.3bn) as of 1.10.2014 is much bigger than that of Calpers. However, the 0.5% share of Russian companies' equity shares in the total value of NGPF-G portfolio is much smaller than their share of capitalization of all companies worldwide. Additionally, beginning with 2010, the value of NGPF-G investment in Russian companies' equity shares dropped markedly to \$2.3bn in October 2014 from \$5.5bn. By contrast, NGPF-G investment in Russian bonds, most of which are OFZs, increased slightly to \$4.0bn in 2013 and \$3.1bn in October 2014 from \$1.8bn in 2010. Perhaps, this, among other reasons, was associated with the building of the inter-custodial relations between Russian NDRs with largest European clearing and settlement systems.

Table 16

Investment in Russian securities by the Norwegian Government Pension Fund Global (NGPFG), a major foreign investor

	2009	2010	2011	2012	2013	2014 (9 months)
Russian companies' equity shares						
billions of US\$	2.5	5.2	2.9	4.6	3.6	2.3
as a percentage of the NGPFG stocks portfolio value	0.9	1.6	1.3	1.1	0.7	0.5
Russian issuers' bonds						
billions of US\$	0.2	1.8	0.2	2.6	4.0	3.1
as a percentage of the NGPFG bonds portfolio value	0.1	0.9	0.1	1.0	1.3	1.1

Source: composed by the author on the basis of the NGPF-G reports published on <http://www.nbim.no/en/transparency/>

3.7. Risks in the money market

3.7.1. Financial risks in 2014

Some of the risks we analyzed in our previous review materialized in Russia at 2014 year-end. The collapsed crude oil prices triggered the devaluation of the ruble and a new downtrend in stock indices. The situation was worsened by the record foreign capital flight. International sanctions against Russia limited the possibilities of foreign debt refinancing first of all for banks

and non-financial companies. This forced corporate borrowers to redeem their foreign debts with foreign exchange revenue and other domestic resources, thus creating an extra burden on the FX market and the ruble exchange rate. The state had to spend the national gold and foreign exchange reserves in order to stabilize the ruble and help companies repay their foreign debts.

The change in the specified terms of priorities of the Bank of Russia monetary policy and the decided transition to a policy of inflation targeting and exchange rate liberalization caused numerous discussions in the society. In our opinion, the transition was quite reasonable both strategically and tactically under the adverse situation in money markets. In the long run, it will help design serious mechanisms to deal with inflation and inflation expectations, achieve macroeconomic sustainability required for investment inflow. In terms of anti-crisis regulation, this policy facilitated the saving of gold and foreign exchange reserves and the setting of a ruble's market exchange rate that meets the new economic reality.

In conducting this policy, the Bank of Russia had to be somewhat inconsistent, because the monetary authority delayed till the last moment letting the ruble devalue, which was unavoidable. Despite the announced exchange rate liberalization, the Bank of Russia had to occasionally intervene into the foreign exchange market in 2014, thereby offsetting the withdrawn liquidity from the banking system by increasing refinancing through repo transactions and lending against non-marketable assets. Those measures prevented the ruble from devaluing, however, banks could take advantage of increased refinancing for currency speculations weakening the national currency. However, the foregoing was not the key driver of the ruble's depreciation.

The banking system obtained extra Rb 2.4 trillion through refinancing in 2014, which along with other sources helped make up for the absorption of ruble liquidity caused by Bank of Russia's foreign exchange interventions worth Rb 3.4 trillion and the growth in cash in circulation, Rb 0.3 trillion. At the same time, amid the ruble's depreciation, which was caused first by such factors as falling crude oil prices and limited access for Russian companies and banks to external capital markets, certain conflicts emerged in the policy of the central bank which had to conduct inflation targeting policies while bolstering the ruble exchange rate. Aiming at the two targets at a time, the Bank of Russia had to undertake foreign exchange interventions entailing the absorption of ruble liquidity in banks. By compensating for liquidity through refinancing at a rate less than the return rate on operations in the foreign exchange market, the Bank of Russia interfered to a certain extent with its own efforts in dealing with the ruble's depreciation through interventions in the foreign exchange market.

In 2015, the Bank of Russia finally abandoned its interventions in the foreign exchange market, allowing the volumes of ruble refinancing of the banking system to be reduced to Rb 1.5–2.0 trillion. This policy coupled with the measures of maintaining the CBR key rate at 15% and the recent ruble devaluation allowed the ruble exchange rate to be stabilized at a new level of Rb 60–62 per US\$. As inflation is lowered by the “subdued” effect of the ruble's devaluation on inflation growth, the Bank of Russia will be able to lower the CBR key rate, which is required for the recovery of growth in lending to businesses and households.

In 2015, the money market's key risks will be related to the following factors: a capital outflow if leading rating agencies downgrade below the market level the sovereign and corporate ratings for Russian companies; stock market stagnation due to slowly recovering crude oil prices and foreign investment outflow; a moderate ruble's depreciation in response to slowly recovering crude oil prices and repayment of foreign debts amid the ban on debt refinancing in foreign markets.

3.7.2. Risks of domestic money market's heavy reliance on foreign investors' behavior

The MOEX stock market differs from global exchanges in its dependence on foreign portfolio investors. According to Sberbank CIB's analytic estimates, about 70% of Russian free-float equity shares are currently being held by non-residents. Furthermore, 14 largest investment funds accounted for 28% of all investment of foreign portfolio investors¹. The list of these funds, according to the data from Sberbank CIB, includes the Norwegian Government Pension Fund Global, Vanguard Emerging Markets Stock Index Fund, Oppenheimer Developing Markets Fund, ISHARES MSCI Emerging Markets ETF Group BlackRock, Lazard Emerging Market Equity Portfolio. The recently considerably simplified procedures for the acquisition and custody of Russian securities in the domestic market for foreign investors made, on the one hand, the domestic market more attractive to foreign investors and, on the other hand, may increase volatility in the domestic market by boosted foreign capital outflow in case of shocks.

This is especially relevant when the sovereign rating for Russia is facing the risk of being lowered below the investment-grade level by the three major international rating agencies. On 26 January 2015, S&P lowered the sovereign rating for the Russian Federation below the investment-grade level, BB+/negative. On 20 February 2015, Moody's Investors Service downgraded the sovereign rating for Russia to Ba1/Not Prime from Baa3/Prime-3, i.e., below the investment-grade level, with a negative outlook as well. Only Fitch, the sole rating agency, keeps the rating for Russia at the investment-grade level, with a negative outlook though. This implies that the three agencies are most likely to shortly lower the rating for Russia below the investment-grade level.

This raises the question of theoretical probability of massive outflow of substantial portfolio investment from Russia. According to the data from the Bank of Russia as of 1 February 2015, the value of OFZs held by non-residents was Rb 891bn, or \$12.9bn. The value of Russia's outstanding Eurobonds as of 01.31.2015 was \$47.8bn, as estimated by Cbonds. The value of Russian companies' equity shares held by non-residents is, according to our estimates, \$75–80bn² of total capitalization of Russian joint-stock companies at 2014 year-end, \$520bn³, including free float \$130bn⁴. The value of Russian companies' outstanding Eurobonds as of 01.31.2015 was \$163.8bn, as estimated by Cbonds. The value of Russian outstanding ruble-denominated corporate bonds as of 01.31.2015 was Rb 7077.6bn, as estimated by Cbonds. Furthermore, the best-time share of market-grade issuers in this segment was 33% or less. The Bank of Russia Money Market Review shows that the share of non-residents in this market segment in mid 2014 was 4–5% or less, or Rb 200–250bn, or \$3.6bn, and saw a downtrend.

Thus, foreign portfolio investment in Russian securities may total some \$300bn. A short-term outflow of even a part of the investment may trigger a collapse regarding the price of financial instruments and solvency of many money market participants. In our opinion, such a scenario can hardly be seen in the Russian money market even in the mid run.

Even most conservative investors tend to sell or purchase given securities of sovereign issuers on the basis of intelligent investing rules set by the authorized body of their investment fund(s).

¹ Gaidayev V. A free-float foreign control. *Kommersant*, 17 January 2014

² Some 60% of free-float, as estimated by Sberbank CIB (*Kommersant*, 01.17.2014).

³ According to the data from S&P.

⁴ 25% of capitalization, as estimated by Sberbank CIB.

Explaining its investment strategy, the Norwegian Government Pension Fund Global (NGPF-G) notes that it tends to buy investment-grade bonds¹. However, while analyzing the current portfolio structure, the NGPF-G is guided not only by issuer's investment grade, but also the in-house model of risk assessment of such investment. It is shown in *Table 17* that in various years the share of non-investment-grade bonds accounted for 0.6% to 2.5% of the value of NGPF-G bond portfolio. In 2012, investment in Russian bonds (mostly in OFZs) reached 1.0% of the NGPF-G bond portfolio value, 1.3% in 2013, and 1.1% within the first nine months of 2014, totaling \$2.6bn, \$4.0bn, and \$3.1bn, respectively. Given that investment in Russian securities is beyond the current levels for non-investment-grade securities, one can suggest that NGPF-G is most likely to moderately, not abruptly, sell Russian bonds.

Table 17

The share of non-investment-grade bonds in the bond portfolio of the Norwegian Government Pension Fund Global in 2009–2014, %

	2009	2012	2013	9 months in 2014
Government bonds, including public agencies	0.2	0.2	0.3	0.3
Corporate bonds	0.7	0.2	0.3	0.3
Securitized bodns	1.5	0.3	0.1	0.0
Total – bonds	2.5	0.7	0.6	0.6

<http://www.nbim.no/en/transparency/>

The mutual funds' (PIMCO, BlackRock, Market Vector, Vanguard Group, etc.) issue prospectuses contain no description of the risks of selling Russian assets if Russia's ratings go below the investment-level grade. EMPF's analysis of cash flows in foreign investment funds investing in Russia shows that investment outflows from such funds have been slowed down. Furthermore, an inflow of investment of their unitholders was recorded in September and October 2014, \$275m and \$437m, respectively. Based on the years long practice, one can infer that foreign portfolio investors will develop their ultimate investment strategy for the Russian stock market in April–May 2015, and with a favorable scenario of slowly rebounding crude oil prices and maintained macroeconomic stability in Russia, a steady inflow of the portfolio investors covered by the EPFR analysis may well recover in the Russian stock market .

Hence, in the short-term horizon of two years, one may suggest that a sovereign rating downgrade for Russia and then for major Russian companies by all three international rating agencies would slightly boost the outflow of foreign portfolio investment in the segments in question, but it wouldn't result in a collapse in the market and massive sales of Russian assets by large foreign institutional investors. Many foreign investors would refrain from selling in the hope that Russia's current economic problems will be solved in the short run (raw material price will grow, the sanctions regime will be softer).

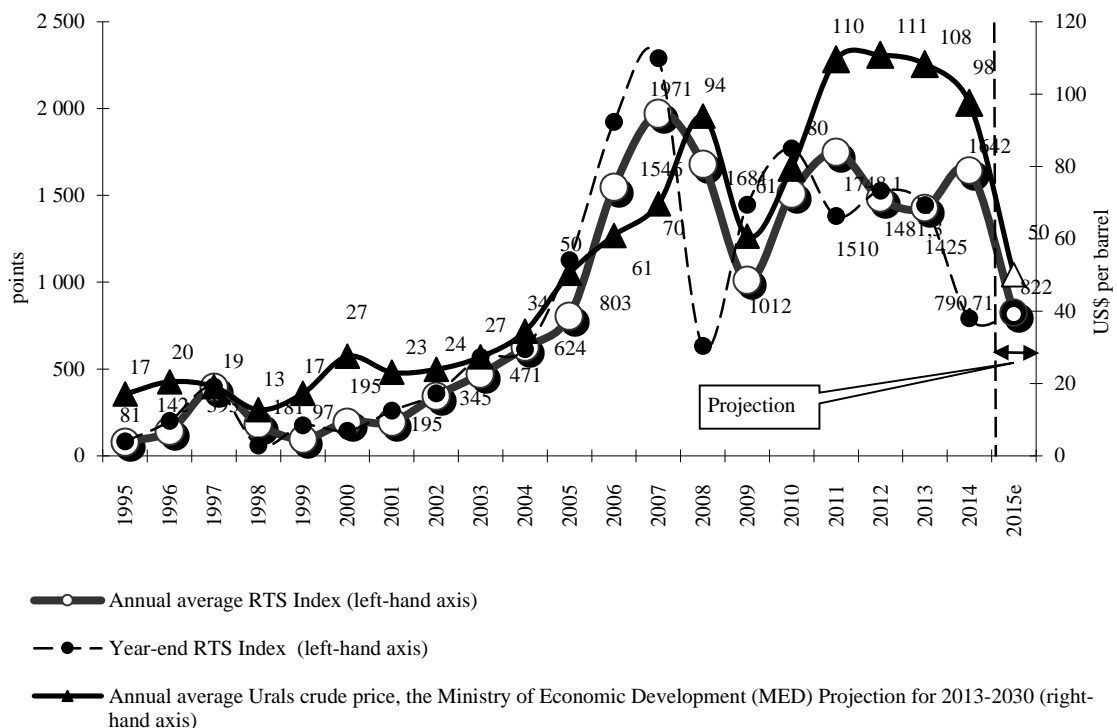
However, in the longer run (2–3 years), with the ratings being below the investment-grade level, the financial system and businesses would see their losses grow. The government and companies would be closed down from new foreign capital, even with a relatively “soft scenario” under which ratings would stop falling after crossing the investment-grade level, while a major part of foreign institutional investors would be patient with Russian assets. It would be difficult to maintain investment activity, the national business would be less competitive versus its global rivals. A long-term stagnation of financial assets' price will pose a threat for the sustainability of the banking system.

¹ A bond is regarded as investment-grade bond as long as it is ranked as such by at least one of the acknowledged international rating agencies.

3.7.3. Equity stock value and dynamics of crude oil prices

As shown in section 3.3.1, Russian stock market depends on crude oil prices which show the state of global economy, the sustainability of financial system and the level of cash liquidity therein. The recent projections of Russia's Ministry of Economic Development are similar to those of international financial institutions in that crude oil prices are not expected to increase in the mid run because of the development of new oil and gas production technologies allowing many countries to migrate to oil and gas self-support. Furthermore, speaking of the public space, the Ministry of Economic Development has shortened the planning horizon to one year, and the Projection for 2015 draws on a crude oil price of \$50 per barrel.

If the equation of relationship between crude oil price and the RTS Index (see Fig. 11) is applied to the Ministry of Economic Development's crude forecast for 2015, then the average annual RTS Index would drop to 822 in 2015 from 1642 in 2014; by contrast, the RTS Index would slightly increase to 816.0 points from 790.7 in 2014, or by 3.2%, as of 2015 year-end (see Fig. 43).



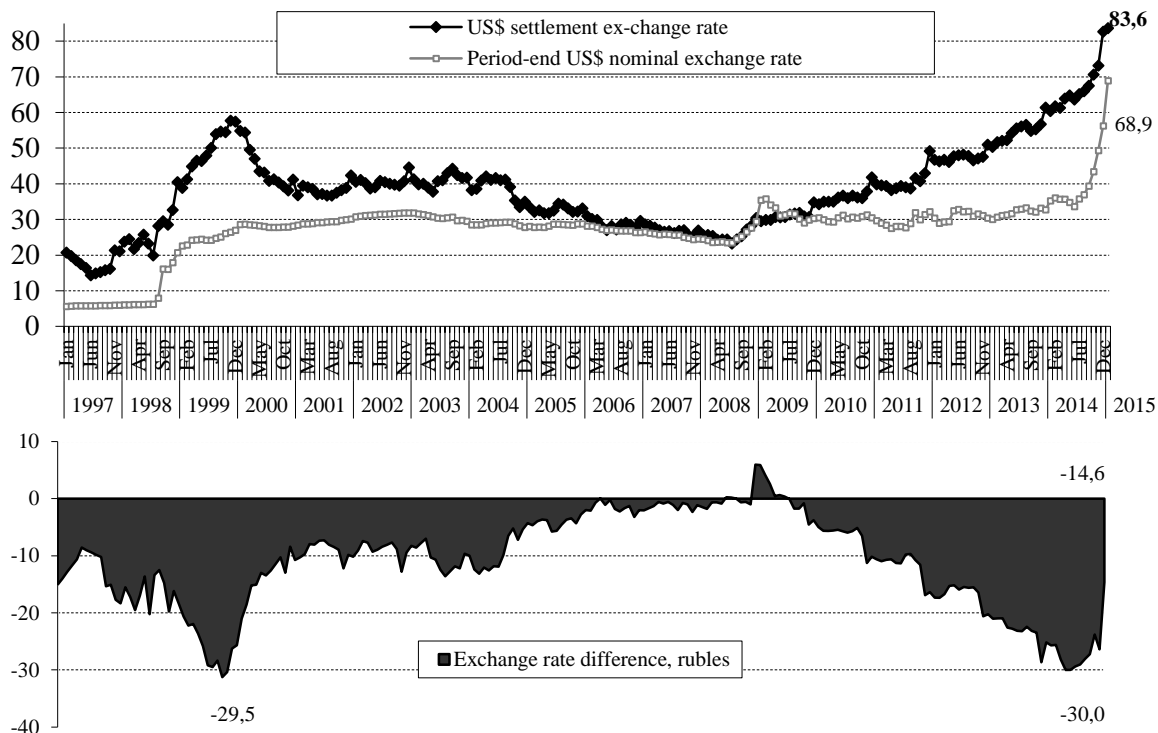
Source: the author's calculations based on the data from the Ministry of Economic Development (MED) and the Moscow Exchange.

Fig. 43. An RTS Index projection in 2015 based on the MED crude price forecast

The presented method for forecasting the stock index average annual growth falls short of the ideal, like any other methods for forecasting stock market indices. The forecast based on the previously seen ratio of crude oil prices and the RTS Index is inaccurate because the foreign investment outflow from Russia has now a stronger than ever downturn impact on the Index.

3.7.4. Risks of ruble depreciation in the mid run

The experience of recent crises in Russia shows the need to maintain a certain ratio of the ruble monetary aggregate (M2) and the gold and foreign exchange reserves (see Fig. 44).



Source: the calculations are based on the data provided by the Bank of Russia and the Ministry of Finance.

Fig. 44. The relationship between the US\$ nominal exchange rate in terms of rubles and the settlement exchange rate in January 1997 – January 2015

The diagrams show the ratio of the official US dollar exchange rate expressed in rubles at month end and the US dollar's settlement exchange rate measured by dividing the M2 value by the value of gold and foreign exchange reserves¹. The outstripping growth of the settlement exchange rate, reflecting how the ruble monetary aggregate is backed by the gold and foreign exchange reserves back, over the official exchange rate is normally indicative of a softer monetary policy and mounting risks of the ruble's devaluation. During the crisis of 1998–1999, the gap between the settlement and official exchange rates was caused by the devaluation of the latter. In the period between 1999 till mid 2008, the difference between the exchange rates narrowed because of the replenished gold and foreign exchange reserves. After the crisis 2008, the gold and foreign exchange reserves stopped growing, the monetary authority began to stimulate economic growth by increasing the money supply. The gap between the settlement and official exchange rates widened again. It is interesting that at any point when the gap reached Rb 30 (in both cases, the settlement exchange rate was double the official exchange rate), the

¹ Although this indicator is not universally meaningful for various countries, especially those with diversified economy, the ruble exchange rate's heavy reliance on export revenue makes the indicator's analytical value significant for the Russian financial system.

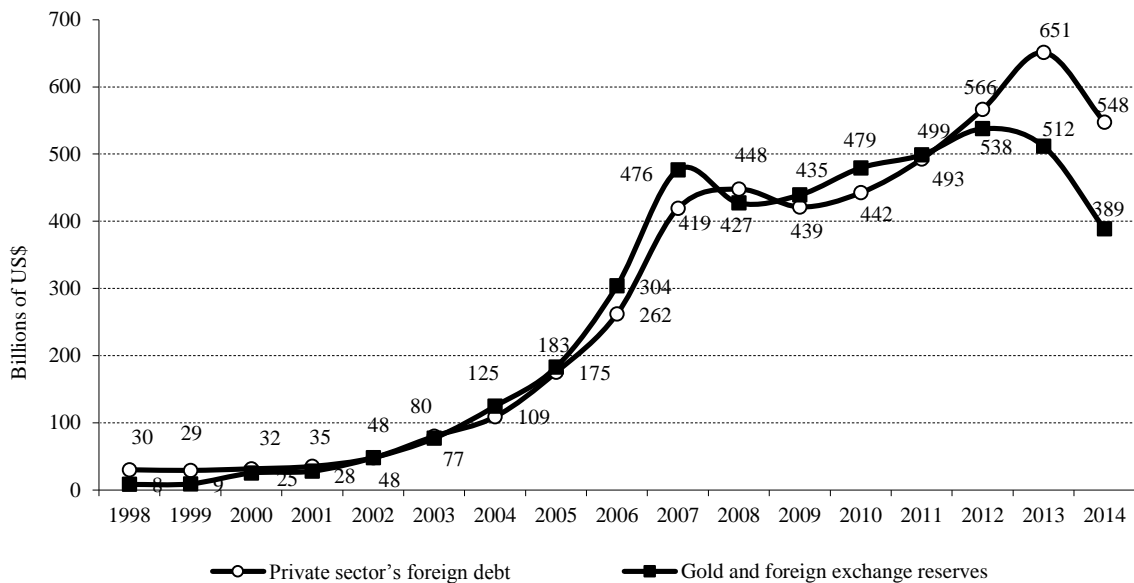
monetary authority began to take unusual measures aimed at narrowing the gap between these exchange rates. Since 1999, the government has begun to actively accumulate the gold and foreign exchange reserves, and the government let the ruble depreciate by 67.3% after the exchange rate liberalization in mid 2014.

In our opinion, in the mid run, late in January 2015, the ruble hit the bottom. In January, the gap between the settlement exchange rate and the actual exchange rate narrowed to Rb 14,6 from Rb 30,0, i.e. in 2 times. This suggests that without external shocks such as, for example, sweeping outflow of foreign portfolio investment, collapsing crude oil prices, to \$30–40 per barrel or the migration to a supersoft monetary policy, the ruble may be maintained at Rb 60 per US dollar.

3.7.5. Risks of banks and non-financial companies servicing their foreign debt

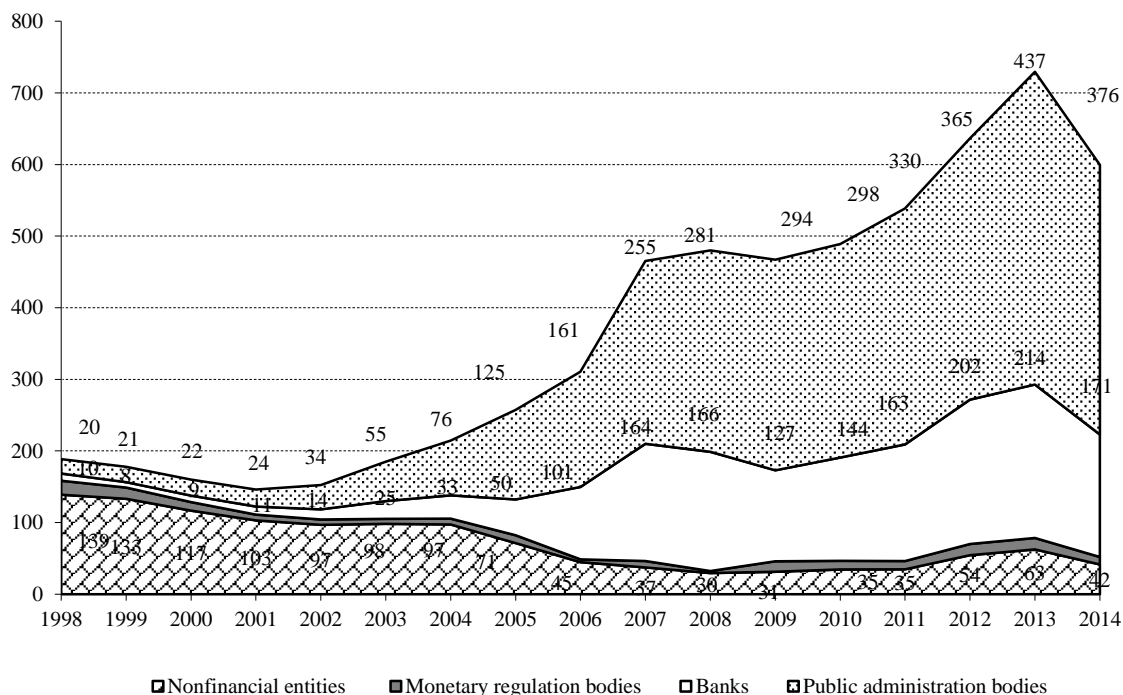
The sanctions didn't allow Russian companies and banks to refinance their external liabilities in the global markets, and they had to purchase more foreign exchange in the internal market to be able to repay their debt. In 2011–2013, the annual average growth in the private sector's external liabilities amounted to \$69,6bn. The sanctions made the amount of the foregoing liabilities reduce from \$651bn in 2013 to \$614bn as of 10.01.2014, or by \$36,7bn (see *Fig. 45*). In other words, the sanctions are assumed to not allow Russian companies and banks to borrow about \$110bn in the global market in 2014. At the same time, in 2014, the foreign-currency and gold reserves shrank to \$389bn from \$512bn, or by \$123bn. This amount was spent to support the ruble's exchange rate in the foreign exchange market and replenish indirectly the foreign exchange reserves of Russian organizations which are required for the repayment of their foreign debt. To compare, in the period of guided devaluation of the ruble, between August 2008 and February 2009, the foreign-currency and gold reserves shrank by \$212bn, reaching a minimum of \$384bn.

It is banks and non-financial companies that saw most of the decline in foreign debt in 2014. Banks' debts to non-residents decreased to \$171bn in 2014 from \$214bn in 2013, or by 20.1%. Non-financial companies' foreign debt decreased to \$376bn from \$437bn, or by 14.0% during the same period of time. The difficulties encountered by Russia in 2014 while repaying businesses' foreign debts amid international sanctions make it necessary to have a strict regulation of foreign debt burden on Russian companies. In 2014, Russian companies could hardly manage to service their debts denominated in foreign currencies without taking swift measures aimed at supporting such companies through foreign exchange interventions, Bank of Russia's foreign exchange loans to banks in the form of FX swaps and FX repos, measures of financing support to businesses by using the gold and foreign exchange reserves.



Source: author's calculations based on the data on the balance of payments for a few years.

Fig. 45. Growth in private sector's debt and state cash surplus



Source: based on the data obtained from the balance of payments for a few years.

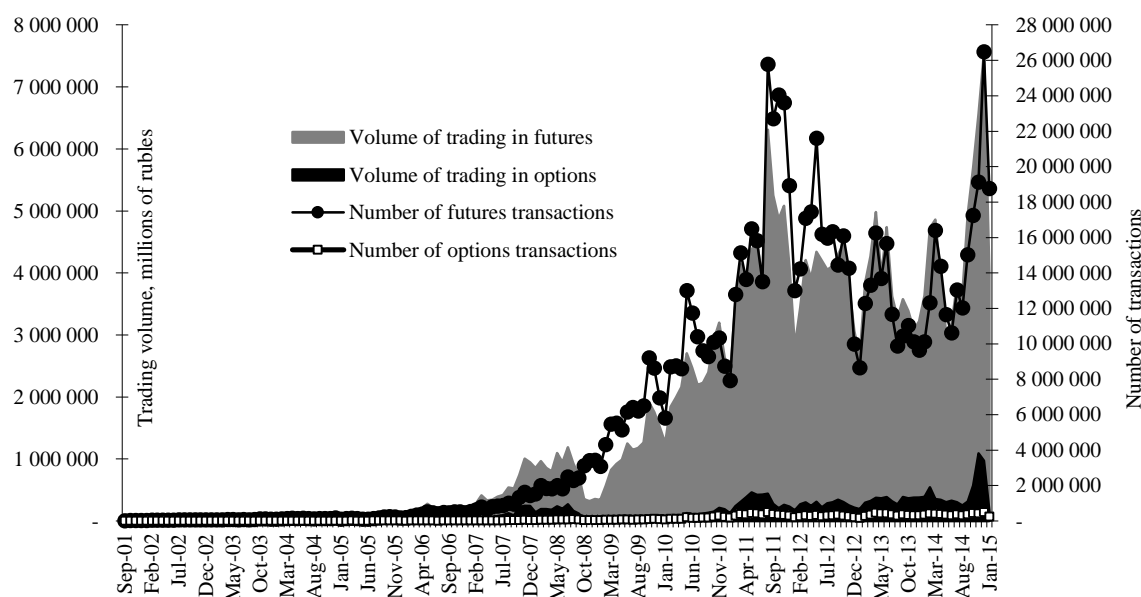
Fig. 46. Russian Federation's foreign debt in 1998–2014, billions of US\$

3.7.6. Transaction risks in the stock market and derivatives market

Outstripping growth in trading volumes vs. assets of market participants and their customers has been the stock market's specific feature over the recent years. High-frequency trading has been gaining ground. The data on customers' transactions which is published from time to time by mass media allows one to assume that major brokers' private customers' portfolios are renewed completely within 2 to 3 days on average¹.

Not only does intensive trading activity often than not interferes with investment results of most private investors, but it also creates higher transaction risks for trading systems. Every year the stock exchange has increasingly been engaged in a battle for processing ever growing flow of applications, being challenged by about 600 participants having all the resources required for intensifying the transaction activity. Furthermore, there is no knowing whether or not such a competition has an impact on growth in issuers' capitalization, new fundraising, better investment performance. Therefore, infrastructural organizations are expected to face more operational problems in the years to come, which might bring up a question of taking further measures aimed at regulating high-frequency trading.

The same concerns raise about the FORTS derivatives market. The number of transactions and trading volumes have been growing fast (see Fig. 47), customers' assets have been increasing at slower rates, information on the number of participants in the market and their trading activity is nontransparent.



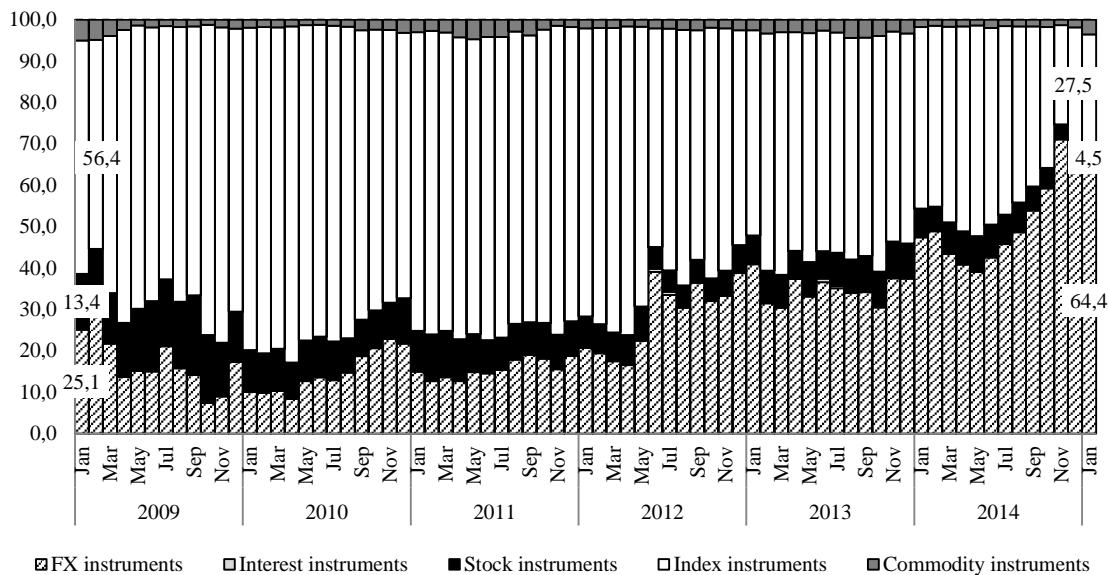
Source: author's calculations based on the data from the Moscow Exchange.

Fig. 47. Trading volumes and number of transactions in the derivatives market of the Moscow Exchange in the period between 09.01.2001 and 01.31.2015

The derivatives market has increasingly been moving towards FX transactions while the share of index instruments has been substantially decreasing in the futures market (see Fig. 48). In the futures market, the share of transactions with FX instruments increased to 64.4% in Jan-

¹ BCS making plans. Vedomosti, 22 June 2010.

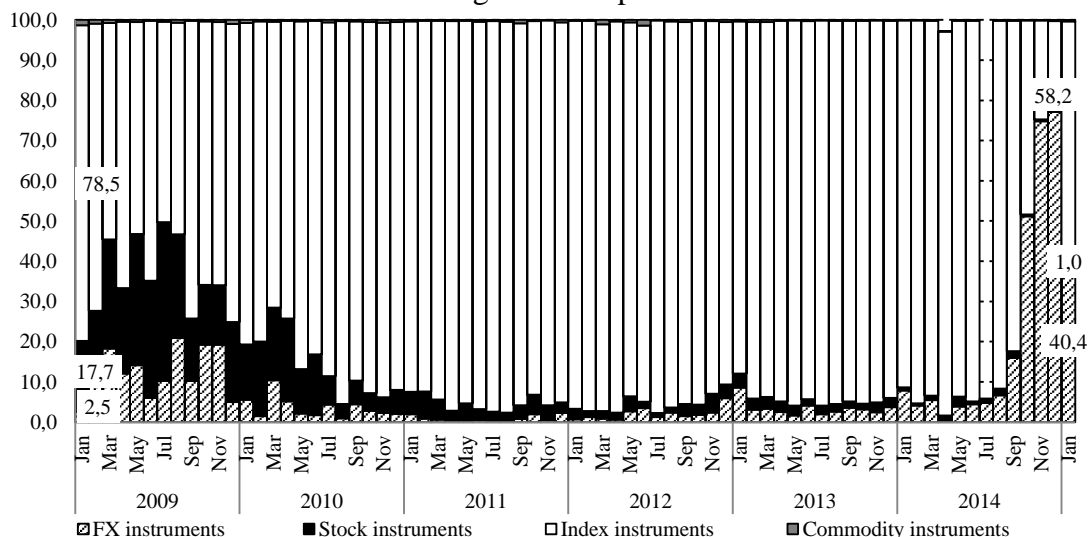
uary 2015 from 25.1% in January 2009, whereas the share of transactions with index instruments declined to 27.5% from 56.4% during the same period of time. This shows that during the acute phase of the current crisis market participants used mostly FX futures rather than securities and index futures for hedging purposes. Yet, interest-bearing instruments play an insignificant role in the derivatives market play still plays.



Source: authors' calculations based on the data from the Moscow Exchange.

Fig. 48. The structure of futures market in the Moscow Exchange in 2009 – January 2015, as a percentage of transactions value

In the options market, the share of transactions with FX instruments increased to 40.4% in January 2015 from 2.5% in January 2009, whereas the share of transactions with index instruments shrank to 58.2% from 78.5% during the same period of time.



Source: authors' calculations based on the data from the Moscow Exchange.

Fig. 49. The structure of options market in the Moscow Exchange in 2009 – January 2015, as a percentage of transactions value