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TRENDS AND OUTLOOKS

(Issue 45)

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R95 **Russian economy in 2023. Trends and outlooks. (Issue 45)** / [V. Mau et al; scientific editing by Kudrin A.L., Doctor of sciences (economics), Radygin A.D., Doctor of sciences (economics), Sinelnikov-Murylev S.G., Doctor of sciences (economics)]; Gaidar Institute. – Moscow: Gaidar Institute Publishers, 2024. – 422 pp.: illust.

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The review "Russian economy. Trends and outlooks" has been published by the Gaidar Institute since 1991. This is the 45th issue. This publication provides a detailed analysis of main trends in Russian economy, global trends in social and economic development. The paper contains 5 big sections that highlight different aspects of Russia's economic development, which allow to monitor all angles of ongoing events over a prolonged period: the monetary and budget spheres; financial markets and institutions; the real sector; social sphere; institutional changes. The paper employs a huge mass of statistical data that forms the basis of original computation and numerous charts confirming the conclusions.

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2.1. Global and Russian financial markets in 2023¹

1. Trends in the global financial market

In contrast to 2022, a rare phenomenon of negative returns on almost most categories of financial assets happened due to a sharp increase in interest rates by central banks of developed countries, the year 2023 was a relatively favorable year of recovery growth in returns on these assets. The economies of the United States and the European Union avoided recession, and the decline in inflation offered financial markets hope for lower interest rates in 2024.

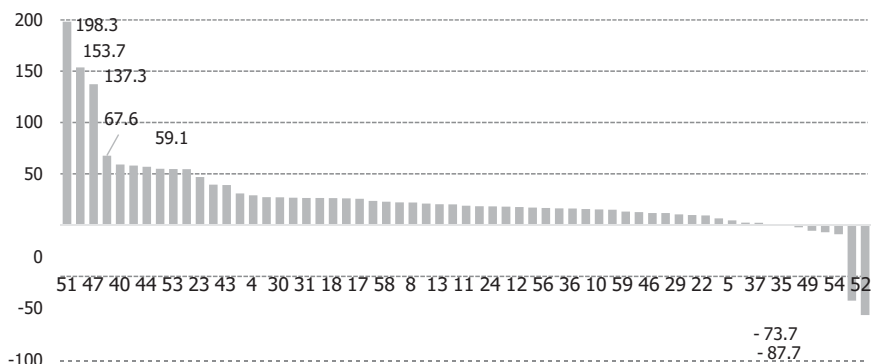
To assess the investment attractiveness of different financial instruments in 2023, it is essential to analyze data on returns and risks of 147 investment strategies popular in the world, represented by stock indices and large investment funds over different time horizons in 2014–2023.

Fig. 1 and *Table 1* show that in 2023, 55 of 63 popular investment strategies in stocks and alternative assets yielded positive dollar returns. The most profitable were investments in the sector of U.S. technology companies, cryptocurrency, shares of communications and communications companies, and shares of issuers popular with users in social networks.

For instance, yield of the exchange-traded investment fund (ETF) focused on purchase of shares of NASDAQ-100 index at the expense of borrowed funds with threefold leverage NASDAQ-100 ProShares UltraPro (serial No. 51 in *Table 1*)², constituted 198.3%, cryptocurrency S&P Bitcoin Index (No.48) was 153.7%, equity fund for innovative companies ARK Innovation ETF (No.61) was 67.6%, ETF shares

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2 Hereinafter, serial numbers of portfolio strategies in corresponding tables are given in brackets.



Note. Name of investment strategy indicated as a number on the chart, is indicated in *Table 1* with the corresponding serial number by column 1.

Fig. 1. Nominal dollar returns on global equity and alternative investment portfolios in 2023, % p.a.

Source: own calculations based on statistics of the information resource Morningstar: URL: <https://www.morningstar.com/>

Table 1

Nominal dollar returns of popular equity and alternative investment portfolios in 2014–2023 (% per annum), January – February 2024 (%)

	Investment strategies	Indices Morningstar and ETFs	Returns, %		
			2014–2023	2023	Jan-Feb 2024
	Global market				
1	Broad stock market	Morningstar Global Markets	8.3	22.1	4.6
2	Stocks of companies from developed countries	Morningstar Developed Markets	8.9	23.5	5.7
3	Stocks of companies from developed countries, excluding USA	Morningstar Developed Markets ex-US	4.9	17.9	1.7
4	Stocks of fintech companies	Morningstar Global Fintech Innovation		29.0	5.5
5	Dividend stocks – broad diversification	Schwab U.S. Dividend Equity ETF (SCHD)	11.0	4.6	2.0
6	Dividend stocks of international companies	Vanguard International Dividend Appreciation (VIGI)		16.3	1.4
7	Stocks of European companies	Vanguard European Stock Index/ FTSE Europe ETF (VEUSX, VGK)	4.3	20.2	1.2
8	Stocks of global companies	Vanguard Total World Stock Index/ ETF (VTWAX, VT)	8.1	22.0	4.5
9	Stocks of European, Australian and Far East major companies	iShares MSCI EAFE (EFA)	4.2	18.4	2.5
10	Companies small cap stocks	Dimensional International Small Cap ETF (DFIS)		15.2	-0.2
11	Value stocks of non-U.S. companies in developed countries (unhedged)	iShares MSCI EAFE Value (EFV)	3.0	18.9	0.1
12	Growth stocks of non-U.S. companies of developed countries (unhedged)	iShares MSCI EAFE Growth (EFG)	4.8	17.6	4.9
13	Investing in non-U.S. growth stocks in developed countries with hedging of local currency risks	iShares Currency Hedged MSCI EAFE (HEFA)		20.3	6.2

Sector 2

Financial markets and financial institutions

14	Stocks of 23 developed and 24 developing markets (unhedged)	iShares MSCI ACWI ex US ETF (ACWX)	3.0	15.7	1.3
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	Investment strategies	Indices Morningstar and ETFs	Returns, %		
			2014–2023	2023	Jan-Feb 2024
15	Investing in non-U.S. growth stocks in developed countries with hedging of local currency risks	iShares Currency Hdgd MSCI ACWI exUS ETF (HAWX)		17.0	4.4
	USA				
16	The US broad stock market	Morningstar US Market	11.6	26.4	6.8
17	Stocks of the S&P 1500 index (90% of equity capitalization in the U.S.)	SPDR® Port S&P 1500 Comps Stk Mkt ETF (SPTM)	11.7	25.5	6.6
18	Stocks of S&P 500 index	Vanguard S&P 500 ETF (VOO)	12.0	26.3	6.9
19	U.S. broad stock market	Vanguard Total Stock Market Index/ETF (VTSAX) (VTI)	11.4	26.1	6.5
20	Stocks of major companies	Vanguard Large Cap Index/ETF (VV)	11.7	27.2	7.1
21	Stocks of NASDAQ-100 index	Invesco QQQ Trust (QQQ)	17.7	54.9	7.2
22	Value Stocks	Morningstar US Value	9.7	9.3	4.2
23	Growth Stocks	Morningstar US Growth	14.0	46.8	9.4
24	Small companies stocks	Vanguard Small-Cap ETF (VB)	8.4	18.2	2.9
25	Dividend stocks	Morningstar US High Dividend Yield	9.2	6.5	3.4
26	High-dividend stocks	WisdomTree US High Dividend ETF (DHS)	7.9	-0.2	0.0
27	Stocks of ESG companies	Morningstar US Sustainability	11.7	26.7	8.8
28	Quality stocks	iShares MSCI USA Quality Factor ETF (QUAL)	11.9	30.8	8.9
29	Stocks with minimal volatility	iShares MSCI USA Min Vol Factor ETF (USMV)	10.3	10.3	4.3
30	Portfolios compiled using AI	QRAFT AI-Enhanced US Large Cap Mmnm ETF (AMOM)		27.1	14.8
31	Portfolios compiled using AI	AI Powered Equity ETF (AIEQ)		26.5	-1.8
	U.S. sectors of economy				
32	Telecommunications and communications	Morningstar US Communication Services	9.6	54.5	10.2
33	Cyclical consumer goods sector	Morningstar US Consumer Cyclical Sector	12.4	39.5	3.5
34	Countercyclical consumer goods sector	Morningstar US Consumer Defensive Sector	8.9	2.4	4.1
35	Energy	Morningstar US Energy	2.8	-0.6	2.5
36	Financial services	Morningstar US Financial Services Sector	10.3	16.1	7.1
37	Medicine and healthcare	Morningstar US Healthcare Sector	11.0	2.2	5.9
38	Manufacturing industry	Morningstar US Industrials Sector	10.4	20.9	5.5
39	Utilities	Morningstar US Utilities Sector	8.7	-7.0	-1.8
40	Technological sector	Morningstar US Technology Sector	19.8	59.1	11.0
41	Sector of basic materials	Morningstar US Basic Materials Sector	8.8	15.0	1.7
42	Real estate operations	Morningstar US Real Estate Sector	7.3	11.8	-2.7
43	Investing in shares of AI companies	Global X Robotics & Artificial Intelligence ETF (BOTZ)		39.0	9.4
44	Investing in shares of AI companies	Robo Global Artificial Intelligence ETF (THNQ)		56.8	7.4
	Alternative assets				
45	Gold	SPDR® Gold Shares (GLD)	5.1	12.7	-1.0
46	Real estate	Vanguard Real Estate ETF (VNQ)	7.4	11.8	-3.2
47	Cryptocurrency	ProShares Bitcoin Strategy ETF (BITO)		137.3	45.2
48	Cryptocurrency	S&P Bitcoin Index		153.7	47.5
49	Index S&P of commodity assets	iShares S&P GSCI Commodity-Indexed Trust (GSG)	-4.6	-5.5	5.3
	Popular speculative strategies in the USA				
50	Down play on NASDAQ-100 index stocks	ProShares UltraPro Short QQQ ETF (SQQQ)	-52.0	-73.7	-18.3
51	Upside play on NASDAQ-100 index stocks	ProShares UltraPro QQQ ETF (TQQQ)	35.0	198.3	19.1

	Investment strategies	Indices Morningstar and ETFs	Returns, %		
			2014–2023	2023	Jan-Feb 2024
52	Betting on changes in the VIX index	ProShares Ultra VIX (UVXY)	-76.6	-87.7	-19.9
53	Stocks popular in social networks	VanEck Social Sentiment ETF (BUZZ)		54.6	8.9
54	Hedging strategies for trend reversal ("crisis alpha")	iMGP DBI Managed Futures Strategy ETF (DBMF)		-8.9	6.2
55	Hedging strategies for trend reversal ("crisis alpha")	Simplify Managed Futures Strategy ETF (CTA)		-2.3	6.7
56	Risk parity hedging strategies (investments in less volatile assets)	AQR Equity Market Neutral N (QMNNX)	5.3	16.7	6.1
57	Fund with covered options (hedging by selling call options)	JPMorgan Equity Premium Income ETF (JEPI)		9.8	4.2
58	Fund with covered options (hedging by selling call options)	Global X NASDAQ-100 Covered Call ETF (QYLD)	6.9	22.8	5.1
59	Strategy Long/Short - purchase of undervalued stocks, sale of stocks which may fall in prices	Neuberger Berman Long Short Instl (NLSIX)	5.3	13.1	2.0
60	Thematic strategy: blue chip growth stocks in the U.S.	Fidelity® Blue Chip Growth ETF (FBCG)		58.0	12.1
61	Thematic strategy: stocks of innovation companies	ARK Innovation ETF (ARKK)		67.6	-2.1
62	Portfolio reflecting investments of Democrats in the Congress (Nancy)	Unusual Whales Subversive Dem Trd ETF (NANC)			8.8
63	A portfolio reflecting investments of Republicans in Congress (Cruz)	Unusual Whales Subversive Rep Trd ETF (KRUZ)			5.4

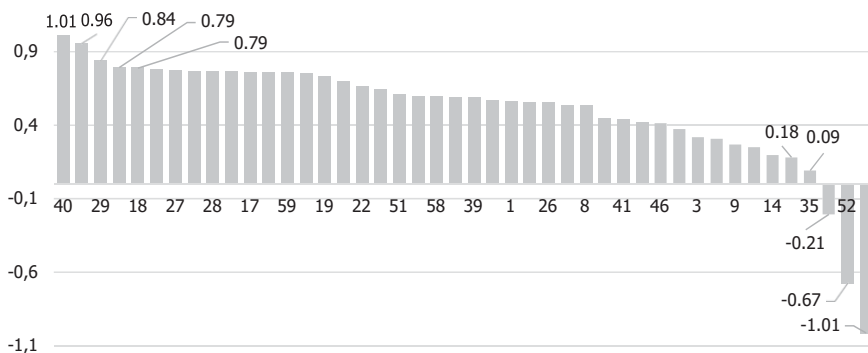
Source: own calculations based on statistics of the information resource Morningstar: URL: <https://www.morningstar.com/>

from the field of artificial intelligence (AI) Robo Global Artificial Intelligence ETF (No.44) was 56.8%, stock fund popular on social media VanEck Social Sentiment (No.53) was 54.6%.

In contrast, the largest losses for investors in 2023 came from the VIX ProShares Ultra VIX Index Derivatives Fund (No. 52) at -87.7%, the NASDAQ-100 ProShares Ultra VIX Index Downside ETF (No. 50) at -73.2%, and hedging strategies focused on shifts in macroeconomic trends ("crisis alpha") iMGP DBI Managed Futures Strategy ETF (No.54) – -8,9%, utility company index Morningstar US Utilities Sector (No.39) – -7,0%, ETF of trade assets iShares S&P GSCI Commodity-Indexed Trust (No.49) – -5,5%, index of energy companies shares Morningstar US Energy (No.35) – -0,6% and high dividend stock exchange fund WisdomTree US High Dividend ETF (No.26) – -0,2% per annum.

Fig. 2 shows data for 44 equity and alternative asset investment strategies over the 10-year period from 2014 to 2023 on a risk-adjusted basis, i.e., as a return/risk ratio. Only three strategies out of 44 yielded negative average annualized returns. Strategies with the highest return/risk ratios were portfolios of technology, medical and health care stocks, factor strategies (growth, quality, and low volatility return stocks), and a broad index portfolio of U.S. stocks.

The Morningstar US Technology Sector Index Portfolio (No.40), the Invesco QQQQ Trust NASDAQ-100 Index Exchange Traded Fund (No.21) and the Morningstar US Healthcare Sector Companies Index (No.37) had return/risk ratios of 1.01, 0.96 and 0.77, respectively; 0.96 and 0.77, for the factor strategies of the iShares MSCI USA Min Vol Factor ETF (No.29), Morningstar US Growth Portfolio



Note. The name of investment strategy labeled as a number in the chart is indicated in *Table 1* with the corresponding serial number in column 1.

Fig. 2. Return/risk ratio of global equity and alternative asset investment strategies for 2014–2023 (ratio)

Source: own calculations based on statistics of the information resource Morningstar: URL: <https://www.morningstar.com/>

Growth Stocks (No.23) and Quality Stocks in the iShares MSCI USA Quality Factor ETF (No.28) – 0.84; 0.79 and 0.76; 0.79 and 0.78 for the Vanguard S&P 500 ETF (No.18) and Morningstar US Market Index; and 0.78 for the Morningstar US Sustainability Index (No.27).

Speculative portfolios with bets on the growth of the VIX index and on the decline of the NASDAQ-100 index, commodity assets, shares of energy companies and shares of non-US companies from developed countries showed the lowest value of the return/risk ratio over the considered 10-year time horizon. Thus, the return/risk ratio of exchange-traded investment funds with highly speculative strategies ProShares UltraPro Short QQQ (No.50) and ProShares Ultra VIX (No.52) constituted -1.02 and -0.67, portfolio of trading assets of the fund iShares S&P GSCI Commodity-Indexed Trust (No.49) – -0.21, stocks of energy company Morningstar US Energy (No.35) – 0.09, exchange-traded investment funds value stocks of non-U.S. companies in developed countries iShares MSCI EAFE Value (No.11), stocks of 23 developed and 24 developing markets iShares MSCI ACWI ex US ETF (No.14) – 0.20 and stocks of European companies Vanguard European Stock Index/FTSE Europe ETF (No.7) – 0.25.

Table 2 and *Fig. 3* show that in 2023, of the 52 popular strategies for investing in bonds and mixed investment funds, all but one strategy for investing in Japanese government bonds (No.38 in *Table 2*) yielded positive dollar returns to investors. Investments in mixed investment funds and corporate bonds, including high-yield bonds, were the most profitable in 2023.

Investments in life cycle funds have yielded the highest returns of the strategies under consideration Fidelity Freedom 2065 (No.49), Fidelity Freedom 2040 (No.48), Vanguard Target Retirement 2045 (No.50), Vanguard Target Retirement 2035 (No.51) respectively 20.5; 20.1, 19.5 и 17.1% p.a., in mixed investment funds (70% stocks and 30% bonds) Fidelity Asset Manager (No.52) –

Table 2

**Nominal dollar returns on global bond and commingled portfolios
for 2013–2022 (% p.a.) and YTD through February 29, 2024 (%)**

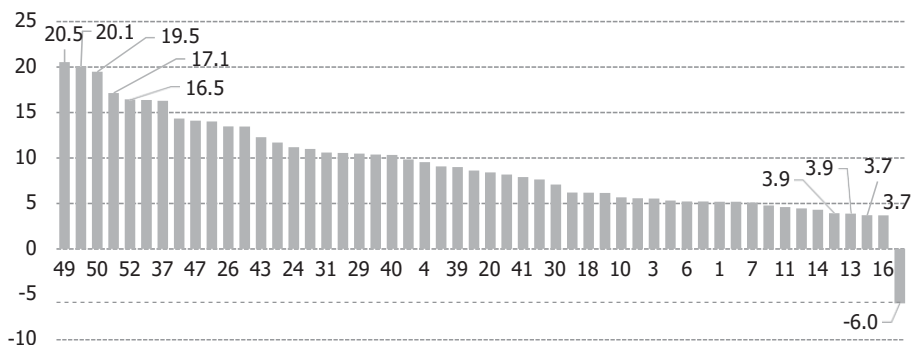
	Investment strategies	Morningstar and ETFs indices	Returns, %		
			2014–2023	2023	Jan – Feb 2024
	Global market				
1	Broad bond market	Morningstar Global Core Bond	0.1	5.2	-2.6
2	Government bonds	Morningstar Global Treasury Bond	-0.6	3.7	-3.1
3	Inflation indexed government bonds	Morningstar Global Treasury Inflation-Linked Securities	0.8	5.5	-2.8
4	Corporate bonds	Morningstar Global Corporate Bond	1.5	9.5	-2.1
5	Infrastructural bonds	Morningstar Global Bond Infrastructure	1.5	10.4	-2.2
6	Global fund of monetary market	Invesco Treasurer’s Ser Tr Prem Instl (IPXX)	1.3	5.2	0.9
	USA				
7	Fund of the U.S. monetary market	Vanguard Cash Rsrv Federal MnyMktAdmiral (VMRXX)	1.3	5.1	0.9
8	Fund of the U.S. monetary market	Fidelity® Treasury Money Market (FZFX)		4.8	0.8
9	Broad bond market	Morningstar US Core Bond	1.7	5.3	-1.6
10	Broad bond market	Vanguard Total Bond Market Index/ETF (VBTIX, BND)	1.8	5.7	-1.5
11	Broad bond market with duration 1–3 year	Morningstar US 1-3 Yr Core Bond	1.2	4.6	0.1
12	Broad bond market with duration 5–10 years	Morningstar US 5-10 Yr Core Bond	1.9	5.2	-1.4
13	Government bonds	Morningstar US Treasury Bond	1.2	3.9	-1.4
14	Government bonds with duration 1–5 years	Morningstar US 1-5 Yr Treasury Bond	1.1	4.3	-0.4
15	Government bonds with duration 5–10 years	Morningstar US 5-10 Yr Treasury Bond	1.6	3.9	-1.7
16	Inflation indexed government bonds	Morningstar US Treasury Inflation-Protected Securities	2.3	3.7	-0.7
17	Municipal bond ETFs	iShares National Muni Bond ETF (MUB)	2.8	5.6	-0.3
18	Mortgage bonds	Morningstar US Asset-Backed Securities	1.8	6.2	0.7
19	Mortgage bonds secured by commercial property	Morningstar US Commercial Mortgage-Backed Securities	2.0	5.2	0.1
20	Corporate bonds	Morningstar US Corporate Bond	2.8	8.4	-1.6
21	Corporate bonds with duration 1–5 years	Morningstar US 1–5 Yr Corporate Bond	2.1	6.2	-0.1
22	Short-term corporate bonds	Vanguard Short-Term Corporate Bond Index/ETF (VSTBX, VCSH)	2.0	6.2	-0.1
23	Corporate bonds with duration 5–10 years	Morningstar US 5–10 Yr Corporate Bond	3.2	8.6	-1.5
24	Long-term corporate bonds	Vanguard Long-Term Corporate Bond Index/ETF (VLTGX, VCLT)	3.8	11.2	-3.5
25	Fallen Angels Bond ETFs	VanEck Fallen Angel High Yield Bond (FALN)		13.5	1.0
26	High yield bonds	Morningstar US High-Yield Bond	4.6	13.5	0.3
27	High yield bonds	CrossingBridge Low Dur Hi Yld Instl CBLDX		7.6	1.5
	Eurozone, Great Britain, Japan				
28	Broad bond market	Morningstar Eurozone Core Bond	-1.2	10.6	-3.5

	Investment strategies	Morningstar and ETFs indices	Returns, %		
			2014–2023	2023	Jan – Feb 2024
29	Government bonds	Morningstar Eurozone Treasury Bond	-0.9	10.5	-3.7
30	Government bonds with duration 1–3 years	Morningstar Eurozone 1–3 Yr Treasury Bond	-2.1	7.1	-2.5
31	Government bonds with duration 5–7 years	Morningstar Eurozone 5–7 Yr Treasury Bond	-1.0	10.6	-3.7
32	Inflation indexed government bonds	Morningstar Eurozone Treasury Inflation-Linked Securities	0.3	9.1	-3.5
33	Corporate bonds	Morningstar Eurozone Corporate Bond	-1.0	11.7	-3.0
34	High yield bonds	Morningstar Eurozone High-Yield Bond	1.2	16.4	-1.1
35	Broad bond market	Morningstar UK Core Bond	-1.2	11.0	-3.9
36	Government bonds	Morningstar UK Gilt Bond	-1.5	9.8	-4.3
37	Corporate bonds	Morningstar UK Corporate Bond	0.2	16.3	-2.8
38	Government bonds	Morningstar Japan Treasury Bond	-2.3	-6.0	-6.8
	Emerging markets				
39	Broad bond market	Morningstar Emerging Markets Composite Bond	3.0	9.0	-0.6
40	Government bonds	Morningstar Emerging Markets Sovereign Bond	3.0	10.3	-1.5
41	Corporate bonds	Morningstar Emerging Markets Corporate Bond	3.0	7.9	0.2
42	Infrastructural bonds	Morningstar Emerging Markets Infrastructure Bond	3.3	8.2	-0.3
43	High yield bonds	Morningstar Emerging Markets High-Yield Bond	3.1	12.3	1.4
44	Broad bond market of Chinese issuers	Morningstar China USD Broad Market Bond	2.1	4.5	0.6
	Mixed investments				
45	60% stock/40% bonds – the largest fund	American Funds American Balanced A (ABALX)	7.6	14.0	3.3
46	60% stock/40% bonds –the oldest fund	Vanguard Wellington™ Inv VWELX	7.9	14.3	3.1
47	Life Cycle Fund 2025	Fidelity Freedom® 2025 (FFTWX)	6.0	14.1	1.9
48	Life Cycle Fund 2040	Fidelity Freedom® 2040 (FFAFX)	8.1	20.1	3.8
49	Life Cycle Fund 2065	Fidelity Freedom® 2065 (FFSFX)		20.5	4.6
50	Life Cycle Fund 2045	Vanguard Target Retirement 2045 Fund (VTIVX)	8.0	19.5	3.6
51	Life Cycle Fund 2035	Vanguard Target Retirement 2035 Fund (VTTHX)	7.1	17.1	2.7
52	70% stock / 30% bonds	Fidelity Asset Manager® 70% (FASGX)	7.0	16.5	3.1

Source: own calculations based on statistics of the information resource Morningstar: URL: <https://www.morningstar.com/>

70%, in the oldest American fund of mixed investments with a strategy 60%/40% Vanguard Wellington Inv (No.46) and the largest mutual fund with a similar strategy American Funds American Balanced A (No.45) in the amount of 16.5; 14.3 и 14.0% respectively. The yields on investments in Morningstar Eurozone High-Yield Bond (No. 34) and Morningstar UK Corporate Bond (No.37) indices of European companies amounted to 16.4% and 16.3% per annum, respectively.

The lowest yields in 2023 came from portfolios of low-risk, mostly government, bonds due to lack of growth or even decline in their value in an environment of high interest rates of central banks of developed countries. A portfolio of



Note. The title of the investment strategy labeled as a number in the chart is indicated in *Table 2* with the corresponding serial number in column 1.

Fig. 3. Nominal dollar returns in 2023 of global bond and mixed investment strategies, % p.a.

Source: own calculations based on statistics of the information resource Morningstar: URL: <https://www.morningstar.com/>

Japanese government bonds (No.38) returned -6.0%, while the returns of the broad U.S. government bond index (No.13) and broad global government bond index (No.2) were 3.9% and 3.7%, respectively.

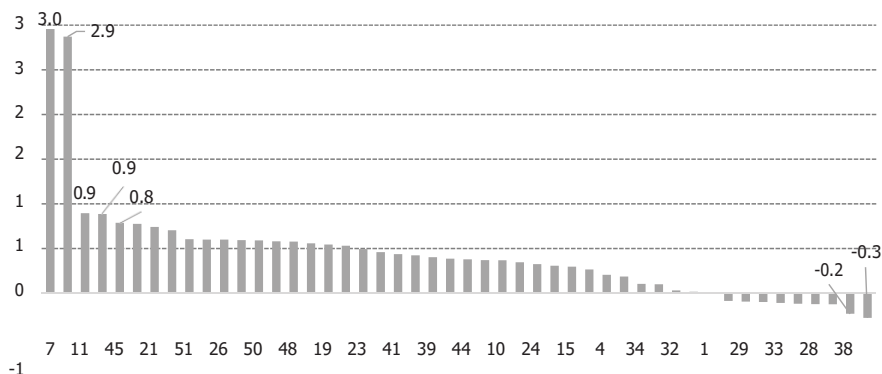
The reason for low return of money market fund (No.7 & 8) most in demand among investors when interest rates rose in 2023, was that by that time rates of central banks of developed countries had reached their peak values, and market actors switched to expectations of their reduction in 2024, which reduced the demand for money market funds among investors and resulted in a limited growth in their market value.

Low return of the China Broad Bond Index (No.44) was due to low government bond yields in this country in a deflationary environment and low value of corporate bonds due to risks of defaults on the debt of large real estate developers.

After 2021–2022, difficult years for the bond and mixed investment strategies market, when the returns of these strategies were predominantly negative, 2023 saw a recovery of positive returns for bonds and commingled investments, which is important in terms of the financial stability of pension funds and other large institutional investors utilizing these strategies.

Of the 48 bond and mixed investment fund strategies over the 10-year time horizon from 2014 to 2023, most strategies showed moderate returns and 9 were loss-making (*Fig. 4*). This is due to the significant losses of these conservative strategies in 2021 and especially in 2022.¹ The worst performers in terms of return/risk over the 10-year period in 2014–2023 were: the Eurozone 1–3 year duration government bond portfolios (No.30) at -0.28, the Japan (No.38) and UK (No.36) government bond portfolios at -0.23 and -0.13 respectively, the Eurozone

¹ For more details see: Russian Economy in 2022. Trends and Prospects. Issue 44. Section 2.1.1. Moscow: Gaidar Institute Press, 2023. URL: <https://www.iep.ru/files/text/trends/2022/2.pdf>



Note. The title of the investment strategy labeled as a number in the chart is indicated in *Table 2* with the corresponding serial number in column 1.

Fig. 4. The return/risk ratio of global bond and commingled investment strategies over the period 2014–2023

Source: own calculations based on statistics of the information resource Morningstar: URL: <https://www.morningstar.com/>

broad bond portfolio (No.28) and the Eurozone corporate bond portfolio (No.33) at -0.13 and -0.11, and the Global Government Bond Portfolio (No.2) at -0.09.

The highest return/risk ratios between 2014 and 2023 were in portfolios of financial instruments with higher tolerance to central bank interest rate hikes, including money market funds, broad low duration bond portfolios and classic mixed investment funds with a 60%/40% strategy.

The U.S. money market fund (No.7) and global money market fund (No.6) had the highest ratios at 2.96 and 2.87, respectively; the broad U.S. issuer bond market with 1–3 year duration and mortgage bond portfolios each at 0.89; and the two most popular U.S. mixed-investment funds with 60%/40% strategies, American Funds American Balanced A (No.45) and Vanguard Wellington Inv (No.46), at 0.79 and 0.77, respectively.

In 2023, a number of emerging market equities, including Russia, showed relatively high returns compared to the previous 10-year period, due to different factors for certain countries. While markets of Brazil, India, Mexico and Poland grew to a greater extent due to the attraction of foreign portfolio investments, and Argentina due to the demand for shares from domestic investors who consider the stock market as one of the ways to preserve savings against high inflation, growth of the Russian RTS index was supported by the inflow of funds from private investors with restrictions to withdraw assets of non-resident investors. Even portfolios of foreign equity funds of Russian companies with assets blocked in Russian depositories and in the process of liquidation, showed positive returns in 2023: VanEck Russia ETF (No.9) at 12.0% and iShares MSCI Russia ETF (No.8) at 4.4%.

With high interest rates of the FRS and, thus, a strong dollar exchange rate,

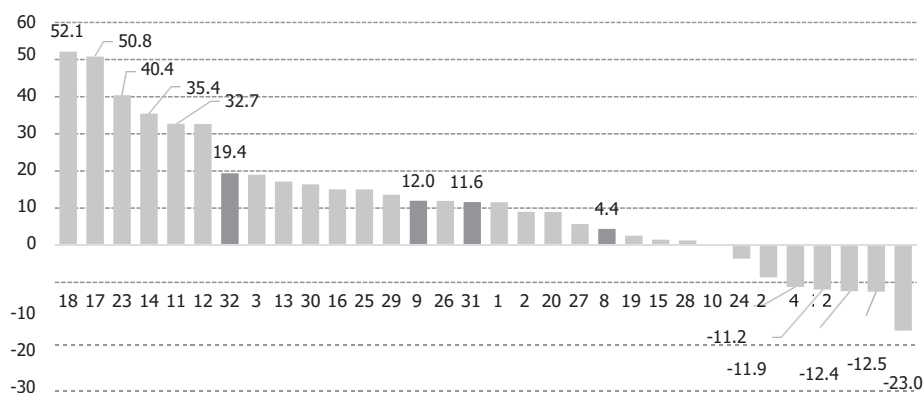
it was difficult for shares of developing countries to compete in terms of dollar

yield with shares of American companies. Nevertheless, as shown in *Fig. 5* and *Table 3*, in 2023, out of the 32 investment strategies in emerging equity markets, 6 portfolios had higher returns compared to the S&P 500 index portfolio of 26.3% per annum. The return of equity funds of companies from Argentina (No.18 in *Table 3*) amounted to 52.1%, Poland (No.17) – 50.8%, Mexico (No.23) – 40.4%, Brazil (No.11) – 32.7%, small companies from India (No.14) and Brazil (No.12) – 35.4 and 32.7%, respectively. The portfolio of the Russian RTS Total Return Index (No.32), while not outperforming the S&P 500 Index, returned 19.4%, ranking 7th out of the 32 emerging market strategies under this criterion.

In 2023, the portfolios of Chinese, Turkish and Malaysian stocks provided negative returns to investors. The problems in Chinese equities were due to the outflow of funds from foreign portfolio investors amid growing risks of a slowdown in the Chinese economy and instability in corporate borrowing markets, as well as the behavior of domestic investors withdrawing funds from equities in favor of safer investments in government bonds and gold.

In Turkey, investors preferred to invest more in deposits, gold and foreign currencies amid a sharp rise in the central bank's interest rate due to high inflation. Low stock returns in Malaysia were driven by a sharp slowdown in the country's economic growth in 2023 and accelerating inflation. In 2023, returns of the China small companies stocks (No.6), A-Shares (No.7), major company stocks (No.5) and broad equity index (No.4) portfolios evidenced -23.01; -12.5; -12.4 and -11.2%, respectively. The return of the Turkish companies ETF portfolio (No. 22) dropped to -11.9% and the return of the Malaysia companies ETF (No. 24) dropped to -3.6%.

Over the 10-year time horizon from 2014 to 2023, the return and risk performance of all 30 emerging market equity exchange-traded funds shown in



Note. ETF serial number on the chart – see *Table 3*.

Fig. 5. Nominal dollar yield of exchange-traded funds (ETFs) investing in emerging market equities in 2023, % p.a.

Source: own calculations based on statistics of the information resource Morningstar: URL: <https://www.morningstar.com/>

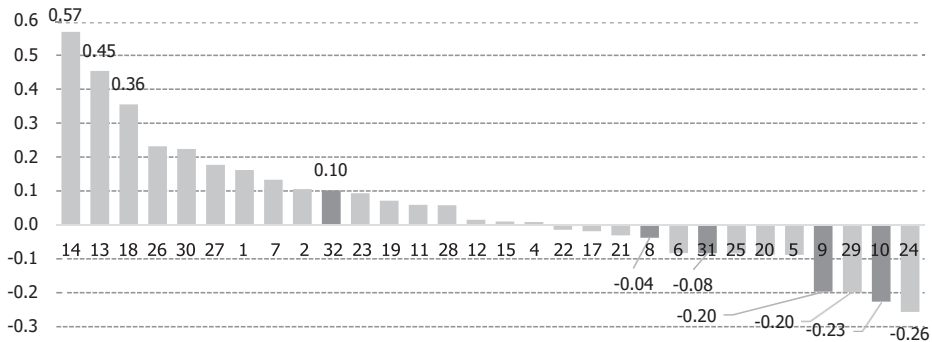
Table 3

Nominal dollar returns of emerging market equity index portfolios in 2014–2023 (% p.a.) and YTD through February 29, 2024 (%)

	Investment strategies	Morningstar and ETFs indices	Ticker	Returns, %		
				2014–2023	2023	Jan–Feb 2024
1	Broad market ETF	iShares Core MSCI Emerging Markets ETF	IEMG	2.8	11.6	-0.5
2	Emerging Markets Equity ETFs	iShares MSCI Emerging Markets	EEM	1.8	9.0	-0.6
3	Developing countries excluding China	iShares MSCI Emerging Mkts ex China ETF	EMXC		19.0	0.6
4	China	iShares MSCI China ETF	MCHI	0.2	-11.2	-4.3
5	China, major companies	iShares China Large-Cap ETF	FXI	-2.1	-12.4	-2.5
6	China, small companies	iShares MSCI China Small-Cap ETF	ECNS	-2.0	-23.0	-8.4
7	China, A share	Xtrackers Harvest CSI 300 China A ETF	ASHR	3.3	-12.5	0.4
8	Russia	iShares MSCI Russia ETF	ERUS	-11.9	4.4	0.0
9	Russia	VanEck Russia ETF	RSX	-11.2	12.0	0.0
10	Russia, small companies	VanEck Russia Small-Cap ETF	RSXJ	-9.9	0.0	0.0
11	Brazil	iShares MSCI Brazil ETF	EWZ	2.0	32.7	-5.6
12	Brazil, small companies	iShares MSCI Brazil Small-Cap	EWZS	0.6	32.7	-6.5
13	India	iShares MSCI India ETF	INDA	8.4	17.2	4.8
14	India, small companies	iShares MSCI India Small-Cap ETF	SMIN	13.5	35.4	4.2
15	South Africa	iShares MSCI South Africa ETF	EZA	0.3	1.5	-11.1
16	Saudi Arabia	iShares MSCI Saudi Arabia	KSA		15.1	5.1
17	Poland	iShares MSCI Poland ETF	EPOL	-0.5	50.8	2.9
18	Argentina	Global X MSCI Argentina ETF	ARGT	11.2	52.1	-2.9
19	Indonesia	iShares MSCI Indonesia ETF	EIDO	1.5	2.6	0.2
20	Chile	iShares MSCI Chile ETF	ECH	-2.2	9.0	-6.7
21	Turkey	iShares MSCI Turkey ETF	TUR	-1.0	-8.7	16.1
22	Turkey	iShares MSCI Turkey ETF USD Dist	ITKY	-0.5	-11.9	14.0
23	Mexico	iShares MSCI Mexico ETF	EWW	2.2	40.4	-3.9
24	Malasia	iShares MSCI Malaysia ETF	EWM	-3.9	-3.6	2.3
25	Vietnam	VanEck Vietnam ETF	VNM	-1.9	15.1	4.6
26	Broad market index	Morningstar Emerging Markets	Index 1	3.9	11.9	0.3
27	BRIC	Morningstar BRIC	Index 2	3.2	5.7	0.0
28	BRICK (ETF)	iShares MSCI BIC ETF	BKF	1.1	1.3	-1.3
29	Developing countries in Europe	Morningstar Emerging Markets Europe	Index 3	-6.3	13.6	12.1
30	Dividend stock	Morningstar Emerging Markets Dividend Yield Focus	Index 4	3.3	16.4	1.2
31	Russia	RTS index	RTSI	-2.8	11.6	4.1
32	Russia	RTS index – total returns	RTSTR	3.4	19.4	4.7

Source: own calculations based on statistics of the information resource Morningstar: URL: <https://www.morningstar.com/>

Fig. 6, significantly underperformed the broad U.S. equity index S&P 500. With the S&P 500 Index's return/risk ratio of 0.79, this indicator for the fastest-growing emerging market equity indices was only 0.57 for the India small company equity ETF (No.14), 0.45 for the India broad dividend equity portfolio ETF (No.13), 0.36 for the Argentina equity fund (No.18), 0.23 for the emerging markets broad equity index (No.26), 0.22 for the high dividend yield emerging markets equity ETF (No.30), 0.18 for the BRIC Equity Index and 0.16 for the emerging markets broad portfolio ETF (No.1). The Russian RTS total return index (No.32) with a return/risk



Note. Serial ETF numbers on a chart – Table 3.

Fig. 6. The return/risk ratio of emerging market equity portfolios in 2014–2023

Source: own calculations based on statistics of the information resource Morningstar: URL: <https://www.morningstar.com/>

ratio of 0.10 ranked in the top ten of the 30 strategies under consideration against its competitors

The index portfolios of Malaysia (No.24) at -0.26, Emerging Europe (No.29) at -0.20, Large China (No.5) at -0.09, Chilean (No.20) and Vietnamese (No.25) stocks with ratios of -0.09 and -0.08 showed negative return/risk in 2014–2023. Among the worst performers in terms of return/risk over a 10-year time horizon were three ETFs of Russian equities with blocked assets: VanEck Russia Small-Cap ETF (No.10), VanEck Russia ETF (No.9) and iShares MSCI Russia ETF (#8) with indicators of -0.23; -0.20 and -0.04, respectively. Sanctions, asset blocking and serious losses of investors in Russian equities may limit the access of Russian companies to international capital markets for a long time in the future.

In early 2024, the U.S. Securities and Exchange Commission registered the first exchange-traded funds investing in bitcoin on the spot market. In addition, two of the world's largest closed-end cryptocurrency funds, Grayscale Bitcoin Trust (BTC) and Grayscale Ethereum Trust (ETH), were re-registered as ETFs. As shown in Table 4, as of February 29, 2024, there were 15 primarily bitcoin ETFs registered in the U.S. with a net asset value of \$60.9 bn.

The future of private cryptocurrencies is still a matter of debate, and in some developing countries, including Russia, transactions by domestic investors using these financial instruments are restricted. Nevertheless, the entry of the largest management companies in the world, such as BlackRock, Fidelity Investments, Invesco, Franklin Templeton, etc., which have a high reputation as providers of financial services for long-term savings, to the spot market of cryptocurrencies, gives us to hope that bitcoin and some other cryptocurrencies will eventually become part of the organized market of financial assets and will be able to compete with such assets as gold and other precious metals.¹ Two newly created

¹ So far, the Grayscale Bitcoin Trust (BTC) and SPDR Gold Shares (GLD) bitcoin ETFs differ significantly in terms of yield and risk. Thus, over a 10-year horizon from 2014 to 2023, the average annualized

bitcoin ETFs are particularly promising. i.e. the iShares Bitcoin Trust ETF managed by BlackRock with \$9.4 bn in assets and the Fidelity Wise Origin Bitcoin ETF managed by Fidelity Investments at \$6.4 bn.

Table 4

**Major exchange-traded funds (ETF) investing in crypto assets
as of February 29, 2024**

	Investment strategies	Exchange-traded funds (ETF)	Ticker	Value of assets, bn USD	Management remuneration, %	Returns, %		
						10 years	Year	Jan- Feb 2024
1	Investing in cryptocurrency derivatives	ProShares Bitcoin Strategy ETF	BITO	2.6	0.95		146.2	45.2
2	Investing in cryptocurrency derivatives, betting on bitcoin's decline in value	ProShares Short Bitcoin Strategy ETF	BITI	0.1	0.95		-67.5	-33.6
3	Direct investment in bitcoin on the spot market avoiding ETFs	Grayscale Bitcoin Trust (BTC)	GBTC	27.2	1.50	56.4	366.5	59.9
4	Direct investment in etherium on the spot market avoiding ETFs	Grayscale Ethereum Trust (ETH)	ETHE	10.0	2.50		291.3	48.6
5	Direct investment in a basket of cryptocurrencies in the spot market avoiding ETFs	Grayscale Digital Large Cap ETC	GDLC	0.5	2.50		142.0	44.0
6	Direct investment in bitcoin on the spot market	iShares Bitcoin Trust ETF	IBIT	9.4	0.12			
7	Direct investment in bitcoin on the spot market	Fidelity Wise Origin Bitcoin ETF	FBTC	6.4	No			
8	Direct investment in bitcoin on the spot market	ARK 21Shares Bitcoin ETF	ARKB	2.1	No			
9	Direct investment in bitcoin on the spot market	VanEck Bitcoin Trust ETF	HODL	0.3	0.25			
10	Direct investment in bitcoin on the spot market	Bitwise Bitcoin ETF	BITB	1.5	No			
11	Direct investment in bitcoin on the spot market	Franklin Bitcoin ETF	EZBC	0.2	No			
12	Direct investment in bitcoin on the spot market	Invesco Galaxy Bitcoin ETF	BTCO	0.4	No			
13	Direct investment in bitcoin on the spot market	WisdomTree Bitcoin	BTCW	0.1	No			
14	Direct investment in bitcoin on the spot market	Valkyrie Bitcoin ETF	BRRR	0.2	No			
15	Direct investment in bitcoin on the spot market	Hashdex Bitcoin Futures ETF	DEFI	0.03	0.94		140.9	42.9

Source: own calculations based on statistics of the information resource Morningstar: URL: <https://www.morningstar.com/>

return of the former was 56.4% p.a. and the return/risk ratio was 0.72, while the gold ETFs had similar indicators of 5.1% and 0.37. That is, even taking into account the increased volatility, the bitcoin ETF was significantly more profitable than the gold fund.

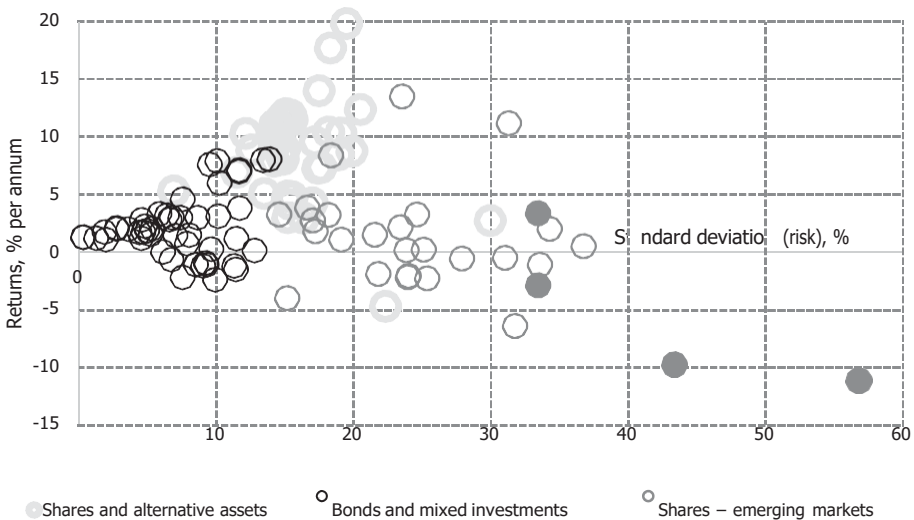
2. Map of returns and risks of financial instruments in the world

To analyze the available investment strategies in the global financial market for private investors with different risk profiles, here, a concept such as “*return and risk map*” is used.

It represents a sample of 122 investment strategies (discussed in *Tables 1–3*), classified by criterion of decreasing standard deviation (risk) into 5 parts equal in number of strategies: with high, increased, moderate, moderately low and low risk. Depending on results of testing of the investor’s risk profile, the investor can select portfolios from the risk group that matches his individual profile. Portfolios of Russian equities (RTS and RTS total return) were added to the global return and risk map to present the risk profile of strategies available to the Russian private investor.

As *Fig. 7* shows, over the 10-year time horizon 2014–2023, private investor in the global market had access to a wide range of strategies with moderately low returns and risks in terms of bond funds and blended investments (red circles), with higher returns and risks in terms of equity and alternative investment portfolios predominantly in developed countries (blue circles), and emerging market equity portfolios, which tended to be inferior to similar investment strategies in developed markets, marked by significantly higher risks.

Fig. 7 has specially highlighted fully shaded green circles reflecting the returns and risks of investing in the shares of Russian issuers: RTS indexes (No.31 in *Table 3*)



Note. The ETFs serial numbers the chart – see *Tables 1, 2, 3* for corresponding groups of financial instruments.

Fig. 7. Average annual returns and risks of portfolio strategies in global markets over a 10-year time horizon in 2014–2023, % p.a.

Source: own calculations based on statistics of the information resource Morningstar: URL: <https://www.morningstar.com/>

and RTS Total Return (No.32), as well as global exchange-traded index funds VanEck Russia Small-Cap ETF (No.), VanEck Russia ETF (No.9) and iShares MSCI Russia ETF (No.8). The last three ETFs had the lowest returns and highest risks of all 122 strategies in the sample. Meanwhile, the iShares MSCI Russia ETF strategy (No.8) with an average annualized return of 11.9% and a standard deviation of 313.0% has not been shown in the figure due to the limited scaling of the chart on the y-axis. The difference between the 3.4% annualized average return of the RTS Total Return Index (32) and the -11.2% annualized return of VanEck Russia ETF (No. 9), once the largest foreign ETF of Russian equities, reflects the difference in valuation of Russian equities in the domestic market and in foreign funds with assets locked up in Russian depositories.

As *Table 5* shows, the map of returns and risks of global investment strategies for a private investor over the 2014–2023 horizon, strategies with annualized standard deviation (risk) values ranging from 21.9% to 313.0% are classified as high-risk portfolios. The returns of the strategies included in this category ranged from -76.6% to +350.0%. The highest risk portfolios include all five Russian equity investment strategies under consideration, including the RTS Total Return Index Portfolio (No. 32) and the RTS Index (No. 31). Assuming that only shares from the RTS index are available to a Russian private investor from equity instruments in the domestic market, it means that in the process of forming long-term savings, the investor has to work with one of the riskiest instruments in the global market. In addition to Russian equities, the highest-risk strategies were dominated by portfolios of many other emerging market equities.

The second group of high-risk strategies included strategies with risk values from 15.5% to 21.7% with a range of average annualized returns from 1.1% to 19.8% per annum. The most common for this strategy were portfolios of stocks of certain developing countries (India, Indonesia, BRIC), sector and factor strategies in the US and other developed countries market, real estate funds and US broad equity market.

The third group of strategies marked by a moderate risk included portfolios with a risk indicator of 12.3% to 15.4% and a return range of -3.9% to 12.0%. This group includes mainly portfolios of factor equity strategies, the S&P 500 Index portfolio, gold and individual life cycle funds with mixed investment strategies.

The fourth group of strategies with moderately low risk includes portfolios with a standard deviation value of 7.2 to 11.8%, with a range of returns from -2.3 to 7.9% per annum. This group includes mainly bond funds, life cycle funds, 70%/30% and 60%/40% mixed investment strategies. Among bond funds there are portfolios of broad market bonds, corporate bonds, high yield bonds, government bonds of Eurozone countries, UK and Japan.

Finally, the fifth group of strategies with the lowest risk includes portfolios with a risk indicator from 0.5% to 7.0% and a range of returns from -0.09% to 2.96% per annum. Among these strategies there are equity ETFs with hedging elements (No.56 and No.59), however, strategies investing in bonds of U.S. issuers, in infrastructure, municipal and mortgage bonds, and in money market funds dominated in this group.

Table 5

Return and risk map of investment strategies in the global financial market over a 10-year time horizon from 2014 to 2023

Risk level	No.	Investment strategies	Morningstar and ETFs indices	Per year, %:		Returns / risk ratio
				Standard deviation (risk)	Returns	
High risk	8	Russia	iShares MSCI Russia ETF	313.0	-11.9	-0.04
	52	VIX index changes rate	ProShares Ultra VIX (UVXY)	113.7	-76.6	-0.67
	51	Upside play on NASDAQ-100 index stocks	ProShares UltraPro QQQ ETF (TQQQ)	57.5	35.0	0.61
	9	Russia	VanEck Russia ETF	56.8	-11.2	-0.20
	50	Down play on NASDAQ-100 index stocks	ProShares UltraPro Short QQQ ETF (SQQQ)	51.3	-52.0	-1.01
	10	Russia, small companies	VanEck Russia Small-Cap ETF	43.5	-9.9	-0.23
	12	Brazil, small companies	iShares MSCI Brazil Small-Cap	36.9	0.6	0.01
	11	Brazil	iShares MSCI Brazil ETF	34.4	2.0	0.06
	21	Turkey	iShares MSCI Turkey ETF	33.7	-1.0	-0.03
	31	Russia	RTS Index	33.6	-2.8	-0.08
	32	Russia	RTS Index – full yield	33.6	3.4	0.10
	29	Developing countries in Europe	Morningstar Emerging Markets Europe	31.9	-6.3	-0.20
	18	Argentina	Global X MSCI Argentina ETF	31.4	11.2	0.36
	22	Turkey	iShares MSCI Turkey ETF USD Dist	31.2	-0.5	-0.01
	35	Energy	Morningstar US Energy	30.1	2.8	0.09
	17	Poland	iShares MSCI Poland ETF	28.0	-0.5	-0.02
	20	Chile	iShares MSCI Chile ETF	25.5	-2.2	-0.09
	15	South Africa	iShares MSCI South Africa ETF	25.2	0.3	0.01
	7	China, A shares	Xtrackers Harvest CSI 300 China A ETF	24.7	3.3	0.13
	6	China, small companies	iShares MSCI China Small-Cap ETF	24.1	-2.0	-0.08
	5	China, major companies	iShares China Large-Cap ETF	24.1	-2.1	-0.09
	4	China	iShares MSCI China ETF	24.0	0.2	0.01
	14	India, small companies	iShares MSCI India Small-Cap ETF	23.7	13.5	0.57
	23	Mexico	iShares MSCI Mexico ETF	23.5	2.2	0.09
	49	S&P index of commodity assets	iShares S&P GSCI Commodity-Indexed Trust (GSG)	22.4	-4.6	-0.21
25	Vietnam	VanEck Vietnam ETF	21.9	-1.9	-0.08	
Increased risk	19	Indonesia	iShares MSCI Indonesia ETF	21.7	1.5	0.07
	33	Cyclical sector of consumer goods	Morningstar US Consumer Cyclical Sector	20.6	12.4	0.60
	41	Sector of basic materials	Morningstar US Basic Materials Sector	20.0	8.8	0.44
	40	Technological sector	Morningstar US Technology Sector	19.6	19.8	1.01
	28	BRIC (ETF)	iShares MSCI BIC ETF	19.2	1.1	0.06
	36	Financial services	Morningstar US Financial Services Sector	19.2	10.3	0.54
	24	Small companies' stocks	Vanguard Small-Cap ETF (VB)	19.0	8.4	0.44
	13	India	iShares MSCI India ETF	18.5	8.4	0.45
	21	Index NASDAQ-100 stock	Invesco QQQ Trust (QQQ)	18.4	17.7	0.96
	38	Manufacturing industry	Morningstar US Industrials Sector	18.3	10.4	0.57
	27	BRIC	Morningstar BRIC	18.3	3.2	0.18
	46	Real estate	Vanguard Real Estate ETF (VNQ)	17.8	7.4	0.41
	23	Growth stocks	Morningstar US Growth	17.6	14.0	0.79
	42	Real estate operations	Morningstar US Real Estate Sector	17.5	7.3	0.42
	2	Emerging Markets Equity ETFs	iShares MSCI Emerging Markets	17.4	1.8	0.11
	32	Telecommunications and communications	Morningstar US Communication Services	17.3	9.6	0.55
	1	Broad Market ETFs	iShares Core MSCI Emerging Markets ETF	17.2	2.8	0.16
	7	Stocks of European companies	Vanguard European Stock Index/FTSE Europe ETF (VEUSX, VGK)	17.1	4.3	0.25
	26	Broad market index	Morningstar Emerging Markets	16.8	3.9	0.23
	11	Value stocks of non-U.S. companies in developed countries (unhedged)	iShares MSCI EAFE Value (EFV)	16.5	3.0	0.18
	12	Growth stocks of non-U.S. companies in developed country (unhedged)	iShares MSCI EAFE Growth (EFG)	15.7	4.8	0.31
	19	U.S. broad stocks market	Vanguard Total Stock Market Index/ETF (VTSAX) (VTI)	15.6	11.4	0.73
	28	Quality stocks	iShares MSCI USA Quality Factor ETF (QUAL)	15.5	11.9	0.76
	9	Stocks of European, Australian and Far East major companies	iShares MSCI EAFE (EFA)	15.5	4.2	0.27

Risk level	No.	Investment strategies	Morningstar and ETFs indices	Per year, %:		Returns / risk ratio	
				Standard deviation (risk)	Returns		
Moderate risk	17	Stocks of the S&P 1500 index (90% of equity capitalization in the U.S.)	SPDR® Port S&P 1500 Comps Stk Mkt ETF (SPTM)	15.4	11.7	0.76	
	20	Major companies' stocks	Vanguard Large Cap Index/ETF (VLCAX) (VV)	15.3	11.7	0.76	
	14	Stocks of 23 developed and 24 emerging markets (unhedged)	iShares MSCI ACWI ex US ETF (ACWX)	15.3	3.0	0.20	
	3	Stocks of companies from developed countries, excluding the USA	Morningstar Developed Markets ex-US	15.3	4.9	0.32	
	24	Malaysia	iShares MSCI Malaysia ETF	15.3	-3.9	-0.26	
	18	S&P 500 index stocks	Vanguard S&P 500 ETF (VOO)	15.2	12.0	0.79	
	2	Stocks of companies from developed countries	Morningstar Developed Markets	15.1	8.9	0.59	
	27	Stocks of ESG companies	Morningstar US Sustainability	15.0	11.7	0.78	
	8	Stocks of global companies	Vanguard Total World Stock Index/ETF (VTWAX, VT)	15.0	8.1	0.54	
	1	Broad stocks market	Morningstar Global Markets	14.9	8.3	0.56	
	16	Broad U.S. stocks market	Morningstar US Market	14.9	11.6	0.78	
	39	Communal services	Morningstar US Utilities Sector	14.8	8.7	0.59	
	30	Dividend stocks	Morningstar Emerging Markets Dividend Yield Focus	14.7	3.3	0.22	
	22	Value stocks	Morningstar US Value	14.7	9.7	0.66	
	5	Dividend stocks – broad diversification	Schwab U.S. Dividend Equity ETF (SCHD)	14.7	11.0	0.75	
	37	Medicine and health care	Morningstar US Healthcare Sector	14.4	11.0	0.77	
	25	Dividend stocks	Morningstar US High Dividend Yield	14.4	9.2	0.64	
	26	High dividend stocks	Wisdomtree US High Dividend ETF (DHS)	14.3	7.9	0.55	
	48	Life cycle fund 2020	Fidelity Freedom® 2040 (FFFX)	14.0	8.1	0.58	
	45	Gold	SPDR® Gold Shares (GLD)	13.6	5.1	0.37	
	50	Life cycle fund 2045	Vanguard Target Retirement 2045 Fund (VTIVX)	13.5	8.0	0.59	
	37	Corporate stocks	Morningstar UK Corporate Bond	12.9	0.2	0.01	
	34	Countercyclical consumer goods sector	Morningstar US Consumer Defensive Sector	12.7	8.9	0.70	
	29	Stocks with minimum volatility	iShares MSCI USA Min Vol Factor ETF (USMV)	12.3	10.3	0.84	
	Moderate risk	24	Long-term corporate bonds	Vanguard Long-Term Corporate Bond Index/ETF (VLTGX, VCLT)	11.8	3.8	0.32
		51	Life cycle fund 2035	Vanguard Target Retirement 2035 Fund (VTTHX)	11.8	7.1	0.60
		52	70% stocks / 30% bonds	Fidelity Asset Manager® 70% (FASGX)	11.8	7.0	0.59
		58	Covered options fund (hedging by selling call options)	Global X NASDAQ-100 Covered Call ETF (QYLD)	11.6	6.9	0.60
		34	High yield bonds	Morningstar Eurozone High-Yield Bond	11.6	1.2	0.10
36		Government bonds	Morningstar UK Gilt Bond	11.6	-1.5	-0.13	
35		Broad bonds market	Morningstar UK Core Bond	11.5	-1.2	-0.10	
47		Life cycle fund 2025	Fidelity Freedom® 2025 (FFTWX)	10.4	6.0	0.58	
43		High yield bonds	Morningstar Emerging Markets High-Yield Bond	10.3	3.1	0.31	
46		60% stocks / 40% bonds – the oldest fund	Vanguard Wellington™ Inv VWELX	10.2	7.9	0.77	
38		Government bonds	Morningstar Japan Treasury Bond	10.1	-2.3	-0.23	
32		Inflation indexed government bonds	Morningstar Eurozone Treasury Inflation-Linked Securities	9.8	0.3	0.03	
45		60% stocks / 40% bonds – the largest fund	American Funds American Balanced A (ABALX)	9.7	7.6	0.79	
33		Corporate bonds	Morningstar Eurozone Corporate Bond	9.4	-1.0	-0.11	
29		Government bonds	Morningstar Eurozone Treasury Bond	9.4	-0.9	-0.10	
28		Broad bond market	Morningstar Eurozone Core Bond	9.2	-1.2	-0.13	
40		Government bonds	Morningstar Emerging Markets Sovereign Bond	8.8	3.0	0.34	
31		Government bonds with duration 5–7 years	Morningstar Eurozone 5-7 Yr Treasury Bond	8.7	-1.0	-0.12	
5		Infrastructural bonds	Morningstar Global Bond Infrastructure	8.2	1.5	0.19	
3		Inflation indexed government bonds	Morningstar Global Treasury Inflation-Linked Securities	8.0	0.8	0.10	
26		High yield bonds	Morningstar US High-Yield Bond	7.7	4.6	0.60	
30		Government bonds with duration 1–3 years	Morningstar Eurozone 1–3 Yr Treasury Bond	7.7	-2.1	-0.28	
39		Broad bond market	Morningstar Emerging Markets Composite Bond	7.5	3.0	0.40	
4	Corporate bonds	Morningstar Global Corporate Bond	7.2	1.5	0.20		

Risk level	No.	Investment strategies	Morningstar and ETFs indices	Per year, %:		Returns / risk ratio
				Standard deviation (risk)	Returns	
Low risk	56	Risk parity hedging strategies (investments in less volatile assets)	AQR Equity Market Neutral N (QMNNX)	7.0	5.3	0.76
	59	Long/Short strategy– buying undervalued shares, selling shares whose prices may fall	Neuberger Berman Long Short Instl (NLSIX)	7.0	5.3	0.76
	41	Corporate bonds	Morningstar Emerging Markets Corporate Bond	6.9	3.0	0.44
	2	Government bonds	Morningstar Global Treasury Bond	6.9	-0.6	-0.09
	20	Corporate bonds	Morningstar US Corporate Bond	6.7	2.8	0.42
	23	Corporate bonds with duration 5–10 years	Morningstar US 5–10 Yr Corporate Bond	6.5	3.2	0.49
	1	Broad bond market	Morningstar Global Core Bond	6.3	0.1	0.01
	42	Infrastructural bonds	Morningstar Emerging Markets Infrastructure Bond	6.0	3.3	0.56
	44	Broad bond market of Chinese issuers	Morningstar China USD Broad Market Bond	5.5	2.1	0.38
	15	Broad bond market with duration 5–10 years	Morningstar US 5–10 Yr Treasury Bond	5.4	1.6	0.29
	12	Broad bond market with duration 5–10 years	Morningstar US 5–10 Yr Core Bond	5.1	1.9	0.37
	16	Inflation indexed government bonds	Morningstar US Treasury Inflation-Protected Securities	5.0	2.3	0.46
	10	Broad bond market	Vanguard Total Bond Market Index/ETF (VBTD, BND)	4.8	1.8	0.37
	17	Municipal bond ETFs	iShares National Muni Bond ETF (MUB)	4.7	2.8	0.60
	13	Government bonds	Morningstar US Treasury Bond	4.7	1.2	0.26
	9	Broad bond market	Morningstar US Core Bond	4.5	1.7	0.38
	19	Mortgage bonds secured by commercial property	Morningstar US Commercial Mortgage-Backed Securities	3.7	2.0	0.54
	22	Short-term corporate bonds	Vanguard Short-Term Corporate Bond Index/ETF (VSTBX, VCSH)	2.9	2.0	0.70
	21	Corporate bonds with duration 1–5 years	Morningstar US 1–5 Yr Corporate Bond	2.9	2.1	0.74
	14	Government bonds with duration 1–5 years	Morningstar US 1–5 Yr Treasury Bond	2.1	1.1	0.53
18	Mortgage bonds	Morningstar US Asset-Backed Securities	2.0	1.8	0.89	
11	Broad bond market with duration 1–3 years	Morningstar US 1–3 Yr Core Bond	1.4	1.2	0.89	
6	Global monetary market fund	Invesco Treasurer's Ser Tr Prem Instl (IPXX)	0.5	1.3	2.87	
7	U.S. monetary market fund	Vanguard Cash Rsrv Federal MnyMktAdmiral (VMRXX)	0.5	1.3	2.96	

Source: own calculations based on statistics of the information resource Morningstar: URL: <https://www.morningstar.com/>

An important feature of all five groups of strategies on the return and risk map over the 10-year time horizon in 2014–2023 is that their portfolios did not guarantee a breakeven exit of investors at the end of the investment period. This may be due to the impact on long-term portfolio returns of market downturns in 2021–2022, with significant losses in bond portfolios and blended investments due to very rapid increases in FRS and ECB interest rates during this time.

3. Returns and risk s of financial instruments of Russian issuers

Over the past two years from February 2022 to February 2024, dependence of Russian companies' stocks prices on global capital markets has significantly declined. According to our estimates, the correlation margin of profits of the RTS index with the dollar returns of the MSCI indices of large and medium-sized

companies in the US, China, Germany and emerging markets¹, which were 0.77; 0.36; 0.85 and 0.73 respectively as of December 2021, have decreased to the corresponding values of 0.14; 0.20; 0.15 and 0.09 in February 2024. Such a decrease in the correlation between the yields of the RTS and MSCI US indices was observed only once in H2 2007, while it has never happened with the index of developing countries. This means that dynamics of the RTS index is in no way related to the dynamics of these stock indices, even the MSCI emerging markets index.

This phenomenon can be explained as such that under conditions of sanctions, the cash flows of funds of foreign portfolio investors from unfriendly countries still impacted on the change in the value of shares. However, indirect channels of interconnection between the Russian financial market and global financial markets through changes in prices for raw materials and other goods exported from Russia, preservation of the ruble convertibility to the dollar, euro, yuan and other currencies, prices for gold and other precious metals, prices for imported goods and some other channels remain.

Counter-sanctions policy

The key events of 2023 and the beginning of 2024 were associated with attempts to solve the problems of unfreezing the financial assets of Russian investors in foreign depositories and moving the securities of Russian companies² registered abroad to the Russian jurisdiction.

Despite the lacking full official information on the value of the mutually frozen assets as of 2023, they can be estimated as follows:

- Russian assets frozen in the EC area amounted to about \$273 bn,³ of which \$227 bn (84.1%) belonged to assets of the Russian Federation, \$29 bn (10.6%) to Russian legal entities under sanctions⁴, and \$17 bn (5.3%) to private resident investors;
- according to our estimates, the blocked investments of private foreign investors, amounted to about \$164 bn including \$133 bn (81.1%) in shares of Russian issuers,⁵ \$16 bn (9.8%) in OFZ and \$15 bn (9.1%) in Eurobonds of Russian issuers. However, estimates of the value of frozen investments in shares is conditional, since it is not reflected in the accounts of foreign investors.

¹ The correlation ratio at the end of the month was calculated using monthly values of index returns for 3 preceding years according to the MSCI resource.

² Companies implementing their principal activities the Russian Federation

³ According to Russian business media estimates, only about \$5-6 billion of Russian assets have been blocked in the United States. See: *Aleksey Dolzhenkov*. Russia is ready to respond to confiscation // *Monocle*. No. 5. January 29 – February 4, 2004.

⁴ According to a statement by European Commissioner for Justice Didier Reynders, as of the beginning of March 2024, Russia's state reserves worth Euro208 bn were blocked in European depositories. and assets of sanctioned entities worth about Euro27 bn. URL: <https://www.vedomosti.ru/politics/news/2024/03/05/1023870-es-hochet-dostich-dogovorennosti>

⁵ Calculated as 60% of the Free float of Russian shares, which is 33% of the amount of capitalization in 2023. The estimate of the indicated share of non-residents in Free float is based on statements of Moscow Exchange representatives published by RBC. URL: <https://www.rbc.ru/finances/12/12/2023/65783e559a79476ca3869857>

Some of these frozen assets and the income paid are recorded in so-called "C" accounts in Russian financial organizations, and their value is estimated at Rb1.06 trillion or about \$14 bn which according to representatives of the Russian Ministry of Finance, is approximately equal to the above-mentioned asset value of Russian private investors in the amount of \$17 bn, blocked in European depositories.

In 2023, Russia managed to partially solve the problem of unlocking assets belonging to Russian legal entities and individuals; according to the Bank of Russia, the amount constituted about Rb3 trillion rubles (\$33 bn).¹ This was mainly due to forced conversion of depository receipts for shares of Russian companies, issuance of replacement bonds and other measures. However, negotiations and court procedures have not been very successful, the value of the still frozen assets of about 2.5 mn private investors is about Rb1.6 trillion (\$17 bn) as of March 2024.

Moreover, during the second wave of blocking foreign assets of resident investors in November 2023, the St. Petersburg Stock Exchange and related client assets in its infrastructure organizations worth approximately \$3 bn fell under the US blocking sanctions.²

The mechanism of voluntary exchange of blocked assets of Russian and foreign investors envisaged by the Executive Order of the President of the Russian Federation No.844 dated 08.11.2023 "On additional temporary economic measures related to circulation of foreign securities"³ may be more effective in solving this problem.

It suggests the possibility of exchanging blocked foreign assets of Russian private investors up to the amount of Rb100.000 for foreign investors' funds blocked on "C" type money accounts. According to subsequent explanations of the Ministry of Finance and the Bank of Russia, the said exchange is supposed to be conducted under voluntary auctions organized by the Voronezh broker Investment Chamber, which initiated such an original procedure. The responsibility for unblocking of the received foreign assets in foreign depositories lies with the purchasers of the said securities. According to the Ministry of Finance, implementing the above measures could reduce the value of unblocked assets by only Rb100 bn, however, the number of private investors affected by the asset freeze would be reduced by 2.5 mn out of 3.6 mn investors affected by the sanctions.⁴

In the context of preparation of a decision by the European Union on the unilateral withdrawal of income received on blocked assets of the Russian Federation⁵ in European depositories in the amount of about \$3 bn per year, risks of escalation of the conflict over blocked assets and retaliatory measures from Russia have significantly increased. Adoption of such measures in unfriendly countries increases the likelihood that the Russian Federation will introduce retaliatory measures in terms of similar withdrawal of a part of non-residents' funds on "C" accounts or tougher conditions for repatriation of foreign capital

1 URL: <https://quote.rbc.ru/news/article/64e4d83a9a79473cbcf9b43e>

2 URL: <https://quote.rbc.ru/news/article/65d46d289a79478199c6ddef>

3 URL: <http://publication.pravo.gov.ru/document/0001202311080023>

4 URL: <https://quote.rbc.ru/news/article/654babc89a7947761d40573f>

5 URL: <https://www.consilium.europa.eu/media/69866/20240201-special-euco-conclusions-mff-ukraine-en.pdf>

in case of termination of production activities in Russia. At the same time, these measures may be asymmetric in many respects, since seizure of proceeds from frozen assets abroad mainly concerns government assets of the Russian Federation, while Russia's possible retaliatory measures will apply to the assets of private individuals and institutional investors.

Despite the available restrictions, in 2023 the value of non-residents' assets in government securities of the Russian Federation decreased from \$30bn in 2022 to \$16bn in 2023 for OFZs and from \$16bn to \$15bn for government Eurobonds. This indicates that in these market segments non-residents still had some opportunities to sell bonds to various structures of residents of the Russian Federation and non-residents from friendly countries.

A severe risk, including for the stability of the ruble exchange rate, remains the problem of foreign direct investment outflow by global companies deciding to stop doing business in Russia. According to the current legislation¹ in this case, selling transactions of Russian assets are subject to approval by foreign investment commission and should be concluded at a discount of at least 50% of the companies' market value. Moreover, the company must pay a "voluntary" contribution of 5 to 10% of the assets' market value to the budget.

According to the New York Times, in December 2023, losses of Western companies after the decision to leave Russia amounted to more than \$103bn. At least \$1.25bn was paid in 2023 to the budget from sale of business by non-residents in "voluntary" contributions. Many companies continue to stay in Russia because they do not want to lose funds they have invested in the development of Russian business.²

Owing to strict requirements related to sale of assets at high discounts imposed on non-residents going out of business in Russia in 2022–2023, the government has largely succeeded in preventing the impact of the direct outflow of foreign investments on weakening of the ruble exchange rate. However, in the long run, this measure may have more severe implications for the prospects of attracting DFI to Russia.

In order to maintain access to the capital market for Russian issuers admitted to listing on foreign stock exchanges and unblock the funds of their resident shareholders invested in depositary receipts, in 2023 a number of large companies fulfilled the procedure of re-registration of their parent holding companies from a foreign jurisdiction to Russia. According to investment company "Aigenis", organized by RBC³ publishing house, at the end of 2023, the aggregate value of equity securities of Russian companies moving from foreign jurisdictions amounted to about Rb2.6 trillion or \$28.5bn. On the one hand, it creates additional opportunities for Russian investors to invest in shares of promising companies, and on the other hand, amid limited monetary resources of domestic investors

1 Executive Order of the President of the Russian Federation of 08.09.2022 No.618 "On Special Procedure for implementation (execution) of certain types of transactions (operations) between certain persons" and other legal acts.

2 URL: <https://www.forbes.ru/biznes/502683-nyt-ocenila-ubytki-zapadnyh-kompanij-posle-uhoda-iz-rossii-v-103-mlrd>

3 URL: https://pro.rbc.ru/demo/6560a1709a7947525c498723?from=article_body

may result in fire sale of shares of other issuers and reduction in share prices on the stock market.

In 2022, a decision was made to issue so-called replacement bonds in compliance with the Executive Order of the President of the Russian Federation aimed to prevent mass defaults of issuers of corporate Eurobonds due to sanctions restrictions on the fulfillment of their obligations, as well as blocking of assets owned by Russian investors,

Companies that did not receive special permits to retain Eurobond issues were obliged to issue replacement bonds instead of Eurobonds until January 1, 2024. This deadline was subsequently extended to July 1, 2024.¹ In turn, the Ministry of Finance decided to postpone the project to replace sovereign Eurobonds to 2024.² According to the Bank of Russia, the volume of the replacement bond market in 2023 amounted to Rb1.8 trillion, (\$19.8 bn), they were issued by 15 issuers replacing 49 Eurobond issues. According to the Bank of Russia experts, the replacement of corporate issuers' Eurobonds in 2023 was slower than market actors³ expected. The reason is the limited demand for a significant supply of these securities in the domestic market.

Thus, the unprecedented sanctions of unfriendly countries, adopted in 2022-2023, due to effective measures of the government did not result in a crisis of the domestic financial system, however, significant risks and restrictions for the domestic financial market still remain. Blocking of foreign assets of resident investors limits growth of domestic demand for financial instruments of Russian issuers, while blocked assets of foreign investors, primarily in shares, remain a "overhang" creating risks of falling prices for shares of the largest blue chips in case of unfreezing of these funds.

Internal factors affecting financial market

The most severe risks for investors in the Russian financial market in 2023 – early 2024, caused by internal factors, include tightening of monetary policy, liquidity problems and sufficiency of domestic demand for financial instruments, as well as risks of violation of minority investors' rights in the process of nationalization of certain private companies.

Rising inflation in 2023 resulted in raising the key rate by the Bank of Russia from 7.5% at the beginning of the year to 16.0%, keeping it at this level at the end of March 2024 (*Fig. 8*). Rising key rate creates risks of reduction in the market value of fixed-income bonds, increase in the cost of new bond borrowings for issuers, including the government, increase in the risks of financial stability of banks and

1 Executive Order of the President of the Russian Federation of 22.05.2023 No.364 On amendments to the Executive Order of the President of the Russian Federation No. 430 of 05.07.2022 "On repatriation of foreign currency and currency of the Russian Federation by residents-participants in foreign economic activities."

2 URL: <https://www.forbes.ru/investicii/502009-minfin-resil-otlozit-zamesenie-suveren-nyh-evrobondov-novymi-bumagami-na-2024-god>

3 Review of financial instruments. 2023. // Bank of Russia. Analytic material. 2024. URL: https://www.cbr.ru/Collection/Collection/File/48944/fi_review_2023.pdf

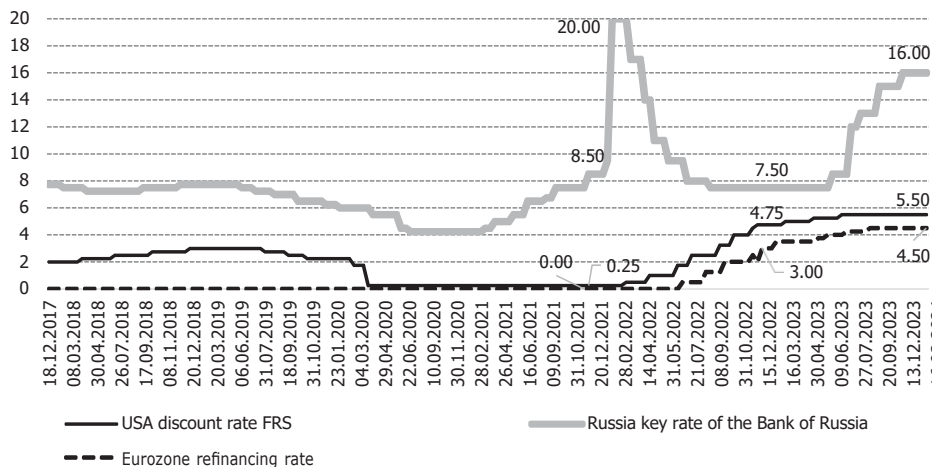


Fig. 8. FRS discount rate, European Central Bank refinancing rate and Bank of Russia key rate, % p.a. from December 2017 to March 7, 2024

Source: own calculations based on Cbonds.

other financial organizations, a significant part of whose portfolios are invested in bonds. Rising interest rates have a negative impact on the whole on the stock market, increasing the attractiveness of bank deposits and reducing the market value of stock issuers by increasing the discount factor of their future financial flows. However, part of this negative impact of rising interest rates on the value of shares is compensated by the fact that amid increased inflation companies' profits grow, and private investors invest additional funds in shares as an instrument that protects against inflation.

As of March 2024, actors of the Russian financial market, as well as investors in the financial markets of developed countries, expect a massive reduction in interest rates by central banks amid slowing inflation starting from the H2 2024, which may provide an impetus for growth in the stock and bond markets, including the domestic Russian market.

Stability of the domestic bond market largely depends on the level of liquidity of the banking system¹, which we estimate as the sum of surplus (+) or deficit (-) of banks' liquidity and the value of funds placed by banks on deposits with the Bank of Russia and in bonds (Fig. 9). As shown in the chart, on the whole, in 2023, the average liquidity of banks remained virtually unchanged compared to 2022. Its average daily level in 2023 amounted to Rb4.2 trillion compared to Rb4.3 trillion in 2022. However, in November-December 2023, as shown in Fig. 9, the liquidity of banks became very unstable, its average daily value during this period decreased to Rb 2.5 trillion. According to the Bank of Russia, this was primarily due to

¹ Since banks are the main investors in the market of government and corporate bonds.

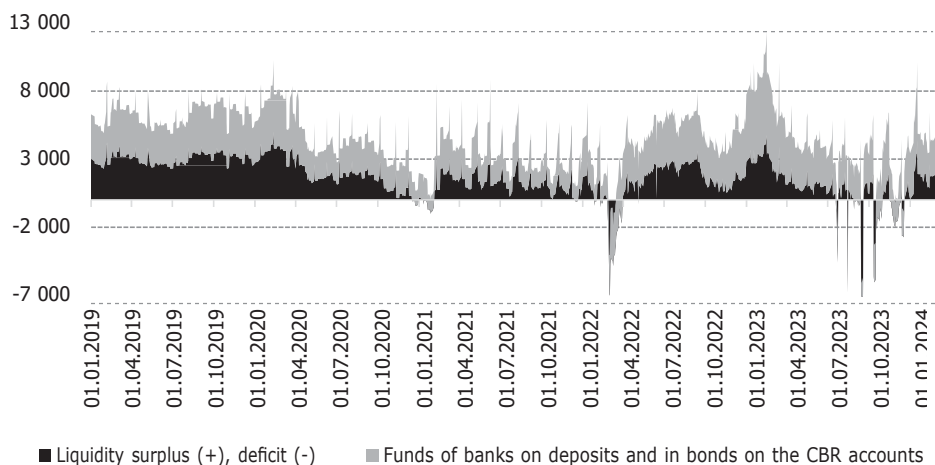


Fig. 9. Total bank liquidity from January 2019 to March 7, 2024, billions of rubles

Source: own calculations according to Bank of Russia. URL: http://www.cbr.ru/hd_base/bliquidity/

growing federal and regional budget expenditures at the end of 2023.¹ It may also be associated with significant investments by banks in corporate bonds in December 2023, when in one month, issuers placed bonds worth Rb 1.9 trillion or 25.7% of the annual volume of their new issues. In January-February 2024, bank liquidity recovered to the average daily level of Rb4.6 trillion.

The main sources to create bank liquidity were cash inflows from banks' activities, including temporarily free budgets' funds (Fig. 10), as well as refinancing by the Bank of Russia. In the context of the key rate growth in 2023 compared with 2022, the refinancing by the Central Bank of Russia began to play a more significant role in ensuring banks' liquidity, especially during the period of outflow of budgetary funds from the banking system in November – December 2023.

Average daily refinancing of banks due to Bank of Russia loans increased from Rb1.5 trillion in 2022 to Rb2.3 trillion in 2023, including up to Rb2.4 trillion in November – December 2023. Accordingly, the average annual refinancing share of the Bank of Russia in sources of bank liquidity rose from 35.3% in 2022 to 54.1% in 2023, including 96.1% in November – December 2023. According to experts of the Bank of Russia, at the end of 2023, banks mainly borrowed loans backed by non-market assets.²

In January-February 2024, as the outflow of budgetary funds from the banking system stopped, the share of refinancing in the sources of liquidity dropped to

1 On development of banking sector of the Russian Federation in December 2023 // Bank of Russia. Information-analytical material. January 2024. p.9. URL: https://www.cbr.ru/Collection/Collection/File/47805/razv_bs_23_12.pdf

2 On development of banking sector of the Russian Federation in December 2023 //Bank of Russia. Information-analytic material. January 2024 p. 9. URL: https://www.cbr.ru/Collection/Collection/File/47805/razv_bs_23_12.pdf

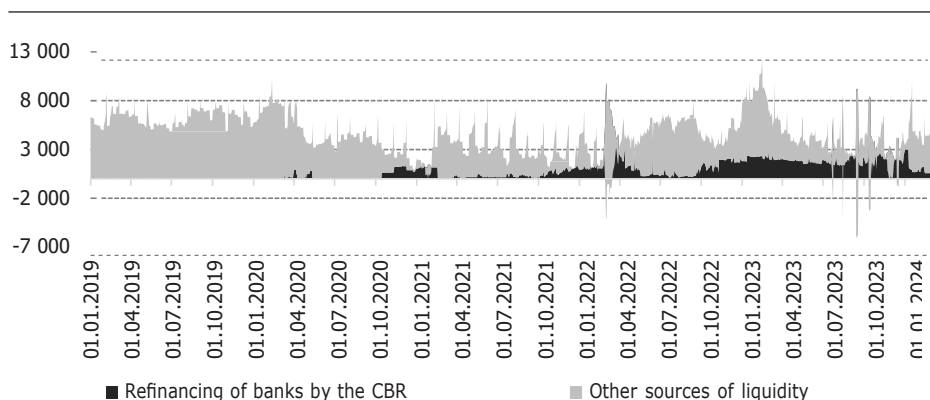


Fig. 10. Sources of bank liquidity from January 2019 to March 7, 2024, billions of rubles

Source: own calculations based on the Bank of Russia. URL: http://www.cbr.ru/hd_base/bliquidity/

21.4%. Cash flows from banks' core activities became the main source of liquidity support with the share of 78.6%.

Largely due to efforts of the Government of the Russian Federation and the Bank of Russia it was possible to maintain financial stability in the domestic stock and bond markets and to prevent devaluing of the ruble exchange rate. In 2023, exchange liquidity in the equity, non-government bond, money and foreign exchange markets generally recovered and exceeded the average level of exchange trading volumes over 2017–2021 (Table 6). In 2023, trading volumes on the equity market exceeded this annual average for the period 2017–2021 by 33.4%, while on the non-government bond market the similar excess amounted to 40.7%, on repo transactions on the money market – 80.4%, on the foreign exchange market the respective deviation amounted to only -1.0%. This was due to the involvement of private investors' funds and banks in the market, while limiting the opportunities for selling shares and bonds by non-residents. However, liquidity of the OFZ, futures and options markets in 2023 never recovered to the average levels of 2017–2021. The market for shares of foreign companies on the St. Petersburg Exchange ceased to exist; client assets in the exchange's depository were blocked abroad due to sanctions imposed on the SPSE and its settlement depository.

The resources of private investors on the stock exchange market are not unlimited; in 2022–2023, there was a tendency of slowing down the inflow of new funds to the stock market. According to the Moscow Exchange, in 2020–2023, the inflow of new funds of private investors on the stock market amounted to \$17.1 bn. However, it is decreasing from \$4.2 bn in 2020 and \$7.2 bn in 2021 to \$3.6 bn in 2022 and \$2.1 bn in 2023. Starting from 2024, the problem of attracting new funds to the exchange market may become more acute. Its solution implies not only the expansion of tax benefits for long-term savings on individual investment accounts (IIA) and in the Long-Term Savings Program (LTSP), but also the stimulation of institutional investors to more active investing in the market of shares and other risky assets.

Trading volumes on the Moscow Exchange (ME) and the St. Petersburg Exchange (SPSE) from 2017 to February 2024, trillion rubles

	Mean value in 2017–2021	2022	2023	Changes in 2023 vs mean value in 2017–2021, %	January – February			
					2021	2023	2024	Change in 2024 vs 2021, %
1. Secondary trading volume:								
Shares, receipts, units	17.3	17.6	23.0	33.4	4.5	1.8	4.0	-10.2
OFZ	7.1	4.2	6.5	-8.8	0.8	0.5	0.7	-11.9
Non-government bonds	3.5	2.3	4.9	40.7	0.5	0.6	0.7	63.7
2. REPO operations	365.8	541.9	659.9	80.4	51.8	74.4	117.7	127.2
Including with central counterparty (CC)	230.9	301.8	364.0	57.6	32.9	39.6	67.5	105.2
3. Currency market	331.4	267.8	328.0	-1.0	46.9	36.3	55.1	17.5
4. Futures	102.8	75.6	77.9	-24.3	22.8	7.6	12.7	-44.1
5. Options	6.2	2.3	2.9	-53.2	0.9	0.3	0.5	-45.0
6. SPSE, foreign shares, billions of rubles	277.9*	122.2	33.9**	-87.8	74.2	9.4		

* Average for 2020–2021

** January-October 2023

Source: own calculations based on Moscow exchange and EPSE.

In 2023 and early 2024, risks of nationalization of stakes in companies that violated privatization legislation in previous years became apparent. As of the beginning of March 2024, according to RBC's calculations, more than 55 companies in Russia have been ruled in courts or are in the process of being considered for nationalization.¹ This was alarming for business, so the Russian Union of Industrialists and Entrepreneurs came up with a legislative initiative to protect bona fide acquirers from transferring their assets to the state.²

The uprise of a precedent of seizure of shares of public companies from their bona fide purchasers – minority investors became a significant risk for the stock market. It concerned the shares of Solikamsk Magnesium Plant (SMZ). In 2023, by court decision, the state became the owner of the bulk of the plant's shares, which privatization in the 1990s was deemed illegal by the court. After that, the Perm Region Prosecutor's Office filed a lawsuit to seize the remaining 10.6% of SMZ shares from the minority shareholders. On March 22, 2023, the Arbitration Court of the Perm Region satisfied the claim of the Kama Region Prosecutor's Office to seize the remaining SMZ shares owned by 2.266 minority shareholders in favor of the state.

1 For details see: *Alexander E. Abramov*. Subtraction of property: what risks for the economy and business nationalization brings // Forbes. March 13, 2024. URL: <https://www.forbes.ru/mneniya/507852-vycitanie-sobstvennosti-kakie-riski-dla-ekonomiki-i-biznesa-neset-nacionalizacia>

2 URL: <https://www.forbes.ru/biznes/506813-rspp-razrabotal-popravki-dla-zasity-biznesa-ot-deprivatizacii>

In response, Elvira Nabiullina, Governor of the Central Bank of Russia, stated that the Bank of Russia “will look” at what can be done in this situation, and the regulator will assess precedents concerning seizure of shares from minority shareholders taking in consideration the legislation.¹ In our opinion, in this case the question arises as to how effective is the norm of Article 302 of the Civil Code of the Russian Federation, which does not allow seizure of property from bona fide purchasers.

Investor strategies in the Russian market

To assess the ruble yield of various financial instruments available to private investors in the Russian financial market, *Table 7* provides data on the nominal yields of 114 portfolios and individual securities issues over the 10-year time horizon 2014-2023 and 2023, grouped into five categories: portfolios of Moscow Exchange indices, portfolios of bonds and mixed investments, portfolios of exchange-traded and open-end mutual investment funds (UIFs), individual issues of shares of issuers of the first, second and third tiers, as well as portfolios of factor strategies on the stock market.²

In 2023, the leaders in terms of profitability in the domestic market were the so-called second and third tier stocks (*Table 7, Fig. 11*).³ Thus, the yield of Globaltruck shares (No.82 in *Table 7*) amounted to 1031.4% per annum, TNS Energo Rostov-on-Don (No.82) to 438.3, Krasny Oktyabr (No.79) to 383.6, TGK-14 (No.83) to 361.8, RCC Energia (No.76) to 325.7, Sollers (No. 80) to 279.7%, while the yield of the Moscow Exchange index including dividends was only 53.8%. In 2023, the factor portfolio of shares of small-capitalization companies (No.90) was among the top ten in terms of return, with a 282.8% return among portfolio strategies.

The increased interest of private investors in second- and third-tier shares is one of the most noticeable trends on the Russian stock market in 2023. According to experts of the Bank of Russia, it is explained by the “lack of new investment ideas,” the weakening ruble exchange rate and rising inflation expectations, that is why “these securities may be considered as objects of speculative transactions.”⁴ However, the interest of private investors in these shares may be largely due to an attempt to find more profitable investments than blue chips. With non-residents’ funds blocked in the first-tier shares, the demand of domestic investors logically shifts in favor of those shares where non-residents’ investments are lacking or

1 The Central Bank was concerned about cases of seizure of shares bought at auctions from minority shareholders // *Vedomosti*. March 22, 2024. URL: <https://www.vedomosti.ru/investments/news/2024/03/22/1027391-izyatiya-aktsii-u-minoritariyev>

2 Portfolios of factor strategies on the stock market were calculated by the Laboratory for institutions and financial markets analytics, IAES RANEPА

3 The division of share issues into echelons is conditional and has no official classification. As a rule, the first tier includes stocks with high trading volumes and large shares in stock indices, while the second and third tiers include less liquid stocks. For the sake of simplification, with few exceptions, the second and third tiers are often referred to as shares from the second and third levels of the Moscow Exchange listing, respectively.

4 Review of financial instruments. 2023 // *Analytics*. Bank of Russia, 2024. p. 27. URL: https://www.cbr.ru/Collection/Collection/File/48944/fi_review_2023.pdf

Table 7

Returns in rubles on investments in financial instruments of Russian issuers in 2014–2023 (% p.a.) and from January to February 2024 (%)

Strategies	Serial Number	Financial instruments	Returns, %		
			2014–2023	2023	Jan – Feb 2024
Indices of Moscow Exchange shares	1	Moscow Exchange index (IMOEX)	7.5	43.9	5.1
	2	Moscow Exchange total yields index (MCFTR)	14.4	53.8	5.7
	3	Index of RTSI in US dollars	-2.8	11.6	4.0
	4	RTS index of total gross yields (RTSTR) in US dollars	3.4	19.4	4.7
	5	Moscow Exchange mid-cap and small capitalization index (MCXSM)	8.0	60.5	5.2
	6	Moscow Exchange broad market index (MOEXBMI)	7.8	44.8	5.5
	7	Moscow Exchange blue chips index (MOEXBC)	6.9	43.2	4.2
	8	Moscow Exchange oil and gas index (MOEXOG)	9.7	56.4	3.0
	9	Electrical energy index (MOEXEU)	6.2	32.9	6.9
	10	Telecommunications index (MOEXTL)	-2.9	15.3	20.4
	11	Moscow Exchange Metals and Mining index (MOEXMM)	13.1	32.0	2.3
	12	Finance Index (MOEXFN)	6.4	58.8	5.8
	13	Moscow Exchange consumer sector index (MOEXCN)	2.5	52.6	12.1
	14	Chemistry and petrochemistry index (MOEXCH)	18.5	14.3	2.6
	15	Transportation index (MOEXTN)	2.6	133.5	5.4
	16	Moscow Exchange IT index (MOEXIT)		53.6	19.6
	17	Moscow Exchange Construction index (MOEXRE)		41.3	19.4
Bonds and mixed investments	18	Moscow Exchange government bond index RGBITR	6.6	0.8	-0.2
	19	Cbonds-GBI RU	6.8	0.7	-0.3
	20	Cbonds-GBI RU 1–3Y	7.2	2.0	1.4
	21	Cbonds-GBI RU 3–5Y	7.4	1.2	0.1
	22	Cbonds-GBI RU 5Y	6.9	-0.1	-0.9
	23	RUGBINFTR		1.7	-3.5
	24	IFX-Cbonds	9.1	5.9	1.7
	25	Cbonds-CBI RU BBB/ruAA-	8.1	2.7	0.8
	26	Cbonds-CBI RU BB/ruBBB	8.3	5.3	2.4
	27	Cbonds-CBI RU B/ruB-	10.6	10.3	3.0
	28	Cbonds-CBI RU High Yield		11.8	2.2
	29	Cbonds-CBI RU 1-3Y	9.1	4.2	1.2
	30	Cbonds-CBI RU 3-5Y	8.7	1.7	1.4
	31	Cbonds-CBI RU 5Y	6.7	-0.1	-0.9
	32	Shares 10% / bonds 90%	8.8	7.6	1.0
	33	Shares 40% / bonds 60%	11.2	21.4	1.6
	34	Shares 50% / bonds 50%	11.9	26.4	1.8
	35	Shares 60% / bonds 40%	12.6	31.5	1.9
	36	Shares 90% / bonds 10%	14.2	48.0	2.5
Collective investments	37	Index IF-FI – bond funds	9.5	5.5	2.1
	38	Index IF-MM – monetary market funds	8.4	11.6	2.6
	39	Index IF-EG – stock funds	15.6	63.8	4.4
	40	Index IF-PE – Electricity stock funds	9.3	24.8	4.8
	41	BPIF Liquidity MC VIM Investment		9.5	2.6
	42	BPIF Pervaya – Savings fund MC Pervaya		9.3	2.6
	43	BPIF Pervaya – Corporate bonds Fund MC Pervaya		3.2	3.0
	44	BPIF Moscow Exchange index MC VIM Investment		51.3	5.9
	45	BPIF Alfa Capital Managed bonds MC Alfa-Capital		12.7	2.2
	46	BPIF Gold. Stock Exchange MC VIM Investment		39.6	0.9
	47	BPIF Pervaya – Government bonds fund MC Pervaya		0.1	-0.2
	48	BPIF Pervaya – Responsible investment fund MC Pervaya		35.3	4.4
	49	BPIF Raiffeisen – High yield bonds MC Raiffeisen Capital		8.4	1.9
	50	BPIF DOKHOD Dividend shares index RF MC Dokhod		56.4	5.9
	51	BPIF DOKHOD Growth stock index RF MC Dokhod		42.9	8.1
	52	BPIF Gazprombank – Corporate bonds 2 years MC AAA Capital management		3.2	0.9
	53	BPIF Gazprombank – Corporate bonds 4 years MC AAA Capital management		0.9	0.6
	54	OPIF Pervaya – Russian shares fund MC Pervaya	9.1	60.6	4.7
	55	OPIF C Pervaya – Balanced MC Pervaya	10.1	42.1	3.3
	56	OPIF Aton shares – Peter Stolypin MC Aton-management	12.8	53.8	3.4
	57	OPIF Aton shares – Iier Z.U MC Aton management	20.5	106.5	7.4
	58	OPIF Alyonka shares – Capital MC RECORD CAPITAL		113.9	27.9
	59	OPIF Oil/gas sector MC VIM Investment	15.5	86.2	5.2
	60	OPIF Pervaya – Mixed fund income producing MC Pervaya (June 2022)		28.7	4.7
	61	OPIF Treasury MC VIM Investment	8.0	5.5	1.3
	62	OPIF Raiffeisen – Corporate bonds MC Raiffeisen Capital	5.5	6.7	1.5
	63	OPIF Raiffeisen – Dividend shares MC Raiffeisen Capital	7.4	60.1	4.9
	64	OPIF MM Monetary market. Rubles MC VIM Investment		9.2	2.6
	65	OPIF Metallurgy shares MC VIM Investment	17.0	40.1	0.3
	66	OPIF April Capital – Shares MC April Capital	19.8	55.5	5.1

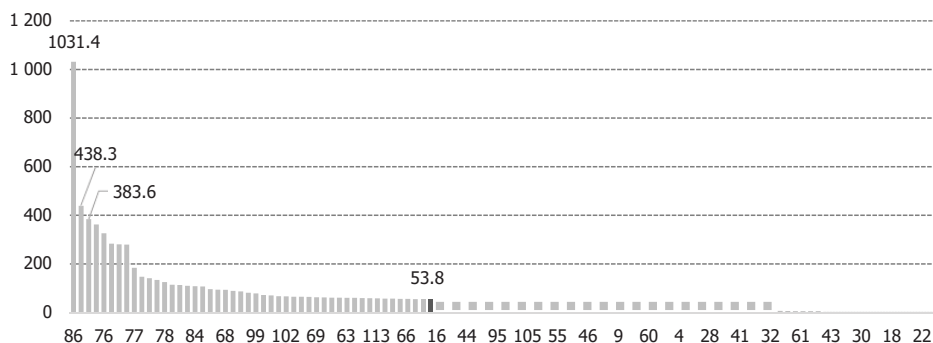
Strategies	Serial Number	Financial instruments	Returns, %			
			2014–2023	2023	Jan – Feb 2024	
Shares of Russian issuers	67	Gazprom	1.4	-1.9	0.7	
	68	JSC Sberbank	10.4	92.8	7.2	
	69	Rosneft	8.9	61.9	-3.9	
	70	Lukoil	12.8	66.4	7.2	
	71	MMC Nor Nickel	11.6	5.6	-9.6	
	72	NOVATEK	13.7	34.1	-6.9	
	73	Surgutneftegaz (PJSC)	7.9	112.2	12.0	
	74	Sberbank (PJSC)	13.0	92.9	7.3	
	75	PJSC Ashinsky metallic plant (AMEZ)	34.9	140.7	6.7	
	76	PJSC RCC Energo (RKKE)	19.8	325.7	-1.7	
	77	OJSC Beiron (BLING)	27.6	183.2	-2.8	
	78	PJSC GAZ (GAZA)	-0.6	124.8	11.4	
	79	PJSC Krasny Ocyabr (KRUT)	27.2	383.6	6.9	
	80	PJSC Sollers (SVAV)	-0.7	279.7	5.1	
	81	PJSC TNS energo Voronezh (VRSB)		278.8	26.1	
	82	PJSC TNS energo Rostov-on-Don (RTSB)		438.3	46.7	
	83	PJSC TGC-14 (TGKN)	22.3	361.8	26.0	
	84	PJSC European electric technique (EELT)		107.7	54.8	
	85	PJSC Samaraenergo (SAGO)		146.7	15.6	
	86	Globaltruck (MMC) GTRK		1031.4	-12.9	
	Factor strategies by Department for analysis of institutions and financial markets IAES RANEPА	87	Broad stock index (Wide_Market)	14.0	55.6	5.5
		88	Broad stocks index – total returns (Wide_Market_IR)	21.0	69.4	6.3
		89	Stocks of Large Cap Companies (Big)	13.8	51.7	5.1
		90	Stocks of Small Cap Companies (Small)	37.8	282.8	12.6
		91	Growth stocks (Growth_L)	13.5	50.6	10.0
		92	Value stocks (Value_H)	11.5	34.6	3.9
93		Stocks with low previous return (Low_Return)	4.3	28.8	21.1	
94		Stocks with high previous return (High_Return)	15.4	71.5	7.6	
95		Low liq stocks (Low_Liq)	10.7	47.9	3.7	
96		High liq stocks (High_Liq)	14.2	58.0	9.4	
97		Low dividend return stocks (Low_DY)	14.2	39.9	5.7	
98		High dividend return stocks (High_DY)	12.3	45.5	3.1	
99		Stocks without dividend payments (No_Div)	15.6	77.9	8.8	
100		Stocks with dividend payments (Was_Div)	12.9	44.3	3.7	
101		Stocks with low dividend return – total return (Low_DY_IR)	18.8	49.5	5.7	
102		Stocks with high dividend return – total return (High_DY_IR)	23.3	65.5	4.5	
103		Stocks without dividend payments – total return (No_Div_IR)	16.4	88.1	9.1	
104		Stocks with dividend payments – total return (Was_Div_IR)	20.6	59.7	4.7	
105		Private companies' stocks (Private)	15.0	44.0	4.7	
106		Stocks of state-owned companies (SOE)	12.3	64.1	4.5	
107		Private companies' stocks – total return (Private_IR)	22.6	54.5	4.7	
108		State-owned companies' stocks – total return (SOE_IR)	19.0	80.6	5.8	
109		Low market stocks (Low_PE)	17.0	95.7	18.5	
110		High market stocks (High_PE)	13.9	52.7	13.6	
111		Low market stocks – total return (Low_PE_IR)	23.3	109.6	20.1	
112		High market stocks – total return (High_PE_IR)	21.0	61.2	13.6	
113		Stocks of financial ecosystems (RusEco Index)		57.4	9.8	
114		Stocks of financial ecosystems – total return (RusEco Index)		64.2	9.8	

Source: own calculations based on Moscow Exchange, Cbonds and Constructor CAPM ru IAES RANEPА. URL: <https://ipei.ranepa.ru/ru/capm-ru/ruseco-index>

insignificant. In this sense, investments in the shares of new companies may become one of the drivers of structural transformation of the Russian economy if the appropriate regulation is available.

The lowest returns of 114 strategies under consideration in 2023 were those of Gazprom (No.67) at -1.9% p.a., and various government bond portfolios: index Cbonds-GBI RU5Y (No.22) – -0.1%, exchange-traded mutual fund Pervaya – State Bonds Fund managed by MC Pervaya (No.47) – 0.1%, index portfolios Cbonds-GBI RU (No.19) – 0.7% and RGBITR (No.18) – 0.8% and the inflation indexed government bonds RUGBINFTR¹ (No.23) in the amount of 1.7%. Similarly, one of the lowest yields for the year was demonstrated by the exchange-traded mutual

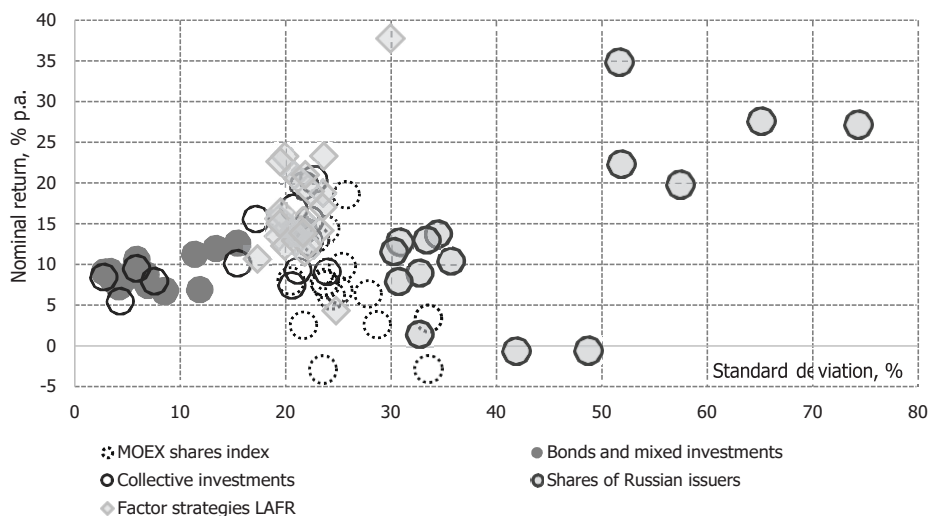
¹ Index of the Moscow Exchange government bonds RUGBINFTR is the indicator of OFZ market attached to inflation (OFZ- Inflation).



Note. The investment strategy serial number corresponds to their names in *Table 7*. The return of the Moscow Exchange is highlighted in dark color on the graph – total return.

Fig. 11. Nominal ruble return of various financial instruments of Russian issuers in 2023, % per annum

Sources: own calculations based on resources of Moscow Exchange, Cbonds and Constructor CAPM-ru RANEPА. URL: <https://ipei.ranepa.ru/ru/capm-ru/ruseco-index>



Note. See *Table 3* for ETF serial numbers on the chart.

Fig. 12. Average annual nominal yield and risk of ruble-denominated investments in financial instruments of Russian issuers over time horizon 2014-2023, % per annum

Sources: own calculations based MOEX, Cbonds and Constructor CAPM-ru resources, RANEPА. URL: <https://ipei.ranepa.ru/ru/capm-ru/ruseco-index>

fund Gazprombank – Corporate Bonds with a duration of 4 years managed by AAA Capital Management (No.53) in the amount of 0.9%. The low yield of bond portfolios, mostly with long duration, was caused by growth of the key rate of the Bank of Russia, and of Gazprom shares by the consequences of sanctions from unfriendly countries.

In 2023, 15 of the 27 factor investing strategies mentioned in *Table 7* outperformed the Moscow Exchange index by the return criterion – full return (*Fig. 11*).

Fig. 12 considers the return and risk indicators of 86 strategies out of 114 listed in *Table 7*, with data over a 10-year time horizon from 2014 to 2023. These strategies have also been grouped into five categories. High risks of direct investments in company shares (red circles), which are not always compensated by higher returns, present a special visual feature of the chart.

However, description of portfolios of collective investments, i.e. mutual funds, marked by green circles, and factor strategies of investing in shares,¹ primarily due to diversification effect, in many cases evidence significantly lower risk values and higher returns rather than direct investments in shares.

Moreover, many portfolios relevant to MOEX indices, where sectoral indices and benchmarks of issuers with different capitalization prevail, noticeably lose to factor strategies and portfolios of exchange-traded and open-end mutual funds in the sample by the yield/risk criterion.

Depending on the value of return/risk ratio, the most successful portfolios over the 10-year horizon under consideration were predominantly bond portfolios with investments in corporate bonds, as well as a mixed strategy of stocks 10% / bonds 90%. The said ratio amounted to 3.22 for IFX-Cbonds broad corporate bond portfolio (No.24), 3.06 for IF-MM index – money market funds (No.38), 2.69 for Cbonds-CBI RU 1-3Y index (No.29), 2.27 for Cbonds-CBI RU BBB/ruAA (No.25), from 1.81 to 1.72 – for three other corporate bond portfolios with different credit quality and duration (Nos. 27, 26 and 20), 1.62 – for IF-FI index – bond funds (No.37) and 1.44 – for the mixed portfolio of shares 10% / bonds 90% (No.32).

Among strategies with the lowest return/risk ratios were the telecom index portfolio (No.10) with -0.12, Sollers (No.80) and GAZ (No.78) with zero ratios, Gazprom (No.67) with 0.04, Moscow Exchange Transportation (No.15) with 0.09, Consumer sector (No.13) with 0.12 and Finance (No.12) with 0.25.

Thus, over the 10-year time horizon from 2014 to 2023, diversified portfolios of mutual funds and factor indices had a noticeable advantage in terms of return/risk on the domestic market compared to investors' direct investments in shares of different tiers and sectoral indices of the Moscow Exchange, while bond portfolios, primarily corporate ones, were noticeably superior to stock portfolios.

Map of returns and risks of ruble-denominated financial instruments

The map of returns and risks of ruble financial instruments for a private investor includes strategies with the average annual risk (standard deviation) from 29.9% to 74.3%, classified as portfolios with particularly high risk out of investments in 86 financial instruments on the horizon of 2014-2023 (*Table 8*). The ruble nominal yield of financial instruments included in this category ranged from -0.7 to +37.8%. This group of portfolios included only equity investments, with their major part being direct investments in second and third tier stocks (No.79, 77, 76, 83, 83,

¹ Each factor strategy shown in *Table 7* is usually given as two portfolios – with and without dividends.

Table 8

Return and risk map of 86 investment strategies in ruble-denominated financial instruments of Russian issuers on a 10-year time horizon in 2014–2023

Strategies based on risk level	No.	Financial instruments	Per year, %:		Return / risk ratio
			Standard deviation (risk)	Return	
High risk	79	PJSC Krasny Ocyabr (KROT)	74.3	27.2	0.37
	77	JSC Bellon (BLNG)	65.1	27.6	0.42
	76	PJSC RCC Energy (RKKE)	57.5	19.8	0.34
	83	PJSC TGC-14 (TGKN)	51.8	22.3	0.43
	75	PJSC Ashinsky metal works plant (AMEZ)	51.7	34.9	0.67
	78	PJSC GAZ (GAZA)	48.8	-0.6	-0.01
	80	PJSC Soller (SVAV)	41.9	-0.7	-0.02
	68	JSC Sberbank	35.7	10.4	0.29
	72	NOVATEK	34.5	13.7	0.40
	3	RTS Index (RTSI) in US dollars	33.6	-2.8	-0.08
	4	RTS index of full gross yields (RTSTR) in US dollars	33.6	3.4	0.10
	74	PJSC Sberbank	33.4	13.0	0.39
	67	Gazprom	32.7	1.4	0.04
	69	Rosneft	32.7	8.9	0.27
	70	Lukoil	30.8	12.8	0.41
	73	PJSC Surgutneftegaz	30.7	7.9	0.26
71	MMC Norinikel	30.3	11.6	0.38	
90	Low cap companies' stocks (Small)	29.9	37.8	1.26	
Higher risk	15	Transportation index (MOEXTN)	28.7	2.6	0.09
	12	Finances index (MOEXFN)	27.8	6.4	0.23
	14	Chemistry and petrochemistry index (MOEXCH)	25.7	18.5	0.72
	8	MOEX oil and gas index (MOEXOG)	25.4	9.7	0.38
	7	MOEX blue chips index (MOEXBC)	25.0	6.9	0.27
	93	Stocks with low accumulated return (Low_Return)	24.8	4.3	0.17
	9	Electric energy index (MOEXEU)	24.3	6.2	0.25
	54	OPIF Pervaya – Russian Equity Fund MC Pervaya	23.9	9.1	0.38
	2	Moscow Exchange Index of full yield «gross» (MCFTR)	23.8	14.4	0.60
	1	MOEX index (IMOEX)	23.8	7.5	0.32
	6	MOEX broad market index (MOEXBMI)	23.6	7.8	0.33
	111	Stocks with low market valuation – total return (Low_PE_TR)	23.6	23.3	0.99
	10	Telecommunications index (MOEXTL)	23.5	-2.9	-0.12
	109	Stocks with low market valuation – total return (Low_PE)	23.5	17.0	0.72
	101	Stocks with low dividend return-total return (Low_DY_TR)	23.5	18.8	0.80
	97	Low dividend return stocks (Low_DY)	23.3	14.2	0.61
11	MOEX metals and mining index (MOEXMM)	22.8	13.1	0.58	
Moderate risk	57	Aton Equity OPIF – tier 2.0 MC Aton -Management Management	22.6	20.5	0.91
	108	State-owned companies' stocks – total return (SOE_TR)	22.4	19.0	0.85
	59	Oil and gas sector equity OPIF VIM Investments Management Company	22.3	15.5	0.70
	56	Oil and gas sector equity OPIF VIM Investments Management Company	22.2	12.8	0.58
	106	State-owned companies' stocks (SOE)	22.1	12.3	0.56
	112	Stocks with high market valuation – total return (High_PE_TR)	21.9	21.0	0.96
	92	Value stocks (Value_H)	21.8	11.5	0.53
	66	April Capital OPIF – Stocks of April Capital Management Company	21.7	19.8	0.91
	36	Stocks 90% / bonds 10%	21.7	14.2	0.66
	94	Stocks with high accumulated return (High_Return)	21.7	15.4	0.71
	13	MOEX consumer sector index (MOEXCN)	21.7	2.5	0.12
	110	Stocks with high market value (High_PE)	21.7	13.9	0.64
	96	High liq stocks (High_Liq)	21.5	14.2	0.66
	104	Stocks with dividend payment – total return (Was_Div_TR)	21.1	20.6	0.97
	40	Index IF-PE – funds of electric power stocks	21.1	9.3	0.44
	100	Stocks with dividend payment (Was_Div)	21.0	12.9	0.62
88	Broad index stocks – total return (Wide_Market_TR)	20.8	21.0	1.01	

Strategies based on risk level	No.	Financial instruments	Per year, %:		Return/risk ratio
			Standard deviation (risk)	Return	
Moderate low risk	65	Metallurgy equity mutual investment fund VIM Investments Management Company	20.8	17.0	0.82
	87	Broad stocks index (Wide_Market)	20.6	14.0	0.68
	63	Raiffeisen OPIF – Dividend Stocks Raiffeisen Capital Management Company	20.6	7.4	0.36
	5	MOEX average and small cap index (MCXSM)	20.5	8.0	0.39
	89	High Cap companies' stock (Big)	20.4	13.8	0.68
	98	Stocks with high dividend return (High_DY)	19.9	12.3	0.62
	102	Stocks with high dividend return – total return (High_DY_TR)	19.9	23.3	1.17
	103	Stocks without dividend payment – total return (No_Div_TR)	19.5	16.4	0.84
	105	Private companies' stocks (Private)	19.5	15.0	0.77
	107	Private companies' stocks-total return (Private_TR)	19.5	22.6	1.16
	99	Stocks without dividend payment (No_Div)	19.4	15.6	0.81
	91	Growth stocks (Growth_L)	19.3	13.5	0.70
	95	Low liq stocks (Low_Liq)	17.3	10.7	0.62
	39	Index IF-EG – stocks funds	17.2	15.6	0.91
	35	Stocks 60% / bonds 40%	15.4	12.6	0.82
	55	OPIF C Pervaya – Balanced MC Pervaya	15.4	10.1	0.66
	34	Stocks 50% / bonds 50%	13.4	11.9	0.89
Low risk	22	Cbonds-GBI RU 5Y	11.8	6.9	0.58
	33	Stocks 40% /bonds 60%	11.4	11.2	0.99
	19	Cbonds-GBI RU	8.6	6.8	0.81
	18	MOEX government bond index RGBITR	8.5	6.6	0.78
	61	OPIF Treasury MC VIM Investments	7.6	8.0	1.05
	21	Cbonds-GBI RU 3–5Y	6.9	7.4	1.07
	30	Cbonds-CBI RU 3–5Y	6.7	8.7	1.30
	32	Stocks 10% / bonds 90%	6.1	8.8	1.44
	27	Cbonds-CBI RU B/ruB-	5.9	10.6	1.81
	37	Index IF-FI – bond funds	5.9	9.5	1.62
	26	Cbonds-CBI RU BB/ruBBB	4.7	8.3	1.76
	62	Raiffeisen OPIF – Corporate Bonds Raiffeisen Capital Management Company	4.3	5.5	1.27
	20	Cbonds-GBI RU 1–3Y	4.2	7.2	1.72
	25	Cbonds-CBI RU BBB/ruAA-	3.6	8.1	2.27
	29	Cbonds-CBI RU 1–3Y	3.4	9.1	2.69
	24	IFX-Cbonds	2.8	9.1	3.22
	38	Index IF-MM – monetary market funds	2.8	8.4	3.06

Sources: own calculations based on MOEX, Cbonds resources and Constructor CAPM-ru RANEPА.
URL: <https://ipei.ranepa.ru/ru/capm-ru/ruseco-index>

75, 78, 80, etc.), as well as in blue chips – Sberbank shares (No.79, 77, 76, 83, 75, 78, 80, etc.), as well as in blue chips – shares of Sberbank (No.68 – ordinary shares and No.74 – preferred shares), NOVATEK (No.72), Gazprom (No.67), Rosneft (No.69), Lukoil (No.70) and MMC Norilsk Nickel (No.71), Surgutneftegaz (No.73).

The second group of high-risk strategies included portfolios with risk values ranging from 22.8% to 28.7% and a range of average annual returns from -2.9% to 23.3%. This group also includes only equity investments, but, unlike the first group, conducted through diversified broad and sectoral indices of the Moscow Exchange and separate factor portfolios.

This group of strategies includes MOEX broad index portfolios – total returns (No.2) and without dividends (No.1), MOEX broad market index (No.6), open-end mutual fund Pervaya – Russian equities fund managed by MC Pervaya (No.54). Considering sectoral portfolios, this group of strategies included MOEX transportation indices (No.15), chemicals and petrochemicals (No.14), finance

(No.12), electric power (No.9) and telecommunications (No.10), as well as five factor stock portfolios (Nos.93, 97, 101, 109, 111).

The third group of strategies marked by a moderate risk included portfolios with a risk indicator from 20.8% to 22.6% and a return range from 2.59% to 21.0%. Only one – stocks 90% / bonds 10% (No.36) of the 18 strategies in this group presents a mixed investment, all others are represented by diversified stock portfolios. This group includes 10 factor strategies, investments in the stocks of state-owned companies (No.106 and 108¹), stocks with high P/E ratios (No.110 and 112), stocks involving dividend payment (No.100 and 104), inertia strategy stocks (No.94) and some others. This group also includes four open-end equity mutual funds with a broad portfolio (No.56, 59, 66) and a second-tier equity fund (No.57).

The fourth group of moderately low-risk strategies includes portfolios with a standard deviation of 13.4 to 20.8% and a return range of 7.4 to 23.3%. This group also includes, in addition to three mixed investment portfolios – stocks 60% / bonds 40% (No.35), stocks 50% / bonds 50% (No.34) and the open-ended mixed investment mutual fund Pervaya – Balanced managed by MC Pervaya (No.55) – stock portfolios with lower return volatility. In this group of strategies, 10 portfolios represent factor investments, including investments in private company stocks (Nos.105 and 107), high dividend yielding stocks (Nos. 98 and 102), non-dividend paying stocks (Nos. 99 and 103), growth company stocks (No.91), low liquidity company stocks (No. 95), as well as portfolios of the Moscow Exchange index of mid- and small-capitalization companies (No.5), Raiffeisen dividend stocks open-end mutual fund managed by Raiffeisen Capital Management Company and other investments.

Finally, the fifth lowest risk strategy group consists of portfolios with a risk indicator between 2.8% and 11.8% and a return range between 5.5% and 11.2%. It includes exclusively bond portfolios and mixed portfolios of stocks 40% / bonds 60% (No.33), stocks 10% / bonds 90% (No.32).

Assessing the return and the risks of investment strategies that were available to the bulk of private investors in 2014–2023, a number of conclusions can be drawn.

The safest strategies for private investors are three of the five strategies listed in *Table 8*, namely, those with moderate, moderate-low and low risk. Over a 10-year horizon, the average annual returns of almost all portfolios in these groups are positive, which means that there is an almost minimal risk of a long-term investor leaving these portfolios with losses.

However, direct investments in shares of issuers of different levels, including blue chips, currently the most popular among private investors, are too risky strategies, which in some cases are not even compensated by an adequate risk premium.

Only diversified investments significantly limit investors' risks by providing comparable equity returns to direct investment. The portfolios of our

¹ Same strategy without and with dividends.

sample of the largest exchange-traded and open PIFs greatly improve the accessibility of diversification to private investors. Using factor investment strategies, unfortunately, not yet popular in the domestic market and also allows to significantly increase the availability and efficiency of the effects of diversification of investments for private investors. Considering the criterion return/risk, bonds, especially corporate, remain more profitable investments for private investors.

Finally, mapping the return and risk of financial instruments with their information technology shown above on the example of a 10-year time horizon, allows investors to better assess opportunities of the domestic financial market and risks when making investment decisions in the implementation of different financial goals.

4. Crisis situations in financial markets

In 2023, global and Russian stock markets were recovering after a difficult 2022.

There have been no classical financial crises in this sphere. However, there is no universally recognized understanding of financial crisis. Risks of financial crises, quite often manifested in sharp drops in the prices of financial assets, are perceived as a rare and unpredictable event, called a "black swan."¹ In this sense, financial crises are understood, for example, as situations where stock indices fall by 25% or more from their peak value within one year.²

In our view, the alternative "black turkeys" hypothesis of Lawrence Siegel³ and Paul Kaplan⁴ more accurately describe the dynamics of the Russian issuers' equity market over long horizons since 1997. According to this theory, financial crises are considered as events lasting over time, starting from the moment of stock prices decline to their full recovery to pre-crisis values. In this context, financial crises are not such rare and unpredictable events; many capital markets continuously live amid such environment during long runs. Considering modern financial markets from the perspective of Siegel-Kaplan theory reveals important trends in capital markets over long time horizons.

Using the example of 70 MSCI indices measuring monthly changes in dollar value of shares of large and medium-sized companies from 59 countries (including Russia)⁵ over the time horizon from December 1969 to February 2024, we tried to assess to what extent the phenomenon characterized by the term "black turkey",

1 *Nassim Taleb*. Black swan. The impact of the Highly improbable. 2-nd edition, add. / Translated from English. M.: KoLibri; Azbuka – Attikus, 2015.

2 *Barro R.J., Ursúa J.F.* Stock market crashes and depressions. NBER Working Paper № 14760. 2009. URL: <http://www.nber.org/papers/w14760>; Reinhart Carmen M., Rogoff Kenneth S. (2009). This time is different. Eight Centuries of Financial Folly. Princeton University Press.

3 *Lawrence B. Siegel*. Black Swan or Black Turkey? The State of Economic Knowledge and the Crash of 2007–2009 // *Financial Analysts Journal*. 2010. July/August. Vol. 66. Iss. 4. P. 6–10.

4 *Lawrence B. Siegel L.B.* Black Swan or Black Turkey? The State of Economic Knowledge and the Crash of 2007–2009 // *Financial Analysts Journal*. 2010. July/August. Vol. 66. Iss. 4. P. 6–10.

5 The dynamics of the Russian stock market in dollar terms was assessed using the RTS and RTS-total return indices.

i.e. stock indices that have not recovered for a long time, is typical for different countries, including Russia.

According to our estimates (*Table 9*), in February 2024, 58 stock indices of 70 examined or 82.3% of the indices in our sample, have not recovered from previous severe declines. The longest recovery time is the MSCI Japanese equity market index, which by February 29, 2024, has not recovered for 35 years since its peak in February 1989. The top five MSCI stock indices that have not yet recovered are also China and Thailand with the same recovery time of 30.2 years since their December 1993 peaks, Philippines with 27.1 years since January 1997, and Finland with 23.8 years since April 2000.

The world equity index, excluding U.S. equities, has recovered only 96.3% within 16.3 years from its October 2007 peak. At the same time, the MSCI emerging markets index is only 2.8 years away from its May 2021 peak. Surprisingly, but stock markets of 29 or 49.1% of all countries in our sample, did not recover to pre-crisis levels after 2007–2008 stock market crisis, which happened during global financial crisis. These indices include Russia's RTS index, which has recovered only 45.8% over the past 15.7 years to its May 2008 value. For the RTS Total Return Index, the situation is more favorable: since its last peak in October 2021, it has reached 73.3% in 2.3 years.

Thus, based on Siegel-Kaplan approach to understanding financial crises, it can be concluded that most stock markets in the world, including the Russian one, are constantly experiencing prolonged recovery of stock values from previous shocks. In this sense, ensuring financial stability of capital markets may probably be understood not only as a financial regulation supporting the ability of these markets to withstand short-term equity price shocks, but also as creating background for growth and early recovery of these markets from previous financial crises. Examples of such new approaches in financial regulation include strategic measures in Japan and South Korea in 2023 and early 2024 to address the problem of chronically low equity capitalization of domestic companies.¹

Table 9

Panorama of financial crises is based on the MSCI stock indices in dollar terms of countries that have not recovered from financial shocks in the past as of February 29, 2024

Serial number	Country and groups of countries	Recovery period, years	Current value, % to peak	Peak year	Serial number	Country and groups of countries	Recovery period, years	Current value, % to peak	Peak year
1	Japan	35.0	95.2	Feb.89	30	Kuwait	15.9	60.5	Feb.08
2	China	30.2	40.2	Dec.93	31	Nigeria	15.9	11.5	Feb.08
3	Thailand	30.2	50.9	Dec.93	32	Marocco	15.9	39.6	Mar.08
4	Philippines	27.1	65.8	Jan.97	33	Egypt	15.8	39.9	Apr.08
5	Finland	23.8	39.1	Apr.00	34	Brazil	15.7	36.2	May 08
6	UAE	18.4	37.4	Sep.05	35	Norway	15.7	48.0	May 08
7	Jordan	18.3	15.3	Nov.05	36	Kazakhstan	15.7	75.0	May 08
8	Saudi Arabia	18.0	71.9	Feb.06	37	Oman	15.7	46.7	May 08
9	Vietnam	17.0	35.6	Feb.07	38	RTS Index	15.7	45.8	May 08

¹ See, for example: *Sanyal Shreyashi*. South Korea to speed up reforms for boosting shareholder returns and tackling «Korea discount» // CNBC – online. 15 March 2024. URL: <https://www.cnbc.com/2024/03/15/south-korea-plans-to-speed-up-reforms-to-boost-shareholder-returns-.html>

Serial number	Country and groups of countries	Recovery period, years	Current value, % to peak	Peak year	Serial number	Country and groups of countries	Recovery period, years	Current value, % to peak	Peak year
10	Belgium	16.8	49.9	Apr.07	39	EM – Latin America	15.7	49.0	May 08
11	Italy	16.8	52.8	Apr.07	40	Czech Republic	15.7	39.1	June 08
12	Austria	16.8	32.4	Mar.07	41	Average of indices of 50 sample countries	15.3	53.0	
13	Ireland	16.8	42.1	May.07	42	Israel	13.9	73.5	Mar 10
14	Hungary	16.5	67.2	Jul.07	43	Chile	13.2	35.4	Dec 10
15	Rumania	16.5	80.7	Jul.07	44	South Africa	12.8	59.2	Apr 11
16	Estonia	16.5	46.4	Jul.07	45	Columbia	11.1	30.1	Jan 13
18	Australia	16.3	80.1	Oct.07	46	Mexico	10.9	89.1	Mar 13
19	Spain	16.3	51.5	Oct.07	47	Indonesia	10.8	80.1	Apr 13
20	Singapore	16.3	65.0	Oct.07	48	Lithuania	9.9	73.4	Apr 14
21	United Kingdom	16.3	66.6	Oct.07	49	Malasia	9.5	49.1	Aug 14
22	Poland	16.3	37.4	Oct.07	50	China class A	8.8	62.8	May 15
23	Turkey	16.3	38.5	Oct.07	51	Peru	5.8	91.6	Apr 18
24	Greece	16.3	2.8	Oct.07	52	Trinidad & Tobago	4.9	50.0	Mar 19
27	Bulgaria	16.3	17.2	Oct.07	53	New Zealand	3.1	67.7	Jan 21
17	World without USA	16.3	96.3	Oct.07	54	Hongkong	2.8	60.5	May 21
25	BRIC	16.3	55.3	Oct.07	55	Emerging markets	2.8	74.2	May 21
26	Portugal	16.2	28.1	Nov.07	56	EM Asia	2.8	72.3	May 21
28	Germany	16.2	88.9	Dec.07	57	South Korea	2.7	69.1	June 21
29	Slovenia	16.2	51.3	Dec.07	58	Index RTS-TR	2.3	73.3	Oct 21

Source: own calculations based on MSCI. URL: <https://www.msci.com/>

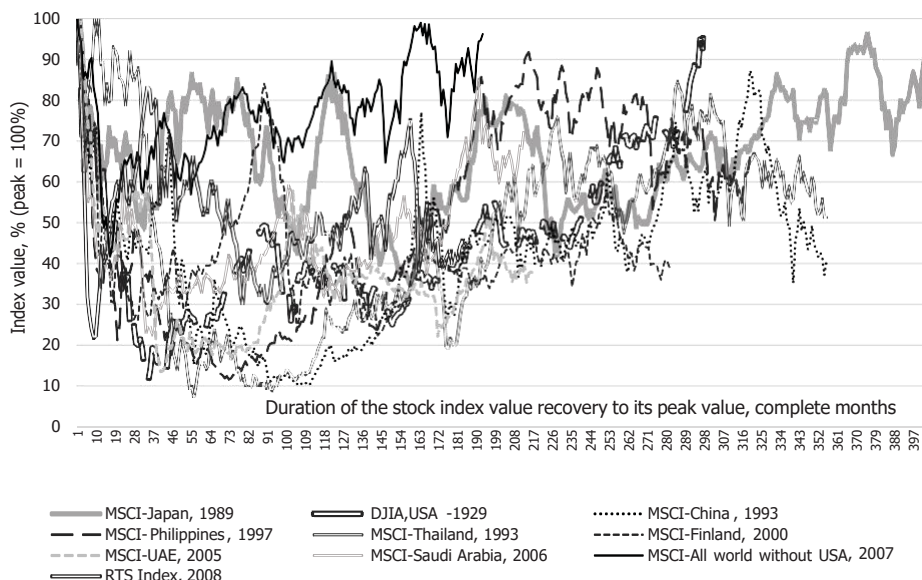


Fig. 13. Depth and duration of the longest recovery periods of stock indices as of February 29, 2024 (recovery duration in months, index value in % (peak = 100%))

Source: own calculations based on MSCI.

The recovery of the RTS index after May 2008 within 15.7 years to the level of only 45.8% is not the longest compared to other long-term financial shocks in

modern history (*Fig. 13*). In the list of the longest financial crises, the most famous

is the recovery of the Dow Jones Industrial Average (DJIA) in the USA after the Great Depression of 1929 which lasted 25.3 years.

However, it currently ranks only 5th in terms of duration, behind Japan’s Nikkei-225, which has been recovering for 35 years since February 1989, and MSCI’s China, Thailand and Philippine large and mid-cap equity indices with recovery durations of 30.2; 30.2 and 27.1 years, respectively.

Moreover, the Japanese Nikkei-225 index in dollar terms is likely to recover in 2024, as its value as of February 29, 2024 was 95.2% of its pre-crisis peak in February 1989, which may become an important historic event in the world of finance. This is facilitated by significant improvements in economic growth and financial stability of the Japanese economy, as well as the implementation of measures of the country’s government to increase the capitalization of national companies.

The duration of the RTS index recovery has already surpassed classic medium-term crises, such as the NASDAQ crisis in 2000 and South Korea’s Kосpi index with recoveries of 14.8 and 15.3 years, respectively. As for the current path of slow recovery, the RTS index is still following the recovery path of the DJIA after the Great Depression of 1929.

In contrast to the dynamically growing MSCI – global companies index, the problem of slow recovery after the 2008 crisis of equity indices is typical for all BRICS countries, except for India (*Fig. 14*). Like the Russian RTS index, the MSCI-Brazil has been unable to recover for 15.7 years since May 2008, and its current value compared to its pre-crisis 36.2% is even lower than that of the Russian index (45.8%). The MSCI indices of companies from China and South Africa reached a recovery point at different times after 2008, i.e. they formally overcame the 2008

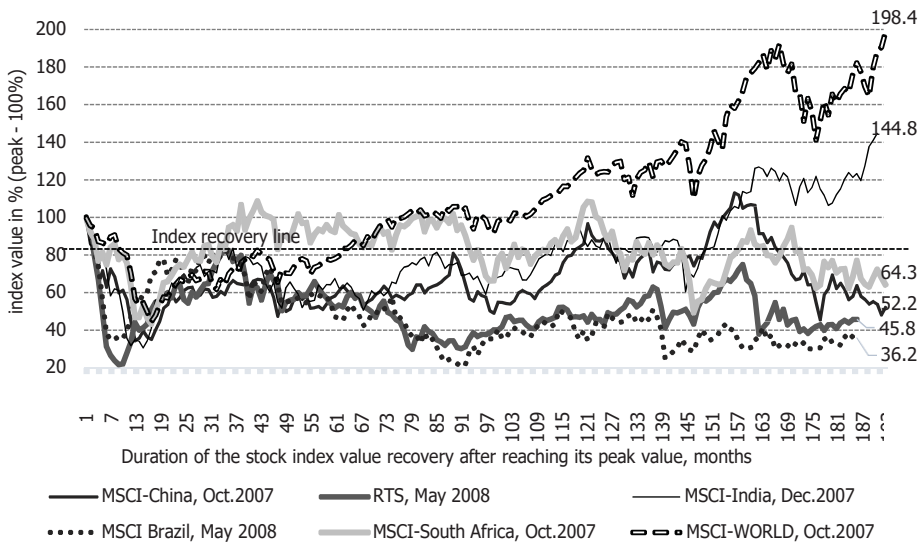


Fig. 14. Recovery dynamics of the BRICS and MSCI World indices in dollar terms after the peaks reached in 2007–2008 (peak = 100%) as of February 29, 2024

Source: own calculations based on MSCI.

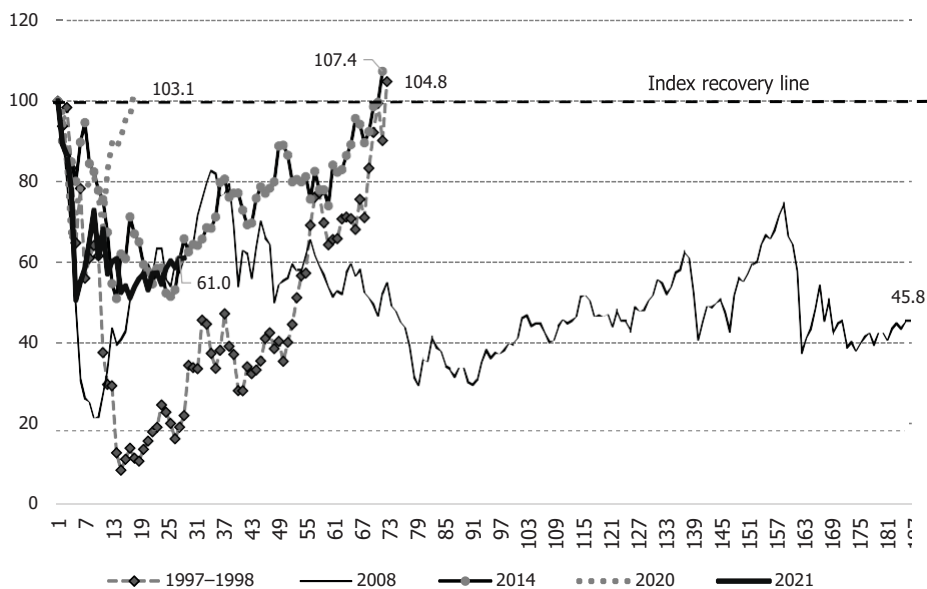


Fig. 15. Changes in the RTS Index relative to its peak values in July 1997, May 2008, February 2014, December 2019, and October 2021 on a time horizon measured in number of months, as of February 29, 2024, % (peak = 100%)

Source: own calculations based on MOEX

crisis. However, these markets have since experienced new recessions, thus, on February 29, 2024, values of MSCI-China and MSCI-South Africa were only 52.2% and 64.3%, respectively of their peak values in October 2007 for both indices.

More dynamic growth of the MSCI-India index is associated with high rates of economic growth in this country and stable inflow of foreign portfolio investments in securities of Indian issuers.

Since 1995, the RTS index has experienced five financial crises, when it declined by 60% or more; two of them, occurring in June 2008 and November 2021, have not ended to date according to the Segel-Kaplan criterion (*Fig. 15*). Apart from the time-delayed recovery of the RTS index from June 2008, the recovery of the RTS index from the more recent financial shock from November 2021 as of February 29, 2024, has lasted 28 months (2.3 years), with its current value at 61.0% of its peak in October 2021.

In relation to the peak value on December 29, 2021, after the SMO began, the Moscow Exchange ruble index recovered only 86.2% by February 29, 2024 (*Fig. 16*). Factors that impede the recovery of blue-chip stocks, constituting the core of the above index, are their dependence on blocked foreign fund investments and limited demand from domestic investors compared to the market value of outstanding shares of major issuers.

During the period under review, the recovery rate for Gazprom shares was 47.3%, MMC Norilsk Nickel – 63.6, NOVATEK – 78.5, Rosneft – 96.5 and Sberbank

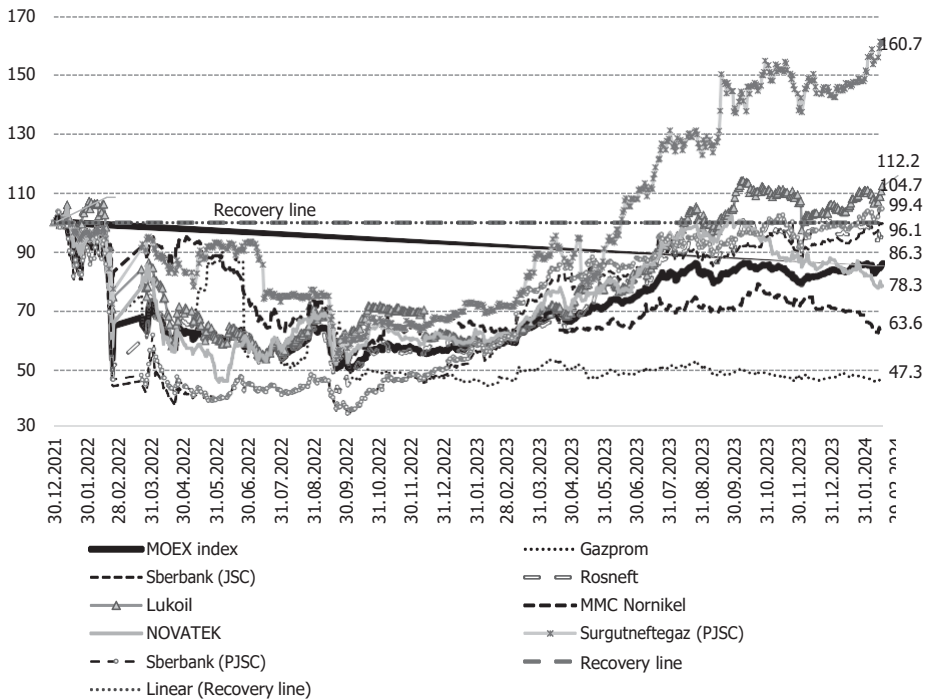


Fig. 16. Change in the value of Moscow Exchange index and share prices of Gazprom, MMC Norilsk Nickel, NOVATEK, Lukoil, Rosneft and Sber as of February 29, 2024, % (values of Moscow Exchange index and share prices of issuers as of December 30, 2021 = 100%)

Source: own calculations based on Moscow Exchange.

common shares – 99.6%. The recovery of those shares of large companies on which issuers paid high dividends was more favorable. For example, preferred shares of Sberbank reached 104.7% compared to prices as of December 29, 2021, shares of Lukoil reached- 112.2%, preferred shares of Surgutneftegaz – 160.7%.

A multiple increase in the value of many second and third tier stocks was a phenomenon of 2023. This phenomenon is only partly explained by speculative factors, to a large extent it can be considered as a search by qualified private investors for more profitable investments in shares of those companies that do not depend on the previous investments of non-residents with growth potential in the current economic environment.

On February 29, 2024 vs December 29, 2021, GAZ share prices amounted to 198.9%, Belon – 247.0, Ashinskiy metal works plant – 391.0, RCC Energia – 391.8, Sollers – 397.0, TGC-14 – 579.2, Krasny Oktyabr – 665.6, TNS Energo Rostov-on-Don – 709.4, Globaltrax (GTM) – 1681.7% (Fig. 17).

Thus, in terms of currency returns on long-term time horizons, the Russian equity market belongs to the category of markets marked by increased volatility and a tendency to long recoveries after periodic financial shocks.

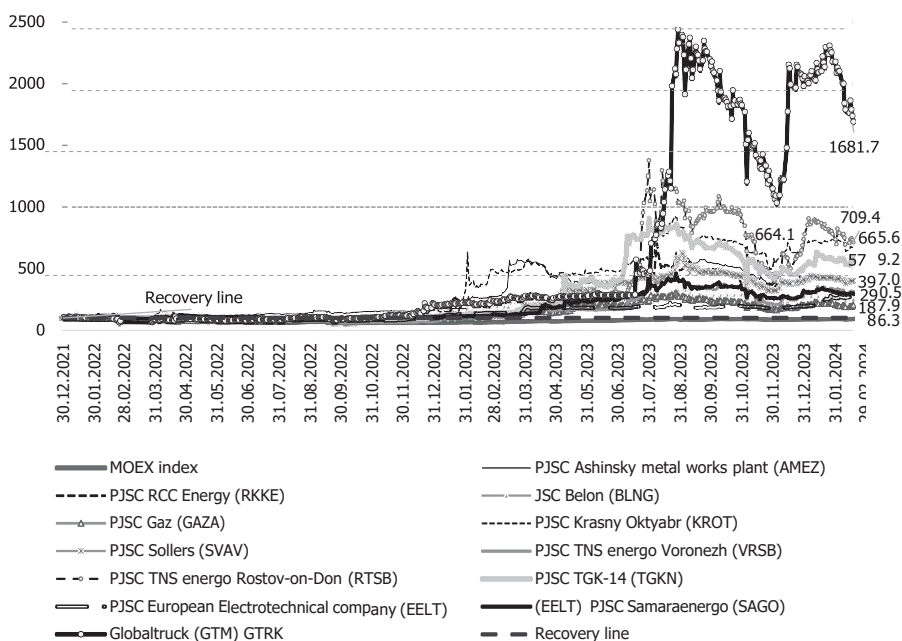


Fig. 17. Change in the value of the Moscow Exchange index and stock prices of a number of second-tier stocks on the Moscow Exchange as of February 29, 2024, % (values of the Moscow Exchange index and issuers' share prices as of 30.12.2021 = 100%)

Source: own calculations based on MOEX data

Currently, like indices of many other countries, the RTS index has not fully recovered from the 2008 crisis and geopolitical events in 2022-2023. The recovery of Russian stock indices in ruble terms is more rapid; as of the beginning of 2024, the Moscow Exchange index has almost recovered to the level of December 2021. In terms of stock returns, the domestic market is becoming increasingly segmented, with moderate price growth of most blue chips accompanied by rapid price growth and increased volatility of second- and third-tier stocks.

2.1.5. Institutional parameters of the Russian equity market

The capitalization of Russian companies increased from \$567 bn in 2022 to \$673 bn in 2023 or by 18.7% (Fig. 18). The net worth of companies partially overcame a 23.4% decline in 2022. In 2023, the equity market's liquidity worth of \$236 bn virtually remained at the previous year's level, an increase of the mere 2.6%, while in 2022 its decline was equal to 39.5%.

On March 22, 2024, the Chairman of the RF Central Bank declared about the need to double the capitalization of the Russian equity market by 2030.¹ By our estimates,

¹ Elvira Nabiullina called for doubling the potential of the Russian stock market // The Vedomosti daily, March 22, 2024. URL: <https://www.vedomosti.ru/investments/news/2024/03/22/1027382-nabiullina-fondovogo-rinka>

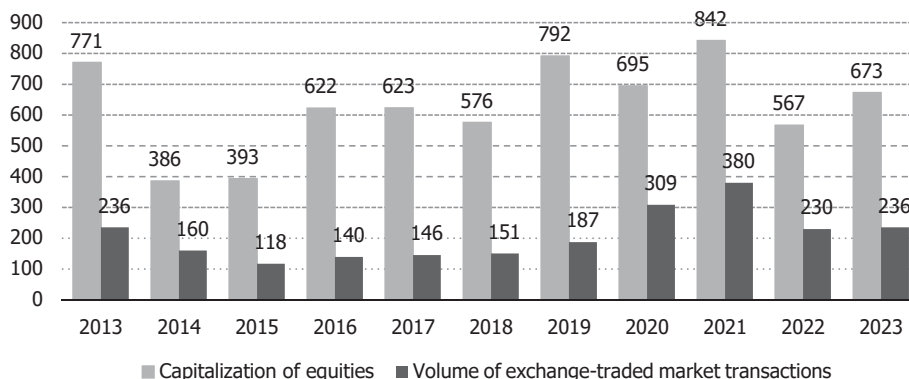


Fig. 18. Capitalization and the volume of market transactions with equities* on the Moscow Exchange in 2013–2023, billion US dollars

* Deemed as market transactions are deals made at an anonymous auction on the Moscow Exchange.

Source: own calculations based on the data of the World Federation of Exchanges.

in 2023 the capitalization/GDP ratio was equal to 33.3%, so, in 2030 this ratio should be around 66%. At the same time, in the updated text of the “Strategy for the Development of the Financial Market of the Russian Federation until 2030,”¹ the stock market capitalization/GDP ratio is planned to be equal to 50%–60% in 2030.

To achieve this result, it is necessary to ensure a considerable increase in domestic investors’ demand for equities. In 2023, growth in the value of Russian companies’ equities was largely facilitated by private investors’ transactions amid the ban on the sale of equities by non-residents, who, by our estimates, own about \$133 bn worth of equities or 60% of Free float. A sale of these equities may cause primarily a capitalization collapse of blue chips. This problem can be solved, for example, by means of a gradual repurchase of these equities by their issuers. Further, to increase capitalization it is necessary to ensure a considerable influx of new funds into domestic market equity instruments, primarily, from domestic institutional investors and non-residents from friendly countries.

To support the domestic stock market, the “Strategy 2030” envisages the implementation of the “Long-Term Savings Program” (LTSP), which became effective on January 1, 2024. However, according to our calculations based on a number of simple assumptions² and published LTSP targets in “The Strategy 2030”, with the existing proportions of investment of NPF pension reserves into Russian companies’ equities maintained, LTSP’s contribution to the support of the

¹ Annex No.2 to “The Strategy for the Development of the Stock Market of the Russian Federation till 2030.” (as amended by RF Government Edict No.3753-r of December 21, 2023).

² When assessing the cash flows of LTSP savings into equities, we proceeded from the following assumptions: 1. The main LTSP participants will be individuals with a moderate level of income amounting on average to Rb80,000 per month. 2. At the initial LTSP stages, the share of personal contributions and funds of their co-financing from the budget in the amount of individuals’ pension savings in their LTSP accounts will be equal to 17%–33%. 3. The average nominal return on investments of pension savings is equal to 5%–7% per annum. 4. The average share of investments of LTSP reserves into equities will be equal to 10.4%, that is, a similar average value of the NPF’s pension reserves in the period from 2019 to September 2023.

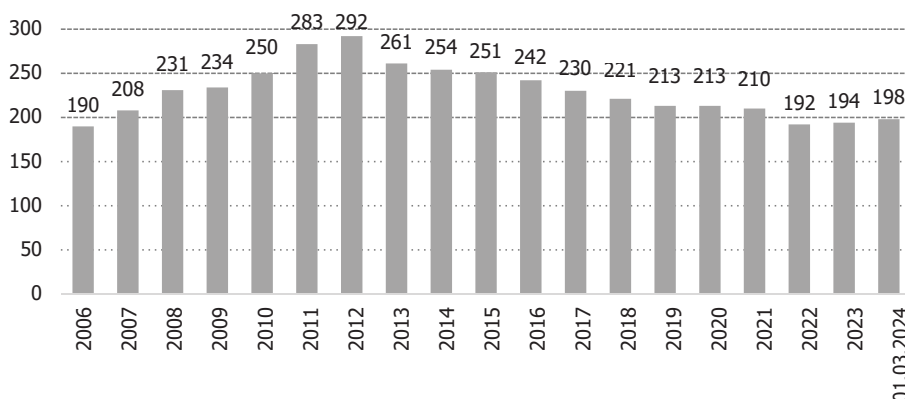


Fig. 19. The number of Russian companies listed at the Moscow Exchange in 2006 to March 1, 2024*

* As regards 2006–2011, the data are based on the MICEX listing; as regards 2012–2022, on the listing of PAO Moscow Exchange.

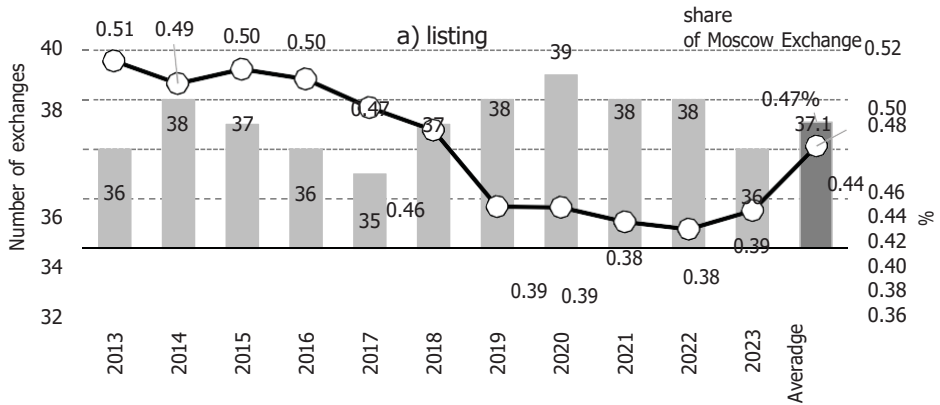
Source: own calculations based on the data of the NAUFOR Bulletin: “The Russian Stock Exchange Market in 2015. Events and Facts” in 2006–2008, as well as the data of the World Federation of Exchanges in 2009–2024.

equity market will be quite moderate. Overall, over seven years – from 2024 to 2030 - the flow of new funds from LTSP to the domestic stock market will amount only to Rb155 bn – Rb422 bn rubles or based on the average annual exchange rate of the ruble in 2023, to Rb1.8 bn to Rb\$5.0 bn. These funds are explicitly insufficient for planned capitalization growth.

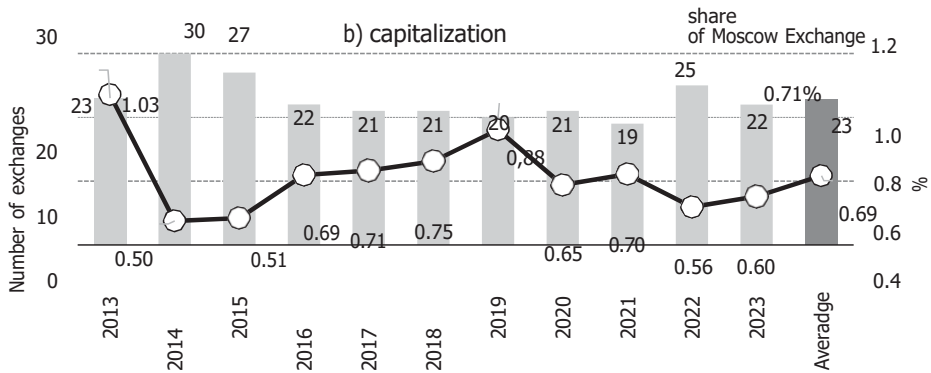
Owing to the revival of IPO transactions, the Moscow Exchange has started to overcome the long-term trend of reduction in the number of listed companies since 2023 (Fig. 19). The number of listed issuers increased from 192 issuers in 2022 to 194 issuers in 2023 and 198 issuers as of March 1, 2024. At the same time, equities of non-residents-owned companies, which under sanctions became the property of Russian owners, did not appear on the stock exchange.

In terms of key ratios characterizing the depth of the stock market, the Moscow Exchange explicitly lags behind many foreign competitors. However, the sanctions introduced against the Russian financial market have not virtually affected the key indicators of its competitiveness.

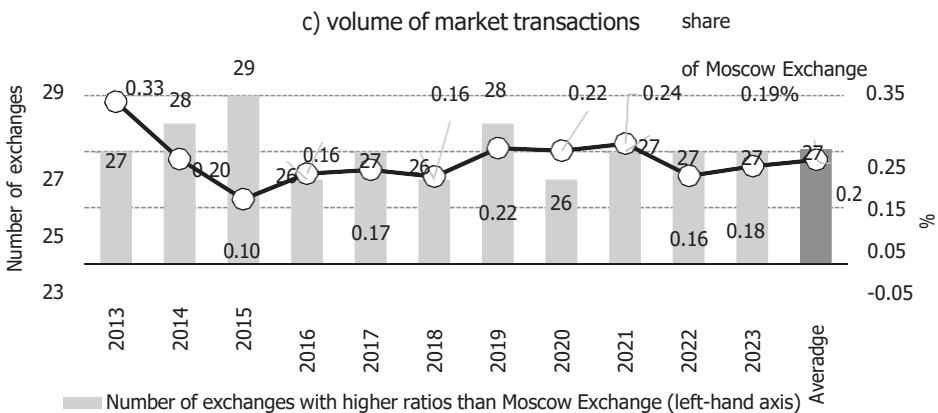
As seen from the data in Fig. 20, a, b, c, in terms of the number of listed national companies in 2023, the Moscow Exchange lagged behind 36 world exchanges against 38 exchanges in 2021 (Fig. 20, a). The Moscow Exchange’s share in the total number of publicly traded companies worldwide even increased to 0.39% as compared to 0.38% in 2021. In 2023, in terms of capitalization value the Moscow Exchange lagged behind 22 world exchanges as compared to 19 exchanges in 2021; its share in the global capitalization of companies fell from 0.70% to 0.60%. (Fig. 20, b). In 2023, in terms of the volume of market equity transactions the Moscow Exchange lagged behind the same 27 exchanges as in 2021, but its share



■ Number of exchanges with larger number of listed issuers than Moscow Exchange (left-hand axis)
 ○ Share of Moscow Exchange in global listing (right-hand axis)



■ Number of exchanges with higher ratios than Moscow Exchange (left-hand axis)
 ○ Share of Moscow Exchange in global capitalization (right-hand axis)



■ Number of exchanges with higher ratios than Moscow Exchange (left-hand axis)
 ○ Share of Moscow Exchange in global market (right-hand axis)

Fig. 20. Russian equity market competitiveness ratios in 2013–2023:

a) the number of foreign exchanges with a larger number of listed issuers than the Moscow Exchange (ME) and the share of ME in the sample of listed companies on the global stock market; b) the number of exchanges with higher capitalization of listed issuers than the Moscow Exchange and the share of ME in global capitalization; c) the number of exchanges exceeding the Moscow Exchange in terms of the volume of market transactions, and the share of the Moscow Exchange in the total value of market-traded equity transactions in the world.

Source: Own calculations based on the data of the World Federation of Exchanges and the Moscow Exchange.

in the total volume of exchange-traded equity transactions declined from 0.24% in 2021 to 0.18% in 2023.

A revival of the IPO and SPO market for Russian companies has become an important trend on the domestic capital market since December 2022; this became feasible owing to efforts mainly by small companies from the financial sector, the IT sector, the food industry and other sectors to raise market equity financing amid high interest rates on the debt market provided that there was demand for new public companies' equities on the part of private investors. According to the RF Central Bank's experts, individuals' interest in the stock market has increased amid households' growing incomes, the development of retail financing mechanisms and high dividend payments on Russian companies' equities.¹

According to our calculations based on an extensive sample of transactions related with public offerings of Russian companies' equities² (*Fig. 21* and *Table 10*), in the period from 1996 to February 2024 the total volume of such transactions amounted to \$136.4 bn of which transactions done in 1996–2003, 2004–2013 and 2014–2023 accounted for 1.1%, 81.0% and 17.9%, respectively. IPO-SPO transactions worth \$529 mn and \$104 mn in 2023 and February 2024, respectively, accounted for the mere 0.4% and 0.1% of the total volume of transactions made from 1996 to February 2024.

A comparative analysis of the parameters of IPO-SPO transactions in the period from 2023 to January - February 2024 as compared with relevant transactions of previous years allows us to identify the specifics of the development of the market of public offerings of Russian companies' equities at the current stage.

Despite certain prevalence in value terms of IPO transactions over SPO transactions for a long time, there was a long-term trend of faster growth in secondary offering transactions over initial public offering transactions. In the pattern of public offering transactions, the average share of SPO transactions increased from 0% in 1996–2003 to 36.7 % and 48.2% in 2004–2013 and 2014–2022, respectively. In 2023, the share of IPO transactions increased to 85.3%, while in January–February 2024, to 100.0%. An increase in the share of IPO transactions in the overall pattern of transactions under review points to a more active influx of new companies to the market as compared to a relatively narrow circle of issuers which regularly carry out repeated offerings of equities.

In public offerings of equities, issuers have been raising more actively additional capital since 2023 for the development of companies compared to the resale of equities by former owners. If in 2004–2013 and 2014–2023 the average share of IPO-SPO capital raising transactions was equal to 55.8% and 40.9% of all transactions, respectively, in 2023 and in January - February 2024 it amounted to 84.2% and 100.0%, respectively. In other words, in the current situation IPO-

¹ The Review of Financial Instruments. 2023. // The analytical material. The RF Central Bank, 2024. p. 24. URL: https://www.cbr.ru/Collection/Collection/File/48944/fi_review_2023.pdf

² Here and below in the section on IPO-SPO transactions, deemed as Russian companies are legal entities registered in Russia (onshore companies), as well as foreign (offshore) companies whose main activities are carried out in the territory of the Russian Federation.

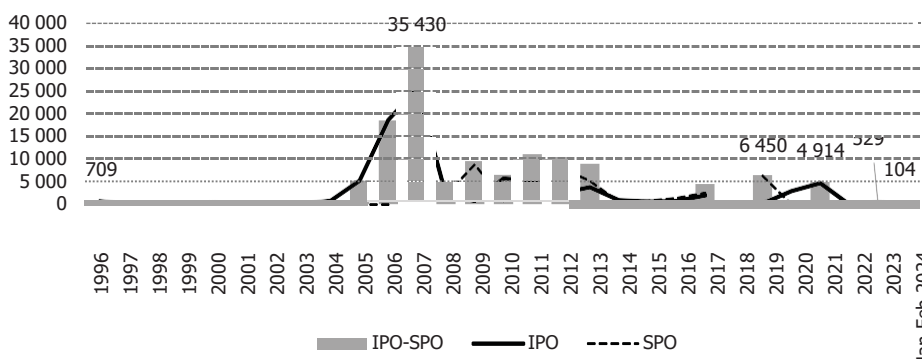


Fig. 21. IPO-SPO* equity transactions of Russian companies, 1996 – February 2024, million US dollars

* Here and below the notion of IPO-SPO transactions includes 8 categories of exchange-related transactions with equities of Russian offshore and onshore companies classified on the basis of three criteria: the place of transaction (Russian or foreign stock exchange), as well as the content of transaction (raising of a new capital for the company or resale of a package of equities by former owners)

Source: Calculations made by the Department of Financial Institutes and Markets Analysis of the IAES RANEPa on the basis of the official data of issuers and the Moscow Exchange.

SPO transactions are more focused on attracting new investments into issuing companies.

In 2023 and January – February 2024, all IPO-SPO transactions of Russian companies were carried out exclusively on Russian exchanges because of sanctions, while in the entire period from 1996 till early in 2024, on average 51.9% of IPO-SPO transactions of these companies on the basis of the value criterion were carried out on foreign exchanges.

In previous years, an important growth driver of the IPO-SPO market for Russian companies was privatization transactions with their equities on stock exchanges. Over the entire period under review, the share of privatization transactions in the total value of IPO-SPO transactions was equal to 38.1%. Though in the past two years the RF Ministry of Finance and the RF Central Bank have repeatedly taken the initiative to carry out privatization transactions on the stock exchange¹, no such transactions have been done on the stock exchange so far, so this can become an untapped growth potential of the IPO-SPO sector of Russian companies.

IPO transactions completed in 2023 and January–February 2024 were characterized by a higher level of the so-called “underpricing,”² which is generally regarded as positive information for investors because it suggests a higher level

1 *Mosolkina D.* The RF Ministry of Finance regards privatization as a source of replenishment of the budget next year // The Vedomosti daily, December 27, 2023. URL: <https://www.vedomosti.ru/economics/articles/2023/12/27/1013325-minfin-rassmatrivaet-privatizatsiyu-kak-odin-iz-is-tochnikov-popolneniya-byudzhet>

2 Underpricing is the difference between the equity price at the end of the first trading day and the offering price of the equities as a percentage of the offering price. Many experts consider undervaluation as an indicator of motivation of owners of the company, which is going public, to avoid overpricing of equities when setting the offering price to allow future investors to receive

higher returns on these equities.

Table 10

The pattern of Russian companies' IPO-SPO transactions in the period from 1996 till February 2024

Classification criteria	1996–2003	2004–2013	2014–2023	Over entire period	2023	Jan. –Feb. 2024
1. Volume of IPO-SPO transactions, million US dollars	1 468	110 566	24 409	136 443	529	104
Including share of transactions in total volume, %	1.1	81.0	17.9	100.0	0.4	0.1
2. Type of transactions, share, %						
IPO	100.0	63.3	51.8	61.6	85.3	100
SPO	0.0	36.7	48.2	38.4	14.7	0
3. Transactions to raise capital for company, share, %						
IPO-SPO capital raising transactions	69.8	55.8	40.9	53.3	84.2	100
IPO-SPO transactions without capital raising	30.2	44.2	59.1	46.7	15.8	0
4. Transactions by place of execution, share, %						
Russian exchanges	1.9	46.1	59.7	48.1	100.0	100
Foreign exchanges	98.1	53.9	40.3	51.9	0.0	0
5. Privatization transactions, share, %						
IPO-SPO privatization transactions	40.7	41.8	21.2	38.1	0.0	0
Other IPO-SPO transactions	59.3	58.2	78.8	61.9	100.0	100

Source: Calculations made by the Financial Institutes and Markets Analysis Department of the IAES RANEPA on the basis of the official data of issuers and the Moscow Exchange.

of long-term return premium on publicly traded equities as compared to the Moscow Exchange index. Over a long historical period (1996–2023), the average size of underpricing of IPOs of Russian companies' equities was equal to the mere 5.3% on the back of the widespread practice of overpricing issuers' equities (Table 11). According to a study by J. Ritter et al. on average underpricing in different countries, the size of undervaluation of Russian companies is the lowest one across 26 countries.¹

In 2023 and early in 2024, the amount of undervaluation of IPO transactions with Russian equities increased considerably on average to 15.4% in 2023 and 9.8% in January - February 2024. This means that original owners set the offering price for equities at a more reasonable level with taking into account the interests of long-term investors.

Under new conditions, positive changes have also taken place in terms of SPO underpricing. Most commonly, taking into account the fact that repeated sales of SPO equity packages on the exchange are carried out with a prevailing shareholder value of these equities, the size of underpricing of such transactions should be

¹ Loughran T., Ritter J., Rydqvist K. Initial Public Offerings – International Insights // Pacific- Basin Finance Journal. 2020. No. 2. P. 165–1996. URL: <https://www.scrip.org/reference/referencespapers?referenceid=2914801>

Table 11

**Undervaluation in case of IPO-SPO transactions by Russian companies
in 1996 – February 2024, % to the equity offering price**

	1996– 2003	2004– 2013	2014– 2023	Over entire period	2023	Jan. – Feb. 2024
On all transactions	12.5	6.6	4.8	6.2	8.0	9.8
including:						
IPO	12.5	4.6	5.9	5.3	15.4	9.8
SPO		13.4	3.3	8.5	0.3	
On Russian exchanges	12.5	8.4	4.5	6.9	11.3	9.8
On foreign exchanges	12.5	4.7	5.2	5.2		
Capital raising IPO-SPO	13.6	7.9	5.3	7.4	11.5	9.8
IPO-SPO with resale of equity packages	7.1	5.2	4.3	4.9	15.0	
IPO-SPO privatization transactions		2.9	4.2	3.4		
Other (non-privatization) IPO-SPO transactions	12.5	6.6	4.8	6.2	11.3	9.8

Source: Calculations made by the Financial Institutes and Markets Analysis Department of the IAES RANEPA on the basis of the official data of issuers and the Moscow Exchange.

insignificant and, on average, lower than that of IPO transactions.¹ Paradoxically, in the previous period the average SPO underpricing of 8.5% on the Russian stock market considerably exceeded the relevant IPO ratio of 5.3%. This means that SPO participants received a considerable premium to the detriment of the interests of other shareholders of the listed company. In transactions completed in 2023, this problem was solved; this year the average size of undervaluation was equal to 15.4% and 0.3% in case of IPO and SPO, respectively.

IPO transactions completed in December 2022 – February 2024 are characterized by positive parameters of the mid-term cumulative excess return on equities demonstrating profitability higher than the Moscow Exchange yield index. As shown in *Fig. 22*, in case of 11 transactions the cumulative excess return on the portfolio of these equities within 95 days after equity placement averaged about 20%, while in previous periods, by our own calculations, IPO transactions tended to have negative excess returns over a long period.

Thus, despite a relatively moderate volume of IPO-SPO transactions by Russian companies over the past year and a half, this market segment has lots of positive parameters as compared to the previous history of the equity market of public offerings because it acts as a driver of the domestic market development and attracts new issuers.

Another driver of the stock market development and appreciation of listed companies' net worth is their active dividend policy. Over the past 10 years, dividends have become an important factor influencing companies' value and investors' decision-making. This can be seen in accelerated growth in the number of companies paying dividends and the amount of dividend payments.

¹ High SPO undervaluation means that a package of equities was placed on the exchange at prices significantly lower than current exchange prices and this may infringe the interests of private investors who bought the issuer's equities on the exchange before SPO.

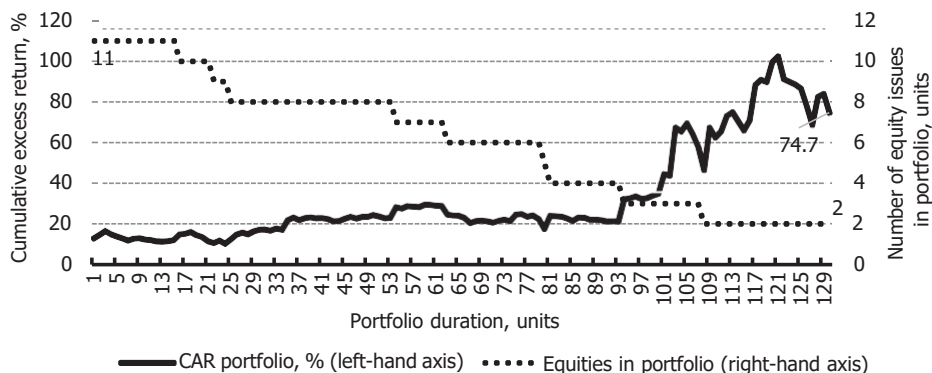


Fig. 22. Cumulative excess returns on the IPO Russian equity portfolio in respect of 11 IPO transactions completed in 2022 – February 2024 and calculated by means of the event window method over the period of up to 130 business days after completion of public offering transactions in equities, p.p.

Source: Calculations made by the Financial Institutes and Markets Analysis Department of the IAES RANEPA on the basis of the official data of issuers and the Moscow Exchange.

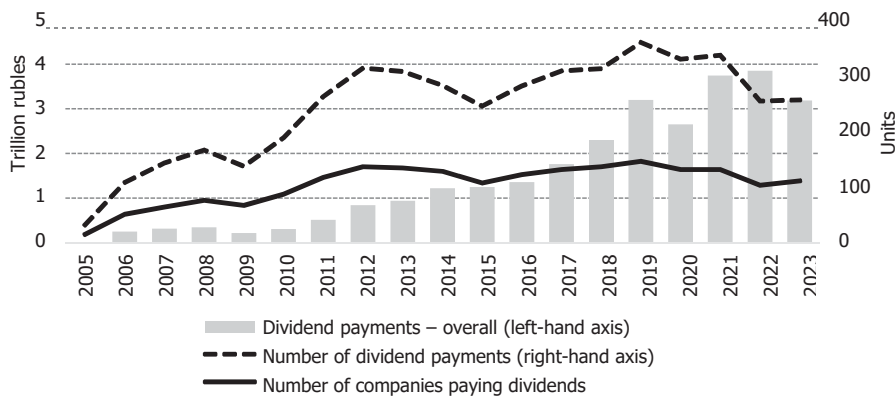


Fig. 23. The number of Russian listed companies paying dividends, the number of dividend payments and the sum of dividend payments in 2005–2023, trillion rubles

Source: own calculations based on the data of Cbonds, SPARK and the Moscow Exchange.

In 2005–2023, Russian companies paid Rb28.2 trillion worth of dividends of which Rb24.5 trillion or 86.9% were the dividends paid in 2014–2023 and Rb16.6 trillion or 59.0%, the dividends paid over the past five years (2019–2023) (Fig. 23).¹ At the same time, the number of listed companies paying dividends has stabilized over

¹ Here and below are the results of a study by the Financial Institutions and Markets Department of IAES RANEPA on Russian companies' dividend policy in 2005–2024 published at the EKONS internet resource. Abramov A.E., Chernova M.I. The Generosity Fair: Main Trends in Russian

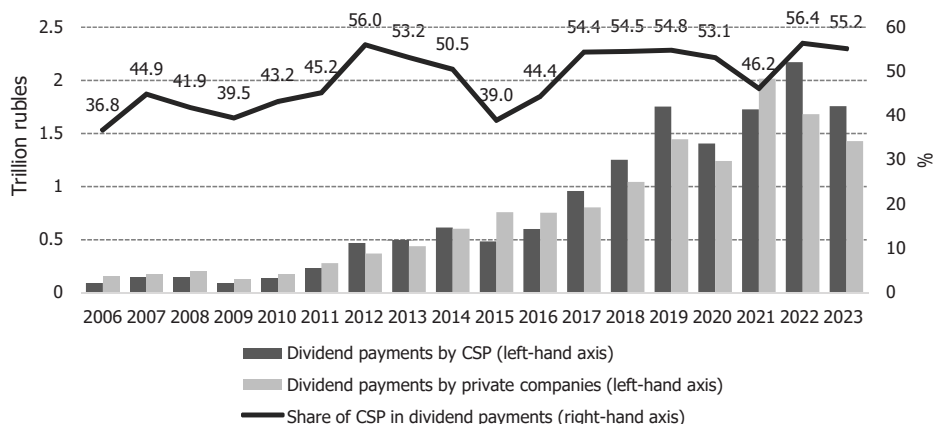


Fig. 24. The value of dividends paid by private companies and CSP (trillion rubles) and the share of dividend payments by companies with state participation in the total sum of dividend payments (%)

Source: own calculations based on the data of Cbonds, SPARK and the Moscow Exchange.

the past 10 years varying from year to year in the range of 103 companies to 146 companies.

Companies with state participation (CSP) account for a larger share of dividend payments.¹ In 2017–2023, with an exception of 2021 when dividends accrued in the year of the coronavirus epidemic were paid, the share of dividends paid by CSP fluctuated in the range of 54%–56% of the overall amount of dividend payments (Fig. 24). This may be the consequence of the Russian government’s measures taken during several years and aimed at ensuring dividend payments by each large CSP in the amount of at least 50% of the net profit.

The bulk of dividend payments was paid by a limited circle of large issuers. Six companies – Gazprom, Sberbank, Lukoil, Rosneft, Gazprom Neft and Norilsk Nickel – accounted for 68.3% of all dividend payments in 2023. The average share of these companies remains consistently high throughout the period under review; it has increased from an average level of 53.5% in 2006–2017 to 59.3% in 2018–2023.

A considerable increase in equities’ dividend yield from 2012 explicitly shows the dividend policy’s increased role in maintaining issuers’ investment appeal (Fig. 25). The average dividend yield of equities in the Moscow Exchange index increased from 2.3% in 2011 to 13.7% in 2023. Further, equities’ dividend yield has exceeded yield to maturity of government bonds in the portfolio of the RGBI broader index since 2019. This means that equities have become attractive to

Companies’ Dividend Policy // Ekons March 25, 2024. URL: <https://econs.online/articles/opinions/yarmarka-shchedrosti-glavnye-trendy-dividendnoy-politiki-rossiyskikh-kompaniy/>

1 A company with state participation (CSP) is a state-controlled entity acting as a sole owner, owner of a majority equity interest or significant minority equity interest (share in the charter capital) of at least 10%.



Fig. 25. Weighted average dividend yield of equities of the Moscow Exchange index and yield to maturity of government bonds of the RGBI index, % per annum

Sources: own calculations based on the data of Cbonds, SPARK and the Moscow Exchange.

those investors who are pursuing a passive strategy of receiving a regular income on their capital investments.

The issue remains open as to what extent dividend payments facilitate growth in the value of Russian companies and the long-term profitability for their shareholders. On one hand, as shown in *Table 12*, equities with a high dividend yield on almost all time-horizons, except for the first two months of 2024, in terms of the total return, consistently outperformed the portfolio of equities with a low dividend yield. In addition, on all time-horizons – starting from 2021 – equities of companies with state participation brought higher total returns than a portfolio of equities of private companies, which situation may be the result of higher dividend payments by CSP as compared to private issuers' equities in the specified years.

Table 12

The ratios of total (including dividends) returns and risks of portfolios of factor investment in Russian companies' equities in various time periods on the 1999 – February 2024 horizon

Factor strategies	Cumulative geometric mean return, % per annum								
	2024*	2023	2 years (2022–2023)	3 years (2021–2023)	5 years (2019–2023)	10 years (2014–2023)	15 years (2009–2023)	20 years (2004–2023)	25 years (1999–2023)
1. Cumulative geometric mean return, % per annum									
Broad equity market	6.3	69.4	13.5	20.2	22.2	21.0	22.1	17.9	14.1
Equities with low dividend yield	5.7	49.5	2.8	14.8	19.8	18.8	19.3	13.3	10.5
Equities with high dividend yield	4.5	65.5	18.3	19.7	21.7	23.3	24.0	15.1	11.9
Equities without dividend payments	9.1	88.1	22.9	27.2	17.9	16.4	20.6	16.6	13.1

Factor strategies	Cumulative geometric mean return, % per annum								
	2024*	2023	2 years (2022– 2023)	3 years (2021– 2023)	5 years (2019– 2023)	10 years (2014– 2023)	15 years (2009– 2023)	20 years (2004– 2023)	25 years (1999– 2023)
Equities with dividend payments	4.7	59.7	10.0	17.6	21.0	20.6	20.5	13.8	10.9
Equities with high E/P ratio	20.1	109.6	26.7	26.6	26.4	23.3	23.5	17.9	14.1
Private companies' equities	4.7	54.5	10.6	16.9	23.0	22.6	25.1	14.2	11.2
CSP equities	5.8	80.6	15.3	20.9	19.8	19.0	18.4	8.2	6.5
2. Total return / standard deviation ratio									
Broad equity market		4.3	0.4	0.7	0.9	1.0	1.0	0.8	0.7
Equities with low dividend yield		3.0	0.1	0.5	0.7	0.8	0.8	0.5	0.5
Equities with high dividend yield		4.3	0.6	0.7	0.9	1.2	1.2	0.6	0.5
Equities without dividend payments		4.1	0.7	0.9	0.7	0.8	1.0	0.7	0.6
Equities with dividend payments		4.1	0.3	0.6	0.8	1.0	0.9	0.6	0.5
Equities with high E/P ratio		4.2	0.7	0.8	0.9	1.0	1.0	0.7	0.6
Private companies' equities		3.1	0.3	0.6	1.0	1.2	1.2	0.7	0.6
CSP equities		5.3	0.4	0.7	0.7	0.8	0.8	0.3	0.3

* Yield in January-February 2024.

Source: own calculations based on the data of the Konstruktor CAPM-ru Internet resource. URL: <https://ipei.ranepa.ru/ru/capm-ru>

On the other hand, a number of patterns confirm the correctness of Modigliani-Miller's ideas¹ that the distribution of net profit for dividend purposes and the size of the dividend yield do not have a fundamental impact on the value of companies and the total return on investments in equities. Firstly, as seen from the calculations in *Table 12*, in the past three years (2021–2023), despite rising dividend payouts, a portfolio of non-dividend paying equities generated higher returns than high-dividend equities. The same thing was observed on the horizons of 20 years and 25 years. Secondly, equities with higher E/P ratios (net income per share to the market value of these equities) consistently outperformed in most time periods under review of the 25-year time horizon (with the exception of 2009–2013) equities with high dividend yields. This is the evidence of the fact that the total return on equities depends to a greater extent on the size of net profit and not on its distribution for dividends and other purposes.

Most commonly, payments of substantial dividends lead to a fall in equity prices (a gap) starting from the ex-dividend date and their lengthy recovery eliminating such equities' total return advantages as compared to equities with modest dividends or without them.² An increase in dividend payments in

1 Miller M., Modigliani F. Dividend policy, growth and the valuation of shares // Journal of Business. 1961. Vol. 34. No. 4. P. 411–433. URL: <https://doi.org/10.1086/294442>

2 A dividend gap is characterized by a fall in the equity price on the first days from the ex-dividend date from which the purchase of equities does not allow the investor to expect the receipt of the declared dividend. As databases for the historical sample of dividend payments have an error and liquidity for a number of stocks is reduced, the study used a time window of 10 days and

2019–2023 was accompanied by growth in the depth of gaps and especially the deadlines for their closure. According to our calculations, for the entire sample of equities in 2022–2023 the dividend yield was on average 2 times less than the dividend gap and for equities of the Moscow Exchange index, 2.5 times less, especially, for those with a high dividend yield.

Thus, a high dividend yield, especially amid sanctions, helped considerably companies maintain their capitalization and increase shareholder loyalty to their equities. However, this led to new risks for investors in terms of dividend gaps with a subsequent slow recovery of the value of company equities. In such a situation, private investors need to be guided by more complex criteria for selecting equities, rather than simply focus their attention on the size of dividend yield. This increases the importance of financial information and its disclosure in order to ensure the interests and protect the rights of such investors.

Through mergers and acquisitions (M&A), stock markets facilitate structural changes in the economy. On the back of the US Fed Reserve's and EU central banks' rising interest rates and geopolitical tensions in 2023 as well as the year before, the world saw a decline in M&A transactions (*Fig. 26*). The volume of finalized transactions decreased from \$5.4 trillion in 2021 to \$3.4 trillion in 2022 and \$3.0 trillion in 2023. In 2022 and 2023, Russia also saw a decline in mergers and acquisitions. An increase in the number of such transactions amid sanctions, when many subsidiaries of foreign companies passed into the hands of Russian owners, did not bring about growth in the volume of the M&A market due to these transactions' low value formed in compliance with legal requirements. As a result, the volume of M&A transactions involving Russian companies decreased from \$37.7 bn in 2021 to \$28.1 bn in 2022 and \$22.3 bn in 2023. At the same time, according to our calculations based on the data of Merger.ru, Russia's share in the global volume of M&A transactions increased slightly from 0.70% in 2021 to 0.83% in 2022, with a subsequent decrease to 0.74% in 2023.

The Russian stock market is characterized by a high level of concentration of issuers in terms of capitalization, however, there has been a stable downward trend since 2020 (*Fig. 27* and *Table 13*). In issuers' total capitalization, the share of the top-ten PJSCs decreased from 70.1% in 2019 to 62.6% in 2023 and the share of the top-20 issuers, from 82.9% to 75.8%, respectively. This generally reflects important changes in the exchange listing pattern in terms of accelerated growth in market value and investment appeal of less liquid second- and third-tier equities as compared to blue chips.

In 2023, the capitalization of Russian companies did not recover to the level seen in 2021. In 2021, it was equal to Rb62.6 trillion, while in 2023, to Rb57.0 trillion or 91.1% of the 2021 level. At the same time, over the same period the capitalization of the top 10 issuers in terms of size recovered only to 86.7%.

the dividend gap was considered the maximum percentage drop in the equity price from the day preceding the ex-dividend date. The dividend gap closing period was calculated as the number of calendar days required to restore the equity price to the level of the day before the ex-dividend date. It was assumed that if the dividend gap on the equity was not closed within 726 or 727 days (depending on the leap year), it was recognized as not closed at all.

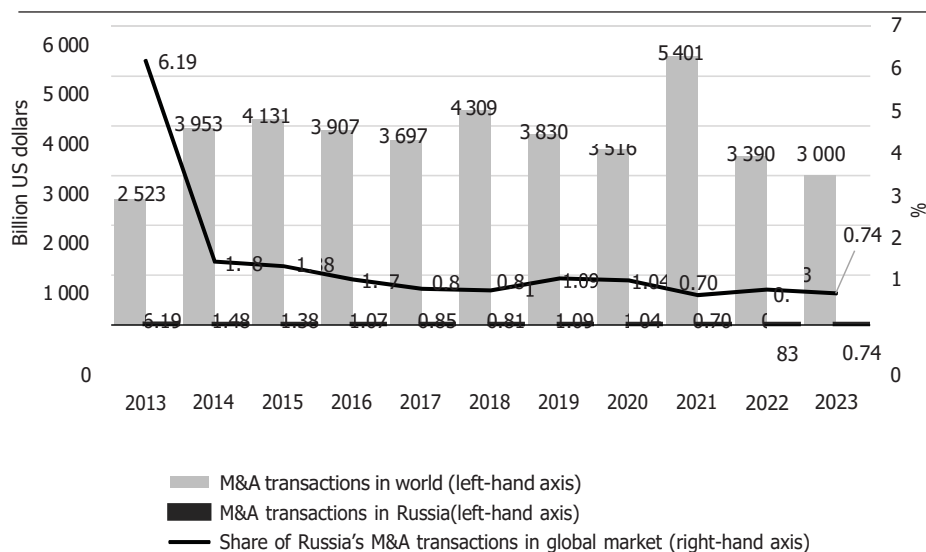


Fig. 26. The value of mergers and acquisitions (M&A) in the world and Russia (billions of US dollars) and the share of M&A transactions in Russia in the total value of relevant transactions in the world (%), 2013–2023

Source: own calculations based on the data of the Merger.ru information resource (URL: <http://mergers.ru/>) and SIFMA.

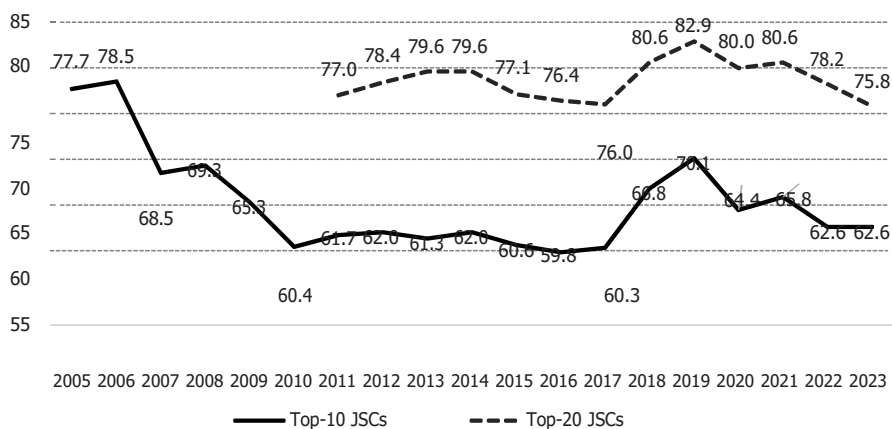


Fig. 27. The share of large PJSCs in the domestic market capitalization, %

Source: own calculations based on the data of the Moscow Exchange.

In 2021–2023, among the top 10 blue chips in the capitalization pattern, there was growth in the share of equities: Rosneft (from 10.1% in 2021 to 11.0% in 2023), Sberbank (from 10.1% to 10.3%), Lukoil (from 7.2% to 8.2%) and Gazprom Neft (from 4.1% to 7.0%). At the same time, there was a decrease in the share in the capitalization of such companies as Gazprom (from 12.9% to 6.7%), NOVATEK

(from 8.4% to 7.8%), GMK Norilsk Nickel (from 5.6% to 4.3%) and "Polyus" (from 2.8% to 2.5%). The equities of Surgutneftegaz and Yandex dropped out of the top-ten group; their share in the total capitalization decreased from 2.3% and 2.3% in 2021 to 1.7% and 1.5%, respectively.

Table 13

Capitalization of Russia's top-10 public joint-stock companies (PJSC) in 2021–2023

	Issuer	2021		Issuer	2022		Issuer	2023	
		Capitalization, billion rubles	Unit weight, %		Capitalization, billion rubles	Unit weight, %		Capitalization, billion rubles	Unit weight, %
1	PJSC Gazprom	8 078	12.9	PJSC Gazprom	3 852	10.1	PJSC NK Rosneft	6 278	11.0
2	PJSC NK Rosneft	6 336	10.1	PJSC NK Rosneft	3 834	10.0	PJSC Sberbank	5 863	10.3
3	PJSC Sberbank	6 329	10.1	PJSC NOVATEK	3 242	8.5	PJSC Lukoil	4 680	8.2
4	PJSC NOVATEK	5 248	8.4	PJSC Sberbank	3 040	7.9	PJSC NOVATEK	4 448	7.8
5	PJSC Lukoil	4 539	7.2	PJSC Lukoil	2 811	7.4	PJSC Gazprom Neft	3 983	7.0
6	PJSC GMK Norilsk Nickel	3 496	5.6	PJSC GMK Norilsk Nickel	2 339	6.1	PJSC Gazprom	3 790	6.7
7	PJSC Gazprom Neft	2 568	4.1	PJSC Gazprom Neft	2 169	5.7	PJSC GMK Norilsk Nickel	2 476	4.3
8	PJSC Polyus	1 761	2.8	PJSC Polyus	1 044	2.7	PJSC V.D. Shashin Tatneft	1 539	2.7
9	YANDEX N.V.	1 447	2.3	PJSC FosAgro	828	2.2	PJSC Polyus	1 444	2.5
10	PJSC Surgutneftegaz	1 423	2.3	PJSC Surgutneftegaz	774	2.0	PJSC Severstal	1 172	2.1
	Capitalization of all issuers at Moscow Exchange	62 604	100	Capitalization of all issuers at Moscow Exchange	38 238	100	Capitalization of all issuers at Moscow Exchange	56 981	100
	Capitalization of top-5 issuers	30 528	48.8	Capitalization of top-5 issuers	16 778	43.9	Capitalization of top-5 issuers	25 252	44.3
	Capitalization of top-10 issuers	41 224	65.8	Capitalization of top-10 issuers	23 931	62.6	Capitalization of top-10 issuers	35 673	62.6

Source: own calculations based on the data of the Moscow Exchange. URL: <https://www.moex.com/s26>

In 2023, the share of CSP in capitalization amounted to 52.8%, which is only less than this ratio's record-high values seen in 2006–2007 and 2019 on the 2005–2023 horizon (Fig. 28). In 2023, advanced growth in capitalization of CSP by contrast with private companies can be explained by a higher level of

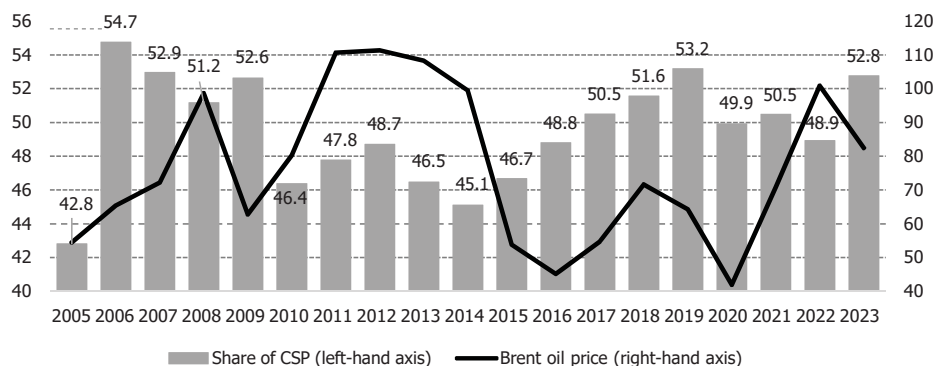


Fig. 28. The share of companies with state participation (CSP) in the capitalization of the domestic equity market and the price for a Brent oil barrel in 2005–2023

Source: Calculations made by the Financial Institutes and Markets Analysis Department of the IAES RANEP.

dividends paid by state-owned companies, as well as support they received from the government amid sanctions and the special military operation.

Thus, in 2023 despite sanctions and a decrease in export revenues, the equity market of Russian companies kept recovering. Growth constraints were still the suspension of the inflow of non-resident funds from unfriendly countries and low investment demand on the part of domestic institutional investors. There was a decline or slow growth in the capitalization of a number of large companies. At the same time, this market segment growth was facilitated by issuers' active dividend policy, private investors' high investment activity and the revival of the IPO-SPO market on the Moscow Exchange. Companies of the second and third echelons demonstrated significant capitalization growth.

6. The bond market

The situation on the bond market

In 2022, the domestic bond market remained stable owing to the moderately low key rate of the RF Central Bank and a liquidity surplus in the banking sector. With a decrease of 37.3% in the Moscow Exchange stock index, taking into account the full return, bonds made it possible to receive a positive ruble return. In 2022, the RGBI government bond index showed a market return of 3.7% per annum and the IFX-Cbonds broad corporate bond index, a market return of 11.9% per annum.

In 2023, less favorable conditions prevailed on the bond market on the back of a sharp increase in the key rate from 7.5% in July 2023 to 16.0% and some signs of unstable bank liquidity. In 2023, the Moscow Exchange index grew by 53.8%, while the yield of the RGBI and IFX-Cbonds indices decreased to 0.8% and 5.9%, respectively. However, investor confidence in the bond market did not decrease. On the contrary, according to the data of the Moscow Exchange, in 2022, private investors invested Rb243.5 bn and Rb299.4 bn worth of new funds in equities and bonds, respectively. In 2023, the influx of new funds from private investors into equities decreased to Rb178.1 bn, while on the bond market it amounted to Rb715.0 bn, that is, 4 times more.

According to the classical patterns of the bond market, an increase in the key rate is expected to restrain the bond market growth because it leads to an increase in issuers' costs associated with attraction of new debts and a decrease in the market value of earlier purchased bonds in investor portfolios. Rising borrowing costs limit issuers' ability to refinance debts, thus increasing the likelihood of bond defaults.

However, despite the increase in the key rate from July 24, 2023 from 7.5% to 16.0%, the so-called g-spreads on corporate bonds¹ increased on expectations of interest rate and credit risks, but to a level below the specified spreads as of the beginning of 2023 when the RF Central Bank's rate was equal to 7.5% (Fig. 29).

¹ The difference between the yield to maturity of corporate bonds as compared to the yield to maturity of government bonds with the same duration. It characterizes credit risks of corporate issuers.

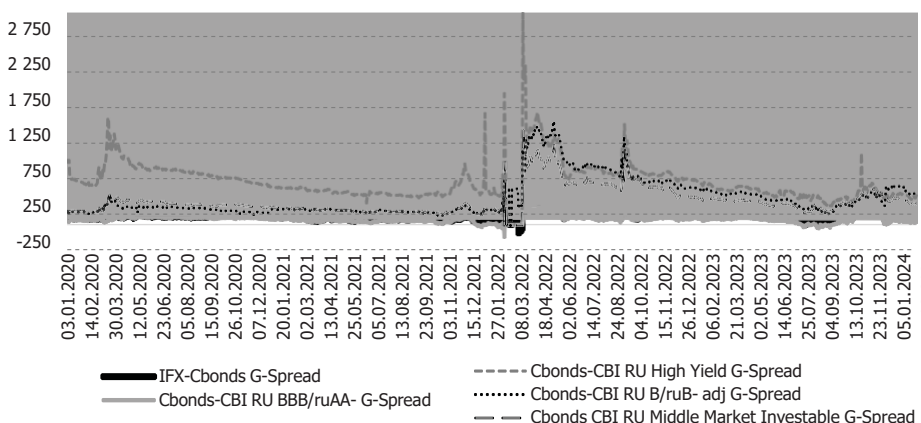


Fig. 29. Average sizes of G-spreads* of ruble corporate bonds with different credit ratings in 2020–2023 and early in 2024

* G-spread is an indicator of the credit risk of corporate bond issues, representing the difference between the yield to maturity of corporate bonds and the yield to maturity of government bonds with a similar duration.

Source: own calculations based on the data of Cbonds.

Spreads of the IFX-Cbonds broad portfolio of corporate bonds increased from 96.86 p.p. as of July 24, 2023 to 142.95 p.p. as of February 20, 2024, while the value of this ratio as of January 3, 2023 was equal 169.93 p.p. G-spreads behaved similarly in case of bonds with a high investment rating from the Cbonds-CBI RU BBB/ruAA- index and high-yield bonds (HYB) in the Cbonds-CBI RU High Yield portfolio.

Moderate yield spreads on corporate bonds were largely ensured by stable demand, which amid the rising inflation, was supported by large companies' issues of bonds with a floating coupon tied to the size of the key rate or the RUONIA money market rate.

Another reaction of corporate issuers to a higher interest rate risk is the reduction in the circulation period or duration of issued bonds. As shown in Fig. 30, the average annual duration of the IFX-Cbonds broad portfolio of bonds decreased from 675 days in 2021 to 407 days in January - February 2024 or by 26.8%, the duration of bonds with a high investment rating Cbonds-CBI RU BBB/ruAA- decreased over the same period from 854 days to 714 days or by 16.4% and that of HYB shrank from 511 days to 369 days or by 27.8%. A decrease in bond duration occurs during periods of economic uncertainty and expectations of rising interest rates. Low duration bonds are more difficult to use as a source of long-term investment, so, in the current situation they are used to a greater extent as an instrument for refinancing issuers' current activities and repaying debts on bank loans.

The rise in the key rate in H2 2023 led to various anomalies in investor behavior on the government bond (OFZ) market. With the start of a rise in the key rate in July 2023, the yield to maturity of short-term bond issues and money market

rates increased while the yield to maturity of long-term OFZ issues saw moderate

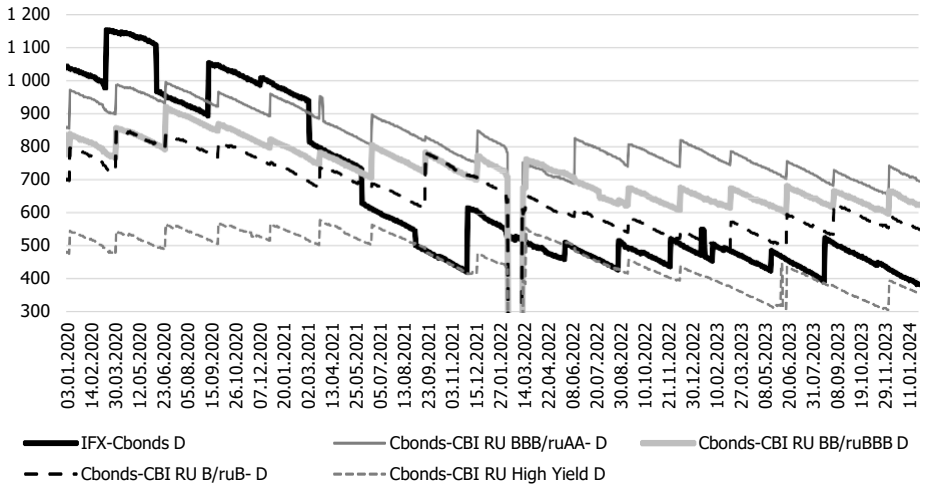
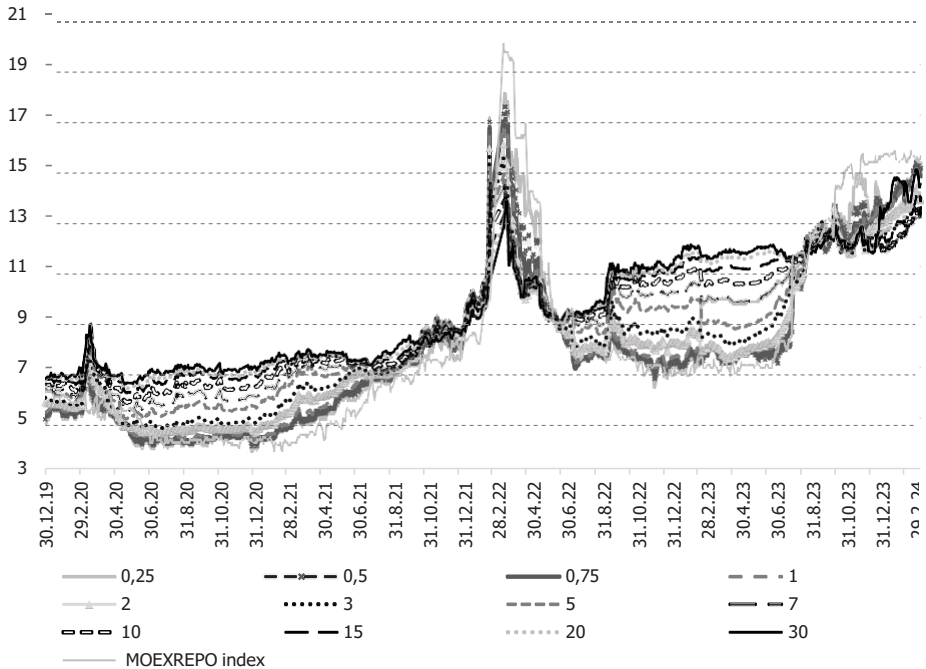


Fig. 30. The duration of corporate bonds (days), January 1, 2020 – February 29, 2024

Source: own calculations based on the data of Cbonds.



Note. MOEXREPO is the interest rate of the REPO exchange-based money market with the central counterparty (REPO with the CC) on the Moscow Exchange.

Fig. 31. The values of the OFZ zero-coupon yield curve with maturities of 0.25 – 30 years and the MOEXREPO money market rate, December 30, 2019 – March 29, 2024, % per annum

Source: own calculations based on the data of the RF Central Bank and the Moscow Exchange.

growth, as investors expected that a high key rate would help reduce inflation and the RF Central Bank would start reducing the rate no later than early in H2 2024. As shown in *Fig. 31*, from July 5, 2023 till December 29, 2023, the yield on money market rates, as measured by the MOEXREPO index, increased from 7.01% to 15.19% or by 116.7%, while the yield on one-year OFZ bonds and 10-year OFZ bonds grew from 7.76% to 12.78% or by 64.7% and from 10.58% to 11.86% or by 12.5%, respectively.

However, in 2024 amid a lack of noticeable progress in reducing the rate of inflation in January–February 2024, OFZ market participants began to doubt whether the RF Central Bank would be able to bring the inflation to the level of 4.0%–4.5% late in 2024; on the back of it the yield on long-term OFZ issues began to grow at a faster rate and in placing new OFZ issues the RF Ministry of Finance had to increase the yield on bonds, providing buyers with an additional premium as compared to the yield on similar outstanding bonds.¹ From December 29, 2023 till March 29, 2024, the yield of MOEXREPO index rates increased from 15.19% to 15.41% or just 1.4%, while the yield on one-year OFZ bonds and 10-year OFZ bonds grew from 12.78% to 14.14% or 10.6%, and from 11.86% to 13.26% or 11.8%, respectively.

Thus, in February–March 2024 OFZ market participants, mostly banks and some institutional investors, had more cautious expectations regarding the achievement of the target inflation level by the end of 2024 and, accordingly, the rate of reduction in the key rate.

In 2023, the value of outstanding government securities increased from Rb18.1 trillion rubles in 2022 to Rb20.2 trillion or 11.6%, which is lower than the average annual growth rate of 17.0% in the past 10 years (2014–2023). Over the same period, the value of domestic corporate bonds increased from Rb19.8 trillion to Rb 25.2 trillion or 27.3%, which is higher than the average annual growth rate of 17.4% in 2014–2023 (*Fig. 32*). Growth in the value of outstanding government and corporate bonds continued in January–February 2023.

In 2022–2023, important conditions for the support of the domestic bond market were the maintenance of macroeconomic stability and a liquidity surplus in the banking sector, financial support of companies, as well as creation of mechanisms for issuers to meet their obligations in respect of Eurobonds despite sanctions. To hold bonds till maturity dates is one of the ways of protecting investors from the growing key rate, leading to a decrease in the market value of bonds.

In 2023, amid rising interest rates the RF Ministry of Finance reduced considerably the volume of funds raising through OFZ issues (*Fig. 33*). The auctions raised Rb2.8 trillion as compared to Rb3.3 trillion in 2022, that is, a decrease of 15.2%. Given a relatively high cost of borrowing, funds from the National Welfare Fund were used to finance the budget deficit. At the same time, the volumes of new corporate bond issues increased from Rb 4.1 trillion in 2022 to Rb7.2 trillion in 2023 or by 75.6%.

In 2023, all types of bonds of Russian issuers amounted to 0.46% of the value of outstanding bonds worldwide (*Fig. 34*). Interestingly, the total value of

¹ URL: <https://quote.rbc.ru/news/article/65d611589a79479c6573e62c>

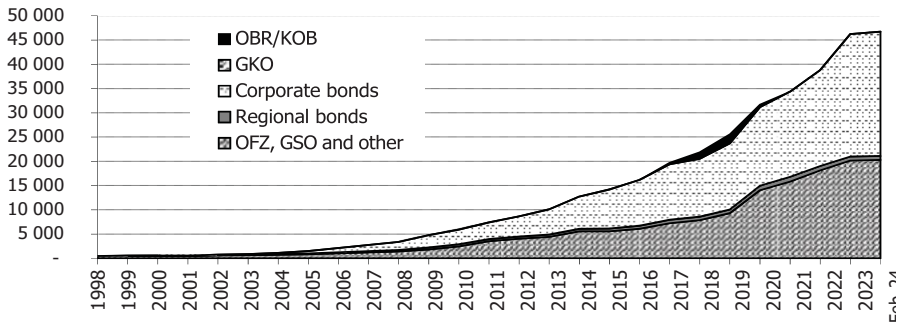


Fig. 32. The volumes of outstanding ruble bonds, 1998 – February 2024, billion rubles
Source: own calculations based on the data of the RF Ministry of Finance and Cbonds.

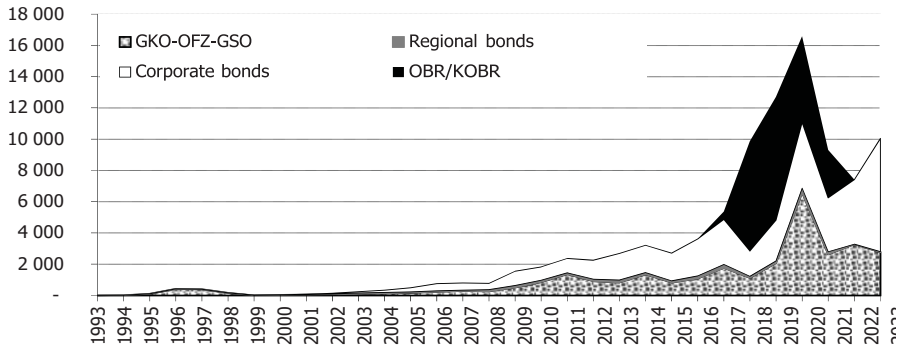
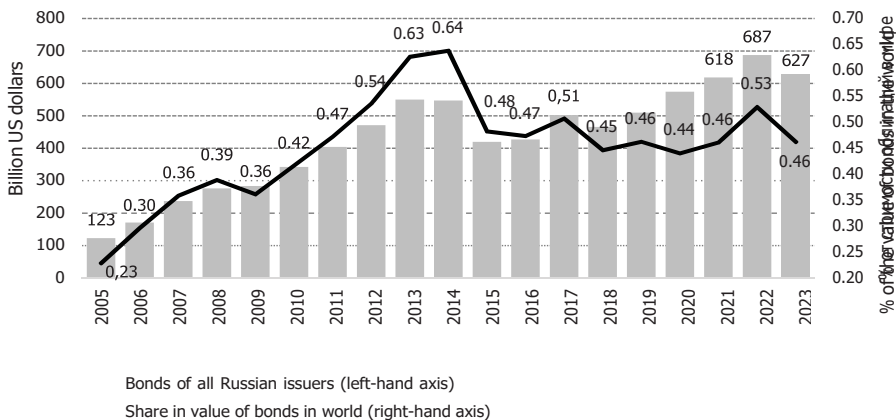


Fig. 33. The volumes of placement of ruble bonds, 1993–2023, billion rubles
Source: own calculations based on the data of Cbonds.



Note. Russian issuers' bonds include corporate, government and municipal domestic bonds and Eurobonds.

Fig. 34. The value of Russian issuers' outstanding bonds (billion US dollars) and their share in the value of bonds in the world, %, 2005–2023

Source: own calculations based on the data of Cbonds and SIFMA.

bonds of Russian issuers attained approximately the level of capitalization of listed companies. In 2022, the value of bonds was equal to \$687 bn or 121.2% of capitalization (\$567 bn), while in 2023 the value of bonds (\$627 bn) decreased to 93.1% of capitalization (\$673 bn).

The value of bond issues in dollars and its share in the value of bonds in the world increased rapidly from 2005 to 2014. During this period, the Russian debt market was growing at a faster rate than the global one. From 2015, the Russian bond market growth has slowed down and become more volatile. Over 10 years (2014–2023), the average share of Russian bonds in the value of bonds in the world was equal to 0.49%, which approximately corresponds to the level seen in 2023.

(For comparison: the average share of capitalization of Russian companies in the world is equal to 0.66%, that is, slightly higher than that of bonds.) The value of bonds of Russian issuers decreased from \$687 bn in 2022 to \$627 bn in 2023 or by 8.7%.

Corporate bond market

The domestic corporate bond market was growing rapidly with corporate bond issuing growth of 20.6% and 75.6% in 2022 and 2023, respectively. According to our calculations, the share of the value of corporate bond issues in the value of bank loans to businesses picked up from 39.2% in 2021 to 39.9% in 2023, with the average value of this ratio being equal to 35.1% in 2014–2023. For companies, corporate bonds have become an important instrument of refinancing debts, replenishing working capital and financing investments.

Amid a high key rate, for external debt restructuring and funds raising from various domestic investors it was crucial to find numerous innovative solutions, such as issuing of bonds with a floating coupon (“floaters”), bonds in yuan and other foreign currencies, replacement bonds, HYB, “gold” bonds and other financial instruments.

An increase in the key rate from July 2023 had virtually no effect on the issuing activity of corporate bond issuers (*Fig. 35*). Over the remaining 5 months of the year (August – December), Rb3.9 trillion worth of bonds or 53.9% of the total annual volume of their issue were placed, including Rb1.9 trillion worth of bonds or 25.7% of the annual bond issuing program in December.

In January–March 2024, though the key rate still stood at 16.0%, the volume of corporate bond placements during this period amounted to Rb1.1 trillion as compared to Rb1.3 trillion in January – March 2023 when the key rate was equal to 7.5%. In other words, the “cooling” of the corporate bond market was quite moderate in Q1 2024.

After the 2008 crisis, the ruble yield of the IFXCND index increased occasionally on the back of a fall in oil prices and investors’ fears of geopolitical risks and international sanctions (*Fig. 36*). The peaks in the yield to maturity of the index portfolio in 2014 and February 2022 took place at a time of the highest values of the key rates set by the RF Central Bank. The corporate bond market growth has

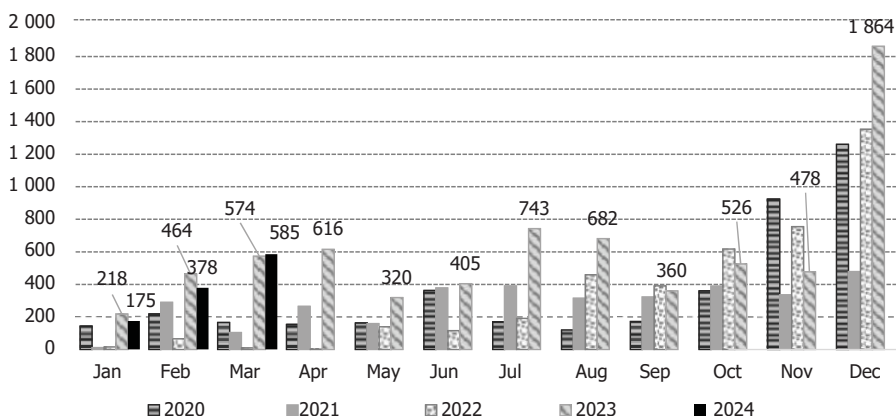


Fig. 35. The volumes of placement of corporate bonds in 2020–2023 and January-March 2024, billion rubles

Source: own calculations based on the data of Cbonds.

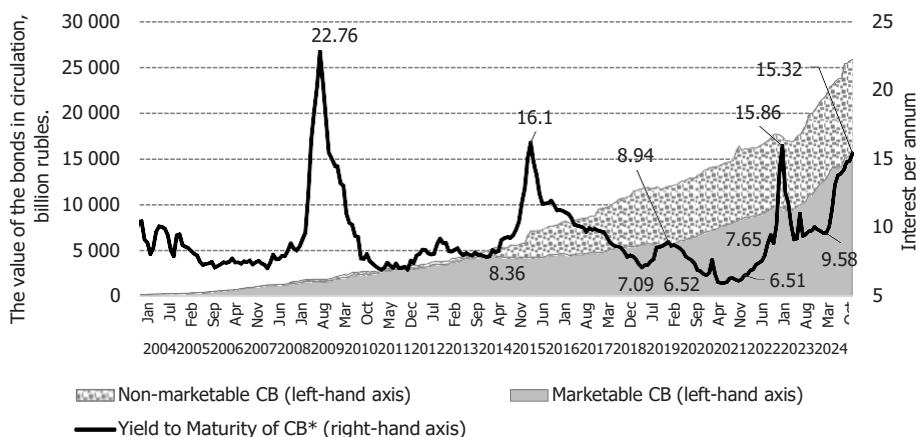


Fig. 36. The value of outstanding ruble corporate bonds and yield to maturity of IFX-Cbonds corporate bond portfolio, December 2002 – March 2024

Source: own calculations based on the data of Cbonds.

been largely facilitated by growth in non-market bond issues since 2014.¹ From March 2021 till March 2022, with the key rate growth from 4.25% to 20.0%, the average yield to maturity of the IFXCBND index bond portfolio picked up from 6.6% to 15.9% per annum. The increase in the key rate from July 2023 did not

¹ According to the definition of the RF Central Bank, deemed as a non-marketable issue is a situation when the purchase of the entire issue or a larger portion thereof is carried out by the lead bank or companies close to the issuer. See: The Review of the Russian Financial Sector and Financial Instruments. 2019 // The analytical material. The RF Central Bank. 2020. p. 37.

lead to a halt in the placement of corporate bonds, however, the yield to maturity of the IFXCND bond portfolio increased from 9.6% per annum in June 2023 to 15.3% in March 2024, which is only slightly lower than the value of this ratio in March 2022 when there were practically no new corporate bond issues for several months.

The fact that the current average borrowing rate did not lead to a halt in initial placements of bonds in Q1 2024 can be explained by issuers' hopes for a quick reduction in the key rate by the RF Central Bank from H2 2024. For investors, the impact of an increase in the yield to maturity of bonds on a decrease in the market value of their bond portfolios is limited by holding of bonds on their balance till maturity dates. In this case, investors' short-term liquidity needs are met through the repo market.

In 2023, out of Rb25.3 trillion worth of outstanding ruble corporate bonds, marketable bond issues accounted for Rb15.0 trillion or 59.3% and non-marketable bonds, for Rb10.3 trillion (40.7%). The share of marketable bonds increased from 56.6% in 2022 to 60.2% in March 2024.

In 2023, the pattern of corporate bond issues was dominated by financial instruments with a high credit rating. The share of bonds rated AAA increased from 38.9% in 2022 to 46.2% in 2023 and that of bonds rated A- to AA+, from 21.5% to 45.9%. By contrast, over the same period the share of bonds with a missing or revoked credit rating fell from 37.5% to 5.6% (Fig. 37). With a lack of access to external financing, the domestic bond market saw primarily large issuers with a high-quality investment rating.

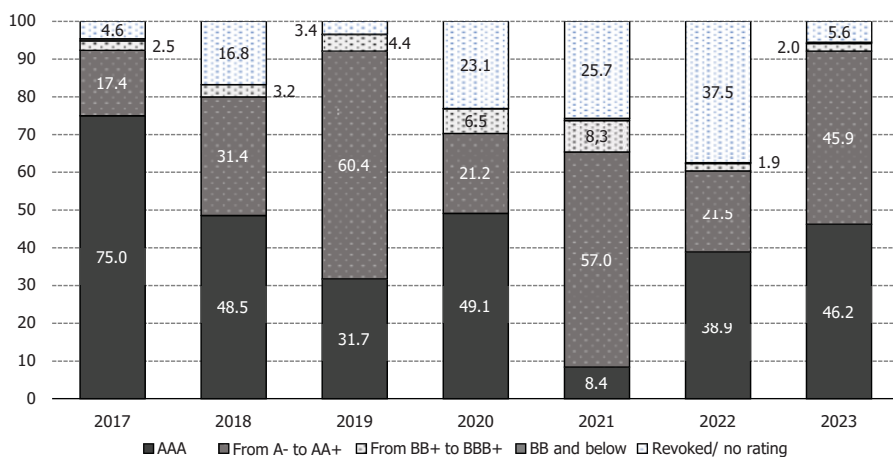


Fig. 37. The rating pattern of corporate bonds in terms of the value of issues, 2017–2023, %

Source: own calculations based on the data of the Review of the Russian Financial Sector and Financial Instruments of the RF Central Bank for a number of years. URL: http://www.cbr.ru/securities_market/analytics/.

A certain prevalence of borrowers with high credit ratings among corporate bond issuers, despite the financial market's increased volatility and the effect of large-scale economic sanctions can be explained to a great extent by a relatively low level of issuers' defaults on the domestic debt market over the past few years. At the same time, 2023 saw the worsening of the volumes of corporate issuers' defaults in terms of statistical data, but this situation has not yet materialized in the revision of credit ratings and growth in credit risk premiums. As shown in Fig. 38, the share of ruble corporate bonds with one or another form of default increased from 1.68% in 2022 to 3.32% in 2023, the highest value of this ratio since 2013. At the same time, the volume of net attraction of funds (Rb4.0 trillion) by issuers (the difference between the cost of placed and redeemed bonds for the year) is also the highest one in the specified period and this is the evidence of accelerated growth in corporate bond debts.

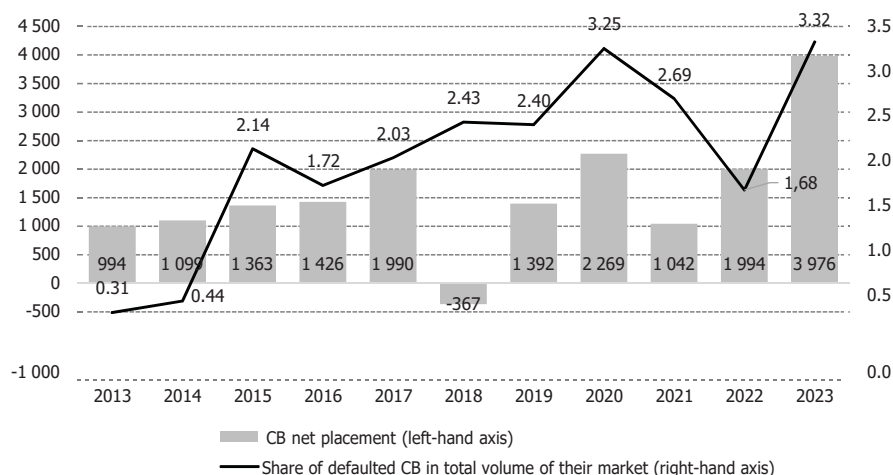


Fig. 38. The value of net placement of corporate bonds (CB) (billion rubles) and the share of defaulted CB in the total volume of their market (%) in 2013–2023

Source: own calculations based on the data of Cbonds.

The number of issuers on the CB market of the Moscow Exchange exceeds considerably the number of companies in the stock listing. In this sense, the corporate bond market is used more actively than the equity market for raising new funds and refinancing companies in different sectors of the economy.

For a long time, the stock exchange saw a decrease in the number of corporate bond issuers from 467 issuers in the pre-crisis 2007 to 198 issuers in 2018 (Fig. 39). This was caused not only by changes in the structuring of loans, when earlier the issuer's subsidiary used to issue bonds, while at present companies do it directly, but also the advantages of large issuers in terms of bond issuing costs and conditions for getting into a higher level of the exchange listing. In 2018, the securities market

legislation was amended with a view to simplify corporate bonds issuing in terms of decision-making on bonds issuing, reduction in the time frame

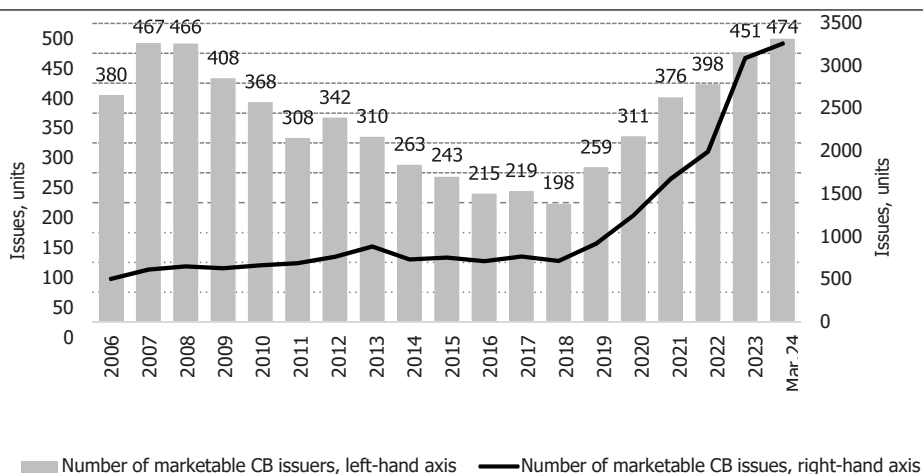


Fig. 39. The number of issuers and marketable corporate bond issues on the Moscow Exchange, 2006-March 2024

Source: Cbonds's data.

for registering issues, simplification of reporting on the results of the issue and removal of restrictions in respect of deadlines for completion of the placement of securities. This led to an increase in the number of issuers in the bonds listing.

In 2023, the number of corporate bond issuers on the Moscow Exchange picked up from 398 issuers to 451 issuers or by 13.3%.

Despite advanced growth in the value of corporate bond issues of large and high-quality borrowers, the level of concentration of new bond issues has been steadily decreasing since 2021. The share of the top-20 issuers in the total volume of new bond issues was equal to 75.9% in 2023 against 78.6% in 2020 and the share of the top-10 issuers decreased from 68.3% in 2020 to 62.3% in 2023 (Fig. 40).

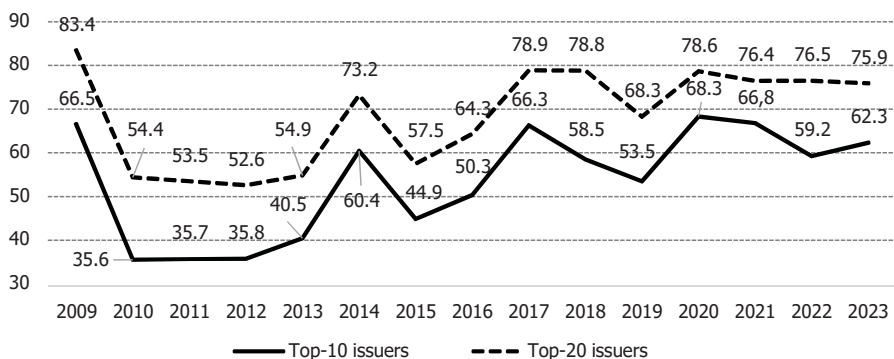


Fig. 40. The share of the top-10 and top-20 issuers in new ruble corporate bond issues in 2009–2023, %

Source: own calculations based on the data of Cbonds.

In 2023, Gazprombank together with Gazprom Capital accounted for about 18.6% of the value of marketable ruble corporate bond issues, DOM.RF and DOM.RF Mortgage Agent, for 13.0% and 4.4%, respectively, Avtodor – 4.4%, the Sberbank of Russia and the SberCIB – 4.3% and VEB.ZF – 3.1%. All these companies were the top-10 borrowers in 2022. In 2023, new top-10 issuers included NLK-Finance, a leasing company and the structures of Rostekhnlogia, Aviakapital-Servis and RZhD (*Table 14*). The other two large issuers in the top-10 list were the so-called “special purpose financial institutions” (SPFI), i.e. insufficiently transparent entities established for the securitization of financial flows from various assets. For instance, SPFI – Ideas and Investments and SPFI – Optimum Finance accounted for 5.3% and 3.5% of the value of new ruble bond issues, respectively.

Table 14

Top-10 corporate bond issuers and their share in the total value of ruble corporate bond issues

Issuers	2021			Issuers	2022			Issuers	2023	
	Billion rubles	%			Billion rubles	%			Billion rubles	%
DOM.RF Mortgage Agent	418	13.3	1	DOM.RF and DOM.RF Mortgage Agent	519	18.6	1	Gazprombank and Gazprom Capital	1 106	18.6
VEB.RF	411	13.1	2	Avtodor	277	10.0	2	DOM.RF and DOM.RF Mortgage Agent	776	13.0
Sberbank of Russia and SberCIB	399	12.7	3	SPFI Ideas and Investments	156	5.6	3	SPFI Ideas and Investments	316	5.3
VTB, including Demetra holding	273	8.7	4	VEB.RF	156	5.6	4	NLK Finance	265	4.4
Veresayeva 6	130	4.1	5	Sberbank of Russia and SberCIB	149	5.3	5	Avtodor	263	4.4
Gazprombank and Gazprom Kapital	162	5.2	6	SPFI Aurum-1	101	3.6	6	Sberbank of Russia and SberCIB	259	4.3
OTEKO-Portservis	96	3.1	7	SPFI MIP-1	83	3.0	7	SPFI Optimum Finance	208	3.5
Alfa-Lizing	76	2.4	8	Rosseti	80	2.9	8	VEB.RF	186	3.1
PRZhD	69	2.2	9	MTS	72	2.6	9	Aviakapital-Servis	180	3.0
AFK Sistems	63	2.0	10	SPFI Media Assets	58	2.1	10	RZhD	150	2.5
Capitalization of all CB issues	3 137	100		Capitalization of all CB issues	2 787	100		Capitalization of all CB issues	5 958	100
Capitalization of issues of top-10 CB issuers	2096	66.8		Capitalization of issues of top-10 CB issuers	1651	59.2		Capitalization of issues of top-10 CB issuers	3710	62.3

Source: own calculations based on the data of Cbonds.

In the total value of outstanding corporate bonds, the share of bond issues of financial institutions increased from 40.3% in 2018 to 43.7% in 2023 and 43.8% in March 2024 (*Table 15*). As of March 2024, the share of the financial sector, together with extractive industries, transport, power generation and construction amounted to 85.4% of the value of outstanding corporate bonds. This means that companies in such modern sectors of the economy as manufacturing, chemicals and petrochemicals, IT, telecommunications and communications, education and other do not yet take a full advantage of market mechanisms of funding by means of bonds by contrast with the above five sectors of the economy.

Table 15

Sectorial pattern of the ruble corporate bond market, 2018 – March 2024, %

	2018	2019	2020	2021	2022	2023	March 2024
Financial institutions	40.3	41.8	40.2	42.9	43.7	43.7	43.8
Production of oil, gas and coal	30.2	27.9	28.3	25.5	25.3	27.1	27.5
Transport	9.5	8.9	9.3	9.7	7.6	5.9	5.9
Power industry	4.6	3.9	3.2	2.8	3.1	2.9	2.9
Construction	4.1	4.4	4.4	4.3	5.4	5.2	5.4
Other industries	11.3	13.1	14.6	14.8	14.8	15.2	14.6

Source: own calculations based on the data of Cbonds.

Despite demands to Russian companies that Eurobond issues should be substituted for replacement bonds, in 2023 and January-February 2024 the Eurobond market volume in dollar terms remained considerable (*Fig. 41*). As of February 2024, its size was equal to \$44 bn or 15.3% of the value of domestic corporate bond issues. Taking into account the fact that there are increased risks of payments on these bonds being frozen in favor of Russian residents with foreign banks and depositories, as well as announcement of formal defaults on these bonds due to issuers' inability because of sanctions to timely transfer funds to foreign Eurobond holders, issuers have to take efforts to make early repayment of this debt.

In 2023, the corporate bond market saw a surge in issuers' innovative activity in terms of issuing various types of debt financing instruments. The cost of replacement bond issues increased from Rb0.5 trillion in 2022 up to Rb1.8 trillion in 2023 or 3.3 times over (*Table 16*). In 2023, the pattern of replacement bonds in currency terms was made up of US dollars (74.2%) and euros (22.1%). The main

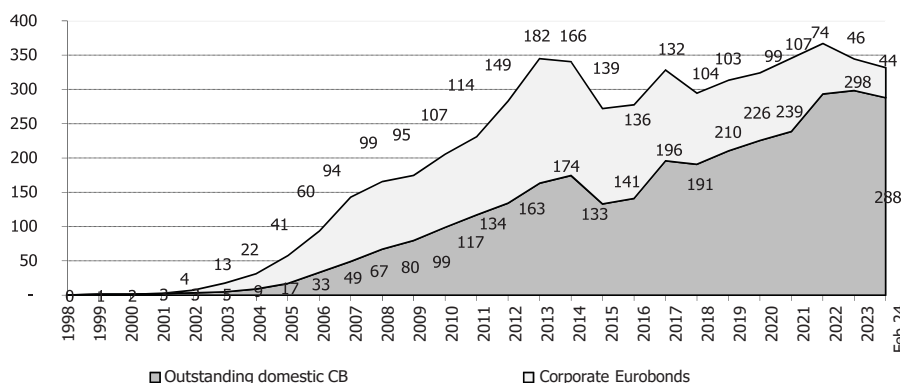


Fig. 41. The volumes of outstanding corporate bonds of Russian issuers, 1998 – February 2024, billion US dollars

Source: Own calculations based on the data of Cbonds and the Moscow Exchange.

Table 16

The value of outstanding corporate bond issues with special risk characteristics or terms of issue, billion rubles

Types of bonds	2022	2023	Growth, %
Replacement bonds	541.3	1 767.5	226.5
Foreign currency bonds (domestic market)	4 006.5	5 008.9	25.0
Bonds in yuans	599.4	1 088.1	81.5
"Floaters" corporate bonds*	3 696.3	4 160.5	12.6
Bonds linked to value of gold		17.8	
High-yield bonds (HYB)**	73.0	89.5	22.6

* Bonds with a floating coupon income.

** According to the definition of the RF Central Bank, in this particular case HYB include issues that meet simultaneously the following three conditions: the issuer's credit rating is not higher than BBB on the Russian scale (including companies without a credit rating or with a revoked one), the issue volume is not higher than Rb2 bn and the spread between the yield of the initial placement and the key rate of the RF Central Bank amounts to at least 5 percentage points.

Source: Based on the data of the Review of Financial Instruments of the RF Central Bank for 2023
URL: https://cbr.ru/ec_research/analitics/

issuers of replacement bonds were companies of the oil and gas industry which accounted for 74.5% of the value of the issues of these bonds. In 2023, the main holders of replacement bonds were credit institutions whose share was equal to 33.5%, households (29.3%), mutual funds and other financial institutions (20.4%), insurers (8.1%) and other investors (8.1%).¹

The value of foreign currency bonds on the domestic market increased from Rb4.0 trillion in 2022 to Rb5.0 trillion in 2023 or by 25.0% and the volume of corporate bonds in yuan, from Rb0.6 trillion to Rb1.1 trillion or by 81.5%. According to the RF Central Bank, the main investors on the yuan bond market were credit institutions and private investors, whose shares in the pattern of holders of these instruments accounted for 68.1% and 20.6%, respectively. In 2023, the oil and gas industry accounted for 50.2% of the total RMB bond issue, while the non-ferrous metals industry, the mining industry and the ferrous metals industry, for 15.2%, 9.9% and 6.7%, respectively.

To make corporate bonds more attractive to investors amid the growing inflation rate and the volatile key rate of the RF Central Bank, in 2023 companies began to issue more actively the so-called corporate "floaters", that is, bonds with a floating coupon income. The value of corporate floater issues increased from Rb3.7 trillion in 2022 to Rb4.2 trillion in 2023 or by 12.6%. In 2023, the oil and gas industry, transport and trade and retail accounted for 53.9%, 12.6% and 8.2%, respectively, of the total issue of corporate floaters. Growth in floater issues suggests that companies are increasingly taking on interest rate risks.

As an important trend, 2023 saw significant growth of the high-yield bond (HYB) market, despite record-high volumes of placement of bonds with high investment ratings and increased interest and credit risks during the period of high inflation. The value of HYB issues picked up from Rb73.0 bn in 2022 to Rb89.5 bn in 2023 or

¹ Based on the data of the RF Central Bank. URL: https://cbr.ru/ec_research/analitics/.

by 22.6%. According to the RF Central Bank, the main HYB investors were private investors and credit institutions, whose shares in the pattern of holders of these bonds accounted for 83.6% and 12.1%, respectively. The prevalence of individuals in the pattern of HYB holders makes the Russian market different from developed countries' markets where institutional investors are the main holders of these bonds. According to the RF Central Bank, in 2023 the construction industry and development business accounted for 25.6% of all issued HYB; non-bank financial institutions, for 18.5%; trade and retail, for 15.6%; leasing and rent, for 13.0%; the food industry and the agro-industrial complex, for 7.0% and other industries, for 20.4%.

In 2023, two gold mining companies issued Rb17.8 bn worth of bonds linked to the value of gold, a new type of bonds on the domestic market for investors in gold and gold derivatives.

Thus, in 2023 corporate bonds were still a popular instrument with issuing companies and domestic investors on the domestic financial market. The volume of their placement reached a record-high level. The main growth drivers of this market were banks with a liquidity surplus, NPF, mutual investment funds, insurers, as well as private investors who were after higher returns than interests on bank deposits, provided that their investments entailed relatively moderate risks amid increased financial market volatility.

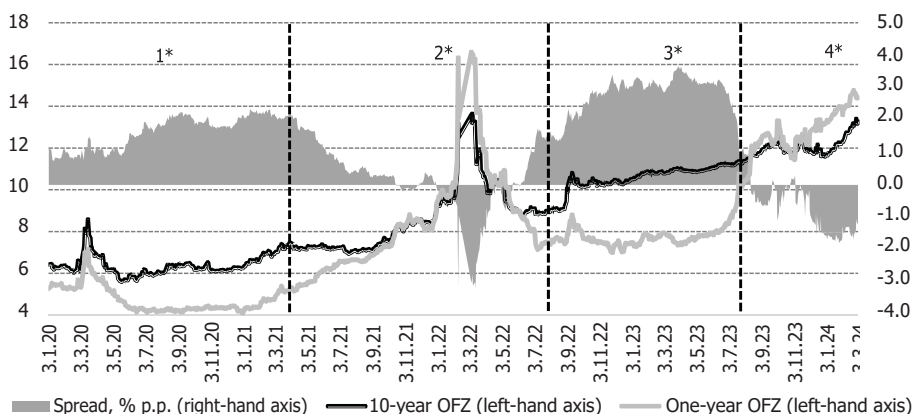
The market of government bonds of the Russian Federation

In 2023, owing to an increase in the key rate in H2 2023, the RF Ministry of Finance did not fully implement the internal borrowing plan. With planned fund-raising targets of Rb3.5 trillion for the year, OFZ placements brought actually in only 2.8 trillion rubles.¹ This OFZ placement volume exceeded that of Rb2.6 trillion in 2021, but was lower than the volume of funds raised in 2022 (Rb3.3 trillion).

An indicator of stable conditions for government bond placement is the spread of the yield to maturity of 10-year and one-year government bonds. With positive expectations of future inflation and economic growth, the yield on long-term securities typically exceeds the yield on short-term ones. With high inflation, unstable key rates and expectations of slower growth, an inversion of the bond yield curve occurs when the yield to maturity of short-term bonds exceeds that of long-duration securities. Due to a high key rate or lack of liquidity, the short-term cost of money is high, while in case of long-term bonds lower key rates are expected in order to support economic growth.

In January 2020-March 2024, we can find four periods in the government securities market with different conditions for issuing government bonds. In the first period – from January 3, 2020 till March 22, 2021 – with a stable key rate and favorable conditions for placing OFZs, the yield to maturity of one-year OFZs decreased from 5.6% to 5.4% per annum or by 0.2 p.p., while the yield on 10-year government securities increased from 6.4% to 7.4% or by 1.0 p.p. (Fig. 42).

¹ URL: <https://www.interfax.ru/business/938060>.



Notes. 1* – period of stable key rate from March 01, 2020 till March 22, 2021 when the key rate first decreased from 6.25% to 4.25% and then from July 20, 2020 till March 22, 2021 remained low at 4.25%; 2* – a period of high volatility of the key rate from March 22, 2021 till July 25, 2022 when it increased from 4.25% to 20.0% on April 08, 2022 and then began to decrease sharply to 8.0% until July 25, 2022; 3* – period of a relative stable key rate from July 25, 2022 till July 24, 2023 when the rate decreased from 8.0% to 7.5% and was at this level from September 19, 2022 till July 24, 2023; 4* – a new wave of growth in the key rate on the back of inflation expectations from July 24, 2023 to the present day (March 29, 2024), when the rate grew from 7.5% to 16.0% with expectations of its decline only in H2 2024.

Fig. 42. Yield to maturity of one-year and 10-year OFZs (% per annum) and the spread between the yield of 10-year and one-year OFZs (p.p.) from January 3, 2020 till March 29, 2024

Source: Own calculations based on the data of the RF Central Bank and the Moscow Exchange.

The second period – from March 22, 2021 till July 25, 2022 – is characterized by increased volatility of the key rate, inversion of the government bond yield curve and difficulties in raising funds through the issue of OFZs. During this period, the yield to maturity of one-year OFZs grew from 5.4% to 7.2% per annum or by 1.8 p.p., the yield of 10-year government securities increased from 7.4% to 8.8% or by 1.4 p.p.

The third period – from July 25, 2022 till July 24, 2023 – was characterized by relative stability of the key rate even amid sanctions and the RF Ministry of Finance's high activity in issuing bonds to finance the budget deficit. Over this period, the yield to maturity of one-year OFZs increased from 7.2% to 8.4% per annum or by 1.2 p.p. and the yield on 10-year government securities, from 8.8% to 11.2% or by 2.4 p.p.

The fourth period – from July 24, 2023 till March 2024 – was a period of rising key rates, recovery of the yield curve inversion and a reduction in the volume of OFZ placements. During this period, the yield to maturity of one-year OFZs increased from 8.4% to 14.4% per annum or by 6.0 p.p. and the yield on 10-year government securities, from 11.2% to 13.3% or by 2.1 p.p.

Thus, it can be assumed that unfavorable conditions for OFZ placements are high volatility of the key rate and inversion of the yield curve of government securities. These conditions developed in H2 2023 and still prevail.

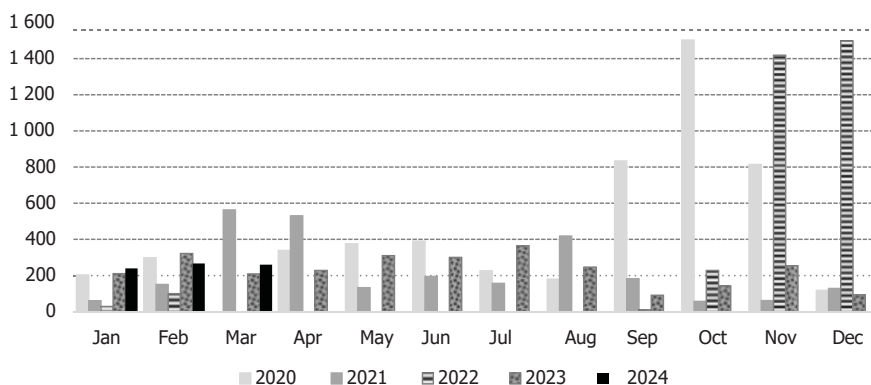
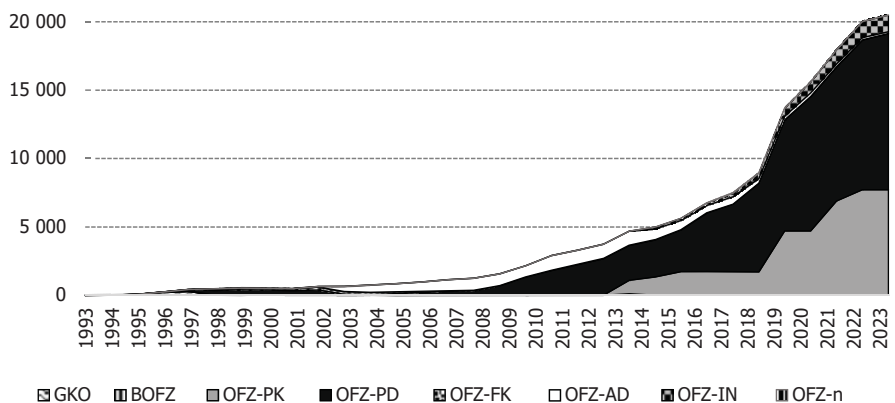


Fig. 43. The volumes of OFZ placements at auctions in 2020–2022 and January-March 2024, billion rubles

Source: Own calculations based on the data of Cbonds.



Note. BOFZ is zero-coupon federal loan bonds;
 GKO is zero-coupon short-term government bonds;
 OFZ is federal loan bonds;
 OFZ-AD is federal loan bonds with debt amortization;
 OFZ-IN is federal loan bonds with par value indexed to the level of inflation in the Russian Federation ("linkers");
 OFZ-PD is federal loan bonds with constant coupon income;
 OFZ-PK is federal loan bonds with variable coupon income 'linked' to the RUONIA rate ("floaters");
 OFZ-n is federal loan bonds for individuals ("popular bonds").

Fig. 44. The volumes of GKO-OFZ issue in circulation, 1993 – March 2024, billion rubles

Source: Own calculations based on the data of the RF Ministry of Finance and Cbonds.

By contrast with the corporate bond market, the rise in the key rate from July 2023 led to a considerable decrease in the volume of OFZ placements by the RF Ministry of Finance, which due to the risk of rising public debt servicing costs had to switch over to the strategy of financing the budget deficit at the expense of the

National Welfare Fund. In August–December 2023, they placed Rb823.7 bn worth of OFZs or 29.8% of the volume of funds raised in 2023. In December, the RF Ministry of Finance placed only Rb92.0 bn worth of bonds or 3.3% of the annual borrowing volume (*Fig. 43*).

In January–March 2024, despite the key rate of 16.0% the volume of OFZ placements began to recover amounting to Rb 764.8 bn against Rb738.8 bn rubles in Q1 2023 when the key rate was equal to 7.5%.

The total value of OFZ issues increased from Rb18.0 trillion in 2022 to Rb20.0 trillion in 2023 or by 11.5%, and to Rb20.5 trillion or by 2.3% in January– March 2024 (*Fig. 44*). Growth in the OFZ value was facilitated by three types of government securities: OFZ-PK, bonds with a floating coupon (“floaters”); OFZ-PD, bonds with a constant income and OFZ-IN, bonds with a par value indexed to the level of inflation (“linkers”).

The most significant segment of the OFZ market in terms of value is OFZ-PD with a constant coupon income. The size of coupon income on these OFZs are set in advance for the entire circulation period which allows the RF Ministry of Finance to manage more effectively public debt servicing costs without taking on interest rate risks. As OFZ-PD are characterized by a diversified pattern of its holders, this facilitates a higher level of liquidity of this type of OFZ. According to the data of the RF Central Bank, in 2023 27.3% of these bonds belonged to credit institutions, 22.9% to public sector entities, 15.6% to NPF, 13.7% to non-residents, 7.4% to insurers, 6.9% to other financial institutions and 3.5% to private investors. Before the sanctions were imposed, the main investors in OFZ-PD, especially those with a long duration, used to be for a long time foreign portfolio investors. The value of OFZ-PD increased from Rb9.8 trillion in 2022 to Rb10.9 trillion in 2023 or by 11.7% and to Rb11.4 trillion in March 2024, or by another 4.2%.

A reduction in the key rate by the RF Central Bank, which process is expected in H2 2024, will contribute to investors’ increased demand for long duration OFZ-PD with a decline in the investment appeal of OFZ-PK (“floaters”) and OFZ-IN (“linkers”).

Amid rising inflation expectations and the key rate, OFZs with a floating coupon (OFZ-PK) are more attractive to domestic investors as their holders have more flexibility in managing liquidity and interest rate risk. In case of OFZ-PK, the coupon size is tied to the RUONIA money market rate which normally follows the values of the RF Central Bank’s key rate. The total value of outstanding OFZ-PK bonds increased from Rb6.9 trillion in 2022 to Rb7.7 trillion in 2023. In January–February 2024, expecting a reduction in the key rate the RF Ministry of Finance did not place new issues of “floaters” because of low investor demand for them in anticipation of a reduction in the key rate by the Bank of Russia

Amid increased inflation risks in 2023 – Q1 2024, OFZ-IN (“linkers”) became more popular with investors because these bonds envisage indexation of their nominal value depending on the level of inflation measured on the basis of the consumer price index. By virtue of their protective properties, these bonds were in domestic institutional investors’ high demand. According to the data of the RF Central Bank, in 2023 33.4% of “linkers” belonged to credit institutions, 30.8% to

NPF, 28.3% to other financial institutions, 4.7% to non-residents, 1.3% to insurers and only 1.3% to private investors. The specified pattern with prevalence of institutional investors holding bonds to maturity reduces liquidity of OFZ-IN on the stock market. The value of OFZ-IN picked up from Rb1.02 trillion in 2022 to Rb1.17 trillion in 2023 or by 14.3% and to Rb1.21 trillion in March 2024 or by 3.5%.

Two other types of government bonds – OFZ-AD with amortization of the principal debt for investing pension savings on a volatile financial market and OFZ-n, which are called “popular bonds” because of their focus on investments by private investors in the over-the-counter market – are not popular in the current conditions and may disappear in the near future. The abovementioned three types of exchange-traded OFZs turned out to be more suitable for the portfolio strategies of NPF and private investors.

The value of OFZ-AD decreased from Rb222 bn in 2022 to Rb176 bn in 2023 or by 20.8% and to Rb146 bn in March 2024 or by another 16.8%. The value of OFZ-n decreased from Rb42 bn in 2022 to Rb14 bn in 2023 or by 38.4% and to Rb8 bn in March 2024 or by 40.5%. The issuer’s hopes for these bonds being popular with households when selling them to private investors directly through banks in bypass of the exchange infrastructure did not materialize.

For 11 years from February 2013, that is, from the day of opening by Euroclear and Clearstream, foreign settlement and clearing organizations, of nominal holder accounts with the Russian central depository (NSD) till March 2024, the share of non-resident investments in OFZs was very volatile. The maximum share (34.9%) of non-resident investments in OFZs was registered in February 2020; in March 2024, this ratio fell to 7.3% (*Fig. 45*).

Such a sharp decrease in the volume of non-residents’ investments in OFZs, despite the blocking of these funds in Russian depositories during the sanctions, suggests that many non-residents from unfriendly countries managed to avoid Russian countersanctions envisaged by Federal Law No.319-FZ of July 14, 2022 by reselling securities to entities which were not subject to sanctions.¹

In 2022–2023, on the government Eurobond market of the Russian Federation the decline in the share and absolute value of non-resident investments was slower than that on market of ruble OFZs (*Fig. 46*). The value of non-resident investments in Russian Eurobonds decreased from \$16.3 bn in 2022 to \$14.8 bn in 2023 or by 9.2%. At the same time, the share of non-residents in Eurobonds of the Russian Federation decreased from 45.0% in 2022 to 44.8% in 2022 or by the mere 0.2 p.p.

For a long time after the financial crisis, the Russian Federation pursued a policy of advanced growth in borrowings on the domestic market in rubles as compared to the building-up of debts in foreign currency (*Fig. 47*). The total value of government bonds fell from \$307 bn in 2022 to \$262 bn in February 2024 or by 14.7%. At the same time, on the back of depreciation of the ruble exchange rate, the value of ruble-denominated government bonds decreased from \$269 bn to

¹ Non-residents keep selling OFZs with a discount of up to 40% in 2023, as well. // Frank Media. January 27, 2023 URL: <https://frankrg.com/110155>

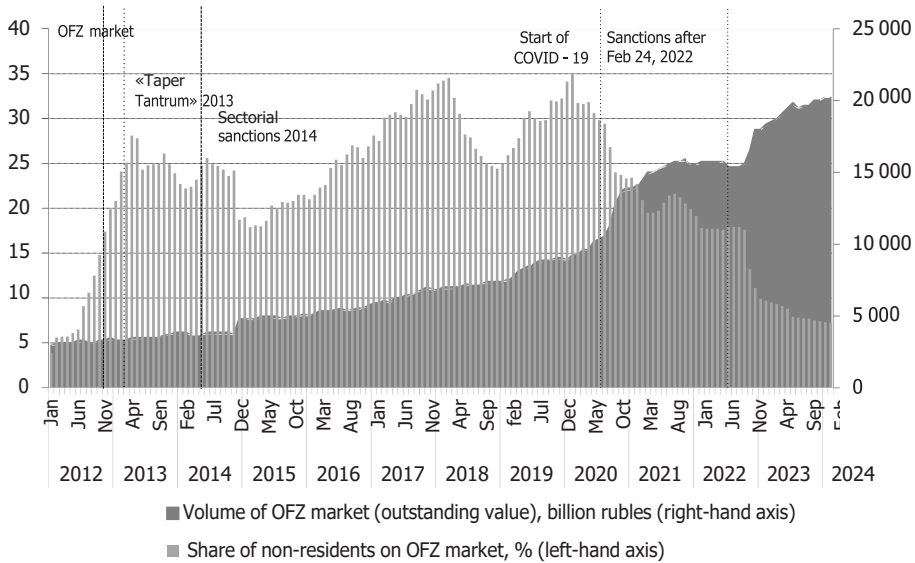


Fig. 45. The share of non-residents on the OFZ market (%) and the value of outstanding OFZ (billion rubles), February 2012 – February 2024

Source: Own calculations based on the data of the RF Ministry of Finance and Cbonds.

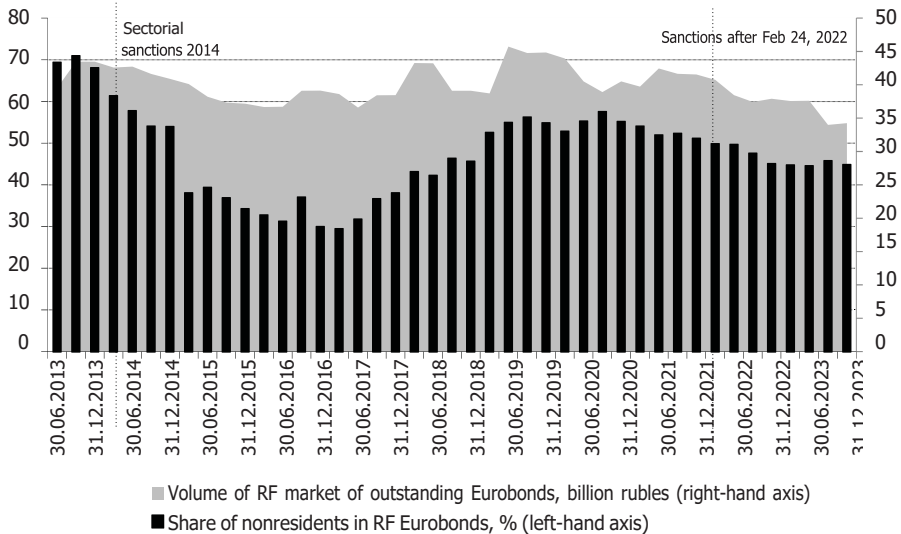


Fig. 46. The share of non-residents on the government Eurobond market of the Russian Federation (%) and the value of outstanding government Eurobonds (billion rubles), July 2013 – December 2023

Source: Own calculations based on the data of the RF Ministry of Finance and Cbonds.

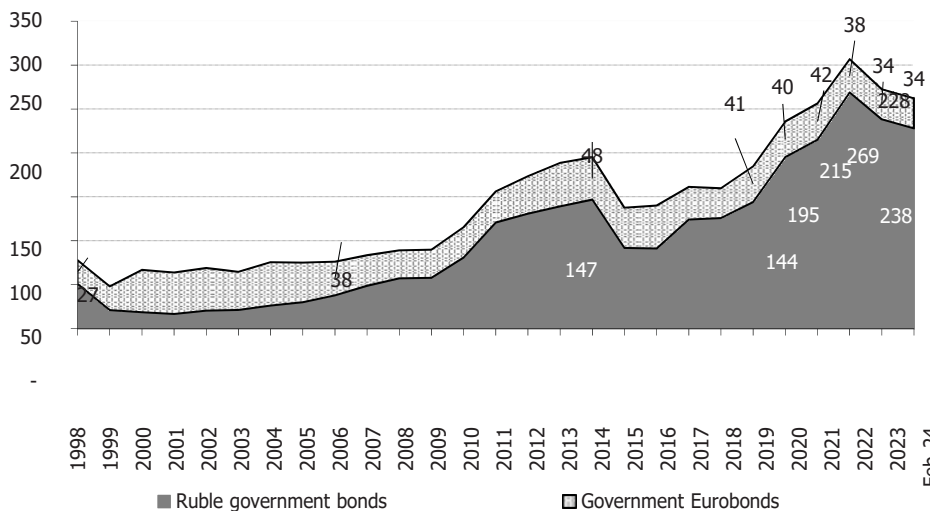


Fig. 47. The volumes of outstanding government domestic bonds and Eurobonds of the Russian Federation, 1998 – February 2024, billion rubles

Source: Own calculations based on the data of the RF Ministry of Finance and Cbonds.

\$228 bn or by 15.2%, and the value of Eurobond issues as they matured decreased from \$38 bn to \$34 bn or by 10.5%.

Thus, in 2023 the government securities market remained stable owing to a liquidity surplus in the banking sector and an influx of funds into bonds from domestic institutional investors and households. A set of OFZs with different terms of issue (constant income bonds, “floaters”, “linkers”) allowed the RF Ministry of Finance to pursue a flexible policy of raising debt financing amid changes in macroeconomic parameters, the monetary policy and investor expectations. Nevertheless, the key rate that remained at 16% in 2023 and in Q1 2024 and some investor skepticism regarding the outlook for its rapid decline in H2 2024 led to growth in the yield of government bonds and a decrease in the market value of the broad government bond index RGBI. This limited the RF Ministry of Finance’s ability to implement in full the government borrowing program in 2023 and Q1 2024.

7. Derivatives and foreign-exchange markets

The economic importance of the derivatives market consists in the pricing of investment assets, as well as providing market participants with options to hedge against sharp changes in asset prices in future. However, the derivatives market where private investors prevail is often used for speculative transactions with a high financial leverage, rather than for risk management.

Private investors who dominate on the derivatives market use it more for short-term transactions, rather than for hedging. Trading volumes on the Moscow

Exchange futures market increased moderately from Rb75.6 trillion in 2022 to Rb77.9 trillion in 2023 or by 3.0%, the volume of option trades picked up more markedly from Rb2.3 trillion to Rb2.9 trillion or by 26.9% (*Fig. 48*). At the same

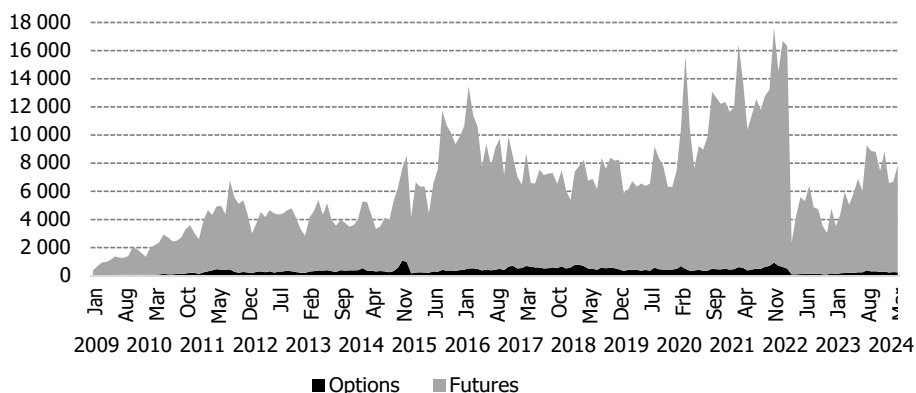


Fig. 48. The value of futures and options at the Moscow Exchange, January 2009 – March 2024, billion rubles

Source: Own calculations based on the data of the Moscow Exchange.

time, in 2023 the liquidity of the futures and options markets amounted only to 51.2% and 42.6%, respectively, of the trading volumes seen in 2021. By contrast with Q1 2023, in January–March 2024 the volumes of futures and option trades decreased by 40.7% and 40.5%, respectively.

In 2023, the Moscow Exchange derivatives market saw lots of new instruments, for example, timeless futures for gold and the Moscow Exchange index, premium options for currencies and commodities and futures for new currency pairs, stocks and commodities. However, derivatives market growth was hampered by high competition on the part of alternative stock and bond markets, bank deposits with high interest rates, exchange-traded money market mutual funds, as well as lack of non-residents which accounted for 48% of the trading volume in 2021. According to the data of the Moscow Exchange, the share of individuals in trading volumes on the derivatives market increased from 59% in 2022 to 62% in February 2024.¹

In 2023, traditional exchange-traded contracts accounted for the bulk of transactions on the futures market (Fig. 49). According to the data of Finam, in 2023 the most popular futures contracts in terms of the number of private investors were foreign currency/Russian ruble contracts: "US dollar/Russian ruble contracts" and "Chinese yuan/ Russian ruble contracts", as well as contracts on prices for natural gas, Brent oil, Sberbank's common shares and gold (24%).² Due to the continued decline in demand for US dollars and euros in 2023, the volume of currency futures decreased from Rb45.3 trillion in 2022 to Rb44.5 trillion or by 1.8%. Relative to 2021, in 2023 the liquidity of this futures market segment wasequal to 66.7%. The share of currency futures fell from 66.9% in 2022 to 56.2% in 2023 and 51.2% in March 2024.

¹ URL: <https://www.moex.com/n68157?nt=0>

² URL: <https://www.finam.ru/publications/item/na-srochnyy-rynok-moskovskoy-birzhi-v-2023-godu-prishlo-100-tysyach-novykh-klientov-20240119-1113/>

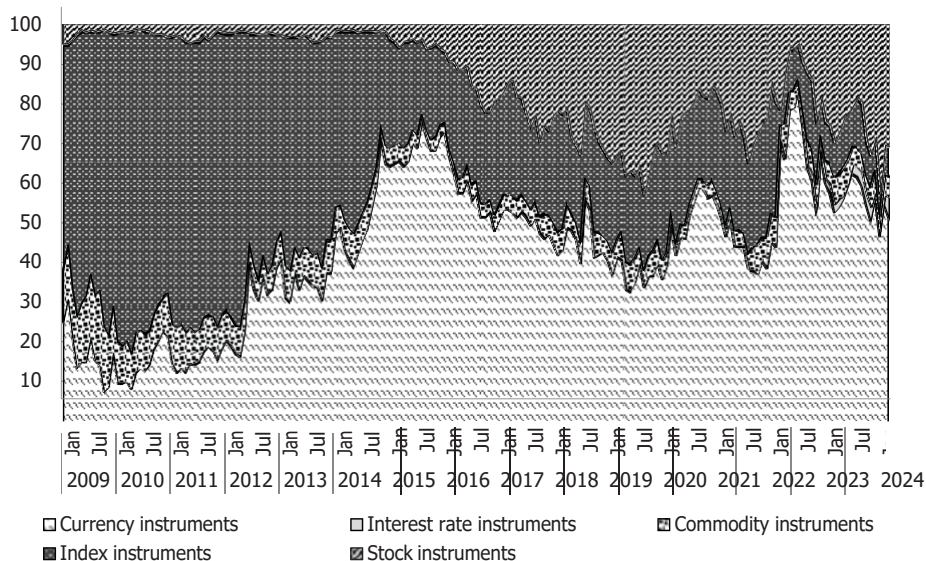


Fig. 49. The pattern of the Moscow Exchange futures market, January 2009 – March 2024, % on transaction value

Source: Own calculations based on the data of the Moscow Exchange.

The second most important segment of the futures market is contracts on stock indices, primarily the RTS and Moscow Exchange indices. Their volume decreased from Rb14.8 trillion in 2022 to Rb7.8 trillion in 2023 or by 47.0%. Relative to 2021, in 2023 the liquidity of this segment of the futures market was equal only to 20.1%. The share of index futures decreased from 8.9% in 2022 to 8.2% in 2023 and 7.3% in March 2024. On the contrary, the share of futures for stock instruments (stocks and other) increased from 4.4 % in 2022 to 5.2% in 2023, remaining at 5.1% in March 2024.

In the past few years, futures for various commodity assets (Brent oil, natural gas, gold, silver, wheat, copper, nickel and other commodities) have been one of the most actively developing sectors of the Moscow Exchange futures market. In 2023, commodity futures trading volumes increased from Rb10.4 trillion in 2022 to Rb19.5 trillion or by 87.7%; as a result, the share of commodity futures rose from 18.5% in 2022 to 28.4% in 2023 and 30.8% in March 2024.

The options market is quite a risky one for individuals' short-term transactions. Unlike previous years, currency options have recently become the most traded contracts on the exchange (Fig. 50). The volume of currency instrument options increased from Rb1.1 trillion in 2022 to Rb2.0 trillion in 2023 or by 87.7%. At the same time, relative to 2021, the liquidity of currency options was equal to 99.3% in 2023. Over the same period, their share in the total volume of option transactions grew from 61.7% to 73.0% with a slight decrease to 67.8% in March 2024.

On the contrary, the volume of index instrument options decreased considerably from Rb1.1 trillion in 2022 to Rb0.7 trillion in 2023 or by 31.3%;

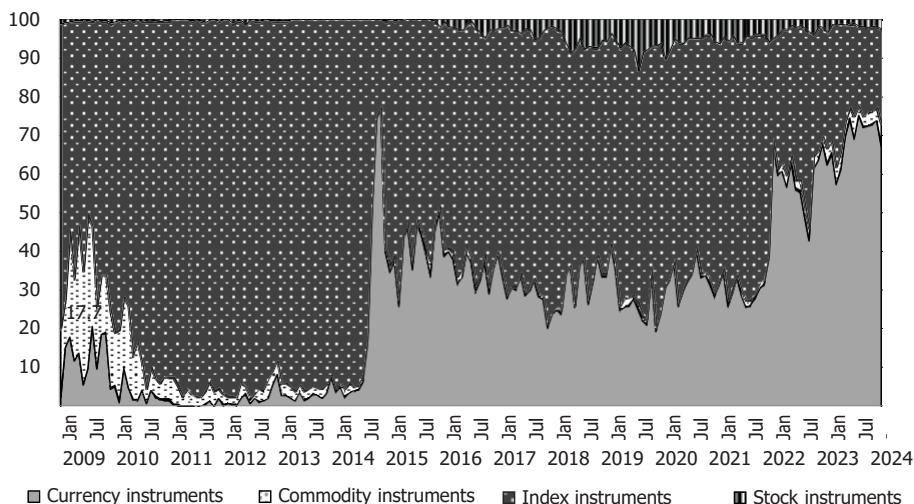


Fig. 50. The pattern of the Moscow Exchange options market, January 2009 – March 2024, % on transaction value

Source: Own calculations based on the data of the Moscow Exchange.

relative to 2021, their liquidity was equal to the mere 17.1% in 2023. The share of these options in the total volume of option transactions on the exchange decreased from 31.0% in 2022 to 21.5% in 2023 with a subsequent increase to 24.4% in March 2023. The launch by the Moscow Exchange of trading in premium options on the Moscow Exchange index, the main indicator of the Russian stock market, at the end of December 2023 stimulated growth in private investors' interest in index instrument options. The remaining segments of the options market are very small.

In 2022–2023, the diminishing role of transactions with the US dollar and euro on the foreign exchange and derivatives markets of the Moscow Exchange was accompanied by the growing interest of exchange trading participants in alternative currencies of friendly countries, primarily, the Chinese yuan. On the spot market, the share of the yuan in foreign exchange trading volumes increased from 0.4% in 2021 to 64.75% in March 2024 (Fig. 51). At the same time, the share of the US dollar decreased accordingly from 82.6% to 20.4%. In addition to its use in foreign trade transactions, an increase in investor demand for the yuan was fueled primarily by the emergence of new financial products, such as yuan deposits with banks, as well as placement by a number of large Russian companies of yuan-denominated bonds.

In 2022–2023, growth in the volume of yuan transactions on the futures market was more moderate (Fig. 52). However, it is speeding up, too. The share of yuan transactions increased from 0% in 2021 to 35.3% in March 2024. Over the same period, the share of transactions in US dollars decreased from 92.0% to 54.4%, while the share of transactions in euros increased from 8.0% to 10.3%.

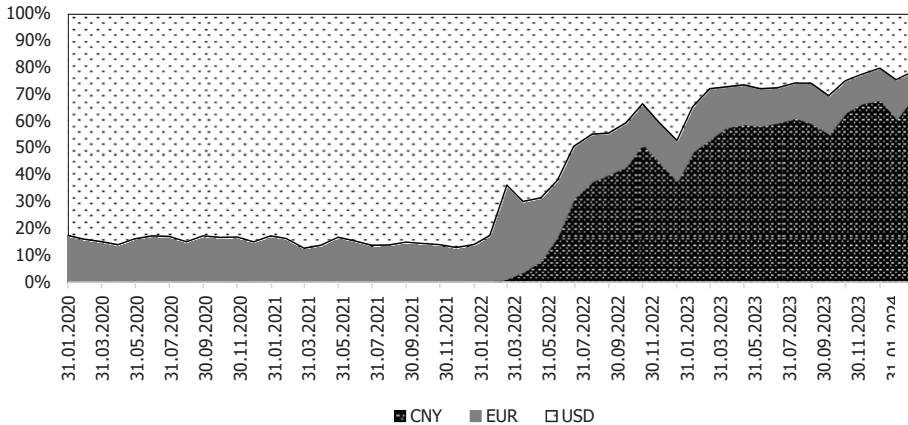


Fig. 51. The pattern of the Moscow Exchange spot market of currency transactions, 2020 – March 29, 2024, % on transaction value

Source: Own calculations based on the data of the Moscow Exchange.

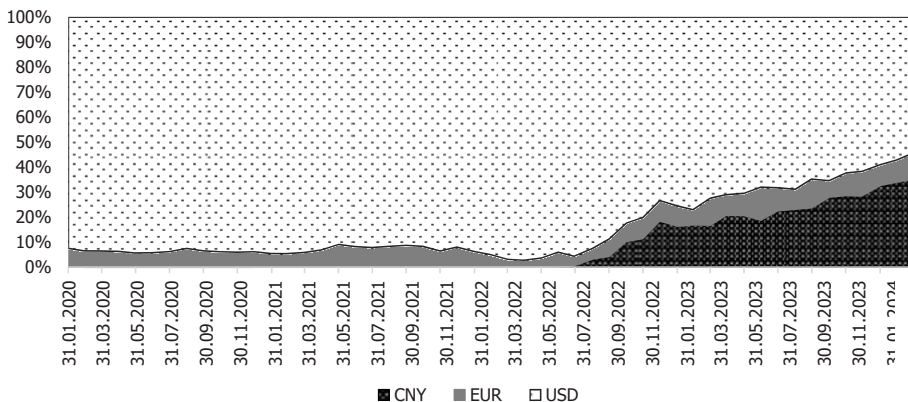


Fig. 52. The pattern of the Moscow Exchange futures foreign exchange market, 2020 – March 29, 2024, % on transaction value

Source: Own calculations based on the data of the Moscow Exchange.

8. Financial intermediaries and exchanges

The Russian financial market is characterized by a situation where despite the development of fintech and entry of dozens of millions of private investors into the market, the long-term trend of a declining number of licenses to carry out professional activities in the securities market is coupled with a trend of a very limited number of new companies entering the market. In 2023, the number of financial intermediaries increased somewhat as compared to the previous year: from 277 intermediaries to 282 intermediaries in dealer activities; from

179 intermediaries to 182 intermediaries with the right to act in trust management of securities; from 253 intermediaries to 254 intermediaries in brokerage activities (Fig. 53). However, the number of new licenses declined from 47 licenses in 2022 to 35 licenses in 2023.

In 2011, with a merger of the MICEX and RTS exchanges, it became possible to speed up the development of exchange-related technologies and concentrate liquidity on trading participants' accounts in the unified settlement and trading system. Along with positive changes, the merger of the RTS and MICEX exchanges led to the situation where the competition between the exchanges disappeared. In 2020–2021, the accelerated development of the St. Petersburg Exchange (SPE), which acted as the organizer of trading in foreign issuers' equities, made it possible to revive the competition between the exchanges on the stock market. However, in 2023 SPE practically stopped its main activities because of sanctions imposed against it and its settlement depository.

In the past few years, the Moscow Exchange tried to realize its advantages in the market as a universal organizer of trading in various investment and financial assets. The total volumes of exchange trading increased from Rb1,056 trillion in 2022 to Rb1,310 trillion in 2023 or by 24.1 (Fig. 54).

Apart from advantages, the modal of a universal exchange creates risks in terms of reduced motivation to develop business segments which do not generate high commissions. As compared to 2021, the share of the stock market decreased from 5.2% to 4.8% in 2023, while in 2010 it was equal to 13.2%. The bulk of trading volumes on the Moscow Exchange is generated by the foreign exchange and money market; in 2022–2023 its share remained at the level of 89% against 72.0% in 2010. The share of the derivatives market decreased from 7.4% in 2022 to 6.2% in 2023 and amounted to 14.8% in 2010 (Table 17).

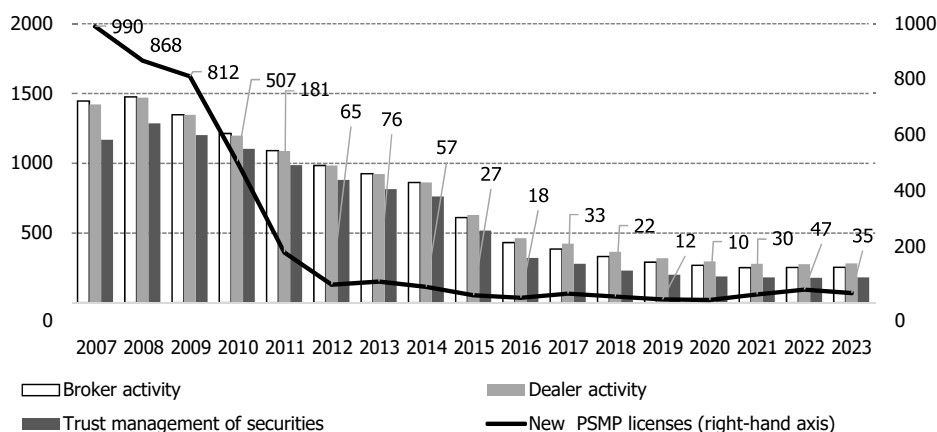


Fig. 53. The number of licenses to carry out broker and dealer activities and trust management of securities (left-hand axis) and the number of issued licenses of professional securities market participants (right-hand axis), 2007–2023

Source: Own calculations based on the data of NAUFOR and registers of the RF Central Bank. URL:

https://www.cbr.ru/securities_market/registries/

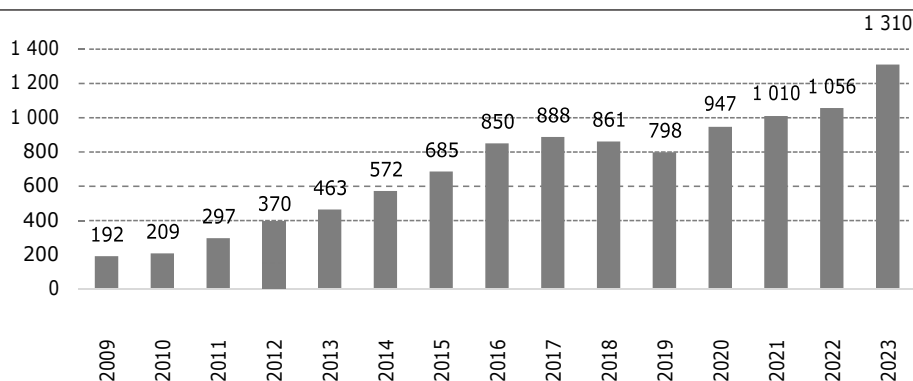


Fig. 54. The total volumes of trading in all instruments on the Moscow Exchange, 2009–2023, trillion rubles

Source: Own calculations based on the data of the Moscow Exchange.

Table 17

The pattern of the Moscow Exchange market in 2010–2023, %

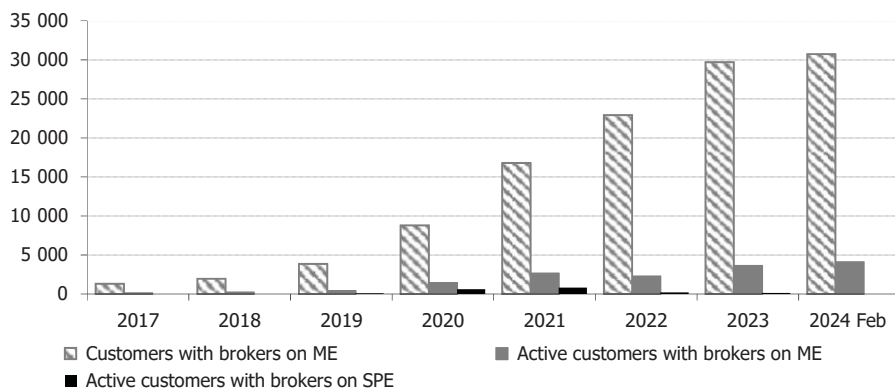
	2010	2015	2020	2021	2022	2023
Stock market	13.2	3.0	5.8	5.2	3.5	4.8
Including:						
Equities, RDR and units	8.0	1.4	2.5	3.0	1.7	1.8
Bonds	5.2	1.6	3.2	2.2	1.9	3.0
Secondary trading	3.4	1.2	1.2	1.0	0.6	0.9
Market of placements	1.8	0.4	2.1	1.2	1.2	2.2
Foreign exchange and monetary market	72.0	83.3	80.5	78.9	89.1	89.0
Including:						
Money market	33.9	38.0	45.7	47.2	63.7	63.9
REPO operations	31.5	33.2	40.7	41.7	51.3	50.4
Loan market	2.4	4.8	5.0	5.5	12.4	13.6
Foreign exchange market	38.1	45.4	34.7	31.7	25.4	25.0
Spot transactions	18.0	15.1	10.2	9.4	9.5	8.2
SWAP transactions	20.1	30.3	24.5	22.2	15.9	16.8
Derivatives market	14.8	13.7	13.7	15.7	7.4	6.2
Derivatives financial instruments	0.0	0.001	0.1	0.3	0.0	0.0
Commodity market	0.001	0.02	0.01	0.02	0.02	0.04
Total	100	100	100	100	100	100

Source: Own calculations based on the data of the Moscow Exchange.

9. Investors on the domestic financial market

Over the past five years, the number of private investors on the Russian market has been growing. The number of unique customer accounts with brokers on the Moscow Exchange increased from 22.9 million accounts in 2022 to 23.6 million accounts in 2023 and to 30.7 million accounts in February 2024 or by 34.1% (Fig. 55). However, as most accounts do not have assets, a more objective ratio

of private investors' trading activity is the number of active customer accounts in



Note. The number of SPE customers in 2023 is given as of October 2023. Later, such information was not disclosed by SPE because of suspension of trading owing to the sanctions introduced from November 2023.

Fig. 55. The number of accounts of registered and active customers with brokers on Russian exchanges, 2017 – February 2024, thousand units

Source: Own calculations based on the data of the Moscow Exchange and SPE.

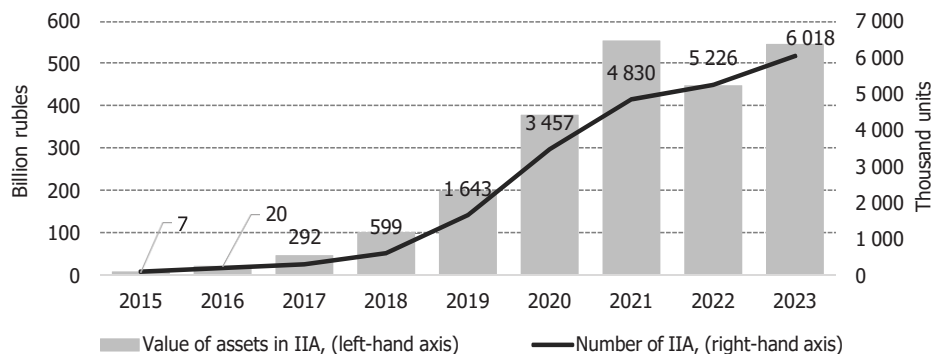


Fig. 56. The number of individual investment accounts (IIA-1 and IIA-2) (thousand units) and the value of customer assets in these accounts (billion rubles), 2015–2023

Source: Own calculations based on the data of the RF Central bank and the Moscow Exchange.

which at least one exchange-related transaction is made a month. The number of such accounts on the Moscow Exchange increased from 2.2 million accounts in 2022 to 4.1 million accounts in February 2024 or by 81.3%. As of November 2023, there were 126,000 active customers on the St. Petersburg Exchange, but later the Exchange stopped disclosing this information because it suspended trading.

The number of individual investment accounts (IIA) of private investors increased from 5.2 million in 2022 to 6.0 million in 2023 or by 15.1% (*Fig. 56*). In 2023, growth in the number of IIA sped up by 8.2% as compared to 2022. In 2023 this growth in the number of IIA was driven by private investors' rush to

open individual investment accounts of the first- and second types until the end

of 2023, that is, before the new legislation on individual investment accounts of the third type (IIA-3) came into force. In compliance with the Federal Law "On the Securities Market" as amended and effective from January 1, 2024,¹ the opening of new IIA-1 and IIA-2 accounts ceased from January 1, 2024, but individuals could open new IIA-3 accounts.

Unlike previous types of individual investment accounts, a new IIA type allows their owners to take advantage of a wider range of tax benefits, combining the advantages of IIA-1 and IIA-2 in terms of receiving a tax deduction when depositing new funds into the account in the amount of up to Rb400,000 per year, as well as exemption from personal income tax on investment income when withdrawing savings from the account. At the same time, the amount of funds deposited into IIS-3 is not limited, and the maximum amount of investment income exempt from tax is equal to Rb30 mn. The main disadvantage of IIS-3 as compared to IIS-1 and IIS-2² is that the minimum duration of keeping assets in the account must be 5 years and subsequently this period will increase to 10 years. Due to this factor, there is a risk of a substantial slowdown in the growth rates of opening of this type of accounts.

The value of assets in the previous version of IIA reached the maximum of Rb551 bn in 2021, fell to Rb446 bn in 2022 and picked up to Rb543 bn in 2023, that is, 1.5% below the peak value seen in 2021.

Owing to restrictions on the application of tax benefits in respect of the ultimate amount of new deposits to IIA-1 and IIA-2, savings in these accounts accounted for a small portion of client assets with brokers (*Fig. 57*). At the peak of the growing popularity of IIA in 2020, the assets value kept in such accounts was equal to the mere 6.7% of individuals' assets in brokerage accounts; in 2023 this ratio fell to 4.9%. The share of brokerage accounts with a IIA status in the total number of brokerage accounts peaked at 33.6% in 2019 and then decreased to 14.5% in 2023.

Overall, the history of the use of IIA-1 and IIA-2 in 2015–2023 points to the need to maintain more stable rules of the game in the field of households' long-term savings, as well as develop a cautious approach to the application of tax benefits.

The data on the number of brokerage accounts registered by the exchanges does not reflect the actual extent of households' involvement in stock market transactions. The bulk of individuals' brokerage accounts is empty or holds assets which sum is insufficient for safe investment. As shown in *Table 18*, the value of assets in private investors' brokerage accounts picked up from Rb8.3 trillion in 2021 to Rb9.2 trillion in 2023 and over the same period the number of brokers' unique customers increased from 20.2 million customers to 38.9 million customers.³

In 2023, 25.3 million people (65.1%) of the total number of brokerage account holders had no assets in their accounts; in 2021 the relevant ratio was equal to

¹ Federal Law No. 600-FZ of December 19, 2023 "On Amendment of Individual Statutory Acts of the Russian Federation."

² The minimum period for which assets were kept in IIA-1 and IIA-2 accounts was equal to three years and not linked to the date of depositing funds to the account.

³ The RF Central Bank's data on the number of private investors' brokerage accounts are normally higher than the ratio of the number of unique customer accounts with brokers published by the Moscow Exchange.

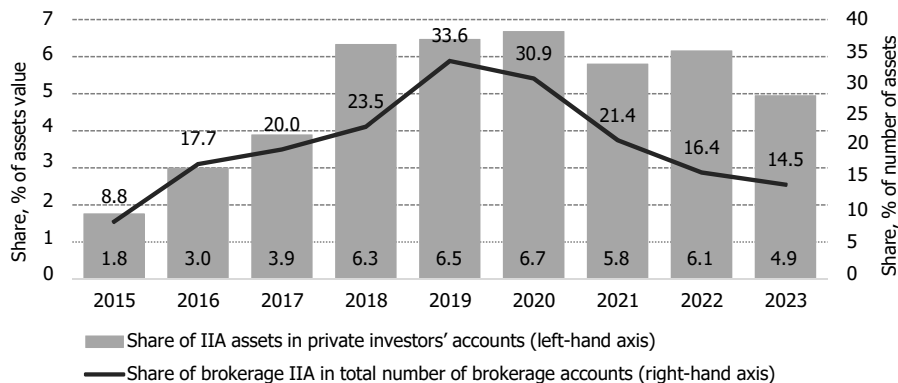


Fig. 57. The share of assets in IIA (IIA-1 and IIA-2) in the total value of assets in private investors' accounts and the share of brokerage IIA in the total number of brokerage accounts, 2015–2023, %

Source: Own calculations based on the data of the RF Central Bank and the Moscow Exchange.

Table 18

The data on the distribution of the number of private investors and the value of client assets depending on the value of assets in a brokerage account, 2021–2023

	Number of customers						Portfolio volume					
	2021		2022		2023		2021		2022		2023	
	Mn persons	%	Mn persons	%	Mn persons	%	Trillion rubles	%	Trillion rubles	%	Trillion rubles	%
1. From Rb1 mn and more	0.6	3.0	0.5	1.8	0.7	1.8	7.6	91.1	5.3	87.6	8.5	91.9
2. From Rb100,00 and more	2.0	9.9	2.0	6.9	2.4	6.2	8.2	99.1	5.9	98.5	9.1	99.1
3. Up to Rb100,000	5.4	26.8	8.0	27.4	11.2	28.7	0.1	0.9	0.1	1.5	0.1	0.9
4. Empty accounts	12.8	63.3	19.2	65.7	25.3	65.1	0.0	0.0	0.0	0.0	0.0	0.0
5. Overall (sum of lines 2–4)	20.2	100.0	29.1	100.0	38.9	100.0	8.3	100.0	6.0	100.0	9.2	100.0

Source: The RF Central Bank. The statistical data to the review of key indicators of securities market professional participants. URL: https://www.cbr.ru/securities_market/statistic/

63.3%. By our estimates, to build a simple diversified portfolio, a private investor needs to have at least Rb100,000 in the account.¹ In 2023, the number of private investors with an investment potential (the asset value of Rb100,000 and more in the account) was equal to 2.4 million people or 6.2% of the total number of brokerage account holders; in 2021 the share of such investors was equal to 9.9%.

¹ According to the study by the RF Central Bank, as comprehensive diversification of brokers' customer portfolios with assets of Rb10,000-Rb100,000 was impossible, this group of investors saw the worst negative returns on individual portfolios across different groups of investors in H1 2022 // Portrait of a Broker's Client. H1 2022. Moscow: The RF Central Bank, 2022. p. 14. URL: https://cbr.ru/Content/Document/File/143859/Portrait_client_brok.PDF

The number of private investors, who could not fully diversify their investments (the asset value of up to Rb100,000 in their accounts) and were more likely to receive returns on individual portfolios below the market level, amounted 11.2 million people in 2023 or 28.7% of brokers' clients; in 2021 the ratio was equal to 26.8%. Thus, the existing practice of disclosing information on brokerage accounts, including unfunded accounts, distorts considerably the general public's comprehension of the extent of private investors' participation in stock market transactions. Other countries – the USA, the EU, China, India and South Korea – publish normally information only on customers' funded accounts with brokers.

The data of *Table 18* also point to a high level of concentration of private investors' assets with brokers. In 2021 and 2023, the accounts of the mere 600,000–700,000 individuals with assets worth of Rb1 mn or more accounted for 91%–92% of the assets kept in brokerage accounts.

In 2023, amid banks' high interest rates on deposits even despite a high yield of the Moscow Exchange index, households sharply increased their investments in bank deposits from Rb46.9 trillion in 2022 to Rb59.7 trillion in 2023; the share of bank deposits in the pattern of household assets grew from 54.6% to 55.4%. Investments in equities increased from Rb4.6 trillion to Rb7.2 trillion, their share in the pattern of financial assets rose from 5.3% to 6.7%. During the period under review, there was growth in the shares of household investments in bonds (from 3.3% to 3.6%) and investment funds (mainly mutual funds) (from 3.9% to 4.9%) (*Table 19*).

Table 19

The pattern of household financial assets, 2017–2023, %

	2017	2018	2019	2020	2021	2022	2023
Cash	24.7	25.5	23.5	26.3	24.3	25.1	23.2
Deposits and funds in escrow accounts	57.8	56.4	56.4	52.9	52.5	54.6	55.4
Equities	3.7	3.6	4.4	5.3	6.8	5.3	6.7
Bonds	1.9	2.3	3.0	3.3	4.0	3.3	3.6
Investment funds	2.3	2.8	3.0	3.4	4.1	3.9	4.9
Pension and insurance reserves	9.6	9.4	9.7	8.8	8.3	7.8	6.3
Financial assets, overall	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Own calculations based on the data of the RF Central Bank. URL: http://www.cbr.ru/statistics/macro_itm/households/

However, cash reserves remained the second largest category of household financial assets. The share of these investments decreased from 25.1% in 2022 to 23.2% in 2023, however, the value of these assets increased considerably from Rb21.6 trillion in 2022 to Rb24.9 trillion in 2023. In 2023, an alarming trend was a decrease in the share of pension and insurance reserves in household financial

assets from 7.8% to 6.3%; these assets in terms of value remained practically unchanged (Rb6.7 trillion–Rb6.8 trillion).

Thus, in 2023 the consolidated portfolio of household financial assets remained markedly conservative and aimed more at preserving the value rather than generating an additional income from investments in risky assets.

With the freezing of non-resident investments in Russian issuers' securities in 2022 and the insufficient level of the development of domestic institutional investors, private investors have become the main driving force maintaining the liquidity of exchange-traded equities and bonds. The share of non-residents in market transactions with equities on the Moscow Exchange fell from 48.5% in 2021 to zero in 2022–2023 and, on the contrary, the share of private investors over the same time increased from 38.5% to 77.0% in January 2024 (Fig. 58). Also, the share of resident-institutions, primarily non-bank financial institutions, increased from 13.0% in 2021 to 23.0% in 2022.

With a high level of dependence of the stock exchange market on private investors, new challenges arise. In particular, funds from private investors returning to the market facilitate growth in the value of small and medium-sized companies in which non-residents did not participate. Private investors' funds yield better results on the example of growth in prices for second- and third-tier equities and the boom on the market of IPO-SPO companies. At the same time, most blue chips have significant blocks of equities blocked in non-residents' accounts. This is a factor constraining value growth of these issuers' equities. In future, domestic institutional investors are expected to become growth drivers for these equities.

The main holders of corporate bonds are credit institutions, NPF and other financial institutions (Fig. 59, Table 20). In 2023, by contrast with the previous year, the share of credit institutions in the pattern of corporate bond holders decreased from 47.4% to 42.9%, while the share of other financial organizations increased

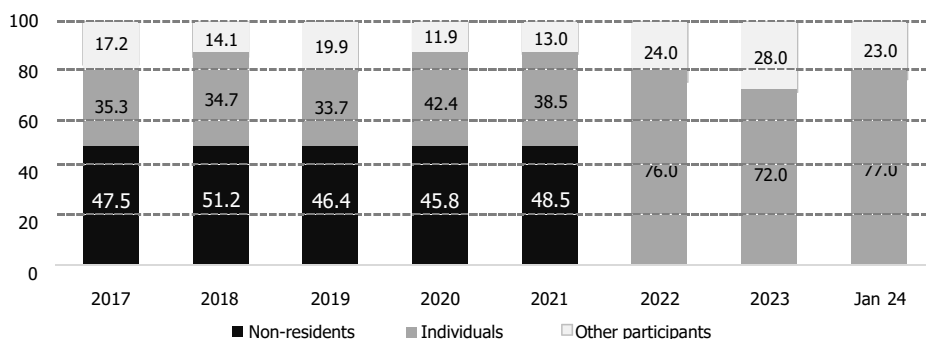


Fig. 58. The pattern of investors in the secondary trading of equities on the Moscow Exchange, 2017 – January 2024, %

Source: Based on the statistical data to the RF Central Bank's Review of Financial Stability (URL:

<https://www.cbr.ru/finstab/statistics/>) and the data of the Moscow Exchange.

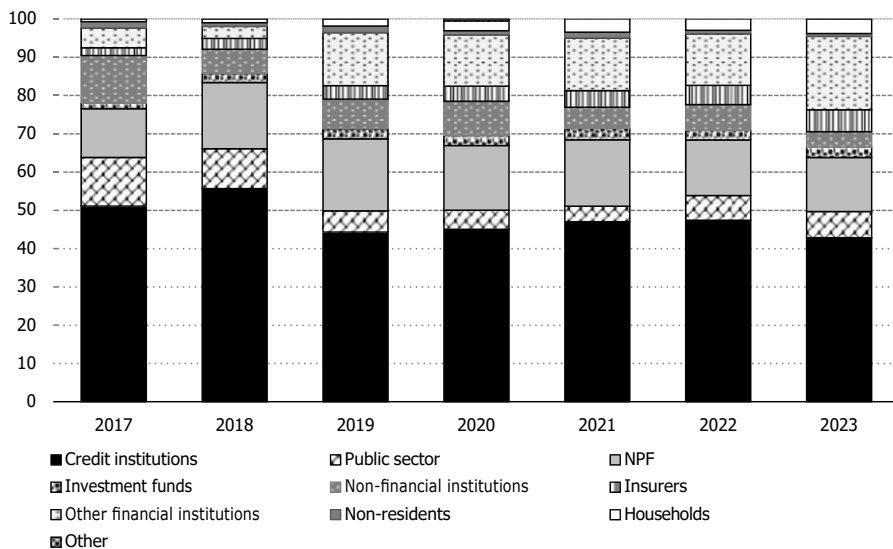


Fig. 59. The pattern of corporate bond holders in 2017–2023, %

Source: Own calculations based on the data of the Review of the Russian Financial Sector and Financial Instruments of the RF Central Bank for a number of years. URL: http://www.cbr.ru/securities_market/analytcs/

Table 20

The pattern of corporate bond holders, 2017–2023, %

	2017	2018	2019	2020	2021	2022	2023
Credit institutions	51.2	55.7	44.3	45.0	47.1	47.4	42.9
Other financial institutions	5.1	3.1	13.8	13.4	13.7	13.4	19.2
Non-residents	1.7	1.0	1.7	1.1	1.6	0.9	0.8
Households	0.7	1.0	1.9	2.5	3.5	3.0	3.8
NPF	12.8	17.3	18.8	16.9	17.4	14.5	14.1
Investment funds	1.4	2.3	2.6	2.7	3.0	2.6	2.7
Public sector	12.7	10.4	5.5	5.0	4.0	6.4	6.8
Insurers	2.1	2.9	3.6	4.0	4.4	5.1	5.8
Non-financial institutions	12.4	6.3	7.7	8.8	5.4	6.6	4.0
Other	0.0	0.0	0.0	0.6	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
For reference: share of non-residence according to the RF Central Bank's previous reports published before 2023	14.0	10.0	13.0	12.0	11.0	1.0	

Source: Own calculations based on the data of the Review of the Russian Financial Sector and Financial Instruments of the RF Central Bank for a number of years. URL: http://www.cbr.ru/securities_market/analytcs/

from 13.4% to 19.2%; the share of NPF declined from 14.5% to 14.1%. The share of private investors (households) is moderate and equal to 3.0% and 3.8% in 2022 and 2023, respectively. The share of non-residents in corporate bonds does not exceed 1%. In future, the corporate bond sector growth depends on the raising of funds from credit institutions and banks, as well as private investors and partly non-residents from friendly countries.

The main holders of government bonds are currently credit institutions, the public sector (development institutions and other), NPF and non-residents (Fig. 60). In 2023, by contrast with 2022, the share of banks in the pattern of government bond holders decreased from 40.0% to 33.8%, the share of the public sector increased from 25.0% to 26.7%, the share of NPF rose from 9.0% to 10.2% and that of non-residents, from 11.0% to 12.3%. The level of households' participation in government bonds still remains moderate, its share increased from 2.0% in 2022 to 3.8% in 2023. In this segment of financial instruments, the main market growth prospects are associated with banks, domestic institutional investors and partly with households and non-residents from friendly countries.

In 2023, as compared to 2021, the value of assets of financial institutions increased from 97.2% to 106.3% relative to GDP (Fig. 61). However, this ratio's main growth was facilitated by the share of bank assets in GDP, which increased from

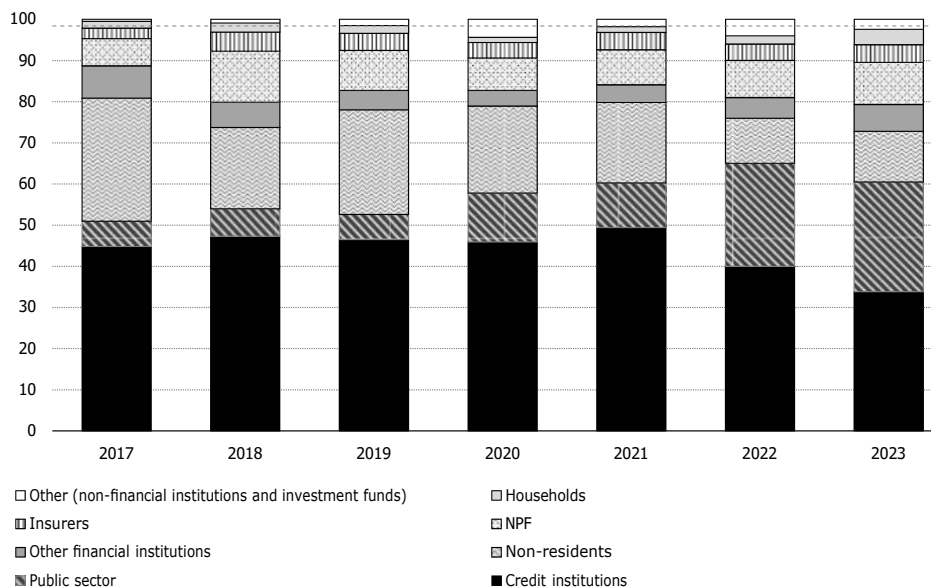
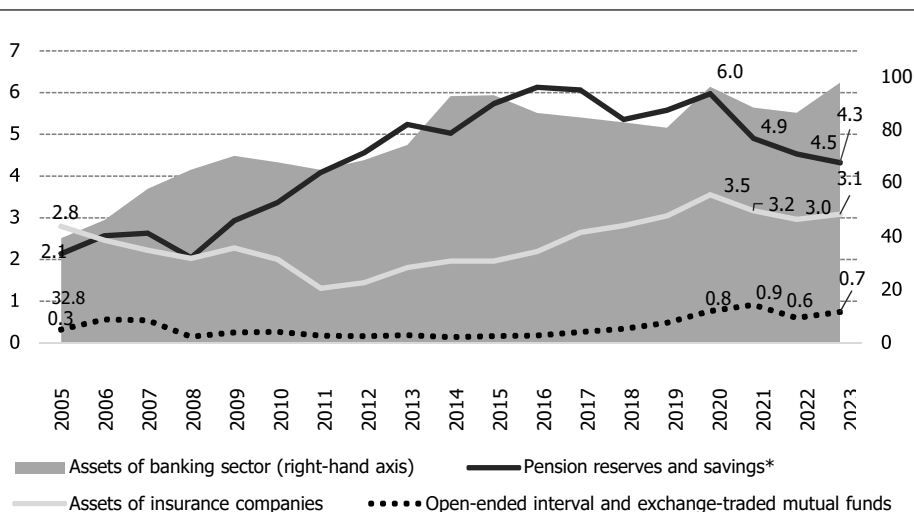


Fig. 60. The pattern of government bond holders, 2017–2023, %

Source: Own calculations based on the data of the Review of the Russian Financial Sector and Financial Instruments of the RF Central Bank for a number of years. URL: http://www.cbr.ru/securities_market/analytcs/



* The data on pension reserves and savings in 2023 are provided as of October 1.

Fig. 61. The share of bank assets, pension reserves and savings, insurers' assets and net assets of open-end, interval and exchange-traded mutual investment funds in Russia's GDP, 2005–2023, %

Source: Own calculations based on the data of the RF Central Bank, VEB and Rosstat.

88.6% to 98.0%. As regards other financial institutions, their shares in GDP decreased in 2023 as compared to 2021, including the value of net assets of open-end, interval and exchange-traded mutual investment funds (UIFs) (from 0.9% to 0.7%), pension reserves and savings (from 4.9% to 4.3%) and insurers' assets (from 3.2% to 3.1%). Thus, in 2022–2023 growth in financial assets of the banking sector outpaced growth in financial assets of key institutional investors.

In 2022–2023, the main achievement of the sector of collective investments is the preservation of financial stability of this market segment in general and the trust of several million private investors, despite the fact that some of financial assets of open-ended and exchange-traded mutual funds were blocked in foreign jurisdictions.

As of February 2024, by contrast with 2021, the value of net assets of open-end mutual investment funds decreased from Rb921 bn to Rb809 bn or by 12.2%, while the value of exchange-traded mutual funds increased from Rb213 bn to Rb392 bn or by 84.0% (Fig. 62). Faster growth in assets of open-end funds is largely complicated by their low information transparency for investors, outdated practices of selling fund units, high assets management costs and insufficient efficiency of many mutual funds' investment strategies.

In 2022, the 7-year period that lasted from 2015 was interrupted when on the back of rising yields on securities of Russian and foreign issuers and declining returns on bank deposits, funds from private investors were steadily flowing into open-end mutual funds (Fig. 63). However, in 2023 the inflow into open-end

mutual funds recovered on the back of high returns on equity portfolios.

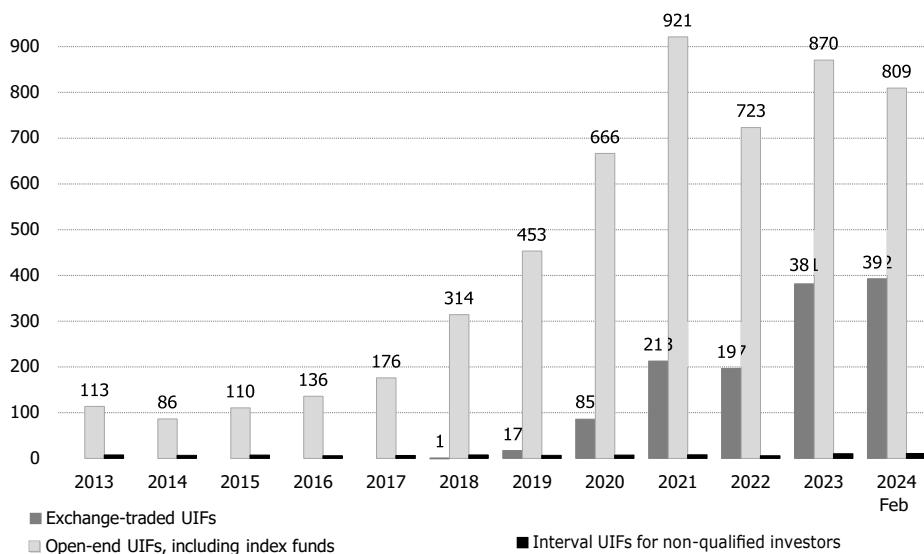
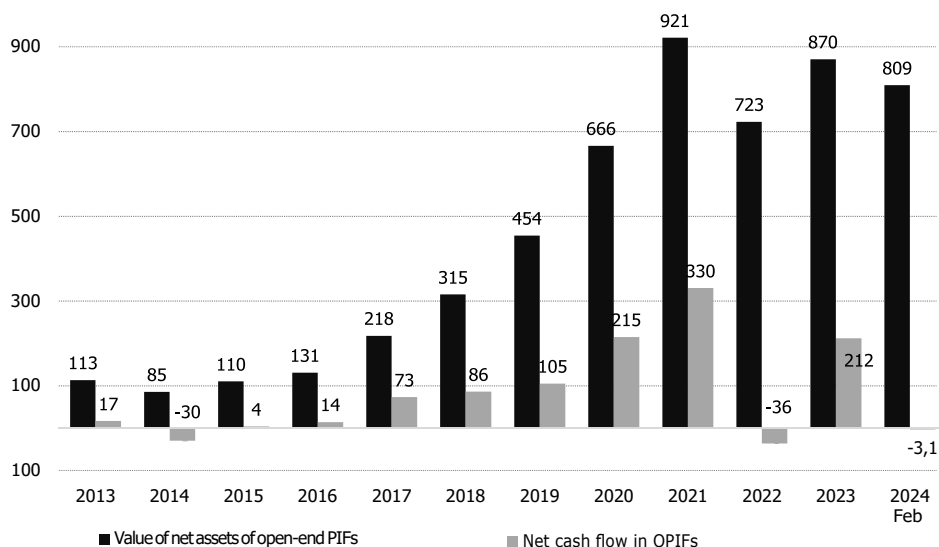


Fig. 62. The value of net assets of open-end exchange-traded mutual investment funds (UIFs). 2013 – February 2024, billion rubles

Source: own calculations based on the data of Investfunds.ru, including the value of mutual investment funds with blocked assets.



Note. The value of net assets of OPIFs in 2022–2023 includes the value of UIFs with blocked assets. The value of net assets of OPIFs without blocked assets is equal to Rb515.2 bn.

Fig. 63. The value of net assets of open-end UIFs and investors' net cash flow into these mutual funds, 2013 – February 2024, billion rubles

Source: Own calculations based on the data of Investfunds.ru

Owing to rising interest rates and the attractiveness of bank deposits amid a decrease in the market value of bond portfolios, bond mutual funds have faced a serious outflow of money since H2 2023. At the same time, thanks to the influx of new investor funds, the value of the net assets of money market funds increased almost 10-fold.

Thus, in 2022–2023 amid sanctions the role of private investors and domestic institutional investors has increased on the financial market. The role of private investors was particularly significant on the stock market and derivatives markets. Thanks to private investors, high liquidity of the blue chips market was maintained, and the phenomenon of accelerated growth of the market of the second- and third-tier equities and the sector of IPO-SPO companies became explicit. In their mass, private investors are not homogeneous.

The main group of private investors has assets of less than Rb100,000 or no assets at all. The main driving force in the market consists of 600,000–700,000 investors with assets of Rb1 mn or more in their accounts. The bulk of private investors plays a passive role in the market, mostly due to the fact that the existing mechanisms of collective investment and long-term savings do not work effectively enough. The main drivers of bond market growth are credit institutions and institutional investors. The role of private investors in this sector remains quite moderate.

* * *

In 2023, the global financial market was recovering from the hard year 2022. The growth drivers in the equity and alternative investment markets were the sectors of technology companies, communications companies, as well as equities of issuers popular with social network users and the cryptocurrency. The most profitable investments on the bond and mixed investment markets were those in life cycle funds, mixed investment funds with a 60% equity/40% bond strategy, as well as corporate bonds, including HYB. Across the country-specific strategies on stock markets, the strategy of investing in a broad portfolio of equities of American companies remained the most profitable one in a strong dollar environment. However, investments in equities of issuers from Argentina, Brazil, India, Mexico and Poland yielded competitive returns. Though it did not outperform the S&P 500, the Russian RTS Total Return Index portfolio ranked relatively high at 7th place out of 32 emerging markets strategies reviewed.

On the example of a wider range of stock indices of different countries, it was shown that most of them are characterized by slow recovery of stock markets after considerable financial shocks in the past, that is, the Siegel-Kaplan phenomenon known in the scientific literature as “black turkey”. The RTS index includes about 30 stock indices that have not recovered to their peak levels after the global financial crisis of 2007–2008. The susceptibility of most stock markets in the world to this phenomenon means that the maintaining of their financial stability implies not only measures to ensure resilience to sudden shocks, that is, the “black turkey” phenomena, but also measures aimed at facilitating long-term

growth of stock markets and overcoming the long-term underestimation of the value of national companies.

Over a 10-year time horizon, a wide range of strategies were available to private investors on the global market, allowing them to form portfolios with different levels of risk. This made it possible to a great extent to mitigate investment shocks to investors' portfolios during the coronavirus epidemic and a large-scale drop in the value of most financial assets in 2022. Among the specified 10-year strategies, the RTS index portfolio was one of the five groups of the riskiest strategies on the global market. At the same time, none of the five groups of strategies in question on the global market, differing by the level of risks, guaranteed investors exit from their portfolios without losses within the specified time horizon.

With the exit of foreign investors from the Russian financial market, the correlation of the Russian stock market with most stock indices of developed and developing countries reached the lowest level in the entire history of the RTS index. At the same time, in 2023 many Russian investment strategies in stocks, bonds and mixed investments demonstrated high returns in rubles.

When analyzing the map of returns and risks of strategies available to private investors on the Russian financial market on the 2014–2023 investment horizon, it was shown that direct non-diversified investments in blue chips and second- and third-tier equities were quite risky investments with a high probability for investors to sustain losses when exiting them. A broad diversification of individual portfolios and the use of collective forms of investment help reduce the risks of investing in such instruments. However, these strategies are not yet quite popular with private investors; the bulk of such investments is made directly in equities of a limited range of blue chips.

The Moscow Exchange's broad, sectoral and thematic indices, which are most popular with domestic investors, are not sufficiently diversified; their pattern is dominated by a narrow circle of "blue chips." Both on the long-term and one-year horizons, many factor investment strategies that imply a higher diversification of investments in equities turned out to be more profitable and less risky.

At the same time, NPF, mutual investment funds and other domestic institutional investors face a challenge of increasing the share of investments in equities of Russian companies, including the second- and third-tier stocks and equities of new issuers carrying out IPOs. The 60% stock / 40% bond strategy, which is popular with institutional investors worldwide, allows investors on the Russian market to receive high returns with risks comparable to those related with investments in bonds.

In 2022–2023, the main achievement of the domestic financial market is its stability and trust of domestic investors. All financial instruments on the exchange market are traded as usual; there were no serious bankruptcies of corporate and regional bond issuers. The number of private investors entering the market is steadily growing. The involvement of considerable household savings in cash and deposits into the stock market can become a driver of recovery and subsequent growth of the domestic stock and bond markets.

In 2022–2023, the market of internal corporate borrowings was growing dynamically. A variety of bonds with different terms of issue, even amid the rising key rate since H2 2023, attracted funds from investors with different financial goals and preferences. The sector of second- and third-tier stocks grew rapidly and there was a revival in the IPO-SPO market segment, which is still dominated mainly by placements of small companies' equities.

The domestic financial market faces the following main challenges.

Despite considerable efforts by the government and market participants, a substantial portion (Rb1.6 trillion) of domestic private investors' assets remains blocked in international depositories' accounts; the release of these funds could facilitate significant growth in investment demand on the domestic securities market.

Domestic investors' funds are not sufficient enough to restore fully the value of blue chips, 60% of which Free float continues to belong to non-residents, mainly from developed countries. Under these conditions, wealthy private investors are paying more and more attention to investments in second- and third-tier equities and this creates risks of bubble formation in this market segment.

Retail investors' portfolios consist mainly of cash, bank deposits and bonds. The inclusion of equities and other financial instruments with high returns in private investors' portfolios is limited by a low level of development of collective investments and lack of popularity of the idea of wide diversification of individual portfolios.

The worsening of information transparency regarding securities issuers' activities because of sanctions is a major obstacle to informed decision-making by investors. A more balanced approach is needed to the composition of restrictions in respect of the disclosure of financial statements, as well as support for Russian information resources and platforms providing services in the field of information disclosure. All publicly traded companies' official financial statements must be transparent (except for some data relating to the ownership and management structure of a narrow circle of issuers).

There is still insufficient competition between financial institutions. It can be seen in high tariffs for financial services and interbank transfers, the limited number of new companies entering the stock market and the limited range of services of fintech companies independent of banks as compared to other developed and developing countries.

In 2023, the RF Central Bank approved the "Main Guidelines for the Development of the Financial Market in 2024 and the 2025–2026 Period" and the government specified the targets of the "Strategy for the Development of the Financial Market of the Russian Federation till 2030." In accordance with the above strategies, to stimulate the development of long-term private savings, the Long-Term Savings Program (LTSP) and third-type individual investment accounts (IIA-3) began to operate from January 1, 2024. It is important to monitor the effectiveness of portfolio management of NPF and individual investors, as well as the attractiveness of LTSP and IIA-3 to households. So far, statistics on these new savings mechanisms is not transparent.