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TRENDS AND OUTLOOKS

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The review "Russian Economy. Trends and Outlooks" has been published by the Gaidar Institute since 1991. This is the 43th issue. This publication provides a detailed analysis of of the most significant trends in the Russian economy, global trends in the social and economic development. The work contains 6 big sections that highlight different aspects of Russia's economic development, which allow to monitor all angles of ongoing events over a prolonged period: global economic and political challenges and national responses, economic growth and economic crisis; the monetary and budget spheres; financial markets and institutions; the real sector; social sphere; institutional changes. The work is based on an extensive array of statistical data that forms the basis of original computation and numerous charts confirming the conclusions.

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Section 1. Economic policy in a pandemic: the experience gained in 2020—2021[1]

The coronavirus pandemic that the world was first faced with in late 2019 and early 2020 presented a key challenge to socioeconomic and political development across the majority of developed and developing countries. Over the recent decades, and perhaps even the entire postwar period (since 1945), it became the most powerful shock for the global economy. The shrinkage, in 2020, of global GDP by 3.4% was significantly greater than that observed during the acute phase of the 2009 crisis (by 1.3%). Over the entire period after World War II, there were only two episodes when global GDP demonstrated negative dynamics, in 2009 and 2020. Next comes the slowdown in 1982, when that indicator was still on the rise, but it gained just 0.41% (*Fig. 1*).

Although the crisis caused by the pandemic was initially triggered by non-economic factors,[2] its economic consequences were very significant. The pandemic produced some huge macroeconomic and structural shifts. However, for an adequate assessment of these shifts, they should be analyzed in the context of more general trends, including the structural crisis of 2008—2009; in our opinion, that crisis was at the time just checked, but by no means overcome.[3] In fact, the

1 This section was written by *Mau V.A.*, Doctor of Economics Sciences, Professor, Rector of the RANEPA. The author should like to express his gratitude to A. Vedev, S. Drobyshevsky, I. Baidakov for their assistance in preparing this material.

2 In our opinion, the pandemic, in its essential features and specific impact on socio-economic and political processes, is similar to the twentieth century's wars (for more details, see *Mau V.A.* Economics and Politics in 2019–2020: Global Challenges and National Responses // Voprosy Ekonomiki. 2020. No. 3. P. 6–8). In addition to the arguments outlined in that article, the period 2020-2021 demonstrates that the pandemic, by the number of excess deaths, is also comparable to the great wars of the past: according to data released by the WHO, the global excess mortality in the first year of the pandemic (2020) jumped above 3 mn, and the number of coronavirus deaths, 1.8 mn (URL: https://tass.ru/obschestvo/11435741). According to Nature, in January 2022 there were 5.5 mn coronavirus deaths, and The Economist estimates excess mortality over two years to climb above 20 mn. See *David A.* The pandemic's true death toll: millions more than official counts // Nature. 18 January 2022.

3 For more details, see *Mau V.A.* Economics and Politics in 2019–2020: Global Challenges and National Responses // Voprosy Ekonomiki. 2020. No. 3. P. 15–16.

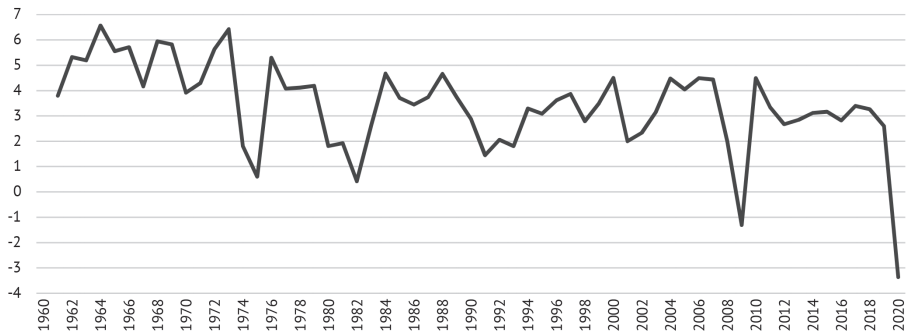


Fig. 1. The global GDP movement pattern, 1961—2020, as % relative to the previous year

Source: World Bank; World Bank Open Data, October 2021.

world was then faced with a structural crisis that was not followed by structural reforms, because the governments of the world's leading countries managed to "pay off" (that is, to mitigate its consequences at the cost of avoiding "creative destruction" (the term suggested by J. Schumpeter[1]).[2] The upshot was a decade of low growth and stunted globalization, unprecedented increases in budget deficits and central bank balance sheets, and exceptionally low inflation. All these phenomena taken together were later described by the terms "new normal" and "long-term stagnation".[3]

A specific economic consequence of the pandemic has been the deeper recession in the developed economies, which are more dependent on globalization processes than the developing ones: according to IMF estimates for 2020, the former then declined by 4.5%, and the latter, by 2.1%.[4] However, in 2021, the recovery across the developed economies was likewise faster (*Table 1*).[5]

Table 1

The global GDP movement pattern in 2019—2021, as % relative to the previous year

Country	2019	2020	2021	2021/2019
Australia	1.9	-2.4	3.5	1.1
Argentina	-2	-9.9	7.5	-3.1
Brazil	1.4	-4.1	5.2	1.0
UK	1.4	-9.8	6.8	-3.7

1 *Schumpeter J.* Capitalism, socialism, and democracy. New York: Harper & Bros, 1942.
2 For a detailed analysis of the contemporary situation, see *Caballero R., Hammour M.* On the timing and efficiency of creative destruction // Quarterly Journal of Economics. 1996. Vol. 111.
3 *Summers L.* Reflections on the 'New Secular Stagnation Hypothesis' // Teulings C., Baldwin R. (eds.) Secular Stagnation: Facts, Causes and Cures. A VoxEU.org eBook. London: CEPR Press, 2014.
4 URL: https://www.imf.org/external/datamapper/NGDP_RPCH@WEO/OEMDC/ADVEC/WEOWORLD; URL: https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG
5 URL: https://www.imf.org/en/Publications/WEO/weo-database/2021/October.

Country	2019	2020	2021	2021/2019
Germany	1.1	-4.6	3.1	-1.6
India	4.0	-7.3	9.5	1.6
Italy	0.3	-8.9	5.8	-3.6
Canada	1.9	-5.3	5.7	0.1
China	6.0	2.3	8.0	10.5
Malaysia	4.4	-5.6	3.5	-2.3
Mexico	-0.2	-8.3	6.2	-2.6
Poland	4.7	-2.7	5.1	2.3
Russian Federation	2.0	-3.0	4.7	1.6
USA	2.3	-3.4	6.0	2.4
Turkey	0.9	1.8	9.0	10.9
France	1.8	-8.0	6.3	-2.2
Chile	1	-5.8	11	4.5
South Africa	0.1	-6.4	5.0	-1.8
Japan	0.0	-4.6	2.4	-2.3

Source: International Monetary Fund; World Economic Outlook Database, October 2021.

1.1. Global trends and challenges

The key features of the year 2021 were the pandemic, economic dynamics and global inflation, as well as a sudden sharp focus on the climate agenda.

The pandemic continued in the form of several new waves caused by new coronavirus strains, and this occurred against the backdrop of ongoing quite active vaccination campaigns, primarily in the most developed countries. However, the economic characteristics and trends altered significantly, and many of them even reversed.

The economic downturn gave way to a recovery growth followed by a recovery in employment. Many (though not all) of the leading economies that had experienced a recession in 2020 now recovered, or even surpassed their 2019 levels.

And at the same time, inflation began to rapidly gain in strength around the world, moving above the target benchmarks nearly in all the countries that had been implementing inflation targeting policies (*Table 2*).

Table 2

Inflation in several inflation-targeting countries, 2019—2021, %

Country	2019	2020	2021	Target
Brazil	4.3	4.5	10.0	3.5
UK	1.3	0.8	4.8	2.0
Germany	1.5	-0.3	5.3	2.0
India	7.4	4.6	5.6	4.0
Italy	0.5	–0.2	3.9	2.0

Country	2019	2020	2021	Target
Canada	2.3	0.7	4.8	2.0
China	4.4	0.3	1.4	3.0
Mexico	2.8	3.2	7.4	3.0
Poland	3.2	2.3	8.7	2.5
Russian Federation	3.0	4.9	8.4	4.0
USA	2.3	1.4	7.0	2.0
Turkey	11.8	14.6	36.0	5.0
France	1.4	–0.0	2.8	2.0
Chile	3	3.0	7.2	3.0
Japan	0.8	–1.2	0.8	2.0

Source: International Monetary Fund[1]; Rosstat[2]; Bank of India[3]; The State Council of the People's Republic of China[4]; Bank of Japan[5]; Central Bank of Brazil[6]; Banco Central Chili[7]; Central Bank of Turkey; Bank of England[8]; South Africa Reserve Bank[9].

In order to analyze the emerging trends, it makes sense to consider separately (1) the non-economic factors; (2) the economic consequences of the pandemic; and (3) the long-term socio-economic problems reflecting those structural challenges that emerged during the 2008—2009 crisis but have not yet been properly dealt with.

The short-term economic prospects depend to a great degree on the prospects for combating the pandemic. The important factors here are the pace and scale of vaccination, the possible emergence of new coronavirus strains and their specific properties (danger, virulence), and the willingness of various countries to cooperate internationally in their fight against the coronavirus. One particular problem is the current risk of mounting geopolitical tensions. Contrary to hopes, the universal danger posed by the coronavirus failed to translate into an easing international situation, nor did it become a factor that deepened (or at least restored) international cooperation.

The pandemic has brought in focus structural shifts, and partly changed their direction. On the one hand, there has been a noticeable shift in the development of digital technologies and, on their basis, in the modernization of production and services. This substantially transforms the demand for material production facilities, including real estate.

1 URL: https://data.imf.org/regular.aspx?key=61015894
2 URL: https://rosstat.gov.ru/storage/mediabank/239_29-12-2021.
3 URL: https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1789391
4 URL: http://english.www.gov.cn/archive/statistics/202112/09/content_WS61b173eac6d09c94e48a1fea.html#:~:text=China%20has%20set%20its%20consumer,this%20year's%20government%20work%20report.
5 URL: https://www.stat.go.jp/english/data/cpi/1581-z.html
6 URL: https://biblioteca.ibge.gov.br/index.php/biblioteca-catalogo?view=detalhes&id=7236
7 URL: https://www.bcentral.cl/en/web/banco-central/areas/monetary-politics
8 URL: https://www.ons.gov.uk/economy/inflationandpriceindices/bulletins/consumerpriceinflation/december2021
9 URL: http://www.statssa.gov.za/?p=15080

On the other hand, the containment measures against the coronavirus (restrictions) contributed to changes in the structure of consumer demand, from services towards goods. The demand for durable goods increased: apparently, the switchover to remote work and online education produced an increase in purchases of real estate, home appliances, and electronics. What matters is just how sustainable (or long-term) the emerging trends could become. After all, it is the shift toward the services sector that has been a specific structural feature of recent decades. However, this phenomenon may become short-lived, as a recovery in the services sectors is prevented by the persistent containment measures.

The pandemic accelerated the ongoing long-term structural and institutional shifts. The most important of these shifts include the increasing attention of both governments and individuals to the sectors that have to do with human capital development (especially healthcare and education), and development of digital technologies and virtual (augmented) reality, as well as infrastructure (digital and physical).

The increasing role of the state in organizing and regulating economic and social life is undoubtedly the most important institutional change in our time. "*The return of the state* is a phrase seemingly on almost everyone's lips nowadays. Given the global challenges posed by the COVID-19 pandemic and climate change, the argument goes, it is governments, not markets, that should be responsible for allocating resources. The neoliberal revolution started by Ronald Reagan and Margaret Thatcher has apparently run its course. New Deal-style state intervention is back", notes Luigi Zingales.[1]

However, the sources of this reversal not just differ from, but in many ways are opposite to the sources of growth of the state during the New Deal period.[2] At present, these shifts are associated primarily with a radical rise in technological uncertainty (which requires the state to become some sort of insurer (in particular, to be not only a lender, but also an *investor of last resort*)), as well as with increased public attention to those industries that have traditionally been the domain of state responsibility (health care, education, and transport infrastructure).

The issue of the forms and macroeconomic consequences of new state regulation remains open. First of all, this is the issue that has to do with the future trends in the tax burden. In the previous era, when dirigisme prevailed (the greater part of the twentieth century), there was a qualitative leap (by several tens of percent) in the fiscal burden on the economy, which somewhat eased as the century was drawing to a close (during the triumph of the doctrine of economic liberalism). Strictly speaking, a return to the old dirigisme practices is not absolutely necessary at this time: the strengthening regulatory role of the

1 See *Zingales, Luigi*. Burying the Laissez-Faire Zombie // Project Syndicate. December 15, 2021. However, with a reference to the New Deal, Zingales specifically emphasizes that the case in point is not that the state should become a substitute for the market, but that competition should by no means be restricted, be it by the state or by private monopolies.

2 For an analysis of the processes associated with an increasing role of the state, see *Mau V.A*. The Coronavirus Pandemic and Economic Policy Trends // Voprosy Ekonomiki. 2021. No. 3. P. 8–9; *Caballero D., Lucas A., Bernd Schwaab and Xin Zhang*. Risk endogeneity at the lender/investor-of-last-resort. BIS Working Papers No 766. 2019.

state does not require it, while the investment functions can well be exercised through the mechanism of targeted borrowing.[1] Meanwhile, the implementation of this scenario requires certain macroeconomic preconditions, and first of all, a low public debt and a balanced budget system. However, the macroeconomic situation in the majority of leading countries does not meet these criteria (Russia is an exception in this respect). Public debt in excess of 100% of GDP will force many governments to raise taxes. Yet another factor will be the rising costs associated with servicing public debt in response to rising interest rates rise, which will be practically inevitable in view of the current high inflation. Thus, in the foreseeable future, it is quite possible to expect an increasing tax burden across the majority of leading countries of the world.

The socioeconomic consequences of the pandemic will vary in form, and have different time horizons. In 2021, the debate about the possibility of returning to the habitual way of life after the pandemic was nearly over (or the hopes of such a return have evaporated). If we continue the parallel between the pandemic and war, it can be noticed that in this current situation, just as it happened after the large-scale wars of the twentieth century, the "postwar" life is fundamentally different from the "prewar" life, and "postwar recovery" implies not just GDP recovery, but a substantial structural and institutional renewal. From this point of view, the years 2020—2022 set some new socio-economic trends. However, the question as to the timespan of these trends remains open.

The long-term structural trends (shifts) also include general digitalization and the unprecedented information openness associated with it. A century ago, Aleksei Gastev, while describing the trends of industrial society, wrote that the latest technologies of the time (large-scale machine production) were evolving towards "a stunning open grandiosity that knows nothing intimate or personal."[2] Now something similar is becoming a reality, though not in the form that was expected by theorists of industrial utopia (or dystopia).

There is little doubt that digital transformation will have a profound effect on human capital and government systems. The character and vector of these transformations are beyond the scope of this discussion, and are likely to become one of the key areas of research and practical experimentation in the foreseeable future. But so far, the digitalization processes have been the focus of quite opposite assessments (both positive and negative)[3], while the irreversibility of the changes initiated in this connection has been widely recognized – above all,

1 See, e.g., *Frieden J.* Lessons for the Euro from Early American Monetary and Financial History. Brussels: Bruegel, 2016.

2 *Gastev, A.* On the tendencies of proletarian culture // Proletarian Culture. 2019. No. 9–10.

3 The key negative result of digitalization is what George Orwell called "Big Brother"; or, the disappearance of the "personal and intimate", as Aleksei Gastev wrote. This topic is becoming the focus of both politicians and researchers. A year before the onset of the pandemic, a study with the characteristic title "The Age of Surveillance Capitalism" was published. See *Shoshana Zuboff*, The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power. Profile Books, 2019.

because these technologies will ultimately increase productivity, and so become a source of economic growth and prosperity.[1]

Another source of structural shifts will be *changes in global trade*. The pandemic, on the one hand, and geopolitical tensions, on the other, have produced some significant changes in global supply chains. Accelerating inflation (to be discussed later in this section) also contributes to this transformation. And as time passes, there is less and less hope that they will be restored to their previous form.[2]

A *rapid inflation acceleration* was the most important phenomenon of 2021 and, consequently, one of the major themes of ongoing macroeconomic and political discussions. In October 2021, global consumer inflation gained 4.9% relative to the same period of 2020, and this is 1.9 p.p. higher than in January 2020. The causes of inflation acceleration are much more obvious than those of its absence in the 2010s, when the governments and monetary authorities of leading countries were implementing strong expansionary monetary and fiscal policies, and that decade saw unprecedented increases in government borrowing and central bank balance sheets in peacetime history (*Tables 3, 4*).

Table 3

Public debt, global and by country, % of GDP

Country	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Australia	11.8	16.7	20.4	24.1	27.5	30.5	34.0	37.7	40.5	41.1	41.6	46.6	57.3	62.1
Brazil	62.3	65.5	63.0	61.2	62.2	60.2	62.3	72.6	78.3	83.6	85.6	87.7	98.9	90.6
UK	49.3	63.2	74.3	80.0	83.2	84.2	86.1	86.7	86.8	86.3	85.8	85.2	104.5	108.5
Germany	65.7	73.2	82.5	79.9	81.2	78.8	75.7	72.3	69.3	65.0	61.6	59.2	69.1	72.5
Israel	71.6	74.4	70.4	68.6	68.1	66.8	65.6	63.8	62.0	60.2	60.4	59.5	72.0	73.2
India	72.8	71.5	66.4	68.6	68.0	67.7	67.1	69.0	68.9	69.7	70.4	74.1	89.6	90.6
Spain	39.7	53.3	60.5	69.9	86.3	95.8	100.7	99.3	99.2	98.6	97.5	95.5	119.9	120.2
Canada	67.9	79.3	81.2	81.8	85.4	86.1	85.6	91.2	91.7	88.8	88.8	86.8	117.5	109.9
China	27.2	34.6	33.9	33.8	34.4	37.0	40.0	41.5	48.2	51.7	53.8	57.1	66.3	68.9
Malaysia	39.4	50.4	51.2	51.9	53.8	55.7	55.4	57.0	55.8	54.4	55.6	57.1	67.4	70.7
Mexico	42.5	43.7	42.0	42.9	42.7	45.9	48.9	52.8	56.7	54.0	53.6	53.3	61.0	59.8
New Zealand	19.0	24.3	29.7	34.7	35.7	34.6	34.2	34.2	33.4	31.1	28.0	32.0	43.6	52.0
Poland	46.7	49.8	53.5	54.7	54.4	56.5	51.1	51.3	54.2	50.6	48.8	45.6	57.5	55.5
Russian Federation	*7.4*	*9.9*	*10.1*	*10.3*	*11.2*	*12.3*	*15.1*	*15.3*	*14.8*	*14.3*	*13.6*	*13.8*	*19.3*	*17.9*

1 Quite another issue has to do with an adequate measurement of productivity and economic growth in the digital age, because the methods developed in industrial society cannot be applied in the new situation without proper adjustment. This issue has been raised by a number of economists, but so far, no more or less universal standpoint has been elaborated. See, e.g., *Coyle Diane.* GDP: A Brief but Affectionate History. Princeton, NJ: Princeton University Press, 2014; *Sen, Amartya, Jean Paul Fitoussi, and Joseph Stiglitz*. Mismeasuring Our Lives: Why GDP Doesn't Add Up. The New Press, 2010.

2 "Adding to the uncertainty, there have been pandemic-induced shifts in domestic and global supply chains that are not yet well understood and will most likely be difficult to reverse. Indeed, the disruptions coming out of the pandemic are broader and appear to be exerting a stronger drag on the economy than did the recent trade war between the United States and China." *Spence M.* A World of Heat and Headwinds // Project Syndicate. August 24, 2021.

Country	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Singapore	97.9	101.7	98.7	103.1	106.7	98.2	97.8	102.2	106.5	107.8	109.8	129.0	154.9	137.9
USA	73.4	86.6	95.1	99.5	103.0	104.5	104.5	104.9	106.9	106.0	107.1	108.5	133.9	133.3
Turkey	37.8	43.5	39.7	36.2	32.4	31.2	28.5	27.4	28.0	28.0	30.2	32.7	39.8	37.8
France	68.8	83.0	85.3	87.8	90.6	93.4	94.9	95.6	98.0	98.3	98.0	97.6	115.1	115.8
Switzerland	44.6	42.8	41.1	41.5	42.2	41.6	41.6	41.7	40.5	41.2	39.2	39.8	42.4	42.7
South Africa	24.0	27.0	31.2	34.7	37.4	40.4	43.3	45.2	47.1	48.6	51.6	56.3	69.4	68.8
Japan	180.7	198.7	205.7	219.1	226.1	229.6	233.5	228.4	232.5	231.4	232.5	235.4	254.1	256.9
Global public debt	**201**	**215**	**209**	**208**	**210**	**211**	**213**	**220**	**226**	**225**	**225**	**227**	**256**	**258**
Developed economies	71.7	90.9	97.4	101.4	105.5	104	103.6	103.1	105.6	103.2	102.6	103.8	122.7	121.6
G7	88.5	103.4	111.6	116.8	120.7	120.7	118.5	117.4	116.3	119.5	117.4	118	140.2	139
EU	65.4	75.5	80.6	82.9	86.4	88.5	88.8	86.7	85.9	83.3	81.2	79	91.9	93

Source: International Monetary Fund; World Economic Outlook Database, October 2021.

Table 4

The balance sheets of some major central banks (2010 = 100%)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
US FRS	100	120.9	120.1	166.6	185.8	185.4	183.9	183.8	168.4	172.0	304.2	361.8
Swiss National Bank	100	128.2	185.0	181.7	207.9	237.1	276.5	312.4	302.7	318.9	370.1	383.3
ECB	100	105.2	143.6	155.7	119.5	116.0	146.1	192.4	234.8	247.1	245.5	366.7
Bank of Japan	100	111.1	123.0	174.2	233.3	297.7	370.2	405.1	428.9	445.2	545.9	562.3
Bank of Russia	100	100.7	121.0	133.8	146.3	213.3	187.9	199.8	255.3	262.7	326.0	352.1
People's Bank of China	100	108.4	113.6	122.4	130.5	122.6	132.6	140.0	143.7	143.1	149.5	151.6

Sources: Bank of Russia[1]; People's Bank of Chine[2]; Bank of Japan[3]; European Central Bank[4]; Swiss National Bank[5]; US Federal Reserve System[6].

Inflation acceleration was, as it usually happens, the upshot of the combined impact of several short-term and long-term (structural) factors. The most significant of these factors are as follows:

— first of all, it is a the protracted, almost decade-long, stimulation of demand in the context of a weak supply response and, consequently, persistently low growth rates;

1 URL: http://www.cbr.ru/statistics/bbs/
2 URL: http://www.pbc.gov.cn/en/3688247/3688975/4280784/4438377/index.html
3 URL: https://www.stat-search.boj.or.jp/ssi/cgi-bin/famecgi2?cgi=$nme_a000_en&lstSelection=BS01
4 URL: https://www.ecb.europa.eu/pub/annual/balance/html/all_balance_sheets.en.html
5 URL: https://data.snb.ch/en/topics/snb#!/cube/snbbipo?fromDate=2008-01&toDate=2021-12&dimSel=D0(T0)
6 URL: https://www.federalreserve.gov/monetarypolicy/bst_recenttrends.htm

- a the supply constraint as a result of the pandemic, which naturally translates into rising prices;[1]
- Huge budget deficits across many major countries significantly increase the socio-economic risks when interest rates are raised, and central banks, in spite of their high independence, cannot ignore this fact;
- the unpreparedness of the US government to undertake sterilization in order to adjust the money supply, and so inflation for the most part becomes a fiscal, and not monetary, phenomenon;[2]
- a rapid recovery growth triggered increased demand for several investment goods (raw materials and metals),[3] as well as foodstuffs, while an adequate response to that demand is hampered by broken value chains;[4]
- and finally, one should not overlook the emergence of the powerful structural factor of energy transition, which is gaining momentum to become a long-term source of inflation. So far, environmental technologies have been making energy more expensive, and investments in the energy sector are also becoming more expensive due to greater uncertainty.

Furthermore, stagflation may sooner or later also become an equally controversial issue.[5] This was a key macroeconomic problem during the structural crisis of the 1970s (*Fig. 2*), and the risks of its reemergence were particularly exacerbated by the pandemic. The pandemic gave rise to an acute supply crisis, both because of the periodic lockdowns introduced in many countries, and because of broken economic linkages (value chains) and a slowdown in international trade. Thus, in the current situation (unlike, for example, that in 2008–2009), the demand crisis is evolving alongside the supply chain crisis. And so, the "traditional" Keynesian recipes are not only ineffective, but dangerous: when it is physically

1 "GDP and employment did not fall because there was a lack of "demand." In a pandemic, you can send people all the money in the world and they still won't go out to dinner or book a flight, especially if those services are suspended by government fiat. To the economy, a pandemic is like a blizzard. If you send people a lot of money when the snow is falling, you do not get activity in the snowdrifts, but you will get inflation once the snow has cleared." *Cochrane J.H.* The Ghost of Christmas Inflation // Project Syndicate. December 23, 2021.

2 "… this US inflation is ultimately fiscal, not monetary. People do not have an excess of money relative to bonds; rather, people have extra savings and extra apparent wealth to spend. Had the government borrowed the entire $5 trillion to write the same checks, we likely would have the same inflation. <…> … unlike in previous crises, the government created money and sent checks directly to businesses and households, rather than borrowing, spending, and waiting for the effect to spread to incomes." *Cochrane J.H.* The Ghost of Christmas Inflation // Project Syndicate. December 23, 2021.

3 According to data released by the World Bank, at the end of October 2021, the price of oil hit its seven-year record high, while the prices of natural gas and coal renewed all-time highs. See World Bank. Russia Economic Report. December 2021, pp. 6–8.

4 "[The] problem is that global supply chains have been more severely disrupted than previously thought. It is now apparent that the resulting shortages – in labor, semiconductors (which are used in countless industries), construction materials, containers, and shipping capacity – are not going away anytime soon. Surveys indicate that the inflationary effects are widespread across sectors and countries, and are likely to act as a persistent headwind to recovery and growth." *Spence M. A*. World of Heat and Headwinds // Project Syndicate. August 24, 2021.

5 See the discussion of stagflation prospects viewed in retrospect: *Roubini N.* The Looming Stagflationary Debt Crisis // Project Syndicate. June 30, 2021*; Roubini N.* The Stagflation Threat Is Real. // Project Syndicate. August 30, 2021; *Roubini N.* Goldilocks Is Dying // Project Syndicate. September 21; *Roach S.S.* The Ghost of Arthur Burns // Project Syndicate. May 25, 2021; *El-Erian M.A.* Taming the Stagflationary Winds // Project Syndicate. September 22, 2021.

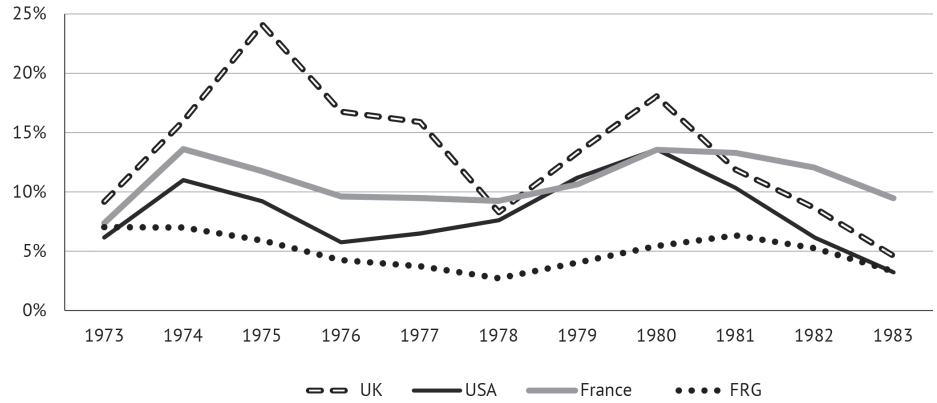


Fig. 2. Inflation in 1973–1983

Source: Eurostat.

impossible to increase supply, demand-side financing pushes up inflation, which in turn undermines production incentives. As a result, there has emerged a phenomenon that is rather rare and uncharacteristic of cyclical crises, when inflation goes hand in hand with a falling output growth and falling employment. In fact, this is exactly what happened in the West during the structural crisis of the 1970s, as well as during the post-communist structural crisis of the 1990s.

Currently, there are no signs of stagflation, but the risks of stagflation are still there. In 2021, this was pointed out by some economists, who emphasized the difficulties of implementing a careful macroeconomic policy in order to avoid repeating the mistakes of fifty years ago.[1]

1 Generally speaking, the issue of how to avoid the mistakes made during the previous crises is most urgent and at the same time complicated. It is all the more complicated because the history of modern economic growth (approximately from the mid-18th century) knows many different crises that required a variety of anti-crisis policies. Therefore, when developing an anti-crisis package, it would be necessary to provide answers to at least two questions. First, how the accumulated experience could be applied to this particular situation. A mistake is fraught with dire consequences, as was the case, for example, in the early 1970s, when in order to control the supply crisis, it was decided to stimulate demand (a policy that had been appropriate, but had not actually been implemented in the 1930s). Secondly, history does not repeat itself, and so each crisis has its own significant nuances that must be taken into account in the context of economic policy.
It is this combination of experiences of the past and the nuances of the present that the current discussion is focused on. Those economists that hold the traditional views of inflation as a predominantly monetary phenomenon are strongly advising against repeating the mistakes of the 1970s. (*Rogoff K.* Back to the Seventies? // Project Syndicate. August 31, 2021; *Roach S. S.* The Ghost of Arthur Burns // Project Syndicate. May 25, 2021; *El-Erian M. A.* Taming the Stagflationary Winds // Project Syndicate. September 22, 2021.) Meanwhile, active proponent of the New Monetary Theory (MMT) James K. Galbraith insists that the advice that "it's the Fed's job to keep [inflation] under control" in response to the recent inflation surge in the USA "comes straight from that era [the 1970s], and [such] prescriptions could reprise the economic and political disasters of those years." In order to avoid doing so, policy-makers should admit that "there is no way that our current inflation rate is 'macroeconomic'." *Galbraith J. K.* Whipping Up America's Inflation Bogeyman // Project Syndicate. November 19, 2021.

Over the course of the past decade, there were many attempts to explain the underlying causes of the absence of inflation, in spite of financial expansion. Such a situation was the underlying cause of the atypical reaction of monetary authorities to the inflation surge of 2021. Raghuram G. Rajan describes it very aptly: "Notwithstanding the growing, but often unspoken, worries at the Fed, central bankers nowadays are reticent to see inflation as a problem. In the past, the current levels of inflation would have prompted them to square their shoulders, look determinedly into the TV cameras, and say, "We hate inflation and we will kill it," or words to that effect. But now they are more likely to make excuses for inflation, assuring the public that it will simply go away. Clearly, the prolonged period of low inflation after the 2008 global financial crisis, when the Fed had great difficulty elevating the inflation rate to its 2% target, has had a lasting impression on central bankers' psyches. The obvious danger now is that they could be fighting the last war. Moreover, even if they do not fall into that trap, structural changes within central banks and in the broader policymaking environment will leave central bankers more reluctant to raise interest rates than they were in the past."[1]

However, the key reason why many economists, let alone politicians, were reluctant to seriously consider the inflation risks was their fear that tightening monetary and fiscal policies might trigger a recession with some unpleasant social and political consequences. Besides, there were still some hopes for a "new reality" where financial expansionism would not produce a macroeconomic crisis.

Now, the situation has changed. Back in 2020, the main macroeconomic policy problem was extremely low inflation with the risk of deflation. Now inflation has spread globally, and the authorities will have to adopt difficult decisions in order to curb it. In this connection, there are some questions that need to be answered, and forks in the road that need to be passed.

First of all, there was the question of just how long the inflation surge would last. Initially, major central banks assumed that it was only a temporary phenomenon, which would disappear quickly enough without requiring any significant revision of the monetary easing policy. By the year-end of 2021, it became clear that this was not the case, and the US Federal Reserve announced that it was accelerating the wind-down of its quantitative easing (QE) program (buying long-term securities to increase the money supply), probably to be followed by an interest rate hike.[2]

1 *Rajan R.G.* Monetary and Inflationary Traps // Project Syndicate. November 23, 2021.

2 This sequence of actions undertaken by the Federal Reserve is by no means obvious and, considering the facts cited in the previous two footnotes, it does not fit well with available accumulated experience. Orthodox economists draw a natural parallel with the 1970s: "In real (inflation-adjusted) terms, the federal funds rate, currently at -6%, is deeper in negative territory than it was at the lows of the mid-1970s (-5% in February 1975), when monetary policy blunders set the stage for the Great Inflation. Today's Fed is woefully behind the curve. My advice to the Federal Open Market Committee: It is time to up the ante on creative thinking. With inflation surging, stop defending a bad forecast, and forget about tinkering with the balance sheet. Get on with the heavy lifting of raising interest rates before it is too late. Independent central bankers can well afford to ignore the predictable political backlash." *Roach S.S.* The Fed Must Think Creatively Again // Project Syndicate. November 22, 2021. See also *Rajan R.G.* Monetary and Inflationary Traps // Project Syndicate. 23 November 2021.

In 2021, some countries already undertook monetary policy tightening. The central banks of the UK, South Korea, the Czech Republic, Hungary, and Poland began to raise their key rates as early as mid-year. Russia, with due regard for its thirty-year long history of inflation (and, consequently, high inflationary expectations) was one of the first to increase the key rate. However, throughout 2021, inflationary expectations across the majority of leading countries of the world where deflation had been the core problem over the past decade were close to the inflation target, and so the interest rates could be kept at a low level.

Thus, given the current inflation and inflationary expectations, monetary policy in many countries is still far from being tightened. This can largely be explained by the high level of debt in state budgets, which means that an increased interest rate will significantly push up the cost of credit and trigger a budget crisis. It is obvious that to overcome inflation, a coordinated fiscal and monetary policy will be required. But it is equally obvious that monetary policy tightening is fraught with serious risks — not only economic, but also social and political ones.[1]

Monetary policy tightening by the reserve currency issuers will create problems not only for their own economies (in the presence of a significant public debt or budget deficit), but also in emerging markets. The latter will be faced with capital outflows followed by a mounting inflationary pressure (through a weakening national currency and the exchange rate pass-through effect), so monetary policy tightening will also become necessary there and result in higher borrowing costs, and may also become a deceleration factor. However, this will depend more on the rate of global economic development, because its upward movement may have a positive impact on emerging markets, thus compensating for growth in the cost of capital.

The climate agenda has gained a new dynamism, its further evolution could produce new major structural shifts.

The influence of the climate agenda on various socioeconomic policy aspects (monetary, fiscal, competitive, structural) and the labor market prospects is becoming increasingly stronger. And this happened in spite of the absence of any breakthroughs in the system of international negotiations on global climate change and the quite controversial year-end results of 2021 (at least from the point of view of formal politics). The USA officially rejoined the Paris climate pact, although its effectiveness had been seriously criticized. The Glasgow Climate Summit was held in November with great hopes that did not quite come true.[2]

1 "If fiscal inflation does erupt, containing it will be difficult. If monetary policymakers try to curtail inflation by raising interest rates, they will run into fiscal headwinds as well as a political buzz saw. First, with the debt-to-GDP ratio above 100 per cent, if the Fed raises interest rates five percentage points, interest costs on the debt will rise by $1 trillion — 5 per cent of GDP. Those interest costs must be paid, or inflation will just get worse. Similarly, if the European Central Bank(ECB) raises interest rates, it increases Italy's debt costs, threatening a new crisis and imperiling the ECB's vast portfolio of sovereign bonds. Second, once inflation works its way to higher bond yields, stemming inflation requires higher fiscal surpluses to repay bondholders in more valuable dollars. Otherwise, inflation does not fall." *Cochrane J.H.* The Ghost of Christmas Inflation // Project Syndicate. December 23, 2021.

2 "As world leaders gather at the United Nations Climate Change Conference (COP26) in Glasgow, there is tremendous ebullience about the potential of green energy sources. But the hard fact is that fossil fuels still account for 80% of global energy, as they did when governments signed the

Still, the year 2021 saw some events what could be regarded as a move towards a qualitatively new level of political debate and policy-making.

First, we are now talking about a comprehensive understanding of the environmental agenda. It is no longer reduced just to climate change (or global warming), but addresses various aspects of life globally and on a national level. ESG (ecology-social-governance) is becoming one of the key concepts not only of the socioeconomic, but also of the political agenda. These issues have been gradually evolving and discussed over the past 10—15 years, but in the last year or two they were literally all over the debate on social development prospects. Similarly to digitalization, the pandemic became a catalyst for the changes (technological and intellectual) that had been building up for some time.

Second, a kind of new philosophy of economic life is emerging on the basis of ESG. The economic mainstream is moving away from the philosophy of economic liberalism that prevailed over the previous five decades.[1] The notion that profit is not the goal of business activity is becoming increasingly widespread. In other words, the goals of entrepreneurs and managers cannot be reduced to the profit maximization indicator (or market capitalization). In fact, the concept of ESG by itself is an indicator of the transition towards a comprehensive system of assessing the economic activity results.

Of course, there will be more debates on the various practical aspects of ESG. The unity of these three components does not eliminate their inherent contradictions, especially in the short term. Thus, decisions in favor of environmental protection (E) run contrary to employment goals (S). Corporate governance goals (G) may get in conflict with environmental goals (E) because of the different performance criteria. And the conflict between entrepreneurial (G) and social (S) goals have been well known since the mid-19th century.

However, there also exists the risk of a too radical revision of the economic model, with the rejection of the basic incentives of the market (capitalist) economy and introduction of strict government regulation designed to ensure an absolute priority of the environmental agenda. Some radical approaches have been suggested that will require a full-scale revolution in the public administration system, a switchover to the Green New Deal (by analogy with the New Deal implemented during the Great Depression), the creation of a Big Green State,[2] as

Paris climate agreement to much fanfare at COP21 six years ago. And even though many economies have not yet returned to their pre-pandemic gross domestic product (GDP) level, the world is on track in 2021 to post its second-largest annual increase in carbon dioxide (CO2) emissions on record." *Rogoff K.* Will the COP Be Different? // Project Syndicate. November 1, 2021.

1 This statement contains an argument against the well-known thesis by Milton Friedman, a key ideologists of modern economic liberalism, that the social responsibility of business is to increase its profits (Friedman, M. Capitalism and Freedom. Chicago: University of Chicago Press, 1962. Ch. VIII.) As always in economic life, no thesis should be treated as an ultimate truth. Friedman introduced his theory to oppose the excessive regulation policy that was broadly accepted in the mid-twentieth century and to promote the idea of increasing the economic incentives for free enterprise. Over several recent years, this concept has become a target of sharp criticism by both left-liberal politicians and economists, and some representatives of the business community.

2 *Gabor D.* Private finance won't decarbonize our economies – but the in 2021big green state' can // The Guardian. 4 June 2021. URL: https://www.theguardian.com/commentisfree/2021/jun/04/private-finance-decarbonise-economies-green-state

well as some War-Communism-style measures as the necessary condition for the survival of the human race.[1]

Third, the EU's proposed carbon border adjustment regulation (tax)[2] will have some important consequences. And while neither the forms and timeline of the new tax regulation, nor its fiscal implications, are not yet fully clear, the announcement of that decision per se became a factor responsible for rethinking the medium- and long-term macroeconomic, structural and institutional policies. It was over the course of the past year that the majority of the world's leading countries set their temporary carbon neutrality targets and began to elaborate the mechanisms to achieve that goal.

By way of summing up, we should discuss the general trend that in recent years has been characteristic of the policies of many developed countries, and will be shaping their economic development in the foreseeable future. It is the trend of economic populism, and the experience of the past few years shows that this phenomenon is typical of both right-wing and left-wing governments. This has been probably most evident in the USA. The governments of Bill Clinton, George Bush and Barack Obama based their economic policies on the principles of economic liberalism, fiscal balance and responsible monetary policy (including the independence of the Federal Reserve), freedom of enterprise and deregulation of the production of goods and services. Then some significant changes took place under Donald Trump, and in spite of the denial of his predecessor's policies, this approach has been continued by Joe Biden. In includes expansionary fiscal policy and the idea that the US FRS must properly implement it, including debt monetization, protectionism, and trade wars. Actually, this is a shift from neoliberalism to neopopulism. However, this shift is quite natural and reflects the general trend that we have discussed earlier, that of building up the economic activity of the state. The only important thing is that populism should by no means become excessive and trigger a global macroeconomic crisis.

1.2. The trends and specific features of Russia's economic policy

The Russian economy demonstrated a high recovery rate, surpassing the pre-crisis level as early as Q2 2021. At year-end 2021, the economic growth index stood at 4.7% (*Table 5*).

This was the result of an effective anti-crisis policy that combined targeted support for individuals and businesses with general macroeconomic restraint and avoidance of populist solutions. Recovery growth was primarily based on consumption revival as a result of lifted containment measures. An important factor in ensuring higher growth rates than those achieved over the previous decade after they had reached their pre-crisis levels was the expansion of the

1 *Malm F.* Corona, Climate, Chronic Emergency: War Communism in the Twenty-First Century. L.: Penguin Random House, 2020.

2 Apparently, the decision concerning the carbon border adjustment tax was an upshot of the lack of any significant progress in decarbonization. By that time, several eminent economists had developed recommendations on the system of incentives for practical implementation of decarbonization. See *Nordhaus W.* Climate Clubs: Overcoming Free-riding in International Climate Policy // American Economic Review. 2015. Vol. 105 (4).

building construction sector (through supporting the demand for housing mortgages), intensification of hydrocarbon production after OPEC+ had eased the restrictions on output, and one-time social payments to certain categories of citizens (military personnel, children, and pensioners).

Table 5

The macroeconomic parameters of Russia's development, 2019-2021

	2019	2020	2021
Macro indicators			
GDP, increase on previous year, %	2.2	-2.7	4.7
Inflation, %	3.0	4.9	8.4
Fixed capital investment, increase on previous year, %	2.1	-0.5	7.6
Foreign direct investment, billion	32	9.5	39.8
Total unemployment rate, %	4.6	5.8	4.3
Real personal income, increase on previous year, %	1.0	-2.0	3.1
Real wages and salaries, increase on previous year, %	4.8	3.8	2.9
Number of vacancies per job seeker in December (hh. index)	6.8	5.7	3.8
Budget parameters			
Federal budget surplus (+) / deficit (-), billions of rubles	1,974.3	-4,102.5	524.4
Federal budget surplus (+) / deficit (-), % of GDP	1.8	-3.8	0.4
External debt, % of GDP	3.1	3.9	3.3
External debt, millions of US dollars	54,848	56,703	59,702
Internal debt, % of GDP	9.3	13.8	12.5
Internal debt, billions of rubles	10,172	14,751	16,486
Gold and foreign exchange reserves (at year-end), billion	549.8	592.4	630.6
Balance of payments, billions of US dollars			
Current account	64.8	36	120.3
Trade balance	165.3	93.7	185.9
— exports	419.9	333.4	489.8
— imports	254.6	239.6	303.9

Sources: Rosstat;[1] Bank of Russia;[2] RF Ministry of Finance;[3] hh.ru[4].

The labor market recovered, and unemployment declined steadily. The unemployment rate at the year-end of 2021 was close to 4.3%, and the labor force increased by 1.7 mn. Job postings from employers also jumped up (by approximately 25% year-on-year), and the ratio of unemployed people to job posts declined to 1.7, well below comparable estimates of 2.9 and 1.9 observed in 2020 and 2019, respectively.[5] Real disposable income resumed growth.

1 URL: https://rosstat.gov.ru/storage/mediabank/ind_potreb_cen_12.html
2 URL: https://www.cbr.ru/hd_base/mrrf/mrrf_7d/?UniDbQuery.Posted=True&UniDbQuery.From=01.2019&UniDbQuery.To=01.2022
3 URL: https://minfin.gov.ru/ru/perfomance/budget/federal_budget/budgeti/2021/.
4 URL: https://stats.hh.ru/#hhindex%5Bactive%5D=true
5 The World Bank. Russia Economic Report. December 2021. P. XIII.

The implementation of government policy ensured the recovery of investment activity. In 2021, investment in real terms moved above the level of 2019.

The favorable prices for Russian exports translated into exceptionally successful results of foreign trade. While imports gained 27%, exports increased 1.5 times, thus doubling the trade balance, to $186 bn (10.3% of GDP).

The rapid growth of exports produced a record-high current account balance of more than $120.3 bn (6.7% of GDP). However, the downside of that record was a high capital outflow in excess of $72bn (approximately 4% of GDP), because the economy could not fully absorb the inflow of export revenues in the form of investment. The latter was associated with the rather low parameters of potential growth, and first of all the insufficient economic efficiency (productivity) of production factors.

There were some positive shifts in regional development. The government was able to significantly reduce the regional budget burden: budget loans were restructured to the value of approximately Rb220 bn, and approximately Rb335 bn was allocated for long-term loans, to replace the commercial debt of regions and municipalities. In this connection, "unplanned" inflation also played a positive role, because regional budget revenue increased in nominal terms.

The key issues (or forks in the road) that the Russian economy (and, consequently, government economic policy) is going to deal with in the near future are quite understandable, and they are similar to the issues that almost all developed countries are currently faced with. It is quite another matter that the solutions are by no means simple or the same for every country.

First of all, *the prospects for economic growth*. Will it be possible to secure a sufficiently high GDP growth rate, approximately at the level of 2021? Or was that just a recovery growth, and when it is over, the situation will return to the same parameters that had been in the 2010s? In the case of the other developed economies, it is the question of whether the secular stagnation hypothesis will become relevant once again in relation to the post-pandemic years. An even more dramatic option is the stagflation scenario, that is, extremely low growth rates alongside high inflation rates.

From the point of view of growth prospects, the coronavirus factor will remain a key source of uncertainty (a war against the pandemic, like a war against any external enemy, always carries the risks of unpredictable developments); the other factor will be the ability of authorities and businesses to implement adequate measures designed to protect social and economic life or, to be more precise, the measures to consolidate economic growth. The possibility of new lockdowns cannot be ruled out until the virus is defeated.

If that factor could disappear, one might have expected the trends of 2021 to persist in the short term. However, in the current environment it is not economic growth per se that matters, but its quality, that is, its ability to improve well-being and modernize the country.[1]

1 For more details, see *Mau V.A.* The lessons of stabilization and prospects of growth: Russia's economic policy in 2016 // Voprosy Ekonomiki. 2017. No. 2.

Hence the second fork in the road, namely *the inflation prospects*. In late 2021 and early 2022, the monetary authorities and governments of the leading countries were still hoping for short-term inflationary effects, which would not require any significant changes in monetary policy, especially because many developed countries had accumulated very significant public debt, and so were particularly sensitive to a tightening monetary policy.

The Russian authorities, taking into account the quarter-century-long inflation history and, consequently, the persistently high inflationary expectations in this country, and also the fact that there was no serious debt burden, chose to tighten their monetary policy at an early stage.[1] Over the course of the year 2021, the RF Central Bank's key rate doubled, jumping from 4.25% to 8.5%. Although these measures could not halt the climbing prices, they somewhat helped in slowing down the inflation rate: according to the estimates of Chairman of the Bank of Russia Elvira Nabiullina, inflation would have been 4 p.p. higher if the key rate had not been raised.[2] Against this background, the discussion of the cause-and-effect links between the RF Central Bank's key rate, inflation and economic growth once again became very intense.

The tremendous importance of monetary policy notwithstanding, its role in Russia's economic growth cannot be assessed in a straightforward way, that is, in the form of simple cause-effect relationships. It is important to distinguish between the measures designed to boost growth and those to prevent a macroeconomic crisis, because the latter makes GDP growth virtually impossible.

With due regard for Russia's specificities and the post-Soviet experience, its macroeconomic policy should be extremely cautious and conservative, and this is particularly true with regard to monetary policy. Any stimulation of economic growth by macroeconomic policy measures can be possible on a very limited scale only, and mainly at the expense of the budget system, which is highly balanced with a low debt level, and denominated almost entirely in the national currency (*Table 5*).

The principal problem is that it is not macroeconomic factors that play the key role in Russia's GDP slowdown. The low level of potential growth (approximately

1 S. Drobyshevsky offers a fairly accurate description of the specificity of inflationary expectations in Russia: "Inflationary expectations have remained predominantly adaptive, and they are adaptive based on the previous inflationary expectations, and not on the previous actual level of inflation. Inflationary expectations have moved persistently 4–5 p.p. above actual inflation (in particular, in the autumn of 2021, their index rose to 12.5%–13.5%). This means that so far, there is little confidence in the Bank of Russia's policy, inflationary expectations are un-anchored, and their previous values have a much greater weight in shaping the expectations for future periods than actual inflation or information on the Bank of Russia's policy decisions. It should be noted that the gap between inflationary expectations and actual inflation that so far has existed for 7—8 years after the launch of the inflation targeting regime is a unique phenomenon, because in the majority of countries, either there was a convergence of the expectations and the target within 4—5 years, or the relevant countries abandoned inflation targeting altogether." See *Drobyshevsky, S.M.* Coordination of fiscal and monetary policies in 2021–2022. M., 2021.

2 In fact, RF Minister of Finance Anton Siluanov agreed with the RF Central Bank's standpoint: "In the final analysis, inflation is caused by monetary factors. It is both possible and necessary to control it by managing supply, but this will be a rather long-term trend. And short-term measures should include, of course, efforts to reduce monetary pressure on inflation." URL: https://gaidarforum.ru/ru/programme-2022/2503/

1.5%-1.8%)[1] has to do with the structural and institutional constraints built into the economy. These include the shrinkage in economically active population, the low investment activity of the private sector, lack of any meaningful growth of total factor productivity (including insufficient investment in human capital), lack of a developed innovation infrastructure, a low inflow of direct foreign investment, and a decline in direct competition with foreign manufacturers. And of course, the entrepreneurial climate is also important, namely trust in business, property rights guarantees, and efficient (but not excessive) government control and supervision.[2]

Thus, macroeconomic policy measures can prevent an unfolding crisis and mitigate its consequences. However, these measures, when implemented in Russia's specific conditions, cannot by themselves have a significant impact on economic growth, neither halting it when interest rates are climbing, nor boosting it when they begin to decline. However, they can become a source of destabilization by blocking growth, if inflation is handled irresponsibly; in this connection, one should simply recall the well-known experiences of hyperinflation in the 1990s. It is quite another thing that such measures are short-lived, while structural and institutional solutions evolve slowly and require considerable organizational work and political will.

Suppressing inflation and avoiding stagflation has become the most important short-term economic policy goal. This is a difficult task, because in contrast to the previous thirty years, the current problem is predominantly of an external origin. Global inflationary processes are naturally impacting Russia, and counteracting them cannot be solely the task of monetary authorities. The RF Central Bank must launch a credible disinflation package, and the experiences of 2014—2020 have demonstrated that the regulator knows how to effectively deal with that problem. However, in the context of imported inflation, the RF Central Bank can only create the necessary prerequisites for disinflation, but these will by no means be sufficient.[3]

1 See *Sinelnikov-Murylev S., Drobyshevsky S., Kazakova M.* Decomposition of GDP growth rates in Russia in 1999–2014. // Economic Policy, 2014. No. 5; *Drobyshevsky S., Kazakova M.* Decomposition of GDP growth rates in 2016–2019. // Russian Economic Development. 2016. No. 6; World Bank. Russia Economic Report. December 2021. P. XVI, 73.

2 As shown by available estimates, the potential growth rate of approximately 1.8% is still rather low, pointing to the necessity of implementing a comprehensive reform package in order to remove the structural constraints preventing a more dynamic and sustainable growth necessary for improving living standards. The most important components of the package will be strengthening the productivity growth factors and improving the conditions for private investment and boosting competition, especially in high value-added and non-energy-intensive sectors. These are quite common ideas that were also set forth in the World Bank's Russia Economic Report released in December 2021. See World Bank. Russia Economic Report. December 2021. P. XVI.

3 The issue of the constraints that the national monetary regulator has to deal with while attempting to control global (and so, for the most part, imported) inflation deserves a special discussion. In principle, this is a rather rare phenomenon, because in the past, the periods of high inflation (and hyperinflation) used to be a national problem, that is, the result of specific national policies implemented by countries. One exception was the global crisis of the 1970s, which engulfed the majority of developed countries. Based on that experience, it can be concluded that a national regulator in an open economy cannot fully control inflationary processes; nevertheless, their level varies significantly depending on the policy of the monetary authorities in a given country. The most striking example is that of the USA and Germany at that time. The USA, profoundly believing

In this connection, the government's efforts are important, and they should be undertaken on different fronts. In 2021, price controls on some market goods, as well as export restrictions (including export duties) were imposed. These are understandable but rough measures that may produce some unpleasant side effects in the form of loss of sales on export markets, deterioration of the structure of exports (increased share of raw materials), and reduced competitiveness of domestic commodity producers.

In order to suppress inflation, institutional measures are required that should boost competition, support non-commodity exports, and promote deregulation. Another important price stability factor should certainly be the independence of the RF Central Bank; this is the principle that, thanks to President Vladimir Putin's commitment to it, ensured the success of monetary policy over the course of the past decade.

Fiscal policy in this situation should also be extremely careful. The key task here, naturally, would be to stimulate economic growth and promote structural modernization. However, a particular challenge in the context of rising inflation would be to find a proper balance between stimulatory measures and avoidance of macroeconomic destabilization (the latter, as Russia's experience has demonstrated, is an independent factor of economic slowdown). The budget deficit and debt growth that happened in 2020, in 2021 gave way to a trend towards budget balance. Moreover, at the initiative of President Vladimir Putin, it was decided to increase the National Welfare Fund's liquidity level (the threshold above which available resources can be allocated for investment) from 7% to 10% of GDP. Such a policy, quite understandably, has been a target for criticism, because in crisis conditions the budget should become a more active source of support for growth. However, given the macroeconomic risks discussed earlier, fiscal conservatism seems to be justified.

In early 2022, specifying the fiscal policy prospects, Mikhail Mishustin said as follows: "As early as this year, we plan to return to the regular fiscal rule parameters, which will bring down inflation and promote a balanced economic development on the basis of private investment."[1]

The issue of efficiency of budget expenditures, especially the choice of projects for government investment, remains important. This is all the more relevant in the situation of high uncertainty (technological and epidemiological), which contributes to the transformation of the state into an investor of last resort. Generally speaking, it is clear that budget expenditures should be primarily concentrated in those areas that boost total factor productivity, and first of all

in the universality of the Keynesian doctrine, actively stimulated demand, so as a result, at its peak, inflation reached 11% in 1974. Germany, after its two hyperinflation periods experienced in the 20th century, chose an extremely conservative monetary policy, and so the inflation peak stood just a little above 7%. It was this example that the Bank of Russia's Chairman Elvira Nabiullina referred to in January 2022, insisting that a lot depended on the national regulator even in the context of imported inflation. URL: https://gaidarforum.ru/ru/programme-2022/2503/.

1 *Mishustin, M.V.* Video greeting to the participants of the "Russia and the World: Priorities" Expert Forum (13th Gaidar Forum), 2022. URL: http://www.government.ru/news/44317/

human capital and infrastructure (transport infrastructure, and now also digital infrastructure).[1] However, the problem is not just the investment directions, but the availability of well-designed projects.

On this basis, it becomes possible to discuss the structural priorities for investment. At present, these include investments in information technology, telecommunications equipment, microelectronics, and genetics, as can be seen from the growing amount of investment in these sectors.

Throughout the year 2021, the RF Government was working on a package of structural and institutional measures designed to become the basis for long-term sustainable economic growth, improved well-being, and modernization of the economy. The Unified Plan for Achieving the National Development Goals until 2024 and the Planning Period until 2030 was adopted on October 1, 2021. The government proposed 42 initiatives for Russia's socioeconomic development that were divided into six key sections: (1) the social sphere, (2) construction, (3) environmental protection, (4) digital transformation, (5) technology breakthroughs, and (6) a state for the people (customer centricity).[2]

The initiatives are aimed at achieving the national goals through to 2030 formulated by President Vladimir Putin in 2018. These are, in the main, structural measures aimed at overcoming poverty (addressing social problems) and increasing the total factor productivity across the economy in order to boost the potential growth rate.

For the first time, a government document of this type contains a section that specifically addresses the function of the state as a customer-centric system. In fact, this is the first occasion in Russian history when the state begins to view itself as a service, i.e., it focuses its activities on the goal of identifying and satisfying the needs of individuals as customers, in a manner that would be convenient for them. The notion of customer centricity as such has raised objections because it has a somewhat technocratic flavor. However, we believe that this approach is extremely important because it lays the groundwork for an essential modernization of the philosophy of public administration. After all, customer centricity essentially based on the principle

1 The understanding that these sectors are the areas of special government responsibility is by no means a feature of the modern era. Minister of Finance of Russia Alexander Abaza, in his speech before the State Council on December 31, 1880, outlined his priorities as follows. In his opinion, a sound financial policy was unattainable, "unless quite decisive measures are implemented to reduce public spending. First and foremost, it is the reduction of expenditures in the military department... Then, saving is also needed in the other parts of the administration, except for those where money should not be spared because, in fact, such expenditures would result in an increase in the people's well-being." Among the latter, Abaza pointed out the upkeep of general-education and technical schools, the judicial system, and transport routes. He went on arguing that, while observing strict economy in public spending, it was necessary to encourage, in every possible way, industrious and frugal private individuals, who were the main sources of national wealth. *Peretz, E.A*. Diary (1880–1883). Moscow, Delo Publishers, RANEPA, 2018. P. 122. (In Russian)

2 Government of the Russian Federation. Unified Plan for Achieving the National Development Goals until 2024 and the Planning Period until 2030. RF Government Edict No. 2765-r. dated October 1, 2021. URL: Plan_po_dostizheniyu_nacionalnyh_celey_razvitiya_do_2024g.pdf (economy.gov.ru); Government of the Russian Federation. List of Initiatives of the Russian Federation's Socioeconomic Development through to 2030. RF Government Edict No. 2816-r dated October 6, 2021. URL: jwsYsyJKWGQQAaCSMGrd7q82RQ5xECo3.pdf (government.ru)

of "taxpayer democracy", i.e., the recognition of individuals and firms as the primary source of society's well-being. From this it follows that the state must enter in a dialogue with society (individuals and firms), finding out and identifying its needs.

In 2021, the authorities significantly increased their focus on the issues included in what has been known as the climate agenda, or the transition to a low-carbon world. These issues have evolved from being part of a ritual towards practical actions. The trigger that intensified the international discussion was the intention of the EU, which remains Russia's major partner in trade, to introduce the carbon border adjustment tax. But the problem actually had been brewing for a number of years, and it goes beyond those issues.

In this connection, the most important development was President Vladimir Putin's decision that Russia would go carbon neutral no later than 2060.[1] The relevant government programs were adopted that envisaged, by 2050, a reduction in net greenhouse gas emissions by 70%, and the achievement of net carbon neutrality ten years later.[2] A thesis was put forth of the green economy (carbon neutrality) with an economic growth of at least 3%. This goal should become the basis for elaborating a complex program of action, to encompass all sectors, which will require rethinking the macroeconomic, structural and socioeconomic policies. It will also require serious resources to be invested by the state and businesses.[3]

To this end, ten task forces were set up under the government, to analyze the situation and develop appropriate programs and regulatory documents.

Naturally, there was a collision of different (if not opposing) ideas about the pace and nature of the expected changes. It is still difficult to say just how fast the world (and Russia) will be moving toward the goal thus outlined. And, most importantly, it cannot be said with certainty that the goal will not be significantly adjusted at a later date due to the unpredictability of the technological challenges and shifts that may occur on the time horizon of 30—40 years. But it can be argued that this agenda will become the core of economic and political discussions in the foreseeable future.

1 URL: http://kremlin.ru/acts/bank/45990

2 Government of the Russian Federation. Goals and Main Directions of Sustainable Development (Including Green Development) of the Russian Federation. RF Government Edict No. 1912-r dated June 12, 2021. URL: sMdcuCaAX4O5j3Vy3b1GQwCKfa9lszW6.pdf (government.ru); Government of the Russian Federation. 2050 Strategy of Social and Economic Development with Low Greenhouse Gas Emission. RF Government Edict No. 3052-r dated October 29, 2021. URL: ADKkCzp3fWO32e2yA0BhtIpyzWfHaiUa.pdf (government.ru)

3 According to the Prime Minister of Russia, "annually, the cost of comprehensive measures designed to reduce the carbon footprint, according to preliminary estimates, can amount to 1-2% of GDP on the time horizon until 2050. … A special program to support enterprises was developed as part of the environmental agenda. It involves subsidizing the interest rate or coupon income. The first selection took place last summer. Over the next three years, annual funding in the amount of about Rb4 bn is envisaged." *Mishustin, M.V.* Video greeting to the participants of the "Russia and the World: Priorities" Expert Forum (13th Gaidar Forum), 2020. URL: http://www.government.ru/news/44317/

* * *

In conclusion, we are going to point out the risks that the global and Russian economy may come to grips with in the near future, including but not limited to the following ones:

- uncertain epidemiological situation: the persisting coronavirus infection, the emergence of new mutations. Like in any war, both the developments and their effects on socio-economic processes (first of all, on employment and supply chains) are poorly predictable;
- the return to the growth rate of the 2010s (that is, structural growth matching actual growth) is another serious risk for the Russian economy. After all, even the GDP growth of 4.7% in 2021 means that the average growth rate over the period 2020—2021 hovered around 1%. Obviously, a lot will depend on successfully overcoming the pandemic, but an efficient growth-oriented policy will also play an important role;
- inflation sustainability and stagflation risks. In this connection, an important indicator should be the achievement, by the year-end of 2022, of the inflation target of 4%—4.5%;
- growth of real personal income has remained a difficult task, which will depend on the prospects for economic growth. However, there is a two-way relationship: growth in real personal income (alongside poverty decline) is an important factor of economic growth;
- corporate sector risks have to do with the uneven recovery of firms and sectors. Here, the source of danger is the excessive reliance on financial support from the government, especially in the presence of long-term solvency problems. Solvency risks will persist throughout 2022 across those sectors that have been most affected by the pandemic (such as transportation and services), as well as in small companies;[1]
- the risk of a significant capital outflow and toughening financial conditions. The underlying causes are the deteriorating geopolitical situation and a faster pace of monetary policy tightening by the US Federal Reserve System, which means rising interest rates in real terms;
- and, of course, the geopolitical situation itself has become a strong risk and factor of uncertainty, especially as it began to exacerbate in late 2021 and early 2022.

1 *Vedev, A.L.* Forecast of the development of the Russian and world economy. Analytical note, 2021.

Section 2. The monetary and budgetary sphere

2.1. Monetary policy[1]

2.1.1. The main trends of the monetary policy

In 2021, the rapid acceleration of the rate of inflation and overshooting by the actual inflation of the RF Central Bank's target were the key challenges to the monetary policy following a fast recovery of demand amid limited capacities to increase supply of numerous goods and the easing of the monetary and fiscal policies. As a result, the RF Central Bank has switched over to the tightening of the monetary policy and raised the key interest rate at all its meetings of the Board of Directors since March 2021. In 2021, the key interest rate picked up by 4.25 p.p. from 4.25% annually to 8.5% annually, a record-high since 2017. It is noteworthy that such a lengthy phase of tightening of the monetary policy was observed for the first time since 2014.

The tightening of the monetary policy began on March 19, 2021 when the Central Bank of Russia raised the key rate by 0.25 p.p. to 4.5% annually. It is noteworthy that before that the key rate was at the record-low of 4.25% annually, which was attained in summer 2020 when easy monetary policy was pursued during the coronavirus pandemic. Within the framework of the meeting of the Board of Directors of the RF Central Bank on April 23 and June 11, 2021, the monetary policy interest rate was raised each time by 0.5 p.p. and amounted to 5.5% annually. If on the basis of the results of the April meeting the regulator declared that it might be feasible to increase the key rate further, the press-release of the June meeting, which was held after the rate of inflation sped up in May, explicitly referred to the need to raise the key rate at the next meetings.

1 This section was written by: *Bozhechkova A.V.,* Candidate of Economic Sciences, Head of the Monetary Policy Department, Gaidar Institute, Senior Researcher of the Center for Central Banks Issues, IAES RANEPA; *Trunin P.V.,* Doctor of Economic Sciences, Head of the Center for Macroeconomics and Finance, Gaidar Institute, Head of the Center for Central Banks Issues, IAES RANEPA.

A record-high rise in the key rate since the end of 2014 took place on July 23, 2021 when it increased by 1 p.p. (up to 6.5% annually). Such a radical measure was related with high risks of a protracted upward deviation of the inflation rate from the target. Amid substantial overshooting by the actual inflation rate of the targets and with inflation expectations taken into account, the RF Central Bank kept tightening the monetary policy by raising at its meetings in September and October the key rate by 0.25 p.p. and 0.75 p.p., respectively, to 7.5% annually. In December 2021, for the second time within a year the RF Central Bank raised considerably the key rate (1 p.p. to 8.5% annually) following the protracted deviation of the inflation rate from the target and projected trajectory, as well growing inflation expectations. It is noteworthy that the inflation forecast published by the RF Central Bank was repeatedly revised during the year. In December 2020, the inflation forecast for 2021 was equal to 3.5%–4%, but in November 2021, to 7.4%–7.9%.

A speed-up in the inflation rate was observed in most countries on the back of a fast recovery of composite demand owing to the mitigation of lockdown measures and pursuit by the advanced economies of ultra-loose fiscal and monetary policies begun as far back as the global financial crisis amid prevailing aggregate supply problems.

With growing inflation risks in 2021, most central banks of developing countries shifted to the tightening of their monetary policies, too, while developed countries made their rhetoric tougher, but left the interest rates unchanged. As the monetary policy was getting tougher in 2021, Russia's key interest rate in real terms (measured on the basis of actual inflation) became positive (0.1% annually in December 2021). In December 2021, a positive key interest rate was also observed in Kazakhstan (1.35% annually) and Indonesia (1.63% annually). Overall, based on results for December 2021 real key interest rates of a majority of developed and developing countries which targeted inflation remained negative (-5.15% annually in the UK; -4.55% annually in Canada; -0.81% annually in Brazil; -3.2% in Chile) (*Table 1* and *Fig. 1*).

Table 1

The rate of inflation and key rate in a number of developed and developing countries

	Actual inflation, December 2021 on December 2020,%	**Key rate as of end of December 2021, % annually**
Developing countries		
Columbia	5.62	3.0
Indonesia	1.87	3.50
Peru	6.43	2.50
Poland	8.6	1.75
Chile	7.2	4.00
South Africa	5.9	3.75
Mexico	7.36	5.5
Brazil	10.06	9.25

	Actual inflation, December 2021 on December 2020,%	Key rate as of end of December 2021, % annually
India	5.66	4.00
Russia	**8.39**	**8.50**
Kazakhstan	8.4	9.75
Turkey	36.08	14.00
Developed countries		
EU	5.0	0.00
UK	5.4	0.25
Australia	3.5	0.10
Canada	4.8	0.25
Norway	5.3	0.5
New Zealand	5.9	0.75
US	7.0	0.25
Czech Republic	6.6	3.75
Iceland	5.1	2.00
Switzerland	1.5	-0.75
Japan	0.8	-0.1

Source: The websites of central banks.

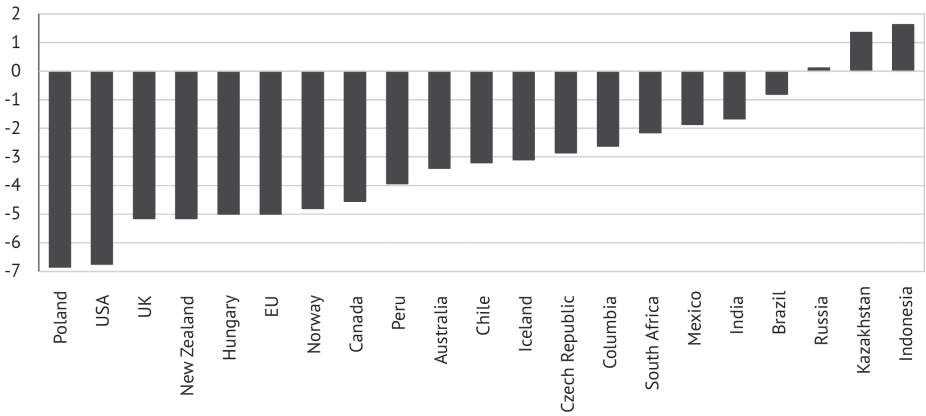


Fig. 1. Real key interest rate as of the end of December 2021, % annually (measured on the basis of the rate of inflation in the previous 12 months)

Source: The websites of central banks, own calculations.

Amid sustainable deviation of the rate of inflation from the target level, a gradual rise in the key rate facilitated the curbing of the inflation rate and inflation expectations. However, with the existing high inflation risks taken into account, the tightening of the monetary policy will continue beyond the year 2021.

It is noteworthy that throughout 2021 the RF Central Bank continued to carry out measures aimed at supporting individuals and the business. Specifically, the RF Central Bank allocated Rb60 bn to facilitate banks' preferential lending to SME out of the list of economic sectors which were hit the hardest by the implications

of temporary anti-epidemic measures. Within the limit, the loan rate for a SME entity is set at the level of maximum 8.5% annually, while in case of a guarantee extended by the SME Corporation the interest rate is maximum 8% annually with a deferred payment on the principal and interests being equal up to three months. Until December 30, 2021, in conformity with the program of motivation of lending to SME authorized banks could draw loans from the RF Central Bank against the SME Corporation's surety at the rate of 4% for the term of up to 1.5 years.

Further, the RF Central Bank advised banks, micro-financial organizations and credit unions to meet halfway individuals and SME entities which applied for restructuring of loans in November-December 2021. The RF Central Bank's measures were aimed at supporting borrowers, providing loans to SME entities, as well as reducing payment costs.

2.1.2. The money market

Amid a stable money market situation 2021, structural liquidity surplus[1] amounted on average to Rb1.1 trillion (Rb2 trillion in 2020) (*Fig. 2*). It is noteworthy that by mid-December 2021 the banking sector saw a liquidity deficit of Rb29 bn on the back of temporary liquidity absorbing by the RF Ministry of Finance late in 2021 in order to effect December payments on the expenditure side of the budget. Late in 2021, structural liquidity surplus amounted to Rb1.7 trillion, having surpassed the RF Central Bank's forecasted band of Rb0.6 trillion–Rb1.0 trillion. In 2021, the banking sector's liquidity surplus dynamics are substantiated by an increase of Rb0.1 trillion in correspondent account balances with the RF Central Bank, growth of Rb0.6 trillion in cash funds in circulation, budget operations for the amount of Rb2 trillion and growth of Rb0.1 trillion in reserve requirements.

In 2021, amid structural liquidity surplus the RF Central Bank's deposit auctions were in demand. Within a scope of deposit auctions, the volume of borrowed funds amounted on average to Rb1.3 trillion for a year at the average weighted rate of 5.75% annually (Rb1.3 trillion in 2020 at the average weighted rate of 4.95% annually). To underpin short-term money market rates close to the key interest rate in 2021, the RF Central Bank held repeatedly "fine tuning" deposit auctions for the term of 1 to 6 days. The average volume of borrowed funds attracted under such operations amounted to Rb0.972 trillion at the average weighted rate of 6.0% annually (Rb0.821 trillion in 2020 at the average weighted rate of 5.3% annually).

In Q4 2021, the RF Central Bank suspended issuing and placing coupon bonds to retain flexibility in managing the banking sector's liquidity by means of deposit auctions amid declining liquidity surplus. Overall, in 2021 the regulator carried out 58 placements of coupon bonds; on average the volume of placement was equal to Rb35.8 bn, while in 2020 they carried out 55 issues with an average volume of Rb94.2 bn each.

1 By the RF Central Bank's definition, the level of structural liquidity deficit/surplus is the difference between the debt on refinancing operations and absorbing operations by the RF Central Bank. The banking sector's structural liquidity deficit is a state of the banking sector where credit institutions have a strong need to attract liquidity by means of operations with the RF Central Bank. The opposite situation when credit institutions have a strong need to place funds with the RF Central Bank represents structural liquidity surplus.

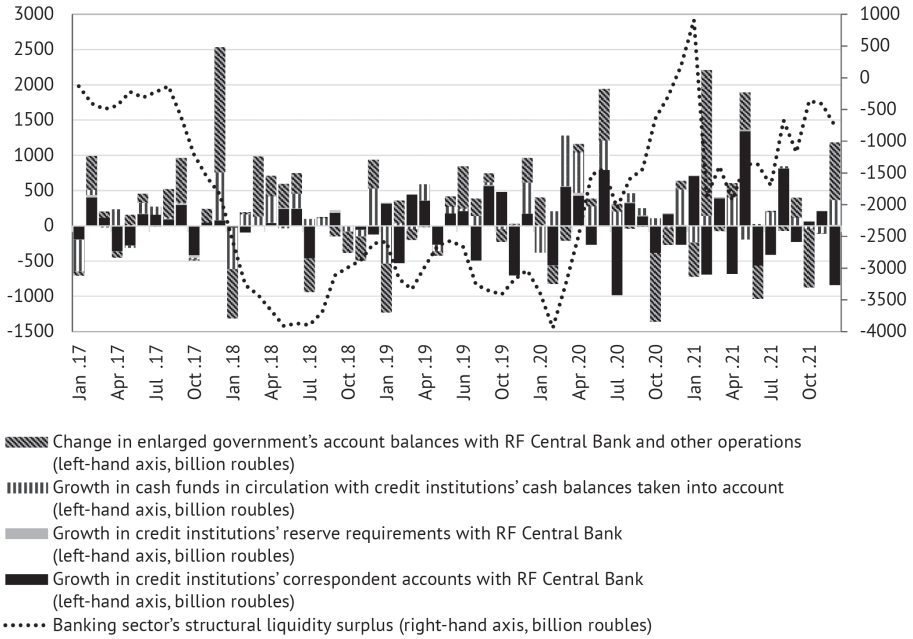


Fig. 2. The banking sector's structural liquidity surplus and its components, 2017–2021

Source: The RF Central Bank

In 2021, the momentum of individual components of the monetary base was also substantiated by a decrease in excessive demand for liquidity in 2020. In January-December 2021, the monetary base in a broad definition increased by 10.1% to Rb20,339 bn (an increase of 9.8% to Rb18,472 bn in 2020). Based on results for 2021, among the most fast-growing components of the broad monetary base were banks' deposits with the RF Central Bank (a 2.3-fold increase to Rb2,805 bn) and reserve requirements (growth of 14.3% to Rb815 bn). Cash funds in circulation and credit institutions' correspondent account balances showed positive growth rates: +4.8% to Rb14,068 bn and +4% to Rb3,762 bn, respectively. As stated above, amid suspension of issues and placement of the RF Central Bank's coupon bonds in Q4, their value on the balance of credit institutions fell to zero by the beginning of January 2022, while early in 2021 it was equal to Rb0.6 trillion *(Table 3)*. Overall, amid growing liquidity surplus the volume of excessive reserves[1] in January-December 2021 increased by 25.7% and amounted to Rb5,455.6 bn (*Table 2*).

1 The banking system's excessive reserves include credit institutions' deposits and correspondent account balances with the RF Central Bank, as well as the RF Central Bank's bonds with credit institutions.

Table 2

Dynamic of the monetary base in a broad definition in 2021, bn roubles

	January 01, 2020	January 01, 2021	January 01, 2022
Monetary base (in broad definition)	16 823.4	18 472.4	20 338.9
– Cash funds in circulation with credit institutions' cash balances taken into account	10 616.1	13 419.6	14 068.1
– Credit institutions' correspondent account balances with RF Central Bank	2 625.5	2 548.5	2 650.6
– Reserve requirements	617.4	713.6	815.3
– Credit institutions' deposits with RF Central Bank	1 027.7	1 220.7	2 805
– Credit institutions' bonds with RF Central Bank	1936.7	570	0.0
For reference: excessive reserves	5 589.9	4 339.2	5 455.6

Source: The RF Central Bank.

Table 3

The RF Central Bank's balance in 2019–2021

	December 31, 2019		December 31, 2020		November 30, 2021	
	billion Rb	% of assets / liabilities	Billion Rb	% of assets/ liabilities	Billion Rb	% of assets / liabilities
Funds placed with nonresidents and securities of foreign emitters	25 342.9	62.6	31 447.5	60.4	32 536.5	59.9
Loans and deposits	3 305.7	8.2	4 442.5	8.5	3 480.7	6.4
Precious metals	6 952.8	17.2	10 446.0	20.0	9 949.8	18.3
Securities	1 121.6	2.8	1 020.0	2.0	973.1	1.8
Other assets	2 252.7	5.6	2 779.9	5.3	4 179.1	7.7
Total assets	**40 513.1**	**100.0**	**52 105.9**	**100.0**	**54 288.9**	**100.0**
Cash in circulation	10 616.5	26.2	13 181.3	25.3	13 719.1	25.3
Account balances with RF Central Bank	16 951.7	41.8	17 798.8	34.2	19 297.1	35.5
Including funds of RF Government	*10 734.1*	*26.5*	*12 645.9*	*24.3*	*12 693.9*	*23.4*
Funds of resident-credit institutions	*4 273.9*	*10.5*	*4 643.4*	*8.9*	*5 683.2*	*10.5*
Settlements funds	–		–		–	
Issued securities	1 952.9	4.8	555.0	1.1	163.9	0.3
Obligations to IMF	1 363.9	3.4	1 640.9	3.1	2 859.1	5.3
Other liabilities	190.6	0.5	9 475.2	18.2	596.1	1.1
Capital	9 437.5	23.3	9 454.7	18.1	17 653.6	32.5
Profit in year under review	–	–	–		–	
Total liabilities	**40 513.1**	**100.0**	**52 105.9**	**100.0**	**54 288.9**	**100.0**

Source: The RF Central Bank

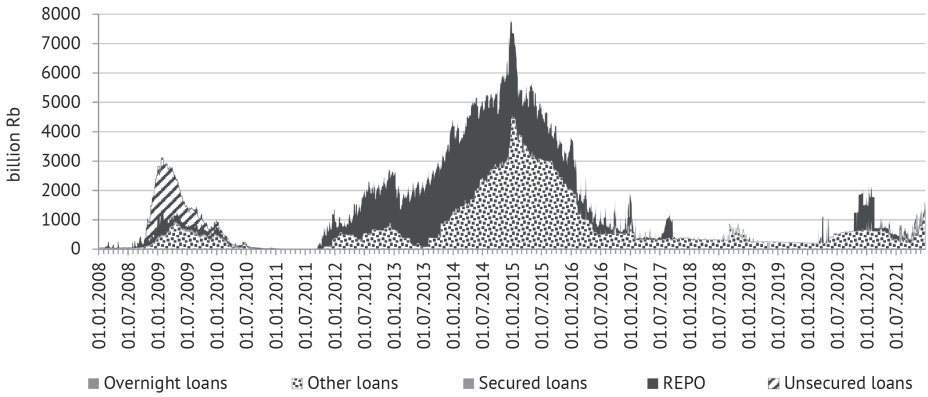


Fig. 3. Commercial banks' debt in roubles to the RF Central Bank, 2008–2021.

Source: The RF Central Bank.

It is noteworthy that 2020 saw considerable growth in the share of cash in circulation (an increase of Rb2.9 trillion or 30% in 2020). The main source of this additional volume of cash was a reduction in households' spending which led to a non-return of the earlier issued cash in transactions on purchasing of goods and services, as well as maintenance of unspent incomes in cash as a precaution amid growing uncertainties.[1] With stabilization of the situation and a lack of new serious negative shocks, in January-December 2021 an increase in cash in circulation turned out to be moderate (4.8% or Rb0.6 trillion), while growth rates of the non-cash component of money supply sped up.

Amid a decrease in the banking sector's excessive demand for liquidity as the money market situation stabilized, in 2021 credit institutions' debt to the RF Central Bank was declining. So, based on results for January-December 2021 the value of loans extended by the RF Central Bank to credit institutions decreased by 14.2% to Rb3.1 trillion (Rb3.6 trillion as of January 1, 2021) (*Fig. 3*). Within the frameworks of REPO auctions, the volume of the regulator's requirements to banks amounted to Rb0.1 trillion as of the beginning of December 2021 (Rb0.85 trillion in 2020), while banks' debt on loans against the pledge of non-marketable assets amounted to Rb1.0 trillion (Rb0.96 trillion in 2020). It is noteworthy that the pattern of banks' overall debt to the RF Central Bank underwent changes: a decrease in banks' debt on REPO auctions was partially made up for by an increase in loans against the pledge of non-marketable assets by virtue of more favorable conditions in terms of a collateral.

In 2021, the regulator kept providing credit institutions with rouble liquidity at REPO auctions for the terms of one month and a year. It is noteworthy that the decision on the renewal of such auctions was taken in May 2020 amid credit institutions' growing demand for liquidity. In 2021, within the framework of REPO auctions for

1 *A. Grebenkina, S. Drobyshevsky, P. Trunin.* A Decrease in Households' Spending is the Main Source of Additional Volume of Cash in 2020. Russia's Economic Development. Issue No.3 (March 2021).

the term of one month credit institutions were granted Rb2.1 trillion (Rb2.6 trillion in 2020). REPO auctions for the term of a year were not much in demand: Rb17 bn were provided on such auctions in 2021 as compared with Rb36bn in 2020.

In 2021 amid structural liquidity surplus, MIACR rate was primarily at the floor of the interest rate collar (*Fig. 4*). In January-December 2021, MIACR rate was equal on average to 5.7% annually, while in 2020 it amounted on average to 4.87% annually. In 2021, a rise in short-term interest rates in the inter-bank segment of the money market is closely related with the tightening by the RF Central Bank of its monetary policy. Overall, the RF Central Bank's activities are aimed at ensuring the required level of liquidity in the banking sector and achieving the monetary policy's operational targets as regards keeping short-term money market interest rates close to the key interest rate.

In 2021, the Russian Federation's international reserves increased by 5.9% to $630.6 bn, a new all-time high (*Fig. 5).* An increase in international reserves facilitated accumulation of foreign-exchange reserves on the back of purchasing by the RF Ministry of Finance of foreign currency within the framework of the fiscal rule, as well as granting of special drawing rights (SDRs) to Russia within the scope of the IMF decision on a new allocation of SDRs in the amount of $17.5 bn among member countries. It is noteworthy that in 2021 monetary gold reserves fell by 4.1% to $133.7 bn primarily because of downward re-evaluation ($28.9 bn)

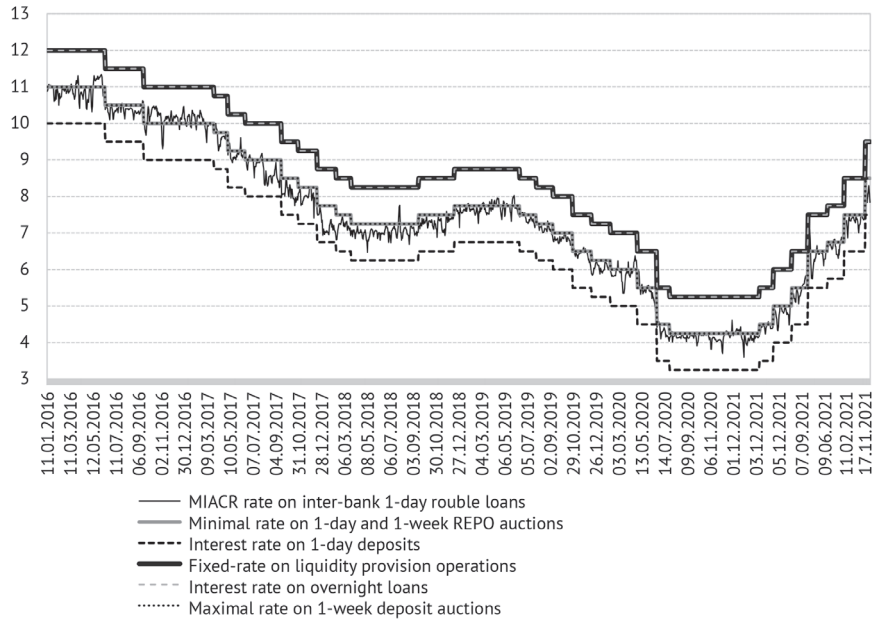


Fig. 4. The RF Central Bank's interest rate collar and dynamics of inter-bank market rates, 2016–2021

Source: The RF Central Bank.

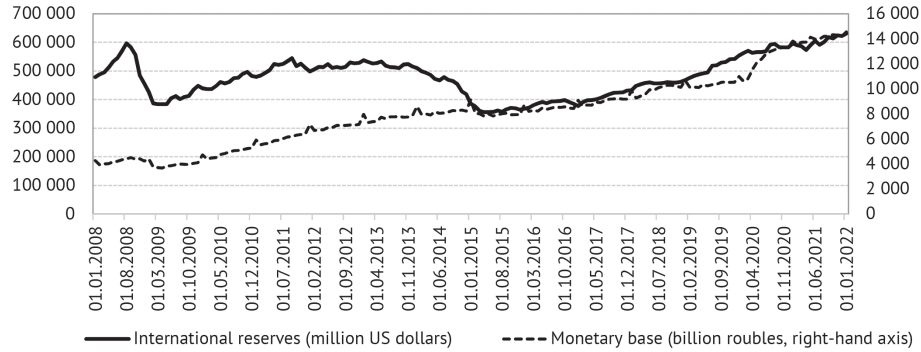


Fig. 5. Dynamics of monetary base (narrowly defined) and gold and foreign-exchange (international) reserves of the Russian Federation, 2008–2021

Source: The RF Central Bank.

of this asset. Growth rates of foreign-exchange reserves were equal to 8.9% and as of the beginning of January 2022 foreign-exchange reserves amounted to $499 bn. As of January 1, 2022, the share of foreign-exchange reserves in overall reserve assets was equal to 77.1% (76.7% in 2020), while the unit weight of gold, to 22.9% (23.3% in 2020).

According to the data for H1 2021, the share of the US dollar in foreign-exchange reserves was equal to 16.4% (22.2% in mid-2020), the share of euro – 32.3% (29.5% in mid-2020), the share of yuan – 13.1% (12.2% in mid-2020) and the pound sterling – 6.5% (5.9% in mid-2020). Note that substantial changes in the pattern of foreign-exchange reserves took place as far back as 2018 when the share of assets in yuan increased from 2.8% to 14.2%, while the share of assets in US dollars decreased from 45.8% to 22.7%. Such changes in the pattern were apparently driven by the need to minimize possible geopolitical risks.

In 2021, the tightening of the monetary policy had an effect on money aggregate dynamics. Specifically, average monthly growth in M2 money supply (as compared with the relative period of the previous year) was equal to 10.7%, while in 2020 it amounted to 14.1%. With average growth rates of monetary base being equal to 8.0% in 2021 (12.0% in 2020), money multiplier (the ratio of M2 aggregate to the monetary base) turned out to be equal to 3.1 (3.0 in 2020). Advanced growth in M2 money supply by contrast with the monetary base is ensured primarily by a pickup in the volumes of lending (a six-year high) to non-financial entities. It is noteworthy that the achieved value of money multiplier is the average value for developing economies (Ukraine, Belarus and Kazakhstan), while for developed countries it is normally in the range of 5–8. In the past 20 years, as the banking sector was evolving in East European countries, they saw growth in money multiplier. For example, in Poland it increased from 3.1 to 4.7 in 1993-2021, while in Russia it picked up in the same period from 1.4 to 3.1.

2.1.3. Inflation processes

Based on results for 2021, the rate of inflation in Russia amounted to 8.4% (4.9% in 2020), an increase of 4.4 p.p. over the RF Central Bank's target (*Fig 6*). Inflation sped up amid fast expansion of demand with limited capacities to increase supply of numerous goods and existing irregularities in global markets supplies. Inflation sped up as far back as November 2020 when a monthly increase in consumer prices was equal to 0.7%, while in October 2021 the monthly consumer price index amounted to 1.1%, a six-year high.

Core inflation dynamics (without taking into account prices related with seasonal and administrative factors) point to sustainability of inflation processes. Specifically, in January-December 2021 it was constantly growing from 4.6% (in January 2021 on January 2020) to 8.9% (in December 2021 on December 2020).

Based on results for December 2021, food inflation was equal to 10.6% relative to December 2020 (+6.7% in December 2020 on December 2019). Amid a low yield of vegetables and increased costs, price growth leaders were fruit and vegetable products (+14.0% by December 2020), eggs (+16.0% by December 2020), meat and poultry (+17.5% by December 2020) (*Table 4*).

In December, a rise in prices for nonfood products amounted to 8.6% by December 2020 (+4.8% in December 2020 on December 2019). As demand for nonfood products was actively growing amid limited supply and delivery problems, prices appreciated the most for building materials (23.75% in December 2021 on December 2020 against 5.3% in December 2020 on December 2019), audio visual goods (12.7% in December 2021 on December 2020 against -0.6% in December 2020 on December 2019), motor petrol (8.84% in December 2021 on December 2020 against 2.53% in December 2020 on December 2019), as well as foreign cars (14.4% in December 2021 on December 2020 against 10.3% in December 2020 on December 2019) and Russian cars (19.6% in December 2021 on December 2020 against 9.4% in December 2020 on December 2019).

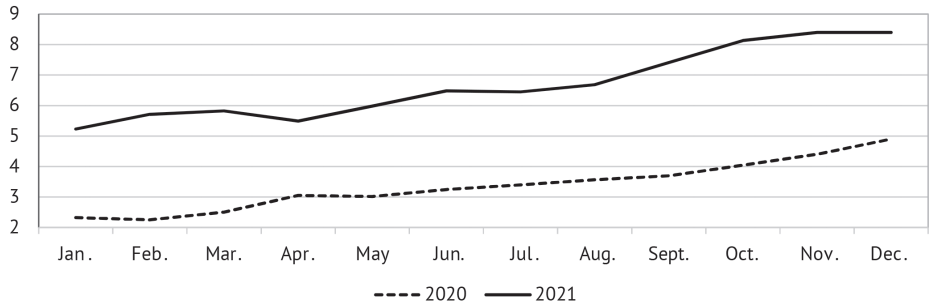


Fig. 6. CPI growth rates in 2020–2021, % in the past 12 months

Source: Rosstat, own calculations.

Table 4

Annual rates of prices rises for individual types of consumer goods and services in 2019–2021, %, December on December of the previous year

	2019	2020	2021	2019–2021
CPI	**3.0**	**4.9**	**8.4**	**12.7**
Food products	**2.6**	**6.7**	**10.62**	**21.1**
Meat and poultry	0.2	2.7	17.53	20.9
Grain and beans	15.2	20.1	16.11	60.6
Eggs	-5	15.1	16.04	26.9
Alimentary products	5.7	12.1	14.95	36.2
Fruit and vegetable products	-2	17.4	13.98	31.1
Sugar	-30.8	64.5	12.33	27.9
Fish and seafoods	5.2	5.2	10.66	22.5
Bread and bakery products	6.3	7.3	10.27	25.8
Milk and dairy products	6.1	3.6	9.84	20.7
Sunflower oil	-2.9	25.9	8.65	32.8
Spirits	1.2	2.8	2.56	6.7
Nonfood products	**3**	**4.8**	**8.58**	**17.2**
Building materials	2.7	5.3	23.75	33.8
Tobacco products	11	8.2	16.37	39.8
Audio visual goods	-5.7	-0.6	12.74	5.7
Motor petrol	1.9	2.5	8.84	13.7
Washing and cleaning products	4.9	6	7.43	19.5
Medicines	6.9	9.8	4.63	22.8
Knitted goods	2.4	2	4.16	8.8
Footwear and linen	2.2	1.6	3.36	7.3
Services	**3.8**	**2.7**	**4.98**	**11.9**
Passenger transportation services	6.1	1.1	9.58	17.5
Consumer services	3	3.3	6.91	13.8
Health and fitness	3.1	3.8	5.94	13.4
Medical services	3.8	4.3	5.82	14.6
Educational services	5.6	1.9	5.54	13.6
Housing and public utilities	4.3	3.6	4.14	12.5

Source: Rosstat.

Fee-based services to households appreciated by 4.98% in December 2021 on December 2020 (2.7% in December 2020 on December 2019). Specifically, prices were appreciating quite quickly for passenger transportation services (+9.6%), cultural services (+8.6%), consumer services (+6.9%) and insurance services (+6.7%). Prices rises in the services sector were primarily driven by anti-epidemic restrictions and upward wage dynamics.

Overall, as seen from the decomposition of inflation by its components the largest contribution to the inflation rate was made by price increases for food products (4.1%), while that of nonfood products and the services sector was equal to 3.0% and 1.4%, respectively (*Fig. 7*). This can be substantiated by a low yield of

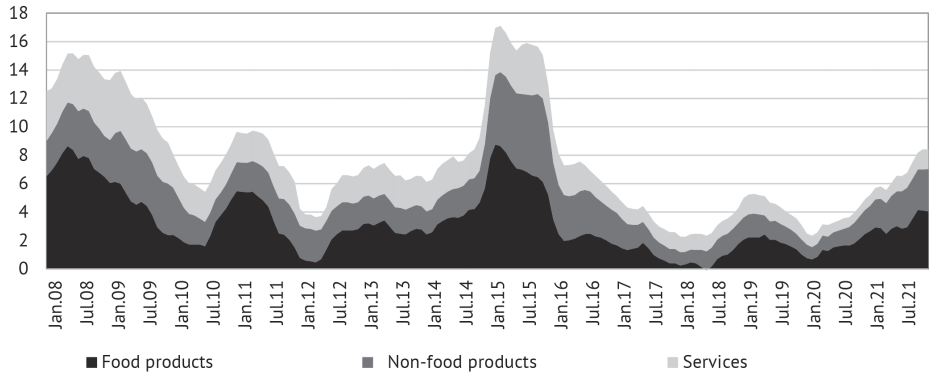


Fig. 7. Inflation pattern in 2008–2021, %, month on the corresponding month of the previous year

Source: Rosstat; own calculations.

vegetables, increased costs in livestock farming, as well as a considerable pickup in global prices for food products.

As stated above, key inflationary factors were a fast consumer demand revival as opposed to capacities to increase output. Specifically, in 2021 retail sales growth rates were equal to 7.3%, a record-high since 2008 (-3.2% in 2020; 1.9% in 2019). In 2021, households' real cash income increased by 3.4% (-1.4% in 2020; 1.7% in 2019). By estimates of Sberindex[1], households' consumer spending increased on average in nominal terms by 12.8% in 2021 as compared with 2020, while in March-December 2020[2] its growth was negative (-7.2%).

A speed-up of the rate of inflation was driven by the situation on the labor market. In January-November 2021, average growth rates of real wages were equal to 2.7% (2.1% in January-November 2020; 2.4% in January-November 2019). The level of unemployment renewed its historic minimum in October 2021 and amounted to 4.3% (6.3% in 2020) and remained at this level till the end of the year. Specifically, the number of job vacancies corresponds to the historic maximum (+49% in December 2021 on December 2020).[3] Labor shortages will contribute to further growth in wages and cost-push inflation.

Apart from a quick revival of domestic demand, inflation was sped up on the back of appreciation of global prices for most goods and services during the year. Though in November-December 2021 growth rates of global prices for primary commodities slowed down and prices for some categories of raw materials even depreciated, the inflation rate is still picking up worldwide on a broad range of goods. So, 2021 saw global price increased for fertilizers (a 2.6-fold increase),

1 URL: https://sberindex.ru/
2 Available observation period.
3 URL: https://stats.hh.ru/

metals (27.7%) and energy commodities (77.1%).[1] The food price index grew from 113.5% in January 2021 to 134.1% in January 2022. In 2021, there was a pickup in global prices for meat (an increase of 17.3%), dairy products (18.8%), grain 12.5%, sugar (19.7%) and vegetable oil (33.8%).[2]

In 2021, an upturn in inflation was a sustainable global trend and was explicit both in developed and developing countries. From January through December 2021, inflation (measured by the consumer price index in relation to the relevant month of the previous year) increased in the US (from 1.4% to 7.7%), Germany (from 1% to 5.3%) and Canada (from 1% to 4.8%). Also, a rise in inflation was typical of developing countries: Brazil (from 4.6% to 10.1%), Kazakhstan (from 7.5% to 8.4%), Mexico (from 3.5% to 7.4%), Poland (2.6% to 8.7%). With the abovementioned global trends in consumer price dynamics taken into account, it is expected that in future an additional inflationary factor for the Russian economy can become the leading developed countries' tightening of their monetary policies, resulting in developing countries' assets becoming less attractive, higher volatility on global financial markets, higher risks of depreciation of national currencies and growing inflation expectations.

According to the data of the OOO InFOM, throughout 2021 households' inflation expectations were at a sustainably high level close to multi-year heights and were characterized by an upward trend. Specifically, from January through December 2021 they increased from 10.5% to 14.8%, a five-year high. As per the data of the monitoring,[3] carried out by the RF Central Bank, the balance of enterprises' answers regarding the expected price dynamic increased from 18.3 p.p. in January 2021 to 27.4 p.p. in June 2021 and stabilized in H2 2021 at the level of 25–26 p.p., surpassing heights seen in 2019–2020. According to the INFOM report, an upturn in enterprises' price expectations was primarily driven by growth in costs and increased demand.[4] It is noteworthy that with increased inflation expectations, the inflation rate will remain high in 2022.

So, based on results for 2022 the inflation rate turned out to be 4.4 p.p. above the target (4%) because of the impact of the abovementioned inflation factors. We believe that the RF Central Bank's decisions on gradual raising of the key rate, as well as signals that it is highly likely to be increased at the nearest meetings of the RF Central Bank contribute to a decline in inflation and inflation expectations. However, taking into account inertia in inflationary processes, inflation may remain above the target of 4% for quite a long time.

2.1.4. Balance of payments and FX rate

According to RF Central Bank's preliminary estimate of the 2021 balance of payment, current account balance reached its all-time high of $120.3 bn, a 3.3-fold increase ($84.3 bn in absolute value) as compared with 2020.

1 URL: https://www.worldbank.org/en/research/commodity-markets
2 UN FAO data. URL: http://www. fao.org/
3 URL: https://www.cbr.ru/analytics/dkp/inflationary_expectations/
4 Similar results were received by S.V. Tsukhlo in his research "Adaptability of Various Groups of Enterprises to the 2020 Crisis." // The Online Monitoring of Russia's Economic Situation. Trends and Challenges of the Social and Economic Situation in 2021. Issue No.18(150). November.

Merchandise trade surplus amounted to $185.9 bn, an increase of 98% ($92 bn in absolute value) as compared with 2020 ($93.7 bn) (*Fig. 8*). This growth was largely driven by an increase of 47% in the value of exports from $333.4 bn in 2020 to $490 bn in 2021. This growth is largely substantiated by sustainability of supply volumes in physical terms and a pickup in average annual export prices for all main commodity items of Russian commodity exports without exception (*Table 5*). As a result, the share of the fuel-and-energy industry in overall exports increased from 45.1% in 2020 to 49.1% in 2021, that is, close to the level seen the 2000s (*Fig. 9*).

Table 5

Changes in prices for essential goods of Russian exports in 2021 as compared with 2020

Commodity group	Share of commodity group in exports, %	Average export price of supplies, USD per ton		Price growth, %
		January-November 2021	January-November 2020	
Crude oil	22.9	472	302	+57
Petrochemicals	14.2	475	321	+48
Natural gas*	10.8	252	124	+104
Ferrous metals	6.0	661	399	+66
Fossil coal	3.5	80	63	+26
Mineral fertilizers	2.5	315	203	+55
Wheat and meslin	1.8	265	209	+27
Liquified natural gas**	1.6	107	99	+8
Aluminium	1.5	1990	1573	+27
Processed timber	1.3	351	232	+52
Copper	0.84	8253	5780	+43
Vegetable oil	0.82	1273	743	+71
Iron ore	0.76	150	75	+101
Fresh and frozen fish	0.60	1956	1642	+19
Plywood***	0.40	635	398	+59
Rubber	0.40	1716	1262	+36

* – Price is specified in US dollars/billion cubic meters
** – Price is specified in US dollars/ thousand cubic meters
*** – Price is specified in US dollars/ cubic meters

Source: The Federal Customs Service, own calculations.

Amid increased exports, trade balance improvement was facilitated by a more moderate (both in absolute and relative terms) increase in import supplies: growth of 27% in 2021 (from $239.6 bn in 2020 to $304 bn in 2021). Such an upward trend of value of supplies can be explained on one side by the stability of the rouble in 2021: according to the data of the RF Central Bank, the index of the

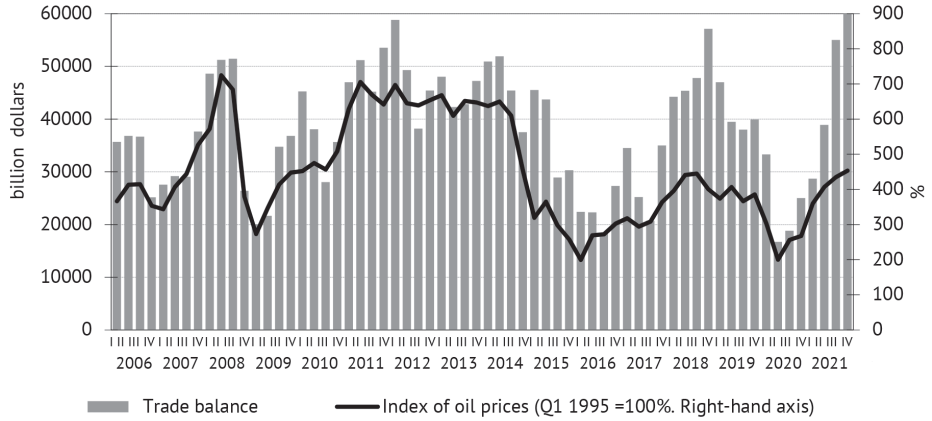


Fig. 8. Trade balance and oil prices dynamics

Source: The RF Central Bank; the IMF.

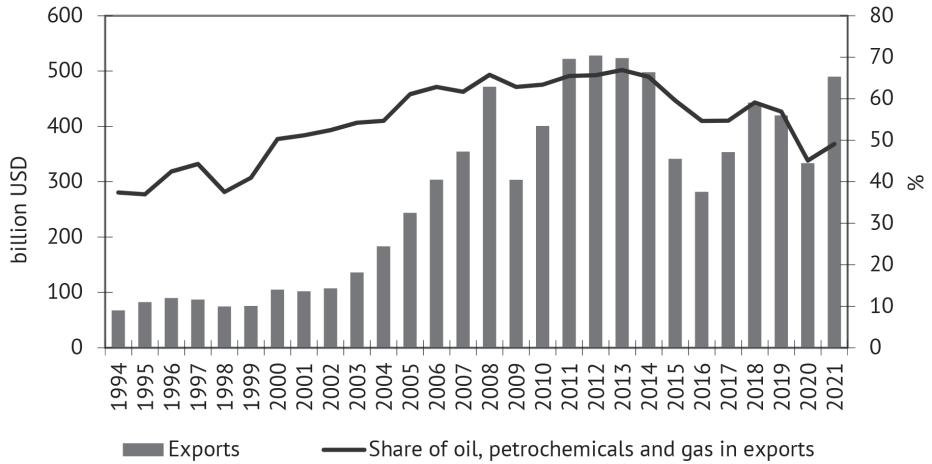


Fig. 9. Dynamic of exports of goods and the share of products of the fuel-and-energy industry, 1994–2021

Source: The RF Central Bank.

Russian rouble/US dollar real effective exchange rate declined by the mere 0.6% in 2021 relative to 2020. On the other side, it was recovery growth of revenues of the Russian economy and appreciation of global prices for imported products amid ongoing need in such supplies (machinery and equipment, polymers and medical supplies).

Also, the trade balance in services got slightly worse: in 2021 it was equal to -$19.9 bn, which is 17% more in absolute value than in 2020 (-$17.0 bn). Exports

of services increased by 16% (growth of $7.6 bn from $47.0 bn to $54.6 bn owing to foreigners' trips to Russia and a pickup in transportation services), while imports, by 17% from $64.1 bn to $74.5 bn (also owing to Russians' trips abroad and a pickup in transportation services).

In 2021 the balance of labor remuneration and the balance of rent[1] remained virtually zero.

In 2021, investment income balance[2] changed quite considerably: it got worse by $7.5 bn (an increase from -$34.1 bn to -$41.6 bn) primarily on the back of an increase of $35.7 bn in 'due to' incomes (repatriation of investment incomes) simultaneously with more moderate growth in 'due from' incomes (an increase of $28.2 bn). It is noteworthy that the Russian Federation's investment balance surplus is sustainably negative because accumulated investments in the Russian Federation and income on them surpass largely Russia's investments (and relevant incomes on them) abroad. Growth in 'due to' investment incomes owing to a pickup in Russian companies' profits caused a deficit of this component of current account surplus.

In 2021, the financial account deficit (without reserve assets taken into account) was equal to $55.4 bn, which is comparable with 2020 when it amounted to $53 bn. However, this indicator's pattern underwent considerable changes. Specifically, net capital outflow was primarily driven by growth of 81.5bn in financial assets in 2021 (in 2020 foreign financial assets increased by the mere $13.1 bn). Foreign financial liabilities grew by $26.1 bn, while in 2020 they decreased by 39.9 bn.

As a result, in 2021 the private sector's net capital outflow picked up considerably to $72 bn ($50.4 bn in 2020), a seven-year high (*Fig. 10*). At the same time, in 2021 net capital outflow in the banking sector was insignificant and amounted to the mere $2.7 bn ($21.7 bn in 2020). In the non-banking sector, net capital outflow amounted to $69.3 bn against $28.7 bn in 2020. Though capital outflow picked up in 2021, it was lower than expected: earlier in October the RF Central Bank forecasted it at the level of $80 bn within a year, while for 11 months its actual value was estimated by the RF Central Bank at the level of $73.9 bn, which means that increased geopolitical risks late in 2021 did not materialize in the predicted capital outflow volume.

Foreign assets growth took place owing to operations of other sectors: $84 bn in 2021, an eight-year high. A pickup in capital outflow from other sectors was largely driven by growth in foreign direct investments aimed at reinvesting income of foreign subsidiaries, as well as increased investments in the capital of related foreign corporations. Specifically, other sectors' outgoing foreign direct investments amounted to $53.6 bn ($5.7 bn in 2020). Portfolio investments abroad were equal to $13 bn ($11.9 bn in 2020); the value of other assets amounted to $10.3 bn (-$6.4 bn); trade credits and advances amounted to $8.5 bn ($6.6 bn in

1 This item takes into account revenues received by residents from use of land granted at their disposal and use of natural resources by non-residents and vice versa.

2 This item shows income of residents received from ownership of foreign financial assets (in terms of direct, portfolio and other investments) and similar income paid to nonresidents based on results of their investments in the Russian economy. Income includes dividends, reinvested income and interests.

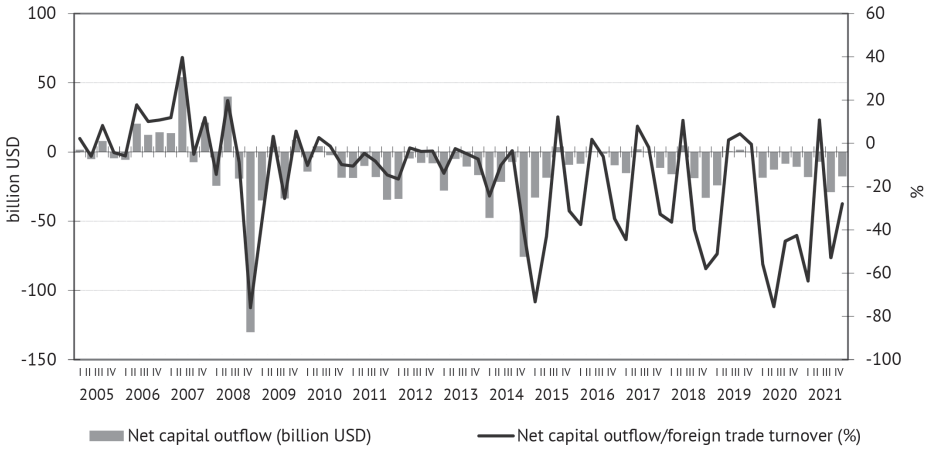


Fig. 10. The private sector's net capital outflow, 2005–2021

Source: The RF Central Bank; own calculations.

2020). By contrast, in 2021 the banking sector's foreign assets decreased by $5.6 bn (-$4.5 bn in 2020).

A pickup in Russian residents' financial obligations was driven largely by the non-banking sector's operations. Specifically, in 2021 other sectors' foreign obligations increased by $15.8 bn (in 2020 they decreased by $16.4 bn). Growth in foreign obligations of other sectors was facilitated by an increase in incoming direct investments ($30.7 bn in 2021 against $8 bn in 2020) and other obligations ($6.9 bn in 2021 against $0.2 bn in 2020). There was a decrease in portfolio investments and loans by $11.3 bn (-$15.3 bn in 2020) and $10.5 bn (-$9.3 bn in 2020), respectively. The banking sector's obligations decreased by $8.3 bn (-$26.1 bn in 2020).

It is noteworthy that based on results for 2021 the volume of the government authorities' obligations to nonresidents declined by $3.3 bn (+$3.7 bn in 2020). According to the data as of early in December 2021, the share of nonresidents on the OFZ (federal loan bond) market fell to 20.5%, while early in the year it was equal to 23.3%. A decrease in government authorities' obligations is substantiated primarily by the rhetoric of sanctions; internal and geopolitical risks; expectations of the tightening of the monetary policy by the US Federal Reserve; high uncertainties about the prospects of development of the global and Russian economies, making it less attractive both for Russian and foreign economic agents to attract nonresidents' investments into Russian assets.

The excess of the current account surplus over the value of capital outflow on financial account was made up for by an increase of $63.5 bn (-$13.8 bn in 2020) in international reserve assets. Accumulation of foreign exchange reserves can be explained by the fact that the RF Ministry of Finance was buying foreign currency within the scope of the fiscal rule following oil prices' overshooting of the cut-off

price (about $40.5 bn in 2021) and receipt by Russia of $17.5 bn worth of special drawing rights within the framework of the IMF decision on a new allocation of SDRs among its member countries.

In 2021, the Russian rouble/US dollar exchange rate changed insignificantly, a decrease of 0.6% to Rb74.3 for $1. Specifically, the exchange rate dynamic was uneven during the year. After appreciation in H1 2021 to Rb72.4 for $1, in Q4 2021 the rouble fell by 2.2% to $74.3 for $1because of higher geopolitical risks. Late in 2021, the fundamentally justified Russian rouble/US dollar exchange rate still stood at Rb70 for $1, which means that the Russian national currency was undervalued for 6%.[1] The weakening of the rouble early in 2022 led to a further gap between the actual exchange rate and the fundamental one due to increased geopolitical risks and capital flight from rouble-denominated assets. In this situation, the rouble outlook for 2022 will be still determined to a large extent by geopolitical factors.

It is noteworthy that in 2021 the Russian rouble/US dollar nominal effective exchange rate consolidated at 6.1%, while effective exchange rates of numerous developing countries targeting the rate of inflation decreased (South Africa: -2.4%; Brazil: -4.2%, Poland: -4.3%) (*Fig. 11*). Based on results for 2021, Turkey saw the most dramatic weakening of its national currency (-41%). It is noteworthy that despite growing global uncertainties and expectations of the tightening by the US Federal Reserve of its monetary policy, spurring capital outflow from emerging markets, the Russian rouble was underpinned by appreciation of prices for oil.

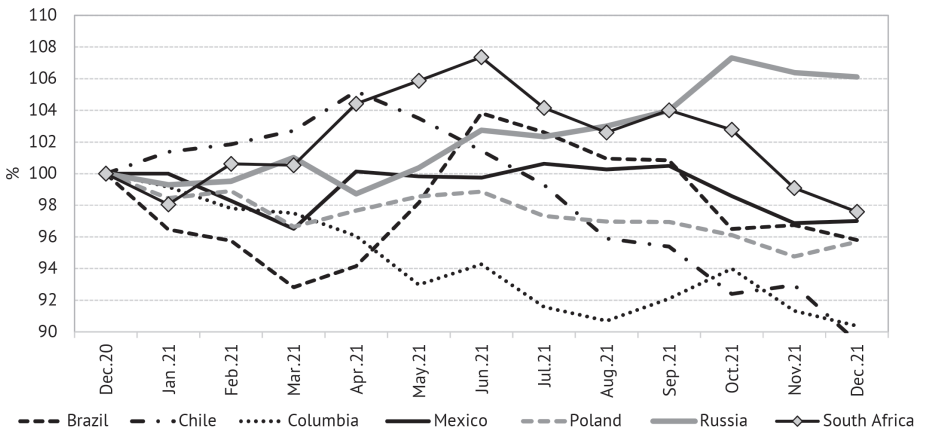


Fig. 11. Dynamic of nominal effective exchange rate of developing countries which target the rate of inflation (December 2020 = 100%)

Source: The IMF; own calculations.

1 For more details, see. *A.V. Bozhechkova, S.G. Sinelnikov-Murylev, P.V. Trunin.* The Factors of Rouble Exchange Rate Dynamics in the 2000s and the 2010s // Voprosy Ekonomiki, 2020, Issue No. 8, pp.11–18.

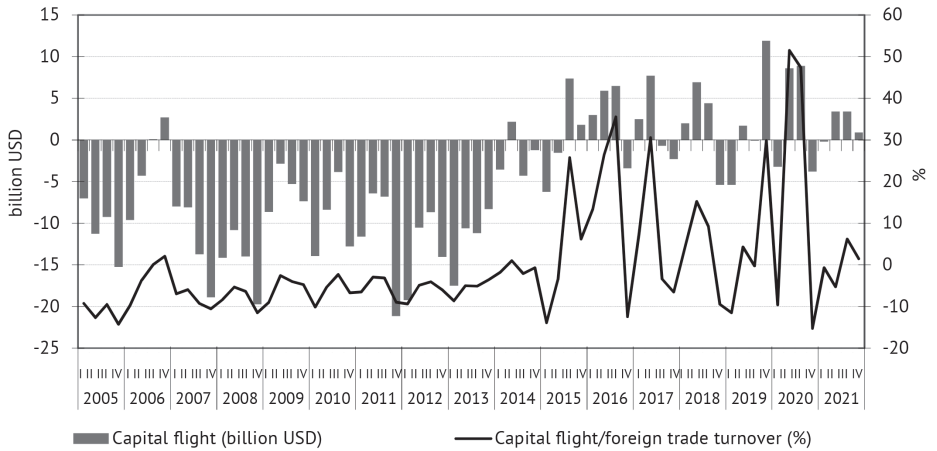


Fig. 12. Capital flight dynamic, 2005–2021

Source: The RF Central Bank; own calculations.

In 2021, Russia's foreign debt increased by 2.4% and as of January 1, 2022 was equal to $478.2 bn. The foreign debt of government authorities declined by 3.9% to $62.6 bn on the back of foreign capital outflow from the Russian OFZ market. Banks' external debt increased by 10.7% to $79.8 bn, while enterprises' foreign liabilities decreased by 4.8% to $301.6 bn.

By our estimates, at year-end 2021 capital flight[1] (*Fig. 12*) was equal to $7.5 bn, a decrease of 29% on 2020, which corresponds to the level seen in 2018–2019.

2.2. Fiscal policy[2]

2.2.1. Characteristics of the budgets of the budget system of the Russian Federation

Basic parameters of the budget system of the Russian Federation

In 2021, budget revenues of the enlarged government (BEG) amounted to Rb48.1 trillion, while the volume of the expenditures came to Rb47.1 trillion.

1 Capital flight is calculated on the basis of the IMF methodology and represents the sum of "trade credits and advances", "doubtful operations" and "net errors and omissions."

2 This section was written by: *Arlashkin I.Yu.*, Researcher, Budget Policy Studies Department, IAES RANEPA; *Barbashova N.E*, Candidate of Economic Sciences, Researcher, Budget Policy Studies Department, IAES RANEPA; *Belev S.G.*, Candidate of Economic Sciences, Head of Budget Policy Department, Gaidar Institute, Senior Researcher, Budget Policy Studies Department, IAES RANEPA; *Deryugin A.N.*, Senior Researcher, Budget Policy Studies Department, IAES RANEPA; *Leonov E.A.* Researcher, Budget Policy Studies Department, IAES RANEPA, Researcher, Tax Policy Department, Gaidar Institute; *Sokolov I.A.*, Candidate of Economic Sciences, Leading Researcher, Center for Macroeconomics and Finance, Gaidar Institute, Head of Budget Policy Studies Department, IAES RANEPA, Director of the Institute for Macroeconomic Studies VAVT under the Ministry of Economic Development of Russia; *Tishenko T.V.*, Candidate of Economic Sciences, Senior Researcher, Budget Policy Studies Department, IAES RANEPA.

Compared to 2019 and 2020, the BEG revenues in 2021 gained Rb8.6 and Rb9.9 trillion, respectively, or 0.8 and 1.2 p.p. GDP to 36.8% of GDP (*Table 6*). In 2021, oil and gas revenues as a share of GDP decreased relative to 2019 by 0.4 p.p. of GDP and increased by 2.5 p.p. of GDP relative to 2020; their share of total revenues in BEG was 19.4% in 2021 versus 20.9% and 12.9% in 2019 and 2020, respectively. Non-oil and gas revenues show an increase of Rb7.5 trillion and 1.2 p.p. of GDP in 2021 vs. GDP relative to 2019 and an increase of Rb5.5 trillion and a decline of 1.3 p.p. GDP vs. 2020.

Table 6

Main parameters of the budget of the enlarged government of the Russian Federation in 2019-2021

	2019		2020		2021		Change, 2021 to 2019		Change, 2021 to 2020	
	Rb bn	% of GDP	Rb bn	% of GDP	Rb bn	% of GDP	Rb bn	p.p. of GDP	Rb bn	p.p. of GDP
Revenue Including	**39 497**	**36.0**	**38 206**	**35.6**	**48 118**	**36.8**	**8 621**	**0.8**	**9 912**	**1.2**
- oil and gas[1]	8 248	7.5	4 951	4.6	9 335	7.1	1 087	-0.4	4 384	2.5
- non-oil and gas	31 249	28.5	33 255	31.0	38 783	29.7	7 534	1.2	5 528	-1.3
Expenditure	**37 382**	**34.1**	**42 503**	**39.6**	**47 072**	**36.0**	**9 690**	**1.9**	**4 569**	**-3.6**
Deficit (-) / Surplus (+)	**2 115**	**1.9**	**-4 297**	**-4.0**	**1 046**	**0.8**	**-1 069**	**-1.1**	**5 343**	**4.8**
For reference only: GDP, Rb bn	*109 608*		*107 315*		*130 795*					

Sources: Ministry of Finance of Russia, Federal Treasury; Rosstat, own calculations.

Expenditures of the Russian budget system increased in 2021 by 1.9 p.p. of GDP or by Rb9.7 trillion as compared to the pre-crisis year 2019, while relative to 2020 their growth was only in real terms (Rb4.6 trillion), while as a share of GDP there was a reduction by 3.6 p.p.

By the end of 2021, the budget surplus of the enlarged government amounted to slightly more than Rb1.0 trillion, which is equivalent to 0.8% of GDP. Thus, the BEG in the reporting year returned to a surplus, as it was at the end of the pre-pandemic 2019. The observed stability in the revenues of the RF budget system in recent years indicates the existing opportunities for maintaining the balance of the BEG in the medium term, if the geopolitical and macroeconomic conditions in the world do not deteriorate.

Receipts of main taxes to the budget system of the Russian Federation

Although in 2021 the level of BEG revenues went up relative to pre-crisis 2019, revenue trends were multidirectional for certain components of the tax burden (*Table 7*)

1 Excluding deductions for excise tax on crude oil sent for processing, damping component and investment deduction.

Table 7

The main tax receipts in the enlarged government budget of the Russian Federation in 2017–2021, % of GDP

	2017	2018	2019	2020	2021	Change, 2021 to 2019	
						pp. of GDP	In 2019 prices, %
Revenue, total*	**32.7**	**35.1**	**35.4**	**34.9**	**36.2**	**0.8**	**7**
Corporate profit tax	3.6	3.9	4.1	3.7	4.6	0.5	18
PIT	3.5	3.5	3.6	4.0	3.7	0.1	9
Insurance contributions*	6.7	6.5	6.8	7.0	6.3	-0.5	-3
VAT	5.6	5.8	6.5	6.7	7.0	0.5	14
Excises	1.7	1.5	1.2	1.8	0.6**	-0.6	-48
MET	4.5	5.9	5.6	3.7	5.6	0.0	6
Customs duties and fees	2.1	2.9	2.1	1.1	1.9	-0.2	-3

* Insurance premiums and income in total are given without double counting insurance premiums for the non-working population, the values of total revenues differ from the official by the amount of insurance premiums.
** Decrease in the total volume of excise duties is associated with the implementation of the mechanism of refundable excise duty on oil raw materials in the framework of the completion of the tax maneuver in the oil industry.

Sources: Federal Treasury, Rosstat, own calculations.

The oil and gas budget revenues, which somewhat "sagged" in 2020, managed to win back some of their fall in 2021: the amount of customs duties and fees did not fully recover (down 0.2 p.p. of GDP vs. the 2019 level), however mineral extraction tax proceeds returned to the pre-crisis level. Personal income tax receipts as a share of GDP remained virtually unchanged, while increasing markedly in real terms (by +9%). Insurance contributions and excises were the "leaders" in the volume of reduction both as a share of GDP and in real terms. The largest increase in the shares of GDP to the level of 2019 is noted for VAT and income tax — by 0.6 and 0.5 p.p., respectively.

Let us dwell in more detail on the factors that determined these changes in the dynamics of tax revenues of the BEG.

Oil and gas revenue. The basic MET rate for oil was maintained at Rb919 per ton, the same as in 2018—2020. The main factors in the movement of the mineral extraction tax (MET) were the recovery of oil production in Russia and the oil prices growth. Thus, oil production, which fell in 2020 on the back of the spread of coronavirus infection and the termination of the OPEC+ deal, gradually began to return to the level of 2019. (*Fig. 13*)

The price of Urals oil in 2021 was on average even higher than in 2019, which was due to the recovery of the global economy and increased demand for this type of raw material (*Fig. 14*).

In 2021, exchange rate volatility had almost no significant impact on the ruble revenues of Russian oil producers.

Corporate income Tax. In 2021, the growth of profit tax revenues was due to the recovery of business activity. According to Rosstat, the growth of profits of profitable enterprises took place practically in all the sectors (except for "postal

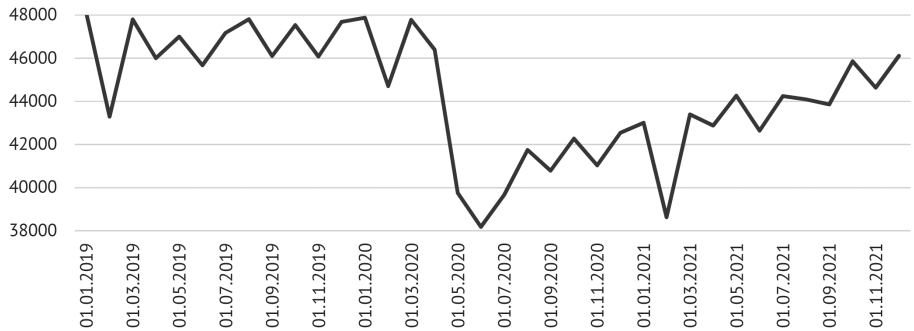


Fig. 13. Dynamics of oil production in Russia in 2019–2021, tons thousand

Source: Ministry of Energy of Russia.

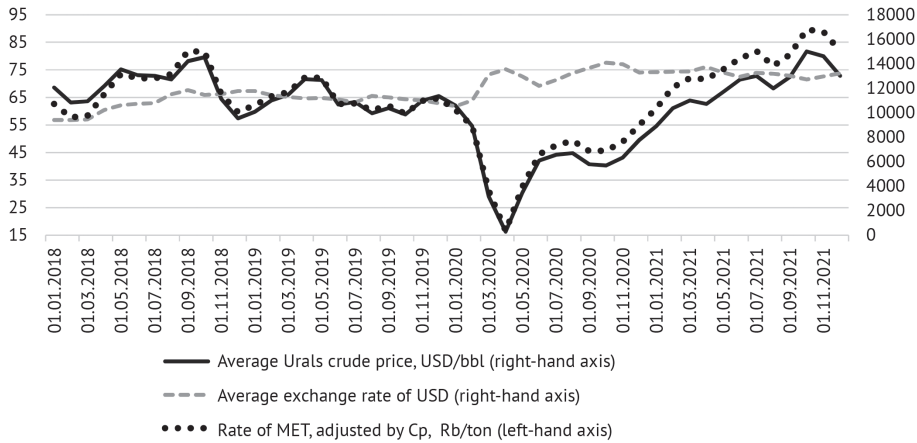


Fig. 14. Dynamics of the actual mineral extraction tax rate, Urals oil prices and the value of the dollar exchange rate in 2018—2021

Sources: Tax Code of Russia, Ministry for the Economic Development of Russia, own calculations.

communication activity" and "courier activity"). The leaders of profit growth of profitable enterprises were enterprises in the sphere of coal mining (by more than 4-fold to the level of 2020), transportation by all modes of transport (by 3.7-fold), production and distribution of gaseous fuel (by more than 3-fold), retail and wholesale trade (by 2.6-fold), and organization of catering and hotel business (by 2.2-fold).

Insurance contributions and personal income tax. Whereas in 2020, the payroll as the main tax base for insurance contributions and personal income tax in 2019 prices experienced virtually no fall, at the end of 2021 the share

of the payroll budget[1] in GDP came to 41% and thus reached its all-time low since the early 2000s. By comparison, the payroll share of GDP was 44% in 2019 and 46% in 2020. Thus, as a result of the economic recovery, the growth of entrepreneurs' revenues was mainly transformed into an increase in business margins, virtually untouched by the increase in personnel costs

VAT. The VAT revenues demonstrated growth both in domestic turnover (+0.3 p.p. of GDP vs. 2019) and imports (+0.2 p.p. of GDP vs. 2019). This was promoted by the return of the households' pent-up demand for durable goods (retail turnover in Russia as a whole rose by 5% against 2020, with growth of turnover of non-food goods by 12%) and growth of imports to Russia, which at 2021 hit 21.3% of GDP, which is the all-time high since 2009.

Excises. Receipts from excise duties on addictive products amounted to Rb1.2 trillion by the end of 2021, demonstrating a gain of 17.8% in nominal terms. The main role was played by budget revenues in terms of traditional and innovative tobacco products, which gained 18.6% in nominal terms and amounted to Rb726 bn. Cigarettes still account for the bulk of this growth (about 94%), as before, the rate on which was indexed only by 4% in 2021, without changes in ad valorem rate. The growth of budget revenues on cigarettes by Rb103 bn in 2021 is associated with two factors: the increased role of the ad valorem component amid rising cigarette prices and a relatively small growth of the illegal segment (at the end of 2021 it rose only by 4 p.p. to 11.5%, that is, it has not yet "recovered" to the record values of 15.6%, observed in late 2019). As for innovative nicotine-containing products, the main role is still played by heated tobacco, the proceeds of which amounted to Rb38 bn. However, in 2021, the market (and, accordingly, the share in excise duties) of disposable liquid e-cigarettes also grew markedly, so revenues from this segment amounted to Rb1.6 bn, which is more than 5-fold higher than in 2020.

As for excises on alcohol beverages, budget revenues amounted to Rb462 bn, i.e. a gain of 8% against 2020, while excise rates, like those on the tobacco market, were indexed by 4%. This increase in revenues was owing to market growth and, above all, in the segment of strong alcoholic beverages (secondly, in the segment of beer). At the same time, as far as excise duties on alcohol products are concerned, there is still a possibility to raise budget revenues by reducing the share of illegal turnover, which is still noticeable (around 25%).

The main reason for the decline in overall excise revenues was the implementation of the refundable excise tax on petroleum feedstock, which was the final stage of the tax maneuver in the oil industry. Thus, the volume of the return on excise duty on petroleum feedstock sent for processing amounted to more than Rb1,287 bn, which exceeded the volume of revenues from all excise duties on addictive products. Hence, there has been a sharp decline in the total revenues of the budget system from excise taxes — from 1.8 p.p. GDP in 2020 to 0.6 p.p. GDP in 2021.

1 Payroll means the remuneration of employees, including wages and mixed income, unobserved by direct statistical methods.

Expenditures of Russia's budget system

In 2021, expenditures of the country's budget system moved up by 1.9 p.p. of GDP compared to 2019, although it fell relative to 2020 by 3.6 p.p. of GDP (*Table 8*). In terms of functional classification of expenditures, the main changes in 2021 relative to 2019 are associated with an increase in expenditures on the national economy by 0.7 p.p. of GDP, on health care and social policy by 0.5 and 0.3 p.p. of GDP, respectively.

Table 8

Expenditure of the enlarged government budget in 2017-2021, % of GDP

	2017	2018	2019	2020	2021	Change, 2021 to 2019, p.p. of GDP	Change, 2021 to 2020, p.p. of GDP
Expenditure total, including:	**35.2**	**33.0**	**34.1**	**39.6**	**36.0**	**1.9**	**-3.6**
Nationwide issues	2.1	2.0	2.1	2.4	2.2	0.1	-0.2
National defense	3.1	2.7	2.7	2.9	2.7	0.0	-0.2
National security and law enforcement activity	2.2	2.0	2.1	2.2	2.0	-0.1	-0.2
National economy	4.7	4.3	4.8	5.6	5.5	0.7	-0.1
Housing and community amenities	1.3	1.3	1.4	1.5	1.7	0.3	0.2
Environmental protection	0.1	0.1	0.2	0.3	0.3	0.1	0.0
Education	3.6	3.7	3.7	4.0	3.6	-0.1	-0.4
Culture, cinematography	0.5	0.5	0.5	0.6	0.5	0.0	-0.1
Healthcare	3.1	3.2	3.5	4.6	4.0	0.5	-0.6
Social policies	13.1	11.9	11.9	14.1	12.2	0.3	-1.9
Physical culture and sports	0.4	0.3	0.3	0.4	0.3	0.0	-0.1
Mass media	0.1	0.1	0.1	0.2	0.1	0.0	-0.1
Government and municipal debt servicing	0.9	0.9	0.8	0.8	0.9	0.1	0.1

Sources: Russian Ministry of Finance, own calculations.

At year-end 2021, only the sections "Housing and utilities" (by 0.2 p.p. of GDP) and "Servicing the public (municipal) debt" (by 0.1 p.p. of GDP) are showing an increase in BEG expenditures vs. 2020. The rest of the sections saw a decline in expenditures as a share of BEG, which was caused by a partial "winding down" of the anti-crisis program to support households and businesses. As a result, compared to 2020, the budget of the enlarged government (BEG) expenditures on social policy dropped in 2021 by 1.9 p.p. GDP to 12.2% of GDP, which is comparable to 2018—2019. Despite a 0.6 p.p. decrease in BEG spending in 2021 under "Health Care" section, their volume (4.0% of GDP) exceeded the 2017—2019 annual average by 0.7 p.p. GDP. Similar dynamics are observed for expenditures in the National Economy section, for which BEG expenditures in 2021 shrank by 0.1 p.p. of GDP relative to the previous year, their volume (4.0% of GDP) was markedly higher (by 0.7 p.p.) than the 2017—2019 annual average. Under "Education" section, BEG spending also declined by (-) 0.4 p.p. of GDP in 2021 compared to the previous year. GDP, but remained comparable to the volumes of 2017—2019 (3.6% OF GDP).

Expenditures on the sections "National issues", "National defense", "National security and law enforcement" in 2021 relative to 2020 were down only slightly - within 0.2 p.p. of GDP and in general remained at the level of 2017-2019.

The 2021 spending cuts in BEG did not result in a significant change in the expenditure structure compared to the pre-pandemic 2019. Thus, the 2021 budget allocations to social policy were 34.3% versus 34.8% in 2019, to the national economy 14.1% versus 13.8% in 2019, to health care 10.5% versus 10.1% in 2019.

2.2.2. Characteristics of the federal budget

Basic parameters of the federal budget and main revenue sources

In 2021, federal budget revenues went up relative to 2019 and 2020 by Rb5.1 and Rb6.6 trillion, or by 0.9 and 1.9 p.p. of GDP, respectively (*Table 9*). The main increase in expenditures in 2021 vs. 2019 is due to the positive dynamics of non-oil and gas revenues, which grew by Rb4.0 trillion, or 1.3 p.p. of GDP. As compared to 2020, up to 2/3 of the increase in revenues to the federal budget was fueled by oil-and-gas revenues which grew by Rb4.4 trillion, or 2.5 p.p. of GDP.

In 2019-2021, the share of oil and gas revenues in total federal budget revenues demonstrated notable fluctuations, amounting to 40.8—26.4—36.9%, respectively. The amount of basic oil and gas revenues, calculated on the basis of the budget rule, remained at the level of 2019 (4.5% of GDP). Non-oil and gas revenues as a share of GDP have had a less volatile dynamic over the last three years, exhibiting steady growth in nominal terms. This circumstance is evidence in favor of some improvement of the long-term sustainability of the federal budget.

Table 9

The main parameters of the federal budget in 2019–2021

	2019		2020		2021		Change, 2021 to 2019		Change, 2021 to 2020	
	Rb bn	% of GDP	Rb bn	% of GDP	Rb bn	% of GDP	Rb bn	p.p. of GDP	Rb bn	p.p. of GDP
Revenue total Including:	**20 188.8**	**18.4**	**18 719.1**	**17.4**	**25 286.4**	**19.3**	**5 097.6**	**0.9**	**6 567.3**	**1.9**
- oil and gas	8247.7	7.5	4951.2	4.6	9335.5	7.1	1 087.8	-0.4	4 384.3	2.5
- including basic	4967.4	4.5	5557.6	5.2	5889.5	4.5	922.1	0.0	331.9	-0.7
- non-oil and gas	11 941.1	10.9	13 767.9	12.8	15 950.9	12.2	4 009.8	1.3	2 183.0	-0.6
Expenditure	18 214.5	16.6	22 821.5	21.2	24 762.0	18.9	6 547.5	2.3	1 940.5	-2.3
Deficit (–) / Surplus (+)	1 974.3	1.8	-4 102.4	-3.8	524.4	0.4	-1 449.9	-1.4	4 626.8	4.2
Non-oil and gas deficit	-6 273.4	-5.7	-9 053.6	-8.4	-8 811.1	-6.7	-2 537.7	-1.0	242.5	1.7
GDP, Rb bn.	**109 608**		**107 315**		**130 795**					
Price for Urals crude oil USD/bbl	63.59		41.73		66.00					

Sources: Russian Ministry of Finance, Federal Treasury, Rosstat, own calculations.

Federal budget expenditures in 2021 rose by Rb6547.5 bn, or by 2.3 p.p. vs. 2019 and relative to 20200 they increased by only Rb1,940.5 bn and declined by 2.3 p.p. of GDP.

The 2021 federal budget surplus amounted to 0.4% of GDP, or Rb524.4 bn, which is by Rb 1449.9 bn lower than the budget execution surplus in 2019 and by Rb4,626.8 bn higher than the budget deficit for 2020. Despite the growth of global crude oil prices in 2021, the non-oil and gas deficit of the federal budget amounted to 6.7% of GDP, which, against the background of the general budget surplus means that just over one-third of all the budget expenditures are financed by cyclical (situational) revenues.

The Federal Budget Expenditure

Federal budget spending in 2021 constituted 18.9% of GDP, an increase of 2.3 p.p. of GDP against 2019 (*Table 10*) and below the 2020 level by 2.3 p.p. of GDP.

Table 10

Federal budget expenditures in 2019–2021

	2019		2020		2021		Change, 2021 to 2019		Change, 2021 to 2020	
	Rb bn	% of GDP	Rb bn	% of GDP	Rb bn	% of GDP	Rb bn	p.p. og GDP	Rb bn	p.p. og GDP
Expenditure total, *including*:	**18 214.5**	**16.6**	**22 821.5**	**21.2**	**24 762.0**	**18.9**	**6 547.5**	**2.3**	**1 940.5**	**-2.3**
Nationwide issues	1 363.5	1.2	1 507.7	1.4	1 759.4	1.4	395.9	0.2	251.7	0.0
National defense	2 997.4	2.7	3 168.8	3.0	3 573.5	2.7	576.1	0.0	404.7	-0.3
National security and law enforcement activity	2 083.2	1.9	2 226.5	2.1	2 335.9	1.8	252.7	-0.1	109.4	-0.3
National economy	2 827.1	2.6	3 483.9	3.2	4 356.4	3.3	1 529.3	0.7	872.5	0.1
Housing and community amenities	282.2	0.3	371.4	0.4	593.7	0.4	311.5	0.1	222.3	0.0
Environmental protection	197.5	0.2	260.6	0.2	405.1	0.3	207.6	0.1	144.5	0.1
Education	826.5	0.7	956.8	0.9	1 064.4	0.8	237.9	0.1	107.6	-0.1
Culture, cinematography	122.4	0.1	144.5	0.1	146.7	0.1	24.3	0.0	2.2	0.0
Healthcare	713.0	0.7	1 334.4	1.2	1 473.9	1.1	760.9	0.4	139.5	-0.1
Social policies	4 882.8	4.4	6 990.3	6.5	6 675.8	5.1	1 793.0	0.7	-314.5	-1.4
Physical culture and sports	81.4	0.1	75.3	0.1	70.9	0.1	-10.5	0.0	-4.4	0.0
Mass media	103.5	0.1	121.1	0.1	114.0	0.1	10.5	0.0	-7.1	0.0
Government and municipal debt servicing	730.8	0.7	784.2	0.7	1 084.2	0.8	353.4	0.1	300.0	0.1
Intergovernmental fiscal transfers	1 003.1	0.9	1 395.9	1.3	1 107.7	0.9	104.6	0.0	-288.2	-0.4

Sources: Finance Ministry of Russia, Federal Treasury, own calculations.

In 2021, reduction of federal budget expenditures as a share of GDP relative to the previous year took place in the sections “Social policy” by 1.4 p.p. of GDP or

Rb314.5 bn, "Intergovernmental fiscal transfers" by 0.4 p.p. of GDP or by Rb288.2 bn, "National defense" and "National security and law enforcement" by 0.3 p.p. of GDP and an increase by Rb404.7 bn and Rb109.4 bn, respectively. The dynamics of expenditures on other sections of the federal budget in 2021 as compared to 2020 in terms of percentage of GDP is insignificant and stood in the range of 0.1 p.p. of GDP.

National development goals and national projects. Executive Order of the President No. 474 of July 21, 2020 "On National Development Goals of the Russian Federation through 2030" defined 5 national goals: population preservation, health and well-being of people; opportunities for self-realization and talent development; comfortable and safe environment for life; decent, efficient labor and successful entrepreneurship, digital transformation. The main tool for achieving them are national projects. Thus, federal budget expenditures for implementation of the national projects in 2021 increased by Rb399.9 bn or 18.6% as compared with 2020 to Rb2,549.0 bn (*Table 11*). At the same time, the share of expenditures on the national projects in the total amount of federal budget expenditures declined to 10.3% at year-end 2021 vs. 10.8% a year ago.

Table 11

Federal budget expenditures for the implementation of the national projects in 2020-2021, Rb bn

	2020		2021		Change, 2021 to 2020	
	billion rubles	cash execution, %	billion rubles	cash execution, %	billion rubles	in nominal terms, %
Expenditure on the implantation of national projects, total Including:	2 149.1	97.4	2 549.0	97,8	399,9	18,6
Demography	689.6	98.0	631.2	99,8	-58,4	-8,5
Healthcare	295.7	96.1	243.3	95,2	-52,4	-17,7
Education	115.0	86.4	131.5	89,8	16,5	14,3
Culture	15.8	98.4	23.4	98,8	7,6	48,1
Science and universities	40.3	99.2	80.1	99,4	39,8	98,8
Housing and Urban Environment	168.7	99.7	263.0	99,8	94,3	55,9
Ecology	63.1	97.6	78.1	97,7	15,0	23,8
Small and Medium-Sized Businesses	61.7	96.9	62.7	95,2	1,0	1,6
International Cooperation and Exports	70.4	97.5	124.0	99,2	53,6	76,1
Digital Economy	86.3	97.0	131.1	95,8	44,8	51,9
Labor productivity	4.1	98.7	4.8	97,9	0,7	17,1
Safe and quality roads	155.7	98.7	364.2	99,8	208,5	133,9
Tourism and hospitality industry	0.0	0.0	38.3	93,4	38,3	–

	2020		2021		Change, 2021 to 2020	
	billion rubles	cash execution, %	billion rubles	cash execution, %	billion rubles	in nominal terms, %
Complex plan of modernization of infrastructure	382.6	99.4	373.3	98,8	-9,3	-2,4
Share of spending on the implementation of development goals in the overall amount of the federal budget expenditure, %	*10.8*		*10.3*			

Sources: Federal Treasury, own calculations

In 2021, in real terms, the largest increase in funding is seen in the following national projects: "Safe and quality roads" by 1.3-fold, or Rb208.5 bn; "Science and universities" by 98.8%, or by Rb39.8 bn; "International cooperation and export" by 63.0%, or by Rb53.6 bn; "Housing and urban environment" by 55.9%, or by Rb94.3 bn. Projects that show a slight decline in funding in 2021 vs. 2020 are noted in "Health care" project by 17.7%, or by Rb52.4 bn, "Demography" by 8.5%, or by Rb58.4 bn, "Integrated infrastructure modernization plan" by 2.4%, or by Rb9.3b n.

In 2021, a new national project "Tourism and hospitality industry" was adopted with a deadline of 2030, which includes three federal projects: "Development of tourism infrastructure", "Improvement of management in the field of tourism", "Improving accessibility of tourist services", under which programs are implemented as a cashback for trips to Russia and for vouchers to children's camps.

In 2021, the main problem in the federal projects implementation was the price rise, especially for construction materials, which led to an increase in the cost of major construction of social facilities, such as schools by 26%, housing by 22%.

Deficit and debt at the federal level

As of January-December 2021, the federal budget surplus amounted to Rb524.4 bn. Regarding cash flow of the federal budget over January through December 2021 taken as sources for covering the budget deficit, it is noted that Rb2.5 trillion were raised on the domestic market against the approved volumes of Rb3.7 trillion (in 2020 Rb5.2 trillion and Rb2.3 trillion, respectively). Redemption of securities in the national currency constituted Rb981.3 bn against a planned volume of Rb986.2 bn. Credits to the budgets of the RF budget system in the national currency came to Rb338.8 bn, including Rb334.8 bn to repay debts of RF subjects to credit institutions, foreign banks and international financial organizations.[1] As it was during the 2008—2009 global crisis, the sum of purchased precious metals and gems totaling Rb39.8 bn (Rb10.5 bn in 2020) was intended to support

1 Decree of the Government of the Russian Federation No. 1206 of 15.07.2021 "On Approval of the Rules for Granting, Use, and Repayment by Subjects of the Russian Federation of Budget Loans Received from the Federal Budget to Repay Debt Obligations of a Subject of the Russian Federation (Municipal Entity) in the Form of Liabilities on State (Municipal) Securities and Loans Received by a Subject of the Russian Federation (Municipal Entity) from Credit Institutions, Foreign Banks and International Financial Institutions for 2021"

the precious metals and gemstones industry. The volume of borrowings in the external market in 2021 constituted Rb134.2 bn and repayment of Rb39.3 bn (the planned volumes were Rb217.2 and Rb39.7 bn, respectively)

For 12 months of 2021, the volume of domestic debt increased by Rb1,735.0 bn to Rb1,6486.4 bn. As of December 31, 2021, the total amount of the internal debt in terms of public securities of the Russian Federation, amounted to Rb1,5759.8 bn (2.8% of GDP). As of December 31, 2021, the share of bonds with a permanent coupon (OFZ-PD) in the total volume of domestic debt denominated in foreign currency (Rb15,759.8 bn) accounted for 62.2%, or Rb9,812.7 bn, while the share of bonds with a variable coupon (OFZ-PC) was 29.9%, or Rb4,709.3 bn. Peoples' bonds (OFZ-n) have not yet become a full-fledged instrument for raising funds; the volume of the state debt on these securities amounted to only Rb39.2 bn, or Rb4,709.3 bn.

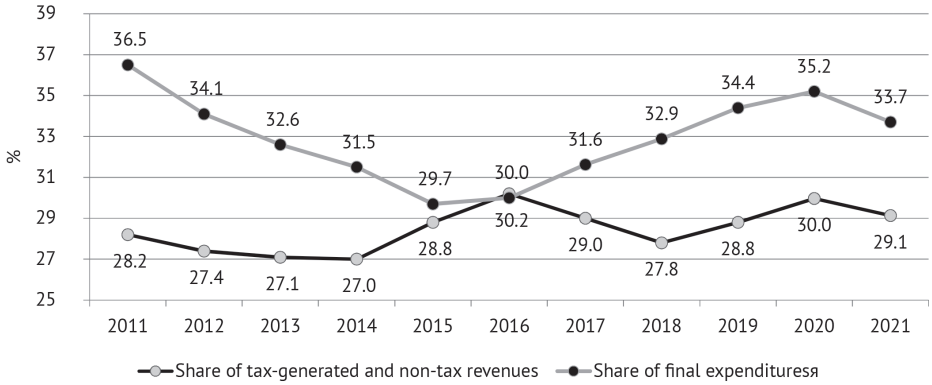
The volume of external debt was $59.7 bn at the beginning of 2022 including $39.1 bn in bond issues, compared to $56.7 bn and $38.2 bn at the beginning of 2021, respectively.

As of January 1, 2021, the resources of the National Welfare Fund in the ruble equivalent amounted to Rb13,565.4 bn, or 11.7% of GDP. The exchange rate difference from the revaluation of the National Welfare Fund in January-December 2021 amounted to (-) Rb227.8 bn. The currency structure of the NWF changed considerably in 2021. As of the end of December 2020, the accounts of the NWF with the Bank of Russia included $51.2 bn, €44.2 bn, £8.5 bn and Rb11.6 bn, which amounted to Rb8,969.6 bn or 66.6% of the NWF. In February 2021, the resources of the NWF were also placed in Japanese and Chinese currencies (Rb600.3 bn and Rb110.54 bn in the country's currency respectively). In July 2021, a decision was made to completely abandon the use of the US dollar as the currency reserves of the NWF in favor of the purchase of gold. As a result, as of the end of 2021, the amount of gold held by the National Welfare Fund stood at Rb8,432.6 bn (62.6% of the total amount of the Fund). As a result, at the end of 2021, there were Rb4,047.4 bn in Euros, Pounds and Japanese Yen, Rb2,641.5 bn in the Chinese Yuan and Rb1,743.7 bn in gold in depersonalized form (or 405.7 tons) on the Bank of Russia accounts (62.6% of the total NWF volume). On the whole, the existing currency structure of the NWF at the end of 2021 changed in the direction of reducing vulnerability to the US sanctions, but insufficiently taking into account sanction risks from financial restrictions on the part of the EU countries, the UK and Japan.

2.2.3. Interbudgetary relations and subnational finances

The main parameters of the consolidated budgets of the subjects of the Russian Federation

The main trends in the relations between different levels of government are reflected in the structure of revenues and expenditures of the consolidated budgets of the subjects of the Russian Federation. *Fig. 15* presents data on the dynamics of the share of tax-generated and non-tax revenues and final expenditures of the RF



Note. In order to ensure comparability of data for the period under consideration and to avoid double counting, the data on the parameters of the budget of the budget system of the Russian Federation, as well as the expenses of the consolidated budgets of the subjects of the Russian Federation, were adjusted to include insurance premiums for mandatory health insurance for non-working population.

Fig. 15. Share of tax-generated and non-tax revenues as well as expenditures of consolidated budgets of RF subjects in revenues and expenditures of budgets of the RF budgetary system in 2011—2021

Sources: Federal Treasury, own calculations

subjects' consolidated budgets in the total amount of tax and non-tax revenues and final expenditures of the RF subjects' consolidated budget and state non-budget funds.

The value of the share of tax-generated and non-tax revenues of the sub-federal level in the respective revenues to the enlarged government budget in 2011—2021 varied within a fairly narrow range: between 27.0% and 30.2%. The relative stability of this index can be explained by the synchronous reaction of the federal and regional tax revenues to the impact of external and internal factors, as well as by the absence of significant changes in the distribution of revenue sources between the levels of the budget system. The share of tax-generated and non-tax revenues of consolidated regional budgets in tax and non-tax revenues of the budgetary system of the Russian Federation increased slightly, from 28.8% to 30.0% in the crisis year of 2020. At the same time in 2021, this index fell to a value close to the pre-crisis level of 2019, amounting to 29.1%.

The increase in the share of regional level final expenditures in the expenditures of the RF budget system in 2020 from 34.4% to 35.2% was due to the redistribution of financial resources in favor of regions in order to mitigate the effects of the crisis and ensure constitutional guarantees (implementation of state powers in the area of health care, social protection, education) to citizens. In 2021, the anti-crisis component of expenditures declined and accordingly the share of the RF subjects in expenditures of the budget system adjusted to 33.7%.

Revenues. The movement of the main components of revenues of the consolidated budgets of the RF subjects in 2021 is presented in *Table 12*.

Table 12

Revenues of consolidated budgets of RF subjects in 2020–2021

	In nominal terms, Rn bn		Nominal growth, %	In real terms, % of GDP		Real growth, p.p. of GDP
	2020	2021	2021/ 2020	2020	2021	2021/ 2020
Revenues, total	**14 901**	**17 546**	**17.8**	**13.9**	**13.4**	**-0.5**
Including:						
Tax-generated and non-tax revenues	**10 798**	**13 652**	**26.4**	**10.1**	**10.4**	**0.4**
Including tax-generated revenues:	10 120	12 676	25.3	9.4	9.7	0.3
Profit tax	2 927	4 529	54.7	2.7	3.5	0.7
PIT	4 253	4 793	12.7	4.0	3.7	-0.3
Excises	798	950	19.0	0.7	0.7	0.0
Total income tax	592	808.9	36.6	0.6	0.6	0.1
Property taxes	1 358	1 445	6.4	1.3	1.1	-0.2
Non-tax revenues	742	976	31.5	0.7	0.7	0.1
Fiscal transfers from budgets of other levels	**3 776**	**3 676**	**-2.6**	**3.5**	**2.8**	**-0.7**
Other revenues	**327**	**218**	**-33.3**	**0.3**	**0.2**	**-0.1**

Sources: Federal Treasury, own calculations.

According to the Federal Treasury's data on regional budget execution, total revenues to the consolidated budgets of RF subjects went up by 17.8% to Rb17.5 trillion in 2021 vs. 2020, but in real terms (as a share of GDP) this value decreased by 0.5 p.p. — from 13.9% to 13.4% of GDP. The regions' tax-generated and non-tax revenues were up both in nominal and real terms (by 26.4%, or by 0.4 p.p., respectively). It was the corporate profit tax that contributed most to the increase in tax receipts, having gained 54.7% in nominal terms and 2.7% in real terms from 2.7% to 3.5% of GDP against 2020, which is the all-time high since 2009. Receipts from other taxes also went up in nominal terms in 2021: the tax on the total income — by 36.6%, which is associated with the revival of small businesses after the shock of the previous year; tax on excises — by 19.0%, personal income tax —by 12.7%, property taxes — by 6.4%. Meanwhile, revenues from personal income tax and property taxes taken as a share of GDP dropped slightly (by 0.3 and 0.2 p.p., respectively). Non-tax revenues grew both in nominal terms (by 31.5%) and in real terms (by 0.06% of GDP)

Simultaneously with the growth of tax-generated and non-tax proceeds, the volume of inter-governmental fiscal transfers from the federal budget to regional budgets declined by 2.6% in nominal terms, or by 0.7 p.p. in real terms. This is owing to a gradual reduction of federal financial assistance to the regions as part of the fight against the consequences of the pandemic, as the acute phase of the crisis is over.

In 2021, two subjects of the Russian Federation saw a drop in consolidated budget revenues in nominal terms, namely the Republic of Crimea (by 3.1%) and Chukotka Autonomous Okrug (by 0.9%). The first one saw a 15% decrease in the

amount of intergovernmental fiscal transfers, while the second one saw a 29.2% decrease in corporate income tax receipts. The regions showing the highest growth in budget revenues in 2021 were Lipetsk region (48.7% increase vs. the 2020 level in nominal terms), Tyumen region (42.8% increase), Vologda region (38.9% increase), Kemerovo region-Kuzbass (38.2% increase), Belgorod region (38.0% increase), Krasnoyarsk Krai (37.7% increase) and Kursk region (35.0% increase). For all the aforementioned regions, high growth rates of budget revenues were fueled by an increase in corporate profit tax proceeds, with the Lipetsk, Vologda and Kemerovo regions seeing a more than 3-fold rise on a year-on-year basis.

Consequently, in 2021 Russian regions saw the positive movement of their own budget revenues generally prevailed, accompanied by the withdrawal of the vast majority of the RF subjects from the acute phase of the crisis associated with the pandemic coronavirus infection, and the accelerated recovery of the taxable capacity.

Expenditures. The dynamics of the main indexes of the expenditure structure of the consolidated budgets of RF subjects in 2021 is presented in *Table 13*.

Table 13

Expenses of the consolidated budgets of the constituent entities of the Russian Federation

	% to total		Nominal growth, %	Real growth, % of GDP
	2020	2021	2021/ 2020	
Expenditures, total	**100.0**	**100.0**	**8.4**	**-1.6**
Nationwide issues	6.0	5.7	3.2	-0.1
National security and law enforcement activity	1.1	1.0	1.4	0.0
National economy *Including:*	20.5	20.9	10.4	-0.3
Agricuture and fisheries	1.7	1.7	7.7	0.0
Transportation	4.9	5.3	17.6	0.0
Motor road system (road funds)	9.1	9.3	10.6	-0.1
other national economy issues	4.8	4.6	3.6	-0.1
Housing and community amenities	8.5	10.0	26.9	0.1
Environmental protection	0.4	0.4	4.0	0.0
Education *Including:*	22.8	23.1	9.7	-0.3
Pre-school education	6.3	6.1	4.4	-0.1
General education	11.5	11.8	11.5	-0.1
Secondary vocational education	1.6	1.6	8.3	0.0
Other education issues	3.4	3.6	14.2	0.0
Culture, cinematography	3.1	3.2	9.5	0.0
Healthcare	12.9	12.0	1.3	-0.3
Social policies	21.3	20.4	3.8	-0.5
Physical culture and sports	2.3	2.4	9.8	0.0
Mass media	0.3	0.3	9.1	0.0
Government and municipal debt servicing	0.6	0.6	1.8	0.0

Sources: Federal Treasury, own calculations.

RF subjects' consolidated budgets expenditures increased against the 2020 level by 8.4% in nominal terms and reached Rb16.9 trillion. The growth in regional expenditures corresponded to the CPI rate recorded by Rosstat in 2021(108,4%). Regional budget expenditures declined in real terms (from 14.5% of GDP to 12.9% of GDP) due to high rates of GDP growth in 2021. Among the major industries, expenditures on the housing and utilities sector surged the most (by 26.9%), transportation (by 17.6%), general education (by 11.5%) and the road sector (by 10.6%).

The structure of consolidated budget expenditures of the RF subjects by the year-end of 2021 changed insignificantly. A small reduction in the share of expenditures on healthcare (from 12.9% to 12.0%) and social policy (from 21.3% to 20.4%) should be noted, which resulted from a reduction in 2021 in the volume of anti-crisis support measures in these sectors, many of which were of a one-time nature in 2020. In the structure of expenditures, the share of expenditures on the housing and utilities sector (from 8.5% to 10.0%), on the national economy (from 20.5% to 20.9%) and on education (from 22.8% to 23.1%) surged most significantly, but in all the above spheres the achieved share remains below the corresponding indicator for the pre-crisis year of 2019 (10.2, 21.8, and 24.7%, respectively). In contrast, the largest reductions in the structure of expenditures occurred in social policy (from 21.3 to 20.4%) and health care (from 12.9 to 12.0%), but even here we see a persistent excess of the 2019 level (19.8 and 8.6%, respectively). Such dynamic indicates a gradual shift in the focus of regional budget policy from the spheres that bore the greatest burden at the beginning of the pandemic (health care and social protection) to the issues of other government priorities, including those implemented as part of national projects. At the same time, a full return to the pre-pandemic level has not yet occurred.

In fact, if we evaluate the deviation of the expenditure structure of the two years as the sum of absolute values of deviations of the expenditure structure by budget classification sections or subsections, it may be argued that the expenditure structure in 2021 is closer to the 2019 expenditure structure at the level of budget classification sections than the expenditure structure of the year 2021. It is also related to a high differentiation of growth rates of expenditures by budget classification's sub-items within the same section. For example, growth in budget expenditures in 2021 against 2020 under the housing and utilities section included widely varying growth rates by subsections ("Housing and utilities sector" (+100.8%), "Public utilities" (+14.7%), "Public amenities" (+9.4%), "Applied research in the housing and utilities sector" (+119.8%) and "Other issues in the housing and utilities sector" (+1.2%)). Therefore, we cannot yet unequivocally say that budget expenditures are returning to the pre-crisis structure of 2019.

Analysis of regional budget expenditures shows that only three regions saw a reduction in nominal outlays in 2021 (Sakhalin region (by 7.4%), Kaliningrad region (by 3.0%), and Smolensk region (by 1.2%), and another two saw zero outlays (Kaluga region and the Republic of Crimea). The largest growth was demonstrated by Kursk region (by 21.9%), Amur region (by 20.1%), Sevastopol (by 16.7%), Murmansk region (by 16.1%), and the Republic of Sakha (Yakutia) (by

15.4%). As for inflation rates, the regions were divided almost symmetrically: 41 RF subjects saw growth in nominal terms above the inflation rate, while 44 regions saw it below. It is worth noting in general an even dynamic of growth in budget expenditures by federal okrugs: the Central Federal Okrug is a leader in the growth of budget expenditures (by 10.8%), while the Urals Federal Okrug may be regarded as an outsider because it has shown a slightly different result from the leader (4.7% by 2020).

Financial assistance from the federal budget

In 2021, the volume of fiscal transfers to the regions declined in comparison with the crisis year of 2020 both in nominal terms (by 1.9%) and as a share of GDP (by 0.67 p.p.) (*Table 14*). Although the volume of all types of intergovernmental

Table 14

Federal budget fiscal transfers to the budgets of the subjects of the Russian Federation

	2019		2020		2021		Increase in 2021 to the level of 2020	
	Rb bn	% to total	Rb bn	% to total	Rb bn	% to total	nominal, %	p.p. of GDP
Transfers to regions, total	**2 387.2**	**100.0**	**3 698.4**	**100.0**	**3 627.2**	**100.0**	**-1.9**	**-0.67**
Grants	**924.0**	**38.7**	**1 303.7**	**35.2**	**1 021.9**	**28.2**	**-21.6**	**-0.43**
Including:								
Equalization transfers	675.3	28.3	717.9	19.4	718.3	19.8	0.1	-0.12
transfers to support measures designed to ensure well-balanced budgets	192.6	8.1	569.6	15.4	257.6	7.1	-54.8	-0.31
Subsidies	**556.6**	**23.3**	**1 011.5**	**27.4**	**1 193.0**	**32.9**	**17.9**	**-0.03**
Including:								
to sustain national economy's development	209.9	8.8	214.0	5.8	150.6	4.2	-29.6	-0.08
Subventions	**396.6**	**16.6**	**606.2**	**16.4**	**519.6**	**14.3**	**-14.3**	**-0.17**
Other intergovernmental fiscal transfers	**510.0**	**21.4**	**777.0**	**21.0**	**892.8**	**24.6**	**14.9**	**-0.04**
Including:								
for development of national economy	305.5	12.8	329.4	8.9	394.2	10.9	19.7	-0.01

Sources: Federal Treasury, Rosstat, own calculations.

fiscal transfers decreased as a share of GDP, the volume of subsidies and other intergovernmental fiscal transfers in nominal terms, as well as donations for fiscal capacity equalization increased insignificantly. As a result, the share of non-targeted financial assistance (grants) dropped by 7.1 p.p. vs. 2020 and stood at a mere 28.2%, which is the lowest value in the period from 2000 through 2021. Subsidies to ensure budget balance have sharply decreased (by 54.8%), a

significant increase of which in 2020 was due to the need to implement anti-crisis inter-budget policy.

In 2021, 36 subventions[1] were granted, down two from a year earlier. The volume of subventions decreased by 14.3% in nominal terms, but remains significantly higher than the pre-crisis 2019.

The nominal increase in subsidies in 2021 came to 17.9%, while subsidies for the national economy decreased by 29.6%.[2] The number of subsidies increased from 140 in 2020 to 148 in 2021 (there were 113 in pre-crisis 2019). Similarly, the nominal growth of other intergovernmental fiscal transfers constituted 14.9%, and the number of such transfers moved up from 108 in 2019 and 120 in 2020 to 153 in 2021. As a result, other intergovernmental fiscal transfers (the least transparent instrument of inter-budget regulation) accounted for about a quarter of the total volume of federal inter-budget aid to regions. Although the growth of subsidies and other intergovernmental fiscal transfers was due to support the regions during the pandemic, it is undesirable in itself, because it reduces the fiscal autonomy of the regions.

As before, a substantial amount of transfers in 2021 was allocated to the implementation of national projects at regional and municipal levels: 36% of subsidies, 29% of subventions and 31% of other intergovernmental fiscal transfers, and 21% of all transfers from the federal budget to the regions. Excluding transfers for implementation of national projects, the structure of financial aid in 2021 is as follows: grants 35.7%, subsidies 26.7%, subventions 12.9%, other intergovernmental fiscal transfers 24.8%.

The regularity of transfers, i.e. the ratio of the volume of funds transferred over the first three quarters of the year to the annual volume of transferred funds, has not changed: while in 2020 it was 64%, in 2021 it was 64.1%. The transfers regularity aimed at implementing the National Projects has noticeably increased, from 54.1% in 2020 to 61.8% in 2021. The regularity of other transfers has dropped from 66.8% to 64.8%

Inter-regional differentiation of average per capita tax revenues, estimated through the coefficient of variation, remained practically unchanged in 2021 (*Table 15*). Furthermore, in 2021, fiscal capacity equalization turned out to be slightly less effective than in the previous year: if in 2020 after equalization the differentiation decreased by 25.1%, in 2021 — by 21.8%. The overall equalizing effect of grants and subsidies also declined: after their provision in 2021, income differentiation dropped by 41%, and in 2020 — by 45.1%. This effect is a consequence of the fact that a comparable increase in the volume of the aforementioned transfers is needed to equalize significantly increased tax revenues, but the nominal volume of grants and subsidies decreased in 2021 vs. 2020.

1 The number of transfers is determined by the number of unique areas of expenditures (13-16 digits of the budget expenditure classification code) provided for in the report on the execution of the federal budget.

2 However, the reduction in subsidies for the national economy was fully offset by an increase in other intergovernmental fiscal transfers for the national economy.

Table 15

The variance coefficient of the consolidated regional budget revenues (per capita, with due regard for the budget expenditure index)

Year	Tax-generated revenue	Tax-generated revenue and equalization transfers	Tax-generated revenue, transfers, grants, subsidies
2014	0.590	0.512	0.499
2015	0.661	0.603	0.560
2016	0.556	0.421	0.373
2017	0.558	0.413	0.377
2018	0.586	0.444	0.387
2019	0.603	0.464	0.390
2020	0.561	0.420	0.308
2021	0.560	0.438	0.330

Sources: Finance Ministry of Russia, Federal Treasury, own calculations.

Deficit and regional debt

In 2021, consolidated budgets of RF subjects were executed with a surplus of Rb660.6 bn (in 2020 — with a deficit of Rb676.5 bn). (in 2020 — with a deficit of Rb676.5 bn). Having said that, the number of regions with a budget surplus, compared to 2020, has increased from 28 to 66 (*Table 16*). Only three regions have a consolidated budget deficit exceeding 10% of tax-generated and non-tax revenues in 2021 (in 2020 — 18 regions). Consequently, the balance of consolidated regional budgets in 2021 has noticeably improved.

Table 16

Execution (deficit/surplus) of the consolidated budgets of the Russian Federation in 2014–2020

Year	Number of RF subjects that have executed the budget	
	With deficit	With surplus
2014	74	11
2015	76	9
2016	56	29
2017	47	38
2018	15	70
2019	35	50
2020	57	28
2021	19	66

Sources: Federal Treasury, own calculations.

The volume of government debt of the RF subjects at year-end 2021 declined insignificantly (from Rb2.50 trillion to Rb2.47 trillion), while in relation to the volume of tax-generated and non-tax revenues of the budgets of RF subjects, it declined from 27.3% to 21.0%.

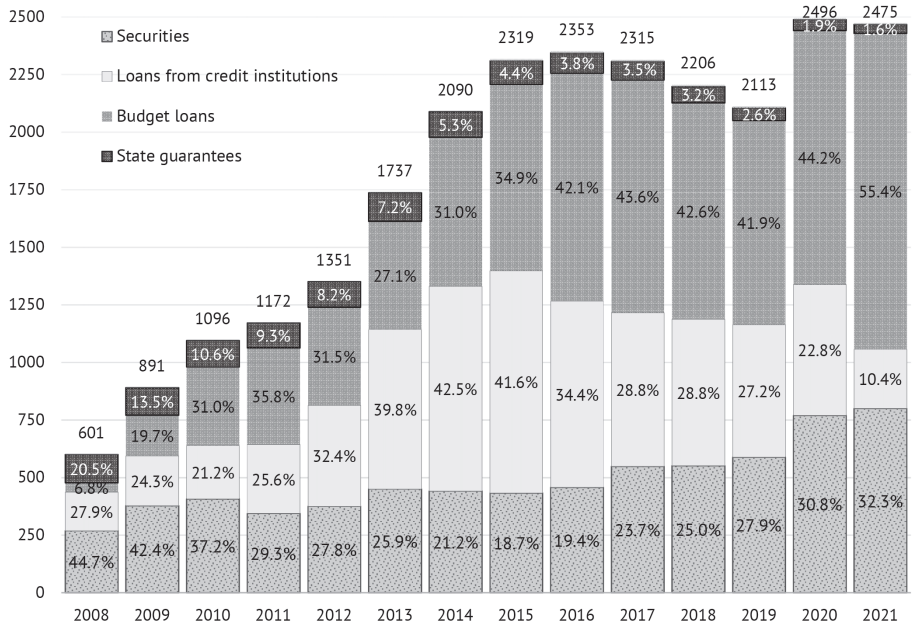


Fig. 16. Nominal volume (Rb bn) and structure (%) of public debt of RF subjects in 2008–2021

Sources: Finance Ministry of Russia, own calculations.

The debt burden on the budgets of certain regions has also changed: the debt ratio to tax and non-tax revenues declined over the year in 81 regions, remained unchanged in one, and increased in three. Debt burden increased by over 10 p.p. in 15 regions. By the end of 2021, public debt exceeded 100% of tax-generated and non-tax revenues in three regions (in 2020 this situation was characteristic only of one region).

The debt structure has also changed significantly: the share of budget loans in 2021 rose by 11.2 p.p. to 55.4% (the maximum value over the period 2008—2021), while the share of loans issued by credit institutions dropped to 10.4% (the minimum value over the period 2008—2021) (*Fig. 16*).

The increase in budget loans in the regional debt structure over 2021 amounted to Rb269 bn (+24.4%), while the reduction of loans from credit institutions was equal to Rb311 bn (-54.7%). In view of this, the federal anti-crisis policy of budget loans and the replacement of regional commercial debt with budget loans resulted in the reduction of the regional debt burden.

Annex 1
Municipal and sub-federal debt market [1]

Market development dynamic

The Russian economy recovery growth directly related to the significant easing of quarantine measures in 2021 compared to the previous year led to the restoration of the consolidated regional budget surplus.

For example, by the end of 2021, the consolidated regional budget and budgets of territorial state extrabudgetary funds were drawn with a surplus of Rb678.8 bn, or 0.52% of GDP.

By way of comparison, in 2020, the consolidated regional budget and the budgets of territorial state extrabudgetary funds had a deficit of Rb667.4 bn, or 0.63% of GDP.

In 2021, budgets of the subjects of the Russian Federation were consolidated with a surplus to the tune of Rb604.7 bn, budgets of municipal districts and urban okrugs with a surplus of Rb29.2 bn, budgets of inner urban municipalities of federal cities with a surplus of Rb0.2 bn, budgets of municipal areas - a surplus of Rb21.4 bn, budgets of urban settlements — a surplus of Rb2.5 bn, budgets of rural settlements — a surplus of Rb2.8 bn, budgets of territorial government extrabudgetary funds — a surplus of Rb18.0 bn.

In 2020, the budgets of the RF subjects were drawn with a Rb708.4 bn deficit, budgets of urban okrugs — with a Rb8.1bn surplus, budgets of inner urban municipalities of federal cities — with a Rb2.9 bn surplus, budgets of municipal areas — with a surplus of Rb17.7 bn, budgets of urban settlements — with a surplus of Rb0.8 bn, budgets of rural settlements — with a surplus of Rb1.8 bn, budgets of territorial state extrabudgetary funds — with a surplus of Rb9.2 bn.

Table A.1

Ratio of surplus (deficit) of the consolidated regional and regions' budgets to budget expenditure in 2007–2021, %

Year	Consolidated regional budget *	Regional budgets
2021	3.5	4.0
2020	-3.7	-5.1
2019	0.11	0.13
2018	3.7	4.7
2017	-0.5	-0.2
2016	…	0.003
2015	-1.6	-1.3
2014	-4.6	-4.9
2013	-6.4	-8.1
2012	-3.0	-3.5
2011	-0.2	-0.3

1 This section was written by *Shadrin A.E.,* Senior Director of Innovation Policy NRU HSE; Researcher, Center for Macroeconomics and Finance, Gaidar Institute.

Year	Consolidated regional budget *	Regional budgets
2010	-1.4	-1.6
2009	-5.3	-5.3
2008	-0.7	-0.7
2007	0.8	0.6

* Taking into account state extra-budgetary funds.

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

Table A.2

Ratio of surplus (deficit) of territorial budgets to budget expenditure in 2007–2021, %

Year	Inner-city municipalities' budgets in federal-status cities	Urban and municipal districts budgets	Municipal rayions' budgets	Urban and rural settlements' budgets
2021	0.6	0.9	1.2	1.3
2020	9.7	0.3	1.0	0.7
2019	1.5	-0.7	0.4	-0.2
2018	-1.2	0.04	1.0	1.0
2017	-1.9	1.6	0.4	-0.3
2016	1.3	-0.9	0.8	-1.5
2015	6.7	-3.0	-0.7	-0.6
2014	6.0	-2.2	-1.4	0.7
2013	-3.47	-2.61	-5.59	2.24
2012	2.26	-2.01	-0.08	1.34
2011	6.15	-2.10	1.13	0.64
2010	-1.12	-1.16	-0.11	1.72
2009	-0.63	-3.32	-1.88	2.63
2008	-1.47	1.09	-0.26	2.72
2007	5.34	1.23	-0.04	2.34

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

As of January 1, 2022, the consolidated budget (including territorial state extrabudgetary funds) was in deficit in 18 subjects of the Federation (in 2020 — in 56 regions and Baikonur). Their aggregate deficit totaled Rb156.5 bn or 2.5% of their budgets' revenues (in 2020 - Rb720.5 bn, or 5.3% of the revenues part of the budgets of the regions having a deficit).

The median level of the budget deficit was 2.5% of the revenues of the corresponding budget. The highest value of the ratio of the budget deficit to budget revenues was in the Ulyanovsk region — 6.6%, the Republic of Kalmykia —4.7%, the Amur region — 3.9%, and the Chukotka Autonomous Okrug — 3.5%.

In this connection, 69.6% of the total deficit of consolidated regional budgets with a deficit, or Rb108.8 bn accounted for Moscow, 5.2% or Rb8.1 bn accounted for the Republic of Bashkortostan, 4.6% or Rb7.2 bn accounted for the Ulyanovsk region (*Table A.3*).

Table A.3

Execution of the consolidated budgets of the subjects of the Russian Federation (including state extrabudgetary funds) in 2021

	Budget revenues, rubles in billions	Budget deficit (surplus) rubles in billions)	Deficit (surplus) to revenues ratio, %	Borrowing to revenues ratio, %	Net borrowing to revenues, %	Redemption costs to	Net borrowing to deficit (surplus), %
Central Federal District							
1	2	3	4	5	6	7	8
Belgorod region	205.0	-32.9	16.1	1.9	-2.3	4.2	14.5
Bryansk region	110.3	-4.0	3.6	1.9	-0.9	2.8	25.4
Vladimir region	128.2	-10.7	8.3	0.1	-0.2	0.3	2.7
Voronezh region	221.8	-22.3	10.1	1.1	-1.0	2.1	9.8
Ivanovo region	84.9	-6.0	7.0	2.8	-3.9	6.8	56.2
Tver region	126.2	-4.3	3.4	0.9	-6.4	7.3	188.8
Kaluga region	115.7	-2.3	2.0	0.3	-0.9	1.2	45.7
Kostroma region	62.8	-2.7	4.4	20.2	-0.9	21.2	21.4
Kursk region	127.8	-11.4	8.9	1.4	-2.1	3.5	23.6
Lipetsk region	143.5	-36.5	25.5	1.2	-2.9	4.0	11.2
Moscow region	1 059.0	-20.5	1.9	7.4	-1.0	8.4	50.0
Orel region	66.6	-4.1	6.1	24.4	-0.9	25.3	15.1
Ryazan region	107.1	-2.3	2.2	1.6	-0.9	2.5	39.1
Smolensk region	84.4	-7.8	9.2	8.6	-4.8	13.4	51.7
Tambov region	84.5	-4.2	5.0	10.8	-1.6	12.4	32.5
Tula region	150.8	-4.6	3.0	3.2	-1.6	4.8	53.6
Yaroslavl region	127.2	-4.5	3.6	24.3	0.0	24.3	0.7
City of Moscow	3 659.3	108.8	-3.0	3.2	3.2	0.0	105.9
City of Baikonur	4.1	-0.2	3.8	0.0	0.0	0.0	0.0
Total	**6 669.2**	**-72.5**	**1.1**	**4.4**	**1.0**	**3.4**	**-93.0**
North-West Federal District							
Republic of Karelia	94.3	-3.6	3.8	14.0	-5.9	19.9	152.8
Republic of Komi	138.7	-2.7	2.0	25.6	-1.0	26.5	48.8
Arkhangelsk region	159.0	4.3	-2.7	43.7	0.2	43.5	5.8
Vologda region	177.4	-34.4	19.4	4.3	-0.5	4.7	2.4
Kaliningrad region	155.0	-5.8	3.7	3.6	-1.1	4.7	28.5
Leningrad region	234.1	4.0	-1.7	0.0	-0.1	0.1	-4.0
Murmansk region	160.3	-18.5	11.5	2.9	-0.9	3.8	7.5
Novgorod region	71.2	-7.4	10.5	6.8	-4.4	11.2	42.4
Pskov region	63.5	-0.7	1.2	26.2	2.4	23.8	-202.9
St. Petersburg	952.1	-47.6	5.0	0.0	0.0	0.0	0.0
Nenets Autonomous Okrug	32.9	-2.5	7.6	6.8	-4.6	11.4	59.7
Total	**2 238.6**	**-114.9**	**5.1**	**7.1**	**-0.6**	**7.8**	**12.0**

Cont'd

1	2	3	4	5	6	7	8
Southern Federal District							
Republic of Kalmykia	27.2	1.3	-4.7	54.3	4.3	50.0	91.0
Krasnodar krai	529.5	-39.4	7.4	0.3	-0.8	1.0	10.2
Astrakhan region	89.3	-3.2	3.6	1.3	-1.2	2.5	32.4
Volgograd region	198.6	1.1	-0.6	8.2	-1.0	9.2	-185.5
Rostov region	354.3	-7.6	2.1	1.2	-2.2	3.4	102.5
City of Sevastopol	70.1	2.2	-3.1	0.0	0.0	0.0	0.0
Republic of Crimea	244.0	5.5	-2.2	0.0	-0.1	0.1	-3.7
Republic of Adygea (Adygea)	46.6	-2.2	4.8	1.0	-2.5	3.5	53.2
Total	**1 559.7**	**-42.3**	**2.7**	**2.5**	**-1.0**	**3.4**	**35.8**
North-Caucasus Federal District							
Republic of Dagestan	222.0	-4.4	2.0	0.0	-0.2	0.2	10.6
Kabardino-Balkar Republic	67.6	-1.7	2.5	0.5	-0.3	0.8	10.6
Republic of Northern Ossetia-Alania	61.0	-1.1	1.8	8.3	-2.6	10.9	144.0
Republic of Ingushetia	45.8	-0.1	0.1	2.1	-0.2	2.3	172.9
Stavropol krai	221.9	-13.5	6.1	3.2	-3.4	6.5	55.4
Karachay-Cherkess Republic	44.8	-1.0	2.2	1.0	-0.5	1.5	23.4
Chechen Republic	157.9	1.7	-1.1	0.0	-0.1	0.1	-11.2
Total	**821.1**	**-20.0**	**2.4**	**1.7**	**-1.2**	**2.9**	**51.0**
Volga Federal District							
Republic of Bashkortostan	350.1	8.1	-2.3	2.9	1.6	1.3	68.0
Republic of Mariy-El	64.5	-3.9	6.1	8.7	-2.3	10.9	37.4
Republic of Mordovia	76.3	-3.9	5.2	52.7	-0.2	52.8	2.9
Republic of Tatarstan	462.2	-13.2	2.9	1.9	-0.1	2.0	3.3
Udmurt Republic	141.0	3.7	-2.7	42.3	-0.7	42.9	-25.1
Republic of Chuvashia	102.3	-0.3	0.3	1.9	-0.6	2.5	185.8
Nizhniy Novgorod region	331.6	-4.6	1.4	22.8	4.1	18.7	-290.6
Kirov region	118.3	-7.2	6.1	1.7	-2.7	4.4	44.0
Samara region	349.2	-27.8	8.0	10.3	-1.7	12.0	20.8
Orenburg region	191.7	-17.4	9.1	1.2	-1.8	3.0	19.7
Penza region	106.1	-4.7	4.4	8.7	-0.7	9.4	15.6
Perm krai	288.9	-28.0	9.7	2.8	-9.0	11.8	92.7

Cont'd

1	2	3	4	5	6	7	8
Saratov region	201.1	-3.8	1.9	17.9	-0.7	18.6	38.2
Ulyanovsk region	109.0	7.2	-6.6	40.4	6.9	33.4	105.2
Total	**2 892.2**	**-95.9**	**3.3**	**11.7**	**-0.6**	**12.3**	**18.3**
Urals Federal District							
Kurgan region	80.7	-0.8	1.0	5.9	-0.2	6.1	21.5
Sverdlovsk region	493.8	-17.2	3.5	3.9	-2.9	6.8	83.7
Tyumen region	298.1	-25.2	8.5	0.0	0.0	0.0	0.0
Chelyabinsk region	372.4	-48.5	13.0	2.1	-0.4	2.5	3.3
Hanty-Mansiysky Autonomous Okrug – Yugra	375.9	1.9	-0.5	1.0	-0.9	1.9	-173.8
Yamal-Nenets Autonomous Okrug	304.8	-20.0	6.6	0.0	-1.0	1.0	15.1
Total	**1 925.7**	**-109.7**	**5.7**	**1.8**	**-1.2**	**3.0**	**20.5**
Siberia Federal District							
Republic of Tyva	61.0	0.1	-0.2	4.4	0.6	3.9	254.7
Altai krai	209.9	-9.0	4.3	0.0	0.0	0.0	0.9
Krasnoyarsk krai	523.5	-97.2	18.6	0.2	-3.2	3.5	17.4
Irkutsk region	338.0	-19.4	5.8	11.8	-4.3	16.1	73.9
Kemerovo region	319.3	-35.4	11.1	3.0	-2.4	5.3	21.3
Novosibirsk region	324.8	-17.3	5.3	9.0	-2.0	11.1	38.5
Omsk region	175.7	2.2	-1.2	19.5	1.5	18.0	118.4
Tomsk region	119.9	3.8	-3.1	31.2	5.0	26.2	160.4
Republic of Altai	37.2	-0.3	0.9	5.7	-0.1	5.8	6.9
Republic of Khakassia	64.6	-1.9	3.0	11.0	-1.6	12.5	52.6
Total	**2 173.9**	**-174.5**	**8.0**	**7.5**	**-1.7**	**9.3**	**21.6**
Far East Federal District							
Republic of Buryatia	124.7	0.4	-0.4	19.5	1.0	18.6	272.7
Republic of Sakha (Yakutia)	396.4	-39.3	9.9	4.9	-0.9	5.8	9.2
Primorsky krai	233.4	-2.9	1.2	0.6	-0.4	0.9	28.6
Khabarovsk krai	193.7	-6.2	3.2	12.2	-2.1	14.3	65.9
Amur region	134.6	5.3	-3.9	5.2	0.1	5.0	3.2
Kamchatka krai	127.8	-1.2	0.9	6.7	-0.1	6.8	6.0
Magadan region	63.8	-0.6	0.9	51.0	-1.4	52.5	158.0
Sakhalin region	199.9	-1.7	0.9	6.8	-0.5	7.3	56.0
Jewish Autonomous Region	27.7	-2.4	8.7	6.7	0.0	6.7	0.3
Chukotka Autonomous Oblast	56.1	2.0	-3.5	0.0	-0.8	0.8	-23.7
Zabaikalsky krai	136.4	-2.3	1.7	8.9	-1.5	10.5	91.6

Cont'd

1	2	3	4	5	6	7	8
Total	**1 694.5**	**-48.8**	**2.9**	**8.5**	**-0.7**	**9.2**	**23.8**
Total Russian Federation	**19 974.8**	**-678.8**	**3.4**	**5.9**	**-0.3**	**6.2**	**9.0**

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

In 2021, a surplus was registered in 68 subjects of the Russian Federation and in Baikonur (as against 29 regions in 2020). The total amount of budget surplus in those regions amounted to Rb842.4 bn, or 6.2% of the size of their budgets' revenues (in 2020 — Rb55.9 bn, or 1.3% of their budgets' revenues). The median budget surplus amounted to 4.3% of the revenue part of the budget.

The highest ratio of surplus to the level of consolidated budget revenues was achieved in the Lipetsk region — 25.5%, Vologda region — 19.4%, Krasnoyarsk Krai — 18.6%, Belgorod region — 16.1%, Chelyabinsk region — 13,0%, Murmansk region — 11,5%, and Novgorod region — 10,5%.

Krasnoyarsk region accounted for 11.5% of the total surplus, or Rb97.2 bn, Chelyabinsk region — 5.8%, or Rb48.5 bn, Krasnodar Krai — 4.7%, or Rb39.4 bn, the Sakha Republic (Yakutia) — 4.7%, or Rb39.3 bn, Lipetsk region — 4.3%, or Rb36.5 bn, and Kemerovo region — 4.2%, or Rb35.4 bn.

Borrowing structure

According to the Russian Finance Ministry data, in the context of economic growth recovery, the amount of accumulated debt of the RF subjects in 2021 contracted by Rb21.5 bn, or by 0.9%, amounting to Rb2,474.5 bn, the amount of accumulated debt of municipalities contracted by Rb10.9 bn, or by 2.8%, amounting to Rb376.7 bn. Having said that, there was a robust replacement of regional and municipalities' debt to credit institutions by borrowings from the higher budgets (*Table A.4*).

The total volume of borrowings of regions and municipalities in 2021 amounted to Rb1,187.2 bn. The largest borrowers were: Moscow — Rb115.3 bn, Moscow region — Rb78.3 bn, Nizhny Novgorod region — Rb 75.6bn, Arkhangelsk region — Rb69.5 bn, and the Udmurt Republic — Rb59.6 bn.

In the total volume of borrowings of the consolidated regional budget, the issue of securities accounted for 13.0%, loans from higher budgets (budget loans) — 38.3%, and loans from commercial banks — 48.7%.

The total volume of net borrowings of the consolidated regional budget in 2021 was negative and amounted to — Rb61.0 bn (in 2020, it was positive and amounted to Rb398.7 bn). The highest ratio of net borrowings to budget revenues was demonstrated by the following regions: Ulyanovsk region — 6.9%, Tomsk region — 6.0%, the Republic of Kalmykia — 4.3%, Nizhniy Novgorod region — 4.1%, and Moscow — 3.2%.

The foremost net borrowers were: Moscow — Rb115.3 bn, Nizhny Novgorod region — Rb13.5 bn, Tomsk region — 6.0 billion rubles, and the Republic of Bashkortostan — Rb5.5 bn.

Table A.4

Volume and structure of public debt of the subjects of the Russian Federation and debt of municipalities as of January 1, 2020 and 2022

Types of debt instruments	Amount of public debt of RF subjects, Rb bn			Amount of debt of municipalities, Rb bn		
	2021	2022	Increase/ decrease 2021 to 2020, %	2021	2022	Increase/ decrease 2021 to 2020, %
Government bonds	769.9	799.9	3.9	24.7	19.9	-19.4
Loans issued by credit institutions, foreign banks and international financial institutions	568.1	257.6	-54.7	264.7	220.0	-16.9
Public budget loans from other budgets of the budgetary system of the Russian Federation	1 094.1	1 363.2	24.6	91.2	132.4	45.2
Government (municipalities) guarantees	36.3	28.4	-21.8	6.7	4.5	-32.8
Other debt liabilities	79.9	79.9	0	0.0054	0.0054	0
Total: amount of public (municipalities) internal debt	2 468.40	2 449.1	-0.8	387.2	376.7	-2.7
Amount of public (municipalities) external debt (USD mn)	374.1	342.5	-8.4	4.7	3.1	-34.0
Total amount of public debt of RF subjects (municipalities)	2 496.0	2 474.5	-0.9	387.6	376.7	-2.8

Source: own calculations based on the data released by the Russian Finance Ministry.

Table A.5

Net borrowing of regional and local budgets, % of GDP

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Net borrowing by sub-federal and local governments Including:	0.17	0.29	0.74	0.51	0.21	0.33	0.61	0.53	0.33	0.10	-0.01	-0.08	-0.06	0.37	-0.05
repayable loans from budgets of different levels	-0.01	0.03	0.33	0.37	0.15	0.01	0.06	0.24	0.21	0.21	0.02	-0.07	-0.05	0.20	0.21

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Sub-federal (municipal) bonds	0.08	0.17	0.24	0.07	-0.11	0.06	0.12	-0.01	-0.01	0.04	0.11	...	0.04	0.17	0.02
Other borrowings	0.10	0.09	0.17	0.07	0.17	0.26	0.43	0.30	0.13	-0.15	-0.14	-0.01	-0.05	0.002	-0.27

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

Due to the excess of the volume of repayment of earlier loans over new loans, the total debt was reduced to the greatest extent: Voronezh region — by Rb10.8 bn, the Krasnoyarsk Krai - by Rb5.0 bn, and the Primorsky Krai — by Rb3.5 bn.

Domestic bond market

In 2021, bond placement memorandums were registered for 24 subjects and two municipalities (as compared to 21 regions and four municipalities that issued bonds in 2020). The bond placement memorandums were registered by Moscow, St. Petersburg, Krasnoyarsk Krai, republics of Sakha (Yakutia), Karelia and Bashkortostan, Belgorod, Ryazan, Sverdlovsk, Samara, Yaroslavl, Nizhny Novgorod, Moscow, Novosibirsk, Tyumen, Lipetsk, Irkutsk, Kaliningrad, Omsk, Orenburg, Ulyanovsk, Chelyabinsk regions, Khanty-Mansiysk, Yamal-Nenets AO, Novosibirsk and Nizhny Novgorod cities.

In 2021, the volume of bonds to be placed amounted to Rb154.4 bn, having decreased by more than 40% as compared to the level of 2020 (Rb267.1 bn) in nominal terms. During the year, the volume of issue of sub-federal and municipal bonds declined from 0.25% to 0.12% of GDP (*Table A.6*).

Table A.6

Amount of issued sub-federal and municipal bonded debt (% of GDP)

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Issuance	0.26	0.43	0.41	0.25	0.10	0.19	0.23	0.16	0.12	0.19	0.23	0.08	0.10	0.25	0.12
Redemption	0.18	0.26	0.16	0.18	0.21	0.13	0.12	0.17	0.13	0.15	0.13	0.08	0.07	0.08	0.10
Net financing	0.08	0.17	0.24	0.07	-0.11	0.06	0.12	-0.01	-0.01	0.04	0.11	...	0.04	0.17	0.02

Source: own calculations based on the data released by Russian Ministry of Finance.

The largest placements of securities were made by Moscow to the tune of Rb115.3 bn, or 74.7% of the total volume of issues of regional and municipal bonds, and Nizhny Novgorod region in the amount of Rb15.0 bn, or 9.7% of the total volume of issues (*Table A.7*).

Thus, the two largest issuers accounted for 84.4% of the total volume of issues of regional and municipal bonds.

Table A.7

Sub-federal and municipal bond placement in 2021

Subject of the Russian Federation	Amount issued, rubles in millions	Issuer's percentage of total amount issued, %	Amount issued to domestic borrowing ratio, %
Central Federal District			
Moscow	115 289.7	74.7	100.0
North-West Federal District			
Kaliningrad region	342.8	0.2	6.1
Volga Federal District			
Republic of Bashkortostan	10 000.0	6.5	100.0
Nizhniy Novgorod region	15 000.0	9.7	19.8
Ulyanovsk region	3 000.0	1.9	6.8
Siberian Federal District			
Novosibirsk region	500	0.3	1.7
Tomsk region	3 794.3	2.5	10.1
Far-East Federal District			
Republic Sakha (Yakutia)	6 500.0	4.2	33.4
Russian Federation — total:	154 426.9	100.0	13.0

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

The highest level of securitization of borrowings was observed in Moscow and the Republic of Bashkortostan.

In 2021, the volume of securities placed by the subjects of the Russian Federation and municipal entities exceeded the volume of redeemable securities by Rb25.1 bn, while in 2020 the volume of redeemable securities exceeded the volume of redeemable securities by Rb184.6 bn. At the same time, the volume of outstanding securities fell in nominal terms by more than 40% and amounted to Rb154.4 bn (Rb267.1 bn in 2020) (*Table A.8*).

Table A.8

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

	Consolidated regional budget	Regional budgets	Municipal budgets
2021			
Net borrowings	25.1	29.9	-4.8
Raised funds	154.4	154.4	0
Principal repayment	129.4	124.6	4.8
2020			
Net borrowings	184.6	181.3	3.4
Raised funds	267.1	261.4	5.7

	Consolidated regional budget	Regional budgets	Municipal budgets
Principal repayment	82.5	80.1	2.3
2019			
Net borrowings	40.4	37.2	3.2
Raised funds	114.0	107.9	6.1
Principal repayment	73.6	70.7	2.9
2018			
Net borrowings	0.02	2.96	-2.94
Raised funds	86.95	86.84	0.11
Principal repayment	86.92	83.88	3.04
2017			
Net borrowings	97.03	91.43	5.60
Raised funds	215.33	205.21	10.12
Principal repayment	118.30	113.77	4.53
2016			
Net borrowings	31.98	26.70	5.29
Raised funds	160.50	153.66	6.85
Principal repayment	128.52	126.96	1.56
2015			
Net borrowings	-5.81	-7.11	1.29
Raised funds	98.45	94.25	4.21
Principal repayment	104.27	101.36	2.92
2014			
Net borrowings	-9.24	-7.41	-1.83
Raised funds	111.49	110.09	1.40
Principal repayment	120.73	117.50	3.23
2013			
Net borrowings	77.61	75.45	2.16
Raised funds	154.64	149.64	5.00
Principal repayment	77.03	74.19	2. 84
2012			
Net borrowings	38.17	36.80	1.38
Raised funds	119.85	115.95	3.90
Principal repayment	81.68	79.16	2.52
2011			
Net borrowings	-58.20	-57.11	-1.09
Raised funds	55.05	53.37	1.68
Principal repayment	113.25	110.48	2.77
2010			
Net borrowings	29.77	28.61	1.16
Raised funds	111.11	105.85	5.25
Principal repayment	81.33	77.24	4.09

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

Most of the regions that issue bonded debt on a regular basis continued doing so in 2021 (*Table A.9*).

Table A.9

Registration of placement memorandums of sub-federal and municipal bonds in 1999–2020

Issuer	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Subjects of Federation															
Krasnoyarsk krai	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Nizhniy Novgorod region	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
St Petersburg	*	*		*	*	*	*	*	*	*	*	*	*	*	*
Republic of Sakha (Yakutia)	*	*		*	*	*	*	*	*	*	*	*	*	*	*
Yaroslavl region	*	*		*	*	*	*	*	*	*	*	*	*	*	*
Samara region	*	*	*		*	*	*	*	*	*	*	*	*	*	*
Belgorod region		*				*	*	*	*	*	*	*	*	*	*
Sverdlovsk region				*	*	*		*		*	*	*	*	*	*
Moscow region	*	*								*	*	*	*	*	*
Lipetsk region	*	*				*	*	*			*	*	*	*	*
Ryazan region				*		*							*	*	*
Orenburg region						*	*	*	*	*	*	*		*	*
Irkutsk region	*	*	*			*			*	*	*	*		*	*
Omsk region							*	*		*	*			*	*
Ulyanovsk region	*	*									*			*	*
Kaliningrad region											*			*	*
Republic of Bashkortostan	*				*	*	*	*	*					*	*
Chelyabinsk region														*	*
Novosibirsk region	*						*	*		*	*	*	*		*
Republic of Karelia	*	*	*	*	*	*	*	*		*	*	*			*
Khanty-Mansi AO			*				*	*		*	*				*
Yamal-Nenets AO										*	*				*
Tyumen region										*					*
Moscow		*	*	*			*								*
Tomsk region	*	*		*	*	*	*	*	*	*	*	*		*	
Udmurt Republic	*	*		*	*	*	*	*	*	*		*		*	
Stavropol krai		*			*	*	*	*		*				*	
Krasnodar krai	*			*		*			*		*	*	*		
Magadan region							*	*			*	*			
Khabarovsk krai												*			
Kirov region												*			
Kamchatka krai												*			
Komi Republic		*		*	*		*	*	*	*	*				
Tambov region										*	*				
Volgograd region	*	*	*	*	*	*	*	*	*		*				
Chuvash Republic	*	*	*		*	*	*	*			*				
Republic of Mariy-El						*	*	*			*				
Kemerovo region							*				*				
Ivanovo region	*				*						*				
Nenets AO											*				

Issuer	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Kursk region											*				
Saratov region											*				
Orel region											*				
Karachaevo-Cherkassia Republic											*				
Republic of Mordovia							*	*	*	*					
Republic of Khakassia		*		*	*	*	*	*							
Tula region				*	*	*	*								
Tver region	*	*	*	*	*	*									
Voronezh region				*	*	*									
Smolensk region					*	*									
Leningrad region					*	*									
Kostroma region			*		*										
Kaluga region			*	*											
Vologda region			*	*											
Republic of Buryatia			*												
Murmansk region		*													
Penza region															
Kurgan region															
Republic of Kalmykia															
Kabardino-Balkar Republic															
Briansk region															
Sakhalin region															
Primorsky krai															
Municipalities															
Novosibirsk		*	*	*	*	*	*	*	*	*	*			*	*
Nizhniy Novgorod									*					*	*
Tomsk		*		*		*	*	*	*	*	*			*	
Krasnodar		*	*											*	
Omsk						*		*							
City of Volzhskiy Volgograd region						*									
Krasnoyarsk	*	*	*	*											
Kazan	*	*	*												
Ufa		*													
City of Elektrostal Moscow region	*														
Smolensk	*														
Lipetsk															
Magadan															
Bratsk															
Novorossiysk															
Ekaterinburg															
Klinskiy rayon Moscow region			*	*	*										
Noginskiy rayon Moscow region		*		*	*										
Blagoveshchensk				*	*										
Cheboksary			*		*										

Issuer	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
City of Balashikha Moscow region					*										
Odintsovo rayon Moscow region			*	*											
Astrakhan				*											
Briansk				*											
Voronezh				*											
City of Orekhovo-Zuyevo Moscow region				*											
Yaroslavl				*											
Yuzhno-Sakhalinsk		*	*												
Novocheboksarsk			*												
Angarsk			*												
Vurnarsky rayon Chuvash Republic			*												
City of Shumerlia Chuvash Republicr		*													
Barnaul		*													
Perm		*													
Kostroma															
Arkhangelsk															
Dzerzhinsky															

Source: Russian Ministry of Finance.

Section 3. Financial markets and financial institutions

3.1. The Russian financial market[1]

3.1.1. The stock market

The market for Russian stocks was characterized by growth nearly throughout the whole year 2021; however, starting from November, it began to display a trend towards its downward adjustment. As shown in *Fig. 1*, among the 43 national stock indexes denominated in different currencies around the world, a positive annual return in 2021 was demonstrated by the composite indexes of 33 countries. The highest growth was achieved by the Argentina index (33.5%), followed closely by the S&P 500 (26.9%). The growth of Russia's indexes, the RTS and IMOEX, was almost the same: 15.0% and 15.1%, respectively. However, over the first two months of 2022, the situation changed significantly: in January-February, IMOEX fell by a record 38.4%, and the RTS Index, by 41.3%. Over the same period of 2022, a majority of the 43 national stock indexes moved downward, except only a few of them, which were mainly those of developing countries: Argentina, Brazil, Greece, Malaysia, Norway, Singapore, Turkey, the Philippines, and the RSA. The main reason behind this massive adjustment of national stock indexes was the announcement, in mid-December 2021, of the leaders of the US Federal Reserve System (FRS) that in March 2022 they planned to curtail the current quantitative easing program, and so there was a high probability that the interest rates set by the Central Bank would begin to climb.

On an 11-year time horizon (2010—2021), against the background of a weakening ruble, the indices of geometric mean return on investment in Russian stocks denominated in Russian rubles (MOEX Russia Index) and US

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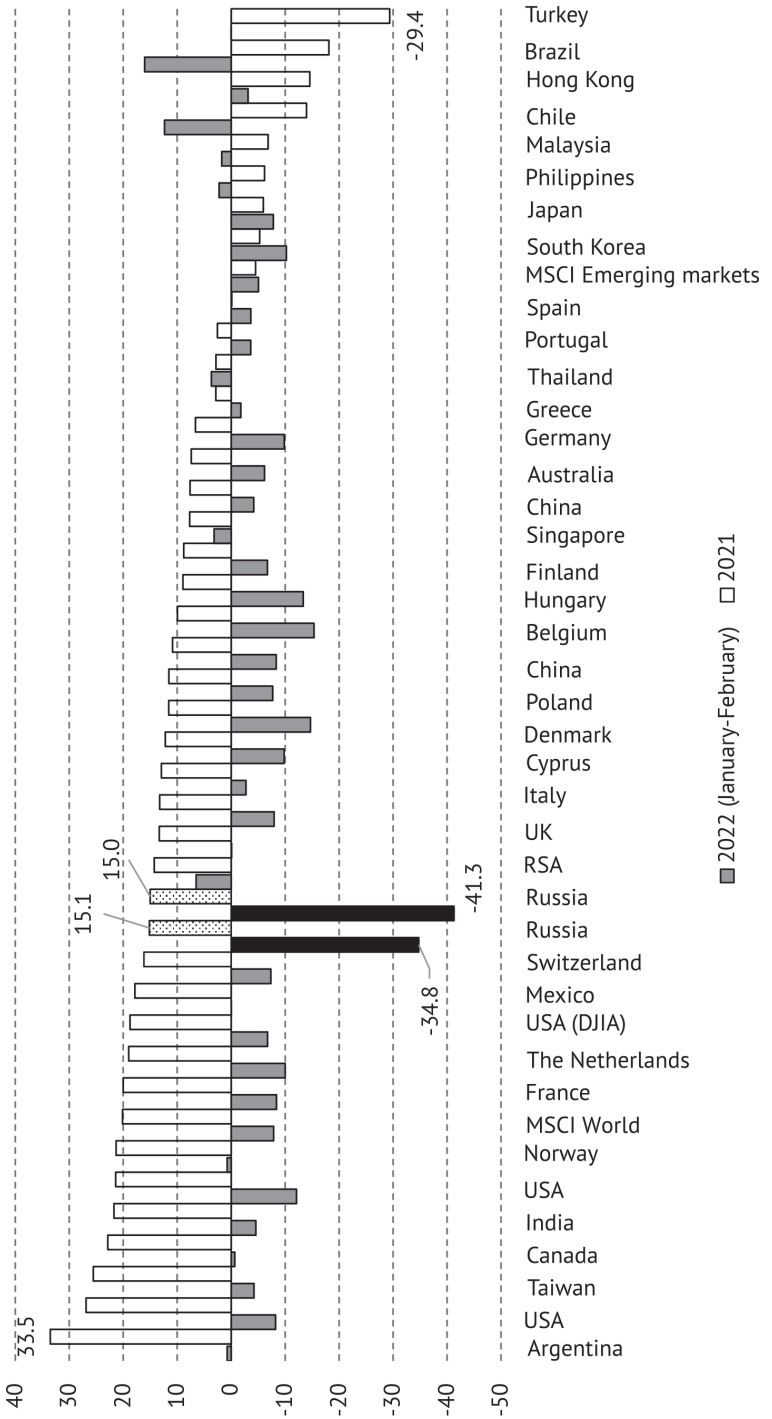


Fig. 1. The returns of 43 world stock indexes on major national exchanges in 2021 and January-February 2022, % per annum

Source: own calculations based on data released by Bloomberg.

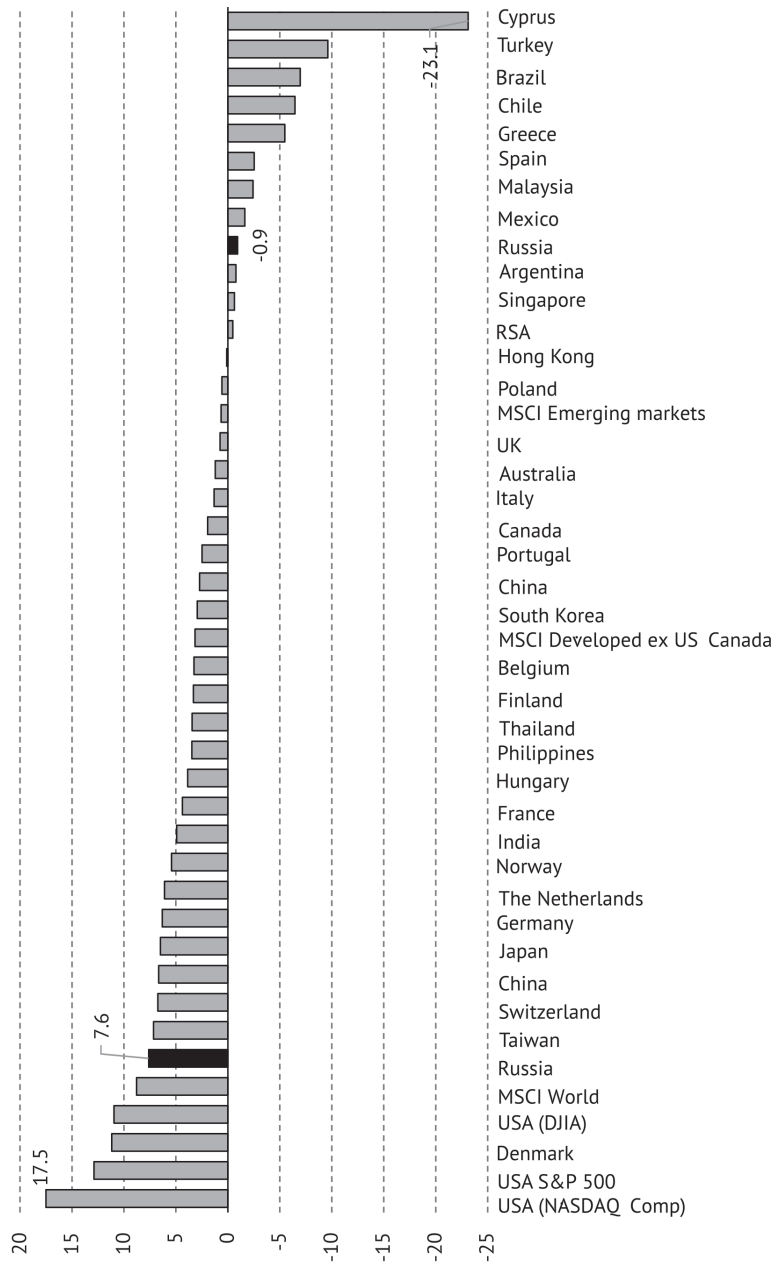


Fig. 2. The geometric mean return of 43 world stock indexes on major stock exchanges denominated in different currencies, over the period 2010–2021, % per annum

Source: own calculations based on data released by *The Wall Street Journal*.

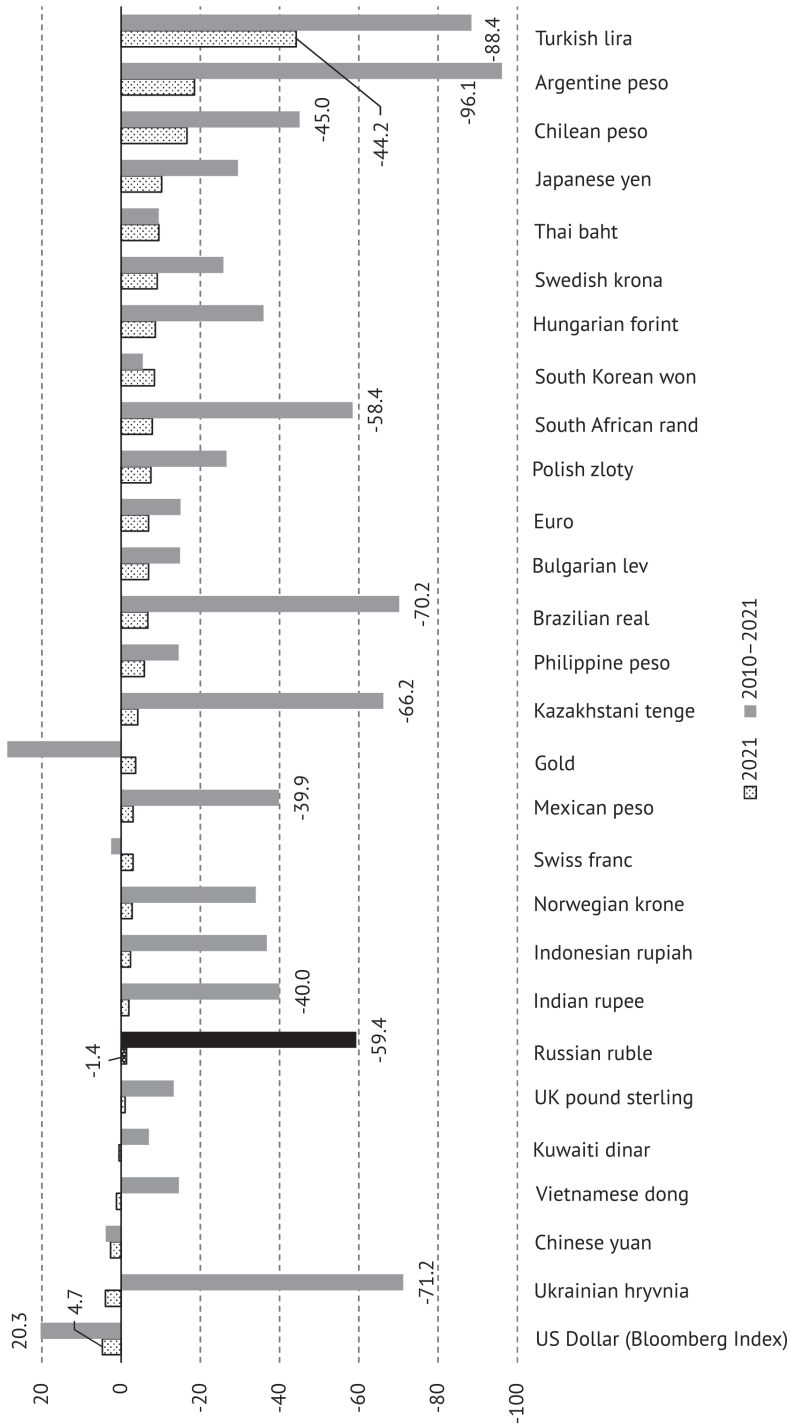


Fig. 3. The downward (-) and upward (+) movement of the value of 42 national currencies and price of gold in US dollar terms, in 2021 and the period 2010–2021, %

Source: own calculations based on data released by Bloomberg and The Wall Street Journal.

dollars (RTS Index) demonstrated different values (*Fig. 2*). The average annual return of the RTS Index amounted to -0.9%, and that of IMOEX, to +7,6%. Out of the 43 national stock indexes, IMOEX was below only three benchmarks, three of which (NASDAQ Comp., S&P 500 and DJIA) reflect the returns on US stocks, while RTS Index was above only 8 national stock indexes, with the lowest average annual returns over the said 11-year period.

The differences in returns on investment in corporate stocks denominated in national currencies and in US dollars observed on the time horizon 2010–2021 can be explained by the devaluation of most of those currencies relative to the US dollar, with the exception of the Chinese yuan and the Swiss franc (*Fig. 3*). Over that period, the value of national currencies in US dollar terms plunged as follows: Argentina, by 96.1%; Turkey, by 88.4%; Ukraine, 71.2%; Brazil, 70.2%; and Kazakhstan, 66.2%; while the Russian ruble lost 59.4%. The downward trend in the value of the majority of national currencies, including the Russian ruble, against the US dollar, continued into 2021. Over that period, the value of the Russian ruble in US dollar terms declined by 1.4%.

On the contrary, the value of gold in US dollar terms over the period 2010—2021 gained 28.7%; to a certain extent, gold played the role of a secure investment in the situation of increased financial market volatility across different economies. However, in 2021, as the economies began to recover after the coronavirus crisis, the price of gold fell by 3.6%.

Academic studies have offered a variety of criteria for defining a financial crisis. In this study, we apply the simplest criterion suggested by Barro and Ursua,[1] and Reinhart and Rogoff,[2] whereby a financial crisis is understood as a fall in stock prices (stock indices) by 25% or more.

According to that criterion, the fifth financial crisis (in the history of Russia's modern financial market started in October 2021. Over the period from October 31, 2021 through March 3, 2022, the RTS Index lost 49.2%, while the Russian Depositary Index on the Vienna Stock Exchange[3] lost 91.0%. The sharp decline phase in the movement of the value of Russia's equity instruments lasted over January-February 2022, when within just two months the RTS Index and the Russian Depositary Index fell by 41.3% and 89.8%, respectively (*Fig. 4*). The deeper plunge of the Russian Depositary Index relative to the RTS Index happened because from February 28, 2022, trading in Russian stocks on the Moscow Exchange was closed, in contrast to trading in depositary receipts on the London Stock Exchange, so the landslide sales of Russian stocks by non-residents only marginally influenced the domestic exchange market, for which the RTS Index is calculated.

1 *Barro R., Ursua J.F.* Stock Market Crashes and Depressions. NBER Working Paper 14760. National Bureau of Economic Research. Cambridge. Mass. February 2009.

2 *Reinhart, C.M., Rogoff, K.S.* (2009). This Time Is Different: Eight Centuries of Financial Folly. Princeton, NJ, Princeton University Press.

3 The Russian Depositary Index is a modified capitalization-weighted index comprised of the most liquid depository receipts on Russian shares that are traded on the London Stock Exchange. The index was developed, with a base value of 1,000 as of October 8, 1997, by the Vienna Stock Exchange.

* On March 3, the market for the bulk of depository receipts on shares in Russian PJSCs on the London Stock Exchange was suspended in response to a sharp drop in their prices.

Fig. 4. The movement of the RTS Index and the Russian Depositary Index from October 8, 1997 through March 1, 2022* (index values as of October 8, 1997 = 1)

Source: own calculations based on data released by Bloomberg.

The specific feature of the current financial crisis in Russia is that for the first time it was triggered not by macroeconomic factors and the behavior of global markets, but mostly by a sharp aggravation of geopolitical risks. In spite of the continually mounting tension in response to the situation in Ukraine, the acute phase that the conflict entered on February 24, 2022 and the ensuing tough mutual sanctions imposed by the countries involved in it came as a surprise to many financial market participants, including non-residents. Thus, for example, a team of analysts from BlackRock (US investment management corporation), who arrived in Moscow in late January 2022, upon reviewing the situation in Russia issued a statement on February 16, 2022 that an armed conflict between Russia and Ukraine was unlikely, and so, on the basis of available data, they advised in favor of maintaining long-term investments in Russia.[1] Apparently, other foreign portfolio investors shared such expectations because, according to statistics released by Emerging Portfolio Fund Research, Inc. (EPFR Global), January and February 2022 saw a noticeable inflow of investor funds into foreign investment funds specializing in Russian shares (Russia-EMEA-Equity), in the amount of $104.6

1 *Lauricella T.* Autocracy Is a Bad Investment // Morningstar on-line. March 8, 2022. URL: https://www.morningstar.com/articles/1083334/autocracy-is-a-bad-investment

mn and $179.0 mn, respectively, while in 2021 an investment outflow from these funds was the prevalent trend.

The events that followed after February 24, 2022 resulted in the domestic stock market's isolation from non-residents and the imposition of restrictions on transactions in Russian shares with non-residents on the exchange market. According to a publication in the Financial Times citing MarketWatch, at that time foreign portfolio investors owned $86 bn worth of Russian stocks.[1] In turn, foreign exchange markets for depository receipts on Russian shares became inaccessible to Russian investors, and so these market participants could no longer buy the significantly cheapened receipts and convert them back into shares.

From February 28, trading in shares in Mobile TeleSystems PJSC (MBT) on the New York Stock Exchange was suspended; and trading in shares in Yandex NV (YNDX) and Ozon Holdings Ltd. (OZON) was suspended on the NASDAQ Stock Market. From March 1, trading in Russian stocks was suspended on the German Stock Exchange (Deutsche Börse).[2] From March 3, the London Stock Exchange suspended trading in more than 50 issues of depositary receipts on Russian shares.[3]

The sanctions imposed from February 24, 2022 on servicing the forex transactions of Russian clients on foreign markets prevented Russian investors from purchasing the cheapening depositary receipts. As a result, the depreciated shares began to be massively removed from the world's leading international stock indexes, which in practice meant an indirect ban on investments in these assets by major foreign institutional investors. On March 3, MSCI Inc. reclassified the MSCI Russian Indexes from "emerging markets" to "standalone markets", calling Russia's equity markets "uninvestable".[4] On the same day, FTSE Russell also removed all Russian stocks from its indexes. Later, a similar decision was made by the administrator of S&P Dow Jones Indices.[5]

From March 4, 2022, the NYSE and CBOE Bzx indefinitely suspended all major Russia ETFs traded in the USA: iShares MSCI Russia ETF (ERUS), Franklin FTSE Russia ETF (FLRU), Direxion Daily Russia 2X Shares ETF (RUSL), VanEck Russia ETF (RSX), and VanEck Russia Small-Cap (RSXJ).[6] Meanwhile, only one of these funds, Direxion Daily Russia 2X Shares ETF, announced its liquidation in March of this year. As of December 31, 2021, according to Morningstar Direct, there existed 150 ETFs and mutual funds with at least 0.5% of their portfolio value invested in Russian equities. The total value of Russian shares in the portfolios of these ETFs

1 *Goldstein S.* More than $500 billion of Russian securities at risk as banks and clearinghouses react to sanctions // MarketWatch online. March 1, 2022.
2 *Dummett B.* Germany's Stock Exchange Closes Door on Trading Russian Securities/ // The Wall Street Journal on-line. March 1, 2022.
3 *Dummett B.* London Stock Exchange Shuts Down Trading of Russia Securities // The Wall Street Journal on-line. 3 March 2022.
4 *DeCambre M.* Ukraine crisis creates cracks in the ETF complex // MarketWatch on-line. 4 March 2022.
5 *Yun Li* S&P Dow Jones is removing Russia stocks from indexes, stripping country of emerging market status // CNBC. March 4, 2022.
6 *Kilgore T.* All these Russia ETFs were halted indefinitely for «regulatory concern» // MarketWatch on-line, 5 March 2022. URL: https://www.marketwatch.com/story/nyse-arca-halts-trading-in-3-russia-etfs-for-regulatory-concern-11646421313?mod=home-page

was nearly $17.5 bn or, on average, 1.9% of the total value of their assets. As of the end of February 2022, the value of their investments in Russian shares shrank by more than 77% to $4 bn, or 0.5% of the value of their assets.[1]

The sanctions imposed by the USA prohibited US individuals and entities from purchasing new shares in 14 major Russian companies after May 25, 2022. The de facto removal, from March 1, of Russian shares from the MSCI, S&P Dow Jones Indices, and FTSE Russell made it impossible for non-residents to buy any Russian stocks. At the same time, US institutional investors were not obliged to urgently liquidate their investments in Russian shares, if this did not contradict the requirements stipulated in legislation (for example, if the limit on holding stocks in the amount of more than 10% of the value of a mutual fund portfolios was not exceeded).

By way of counter sanctions, from February 28, 2022, the Bank of Russia imposed a temporary ban on sales of securities by brokers on behalf of foreign clients. It was also forbidden to transfer dividends to non-residents from those countries that had introduced anti-Russia sanctions. Besides, from February 28 through March 24, the Bank of Russia suspended trading in Russian shares on the Moscow Exchange. When trading had been resumed, this market segment functioned in the main thanks to the transactions carried on by domestic private investors. In the future, the domestic stock market may rely on moderate support from government structures.[2] The narrowed circle of market participants somewhat brought down its liquidity level.[3]

From a historical point of view, a protracted period of suspended trading in the securities issued by a certain country is by no means a unique phenomenon. According to data published by US economists William Goetzmann and Philippe Jorion, over the course of the 20th century, trading in some stock markets outside the USA was suspended for months or years no less than 25 times[4] (in Argentina, Chile, Egypt, Germany, Greece, Japan, Portugal and Spain).

3.1.2. Financial crises in modern Russia

Investors frequently perceive the risks of changes in the prices of financial assets as the probability of a rare and suddenly occurring event called "a black swan".[5] However, we believe that on long horizons starting from 1997, the

1 *Johnson B.* Index Providers React to Russian Market Turmoil // Morningstar on-line. 7 March 2022. URL: https://www.morningstar.com/articles/1083060/index-providers-react-to-russian-market-turmoil

2 In order to support the domestic stock market, Russian Prime Minister Mikhail Mishustin instructed the RF Ministry of Finance to allocate, in 2022, Rb1 trillion from the National Wealth Fund for purchasing shares in Russian companies on the terms to be determined by the RF Ministry of Finance. As follows from RF Government Edict No. 335-r dated February 26, 2022, the RF Ministry of Finance is granted the right to involve VEB.RF and specialized financial organizations in these transactions.

3 According to data released by the Moscow Exchange as of March 24, the share of individuals in the total volume of trading in shares on that day amounted to 58.2%.

4 *Jorion P., Goetzmann W.* Global Stock Markets in the Twentieth Century // Journal of Finance. Junuary 1999. Vol. 54. № 3. P. 953–980.

5 For more details, see Nassim Nicholas Taleb. The Black Swan: The Impact of the Highly Improbable. Random House, 2007.

movement of the Russian stock market can be more accurately described by the "black turkey" metaphor used in the alternative hypothesis suggested by Lawrence Siegel[1] and Paul Kaplan.[2] In their theory, financial crises are viewed as events lasting over time, from the moment when stock prices begin to plunge until their full recovery to the pre-crisis levels. In this sense, financial crises are by no means rare and sudden, because many capital markets exist permanently in such a crisis throughout their existence.

As can be seen in *Table 1*, over the 25-year time horizon from 1997 through February 2022, the market for shares in Russian companies lived through five waves of financial crises that happened in 1997, 2008, 2014, 2020, and 2021. The first crisis broke out in August 1997 and lasted until August 2003. Thereafter, one crisis would soon be followed by another one, and quite often, a new crisis would start even before the previous one was over. Thus, for example, after the stock market decline in June 2008, the value of the RTS Index had not yet recovered by February 28, 2022, amounting to only 38.1% of its pre-crisis level in May 2008. Meanwhile, two more financial crises occurred, lasting from March 2014 through December 2019 and from January 2020 through May 2021; and then from November 2021 yet another crisis began to evolve, where the decline phase is still underway.

In the entire 26-year history of the Russian stock market (between September 1995 and March 2022), there was only one 5-year period (from August 2003 through May 2008) when the market was functioning not in conditions of a financial crisis, that is, it was not experiencing black turkey events.

The RTS Index, having experienced five financial crises, by February 2022 had not yet recovered after its two latest decline periods, the first of which started in June 2008, and the second, in November 2021 (*Fig. 5, Table 1*). From June 2008, the RTS Index had been climbing for 165 months, or 13.7 years, and its value as of February 28, 2022 stood at just 38.1% of its peak in May 2008. The plunge of the RTS Index from November 2021 amounted to 49.2% relative to the October 2021 level, and so far, it has lasted only for 4 months.

Compared to the four previous crises, the current fall of the RTS Index since November 2021 is 49.2% less deep than the stock market downfalls during the 1997 (by 91.3%) and 2008 (by 78.2%) recession. In terms of its duration, so far, the current crisis has been the shortest one. However, if we take into account the decline depth, since November 2021, not of the RTS Index, but that of the Russian Depositary Index on foreign exchanges, which amounted to 91.0% over 4 months, the current crisis would match the crisis that erupted in July 1997, after which the RTS Index lost 91.3% within 14 months.

Out of the five financial crises, as of the end of February 2022, the ruble-denominated MOEX Index had not recovered only from the shock of November 2021, the effects of which had lasted 4 months (*Fig. 6, Table 1*). Compared to the

1 *Siegel L.B.* Black Swan or Black Turkey? The State of Economic Knowledge and the Crash of 2007–2009. // Financial Analysts Journal. July/August 2010. Vol. 66. Iss. 4. P. 6–10.
2 *Kaplan P.D.* What Prior Market Crashes Taught Us in 2020 // Morningstar on-line. 23 July 2020. URL: https://www.morningstar.com/features/what-prior-market-crashes-can-teach-us-in-2020

Table 1

The parameters of financial crises in Russia over the period from July 1997 through February 2022

Index, month and year of peak value	Depth of index decline, %	Period of index decline and recovery		Index as of February 28, 2022 (peak = 100%)
		timeline	months	
RTS Index:				
July 1997	-91.3	August 1997 — August 2003	73	
May 2008	-78.2	Recovery not completed	165	38.1
February 2014	-48.9	March 2014 — December 2019	72	
December 2019	-34.5	January 2020 — May 2021	17	
October 2021	-49.2*	Recovery not completed	4	50.8*
IMOEX:				
August 1997	-79.1	September 1997 — May 1999	21	
May 2008	-68.2	June 2008 — April 2016	95	
December 2013	-13.2	January 2014 — January 2015	13	
December 2019	-17.6	January — November 2020	11	
October 2021	-40.5	Recovery not completed	4	59.5
Brent oil price:				
December 1996	-58.3	January 1997 — November 1999	35	
July 2008	-67.7	Recovery not completed	163	69.0
June 2014	-72.6	Recovery not completed	92	82.6
December 2019	-61.5	January 2020 — May 2021	17	
October 2021	-14.5	November 2021 — January 2022	3	

* The depth of decline of the Russian Depositary Index on the Vienna Stock Exchange over the same period was 91.0%, and its current value (as of March 3, 2022) amounts to only 9.0% of its October 2021 peak value (as of October 31, 2021).

Source: own calculations based on data released by the Moscow Exchange and the Bank of Russia; and data available at URL: http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=pet&s=rbrte&f=m

four previous crises, the current plunge by IMOEX by 40.5% is less deep than the stock market declines in 1997, by 79.1%, and in 2008, by 68.2%.

In 2020, the accelerated recovery of stock markets compared with that of the economy was typical of many countries. US economist Paul Kaplan[1] demonstrates that out of the 18 most serious financial crises in the USA over the 150-year period from 1870 to 2020, in terms of the depth of decline in stock prices and duration, the 2020 COVID-19 crisis was the shortest and shallowest one. After declining by 20% (in real terms) from December 2019 through March 2020, the US stock market fully recovered in just four months, and returned to its previous level in July 2020. The expert concluded that after each of the 18 crises, the US stock market always recovered to its original level, but the speed of the market recovery could not be predicted.

1 *Kaplan P.* In Long History of Market Crashes, Coronavirus Crash Was the Shortest // Morningstar on-line. 9 March 2021. URL: https://www.morningstar.com/articles/1028407/in-long-history-of-market-crashes-coronavirus-crash-is-short.

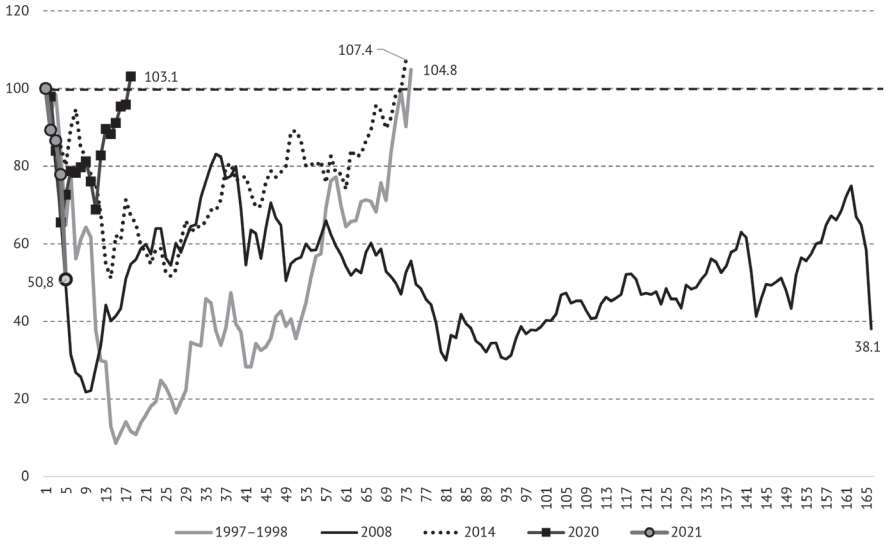


Fig. 5. The movement of the RTS Index relative to its peaks of July 1997, May 2008, February 2014, December 2019, and October 2021, over a time horizon measured in months, as of February 28, 2022, % (peak value = 100%)

Source: own calculations based on data released by the Moscow Exchange.

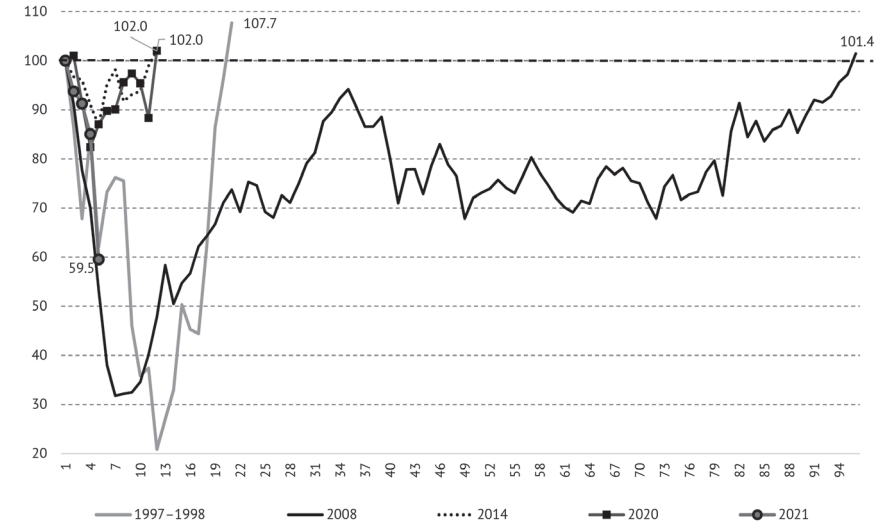


Fig. 6. The movement of IMOEX relative to its peaks of August 1997, May 2008, December 2013, December 2019, and October 2021, over a time horizon measured in months, as of February 28, 2022, % (peak value = 100%)

Source: own calculations based on data released by the Moscow Exchange.

Crises in the market for Russian shares have always coincided with a significant decline in the global oil market, which is one of the key factors that affect this country's forex earnings (*Fig. 7, Table 1*). At the same time, after the two deepest plunges in Brent oil price from August 2008, by 67.7%, and from July 2014, by 72.6%, it has not yet climbed to its previous level over 163 and 92 months, respectively. In the current structure of the economy, over the period 2010–2021, the long-term downward trend in oil prices significantly translated into the negative average annual return of the RTS Index of 0.9% per annum (*Fig. 2*) and the ruble depreciation by 59.4% (*Fig. 3*).

The specific feature of the stock market crisis that began in November 2021 is that, for the first time, a slight decline in oil prices by 14.5% at year end 2021 had almost no significant impact on the decline in stock indices. Within just the first three months of 2022, price of oil fully recovered, and then continued to rise. However, this did not prevent the stock market from a sharp plunge, due in the main to geopolitical factors and mutual sanctions imposed by countries.

Over the period from July 1998 through February 2022, there were five periods of the ruble's weakening, which happened, as a rule, in response to the downward movement of oil prices and the stock market *(Fig. 8, Table 2*). Between July 1998 and May 2008, the USD-to-ruble exchange rate gained 281.8%. Later on, it rose by 55.6% from May 2008 through August 2014, by 89.9% from August 2014

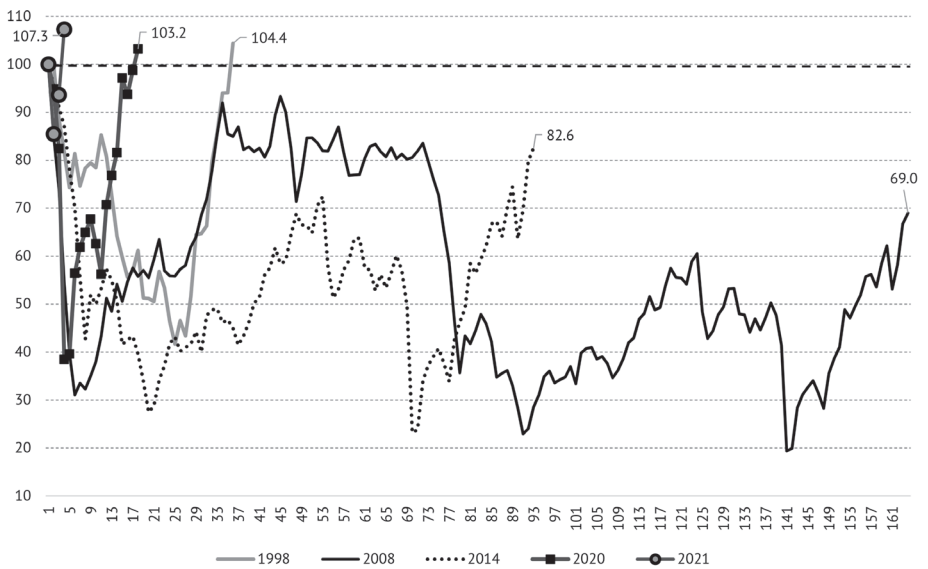


Fig. 7. The movement of Brent crude oil price relative to its peaks of December 1996, July 2008, June 2014, December 2019, and October 2021, over a time horizon measured in months, as of February 28, 2022, % (peak value = 100%)

Source: own calculations based on data available at URL: http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=pet&s=rbrte&f=m

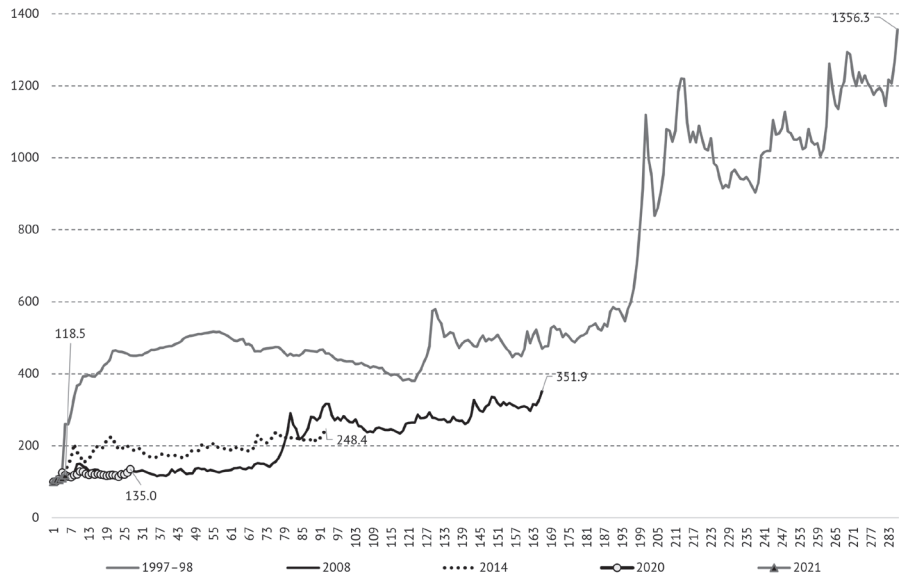


Fig. 8. The monthly movement of the USD-to-ruble exchange rate relative to its base values of July 1998, May 2008, August 2014, December 2019, and October 2021, over a time horizon measured in months, as of February 28, 2022, % (peak value = 100%)

Source: own calculations based on data released by the Bank of Russia.

through December 2019, and by 13.9% from December 2019 through October 2021. Between October 2021 and February 2022, the US dollar climbed by another 18.5%. In total, over 283 months from July 1998 through February 2022, the US dollar exchange rate against the Russian ruble jumped 13.6 times. The ruble's instability and its propensity for a regular weakening against the US dollar has been a significant obstacle per se to the formation of a long-term domestic savings system.

Table 2

Periods of growth of the USD-to-ruble exchange rate on the time horizon from July 1998 through February 2022

Time period = 100%	Period length, months	Growth over period (starting month value = 100%), %
July 1998 — May 2008	118	281.8
May 2008 — August 2014	75	55.6
August 2014 — December 2019	64	89.9
December 2019 — October 2021	22	13.9
October 2021 — February 2022	4	18.5
Total: July 1998 — February 2022	283	13.6 times

Source: own calculations based on data released by the Bank of Russia.

After a sharp decline, in 2008, of stock indices in the five BRICS countries, they have not yet recovered only in Russia and Brazil (*Fig. 9, Table 3*). Over the 165 months that had passed since May 2008, the RTS Index recovered to only 38.1% of its pre-crisis level, and the MSCI Brazil Index, to only 36.3%. The RTS Index, calculated with due regard for reinvestment of dividends, had recovered to its pre-crisis level within 140 months, but as of February 28, 2022, it stood only at 70.1% of its pre-crisis level.

The MSCI indexes for India, the RSA and China recovered more rapidly to their pre-crisis values: over the periods of 22, 28, and 82 months after May 2008, respectively.

The different recovery rates of the national stock indices across the two groups of BRICS countries observed after the 2008 and 2020 crises can be explained by the higher diversification of the economies of India, China and, to some extent, the RSA compared to the structure of Russia and Brazil's economies, as well as some other specific features of those countries. The slow recovery rate of the stock market in Russia was associated with the recovery of oil prices only by 69.0% after the 2008 crisis, while in Brazil, the stock market recovery was complicated by a high level of macroeconomic instability, which only intensified during the COVID-19 epidemic.

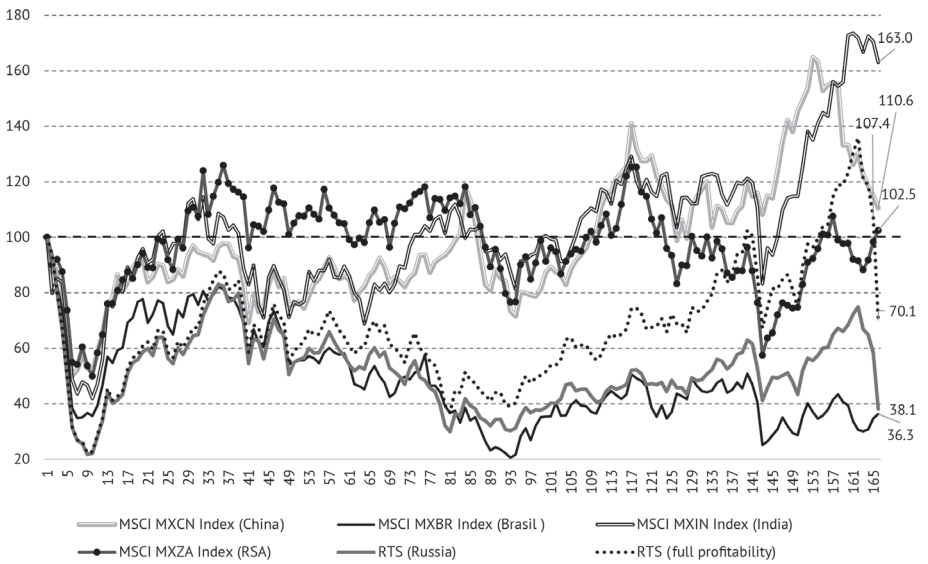


Fig. 9. The depth and duration of the impact of the 2008 financial crisis on BRICS stock indices denominated in US dollars, as of February 28, 2022 (peak in May 2008 = 100%)

Source: own calculations based on data released by the Moscow Exchange and Bloomberg.

Table 3

The recovery of BRICS stock indices denominated in US dollars after the 2008 crisis, as of February 28, 2022

Indexes	Index recovery period from May 2008, months	Full recovery	Current index value, % (May 2008 = 100%)
RTS	165	No	38.1
RTS Total Return	139	Yes	70.1
MSCI Brazil	165	No	36.3
MSCI South Africa	28	Yes	102.5
MSCI India	22	Yes	163.0
MSCI China	82	Yes	110.6

Source: own calculations based on data released by the Moscow Exchange and Bloomberg.

The most protracted crises in the modern history of stock markets are believed to be the recession in the US stock market during the Great Depression of 1929–1933 and the downfall of the Japanese stock market after 1989. The recovery of Dow Jones Industrial Average (DJIA) in the USA after the Great Depression lasted 303 months, or 25.3 years (*Fig. 10, Table 4*). In 2015, this record was broken by the Japanese NIKKEI-225 index, which as of February 28, 2022, had failed to recover in 386 months, or more than 32 years. Its value in February 2022 amounted to only 68.2% of its peak achieved in 1989.

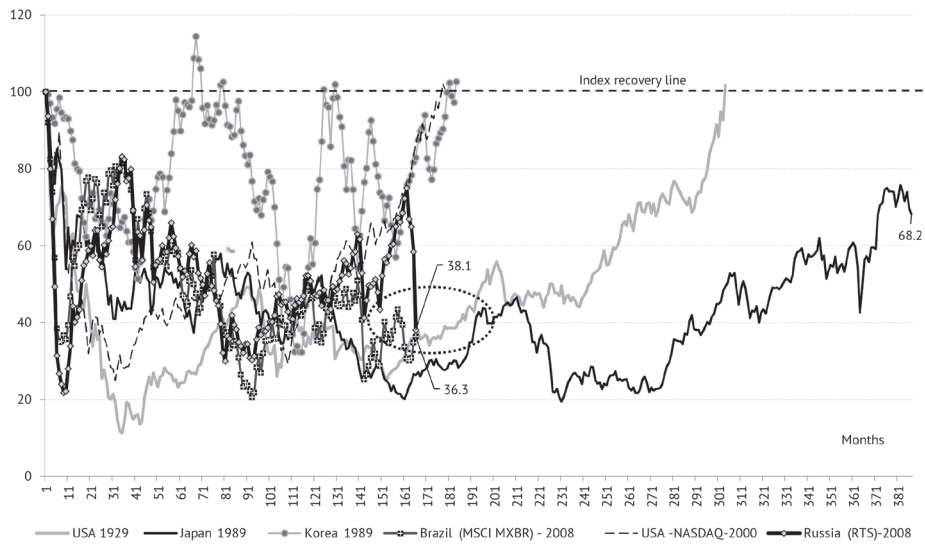


Fig. 10. The depth and duration of the lengthiest recoveries of stock indexes, as of February 28, 2022 (pre-crisis peak = 100%)

Source: own calculations based on data released by the Moscow Exchange and Bloomberg.

Table 4

The longest recovery periods of national stock indexes, as of February 28, 2022

Country (index - year of crisis onset)	Period of index recovery from its peak value, moths	Full recovery	Current value of unrecovered index, % (peak = 100%)
Japan (Nikkei — 1989)	386	No	68.2
USA (DJIA — 1929)	303	Yes	
South Korea (KOSPI — 1989)	183	Yes	
USA (NASDAQ — 2000)	177	Yes	
Russia (RTS (USD) — 2008)	165	No	38.1
Brazil (MSCI (USD) — 2008)	165	No	36.3
China (MSCI-Shanghai (USD) — 1997)	122	Yes	
China (MSCI-Shanghai (USD) — 2008)	82	Yes	

Source: own calculations based on data released by the Moscow Exchange and Bloomberg.

Against the backdrop of these crises, the recovery of the Russian RTS Index and MSCI Brazil to the levels of 38.1% and 36.3%, respectively, which has lasted 165 months, so far has been closer to the market recovery trajectory of a typical medium-term crisis.

The longest declines in stock prices in history were typically driven by underlying economic factors. Thus, for example, in Japan and South Korea, these are the significant imbalances in the financial assets and liabilities of households and businesses, the transformation of the economy from an export model towards domestic demand, and some other long-term economic and social problems. In this sense, the factors that have served as obstacles to a sustainable recovery of Russia's stock market after the 2008 crisis are the outdated structure of the economy coupled with long-term downward trends in the growth rates of prices for raw materials, the low level of development of institutional investors, and the domestic investment climate instability. Quite recently, these factors have been augmented by geopolitical risks.

3.1.3. Equity risk premium

Risk premiums serve as the most important indicator of the effectiveness of investment in stocks. However, this indicator can be assessed by a variety of methods. We have attempted to systematize the various risk indicators and work out our own estimates of these risks, based on the methods suggested by the most reputable economists and information resources.

For the purpose of estimating investments in Russian stocks, two types of indicators are applied, which are called "risk premiums". One group of risk indicators (*equity risk premiums*) show the difference between the estimated real or future return on stocks and the estimated real return on safe (government) bonds. The use of these indicators involves comparing the discounted cash flows generated by stocks and bonds. The lower the premium compared to that of bonds, the more conservatively investors view the benefits of investing in stocks over bonds. A low equity risk premium has become a typical problem in the Russian stock market.

Another set of risk premiums (*discount rates*) determine the present value of future cash flows generated by a company in order to assess the fair value of its shares. Thus, the lower the discount rate, the higher the fair value of the shares, all other conditions being equal. The low value of shares in Russian PJSCs by comparison with their foreign competitors is usually associated with the high risk premium applied in estimating their fair value.

The category of risk premiums also includes the interest rate spreads released in the reports published by Credit Suisse and Bloomberg.

Dimson, Marsh and Staunton, in their book 'Triumph of the Optimists'[1] and the subsequent investment return reports published by the Credit Suisse Research Institute[2], calculate the *historical risk premiums* for different countries, Russia including, as the difference between the estimated real return on stocks and the estimated real return on safe (government) securities on a long-term horizon. According to their methodology, the equity risk premium is calculated as a geometric mean[3] of the return on stocks and the return on a risk-free asset. To calculate the latter, the authors apply two benchmarks: short-term government bonds and 10-year government bonds. In each year, the authors average the premiums on stocks over a long-term period starting from 1900, and on a medium-term horizon covering the last 40–50 years. Data for Russia are available only for the period 2014-2018 (*Fig. 11*).

In this study, we calculate the historical risk premiums (HRP) on a longer time horizon relative to the long- and short-term yields of RF eurobond portfolios, constructed and reviewed on a monthly basis.[4] Fig. 11 presents long-term premiums as the difference between the geometric means of the returns of the main asset classes. The resulting premium values are compared with the values from the Credit Suisse reports, where a similar technique was used. When calculating our indicators, we managed to obtain similar results. The stock return is compared with that of short-term eurobonds (the most 'correct' proxy for the

1 *Dimson E., Marsh P., Stainton M., Garthwaite A.* Triumph of the Optimists: 101 Years of Global Investment Returns. Princeton University Press, 2002.

2 Credit Suisse Global Investment Returns Yearbooks for 2009–2021. Credit Suisse Research Institute, Switzerland.

3 (1+ Premium) = (1 + Return on stocks)/(1+ Return on bonds) in annual terms.

4 The risk premium on stocks is calculated as the difference (cleared of inflation) between the return of a stock index and the return of bonds. This estimate is historical, and not predictive. The stock returns on long historical horizons are calculated taking into account the exchange rate and dividend yield of a given country's stock market index denominated in the base currency, and thus it becomes possible to compare the indices across different countries, for example, in US dollar terms. One example of such an index is MSCI Russia, which has been followed since December 1994. As a proxy for the risk-free rate, Dimson et al. used both short-term and long-term government bonds. Short-term bonds, according to the authors, are more consistent with the concept of a risk-free asset, and their volatility is lower. However, during the periods of a sudden surge in inflation or other extreme conditions, their cost varies significantly. On the other hand, long-term bonds are often used as a benchmark for calculating equity risk premiums. The benchmark should be the yield of the national eurobond price index denominated in US dollars. In Russia, there is no eurobond index denominated in US dollars with a sufficient historical depth. All the available indexes, as a rule, are compiled either by Cbonds or by foreign agencies (for example, Bloomberg), and have been followed from the mid-2000s. We applied our own calculated indexes for RF eurobonds, and thus also calculated our own values of historical risk premium for Russian stocks (HRP1 and HRP2).

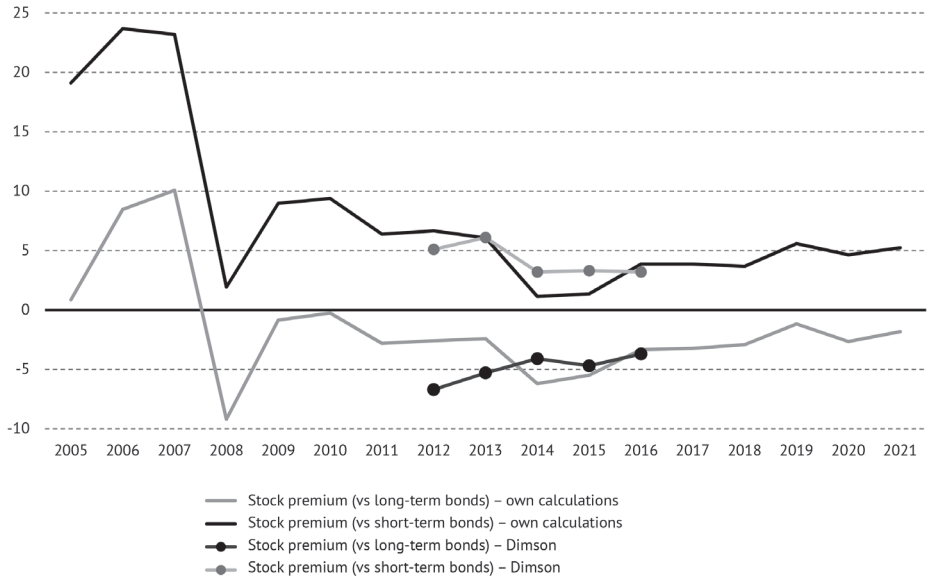


Fig. 11. The long-term historical equity risk premiums vs short-and long-term eurobonds (in US dollars), 2005–2021

Source: own calculations based on data released by Bloomberg.

risk-free rate) and long-term eurobonds (the most commonly used proxy for the risk-free rate). The equity risk premium on Russian stocks relative to long-term bonds has been negative since 2008, while having slightly improved, from -2.7% in 2020 to -1.8% in 2021. The amount of premium relative to short-term bonds has remained positive, and in 2021, it rose on the previous year, from 4.6% to 5.2%.

The negative premium on stocks calculated relative to long-term bonds indicates that foreign investors were cautious in their assessment of the cash flow growth sustainability, and primarily the factors like net profits and corporate governance quality of Russian companies, as well as the general investment climate in this country.

As has been shown by Credit Suisse's reports over several years, most of the major stock markets are characterized, on a long-term horizon, by positive equity risk premiums on stocks relative not only to short-term government bonds, but also to long-term ones, and so the negative premium on stocks in our study, calculated relative to long-term debt instruments on the domestic stock market, points to the existence of some problems in Russia's stock market compared with the stock markets of other countries.

An example of another approach to estimating equity risk premiums is the Bloomberg methodology based on expected stock returns. In particular, risk premiums are calculated as the difference between the expected market rate of return of stocks and the risk-free rate, which is understood to be the yield

to maturity of zero-coupon 10-year government bonds denominated in the local currency. For Russia, the MICEX Russia Zero Cpn 10 Year index is applied as the risk-free rate. The market yield is determined using the dividend discount model (DDM), which is calculated as a capitalization-weighted ex ante internal rate of return for each stock. The model is evaluated on the basis of a 5-year consensus forecast for earnings-per-share growth rates.

Companies usually try to offset the low equity risk premiums by increased dividend payments, so the country risk premium data are posted by the Bloomberg Terminal to the specially assigned information pages together with data on dividend yields and dividend payout ratios. All these indicators are the weighted averages for all the stocks and stock issuers included in MOEX Russia Index.[1]

The long-term and short-term trends in the movement of equity risk premiums, dividend payments and dividend yields on Russian stocks for the most part followed very similar patterns (*Fig. 12*). Over the entire period under review from December 14, 2012 through March 25, 2022, the growth of equity risk premiums from 8.71% to 11.37% was sustained by the rising mean dividend payout rates, from 20.5% to 56.1%, and the dividend yields of the MOEX Index constituent companies, from 2.9% to 9.9%. Over a shorter term, the decline in the equity risk premiums, from 15.60% in June 2020 to 4.64% in February 2021, occurred alongside the downward movement of dividend payout rates, from 58.7% in May 2020 to 45.2% in January 2021, and that of dividend yields, from 8.1% in April 2020 to 5.0% in June 2021. And conversely, when equity risk premiums increased, from 4.64% in February 2021 to 17.68% in February 2022, as the economy was recovering, their upward movement was sustained by that of dividend payouts, which increased from 45.2% in January 2021 to 57.1% in February 2022, and dividend yields, from 5.0% in June 2021 to 7.2% in February 2022.

Equity risk premiums sharply declined, from 16.70% on February 25, 2022 to 11.30% on March 25, in response to the key rate increase from 9.5% to 20.0% per annum announced by the Bank of Russia on February 28, 2022. As a result, over that period, the market stocks return calculated according to Bloomberg's discounted cash flow model plunged from 30.0% to 21.6% per annum, while the yield on long-term government bonds stayed at 12.5%, having been affected very little by the Bank of Russia's decision due to a freeze on revaluation of bonds in the portfolios of financial institutions. All these developments pushed down the equity risks calculated on the basis of yield spreads of stocks and long-term bonds, even while the dividend payout rate remained high, at 56.2%. It can be assumed that alongside a switchover back to market methods of bond valuation, their yield index will increase sharply, while their value will decline. This will push down the equity risk premium (calculated on the basis of the Bloomberg methodology) even further. This trend suggests that in the medium term, the equity risk premiums on stocks issued by Russian PJSCs may become negative, which will increase the investment attractiveness of government securities.

1 The historical data for all three indices are smoothed using a 21-day moving average (approximately 1 month).

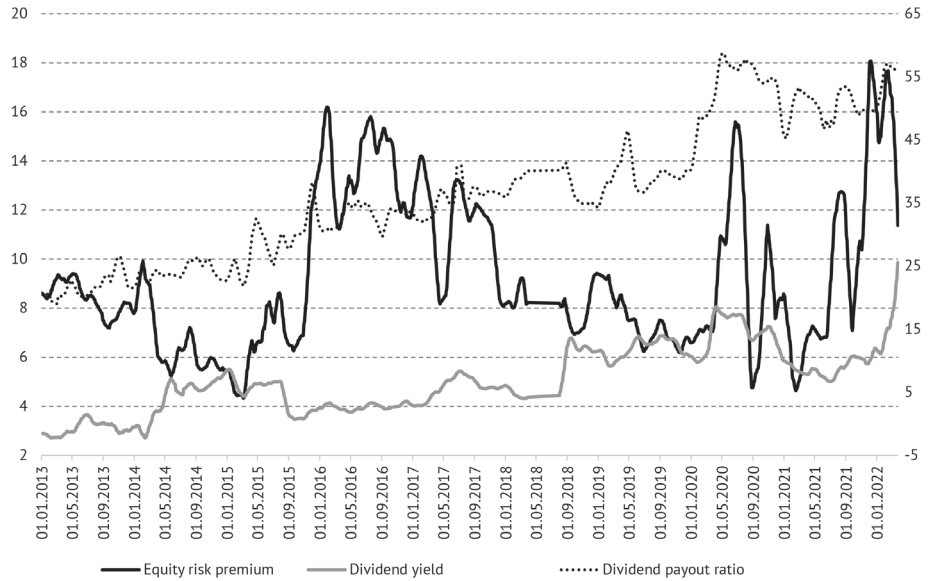


Fig. 12. The equity risk premiums on Russian stocks (left-hand side axis) and additional parameters: dividend yield (left-hand side axis) and dividend payout ratio (right-hand side axis), as %, 21-day moving average

Source: own calculations based on data released by the Bloomberg Terminal.

Discount rate indicators include the equity risk premiums published by a group of Spanish researchers led by Pablo Fernandez and US economist Aswath Damodaran. An increase in the equity risk indicators applied in calculating the discount rate for cash payments to shareholders in the form of dividends brings down the value of stocks and the return on investment. All other conditions being equal, a low equity risk premium is a positive signal for foreign investors to buy Russian stocks.

Fernandez estimates the average equity risk premium based on opinion polls of scientists and business communities across different countries, who were asked about the particular equity risk premiums and risk-free rates that they had applied in their studies over the past year.[1] According to the latest survey by Fernandez

1 *Fernandez P., Aguirreamalloa J., Corres L.* Market Risk Premium Used in 56 Countries in 2011: A Survey with 6,014 Answers. URL: http://ssrn.com/abstract=1822182; *Fernandez P., Aguirreamalloa J., Corres L. Market* Risk Premium Used in 82 Countries in 2012: A Survey. URL: http://ssrn.com/abstract=2084213; *Fernandez P., Aguirreamalloa J., Linares P.* Market Risk Premium and Risk Free Rate Used for 51 Countries in 2013: A Survey with 6,237 Answers. URL: http://ssrn.com/abstract=914160; *Fernandez P., Linares P., Fernandez A.I.* Market Risk Premium Used in 88 Countries in 2014: A Survey with 8,228 Answers. URL: http://ssrn.com/abstract=2450452; *Fernandez P., Pershin V., Fernandez A.I.* Discount Rate (Risk-Free Rate and Market Risk Premium) Used for 41 Countries in 2015: A Survey. URL: https://ssrn.com/abstract=2598104; *Fernandez P., Ortiz A., Fernandez A.I.* Market Risk Premium Used in 71 Countries in 2016: A Survey with 6,932 Answers. URL: https://ssrn.com/abstract=2776636; *Fernandez P., Pershin V., Fernandez A.I.* Discount Rate (Risk-Free Rate and Market Risk Premium) Used for 41 Countries in 2017: A Survey. URL: https://ssrn.com/abstract=2954142; *Fernandez P., Pershin V., Fernandez A.I.* Market Risk Premium and

published in 2021, the risk premium on Russian stocks rose from 7.8% in 2020 to 8.1% in 2021 (*Fig. 13*). The data summary released by Fernandez offers a sociological picture of how different specialists perceive the equity risk premiums in one or other country, but his data can hardly be applied efficiently in predicting risks and, consequently, the fair value of stocks.

A more sophisticated approach is used by Damodaran, who estimates country risk premiums (CRP) by adding country premiums to a risk-free rate calculated using the indicators of return on government securities and the volatility of shares issued by local companies.[1] Based on the methodology suggested by Damodaran, we calculated *project risk premiums* (PRPs)[2]. It is these indicators that have been most frequently used by investors to calculate the cost of capital and the expected effectiveness of future investment projects. The equity risk premium according to Damodaran consists of the "premium in a base developed market" plus the

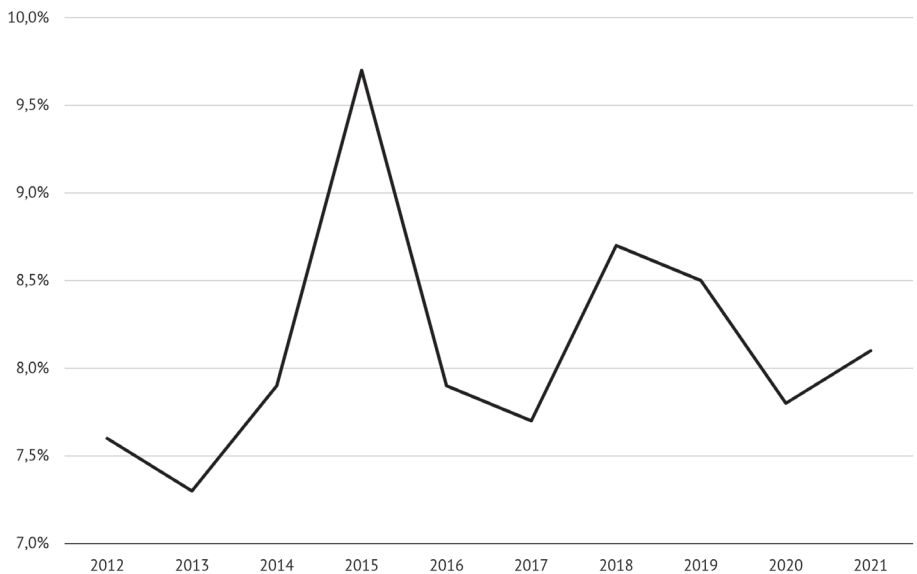


Fig. 13. The equity risk premiums on Russian stocks, as %, 2012–2020

Source: own compilation based on data from the studies by Fernandez et al., etc.

Risk-Free Rate used for 59 Countries in 2018: A Survey. URL: https://ssrn.com/abstract=3155709; *Fernandez P., Martinez M., Fernandez A.I.* Market Risk Premium and Risk-Free Rate Used for 69 Countries in 2019: A Survey. URL: https://ssrn.com/abstract=3358901; *Fernandez P., Martinez M., Fernandez A. I.* Market Risk Premium and Risk-Free Rate Used for 81 Countries in 2020: A Survey. URL: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3560869; *Fernandez P., Martinez M., Fernandez A.I.* Market Risk Premium and Risk-Free Rate Used for 88 Countries in 2021: A Survey. URL: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3861152

1 *Damodaran A.* Country Risk: Determinants, Measures and Implications – The 2020 Edition (14 July 2020). NYU Stern School of Business. URL: https://ssrn.com/abstract=3653512 or http://dx.doi.org/10.2139/ssrn.3653512

2 *Damodaran A.* Equity Risk Premiums (ERP): Determinants, Estimation and Implications – The 2019 Edition. URL: https://ssrn.com/abstract=3378246

country risk premium specific of the stocks issued by a company in a given country. The base market premium is calculated as the discount rate applied to the cash payments to shareholders in the form of dividends and stock buybacks, which grow over a medium-term period of 3-5 years according to market expectations (based on the consensus forecasts released by news agencies, e.g., Bloomberg, Thomson Reuters, etc.), and thereafter at a growth rate that equals the current risk-free rate on 10-year government bonds issued in the base country. The country premium in this approach is determined using the spreads between 10-year government Eurobonds issued by a given country and the bonds denominated in the same currency for the base country, or by using CDS spreads. In addition, in our calculations, the methodology is augmented by the factor of relative volatility of stock returns compared to bond returns in the domestic market of the country under consideration, whereby the country risk premium may be adjusted for the relative equity risk premium.

Fig. 14 shows two indicators of the project risk premiums that we have calculated by applying Damodaran's methodology: the country risk premium determined on the basis of yield spreads of RF and US sovereign bonds denominated in US dollars, adjusted for the volatility of Russian stocks (indicator 1), and the country risk premium calculated on the basis of credit default swap (CDS) premiums on RF sovereign bonds denominated in US dollars, also adjusted for the volatility of Russian stocks (indicator 2).

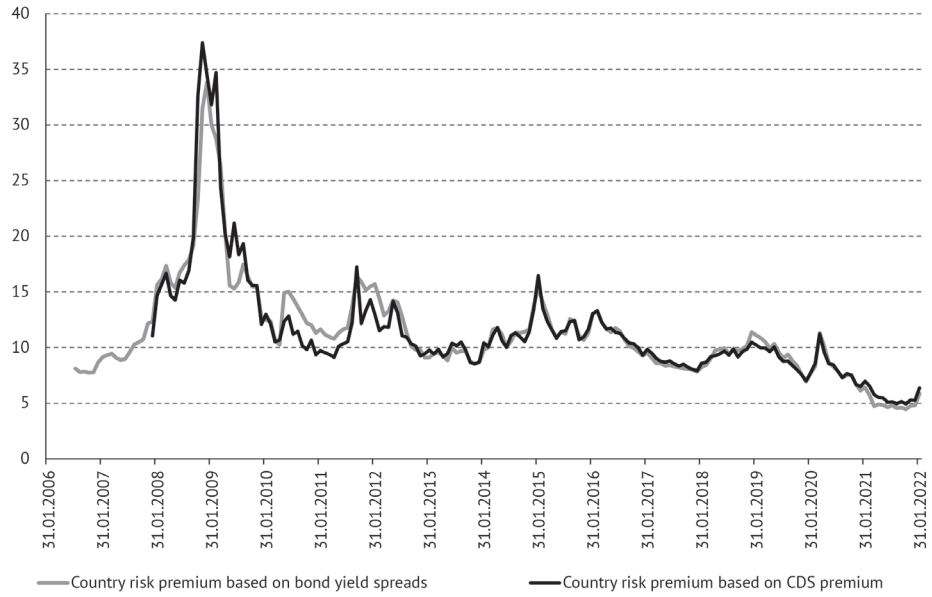


Fig. 14. The current and historical equity risk premiums on Russian stocks, adjusted for their relative volatility in the domestic market, as %, 2006 – January 2022

Source: own calculations based on data released by Bloomberg.

During crisis periods, the equity risk premium spreads, especially those based on indicators that take into account stock volatility, become quite significant. In December 2008, the country risk premiums calculated on the basis of CDS premiums and the yield spreads of sovereign bonds stood at 37.4% and 33.8%, respectively. However, shortly before the onset of the current crisis, in spite of the growing fears associated with rising global inflation, interest rates increases by the US FRS and the ECB, and the mounting geopolitical tensions around the world, both equity risk indicators were at their historically lows, and were relatively weak signals of possible risks: thus, indicator 1 declined from 6.13% in 2020 to 4.80% in 2021, and then and increased to 5.86% in January 2022; over the same period, indicator 2 slid from 6.50% to 5.26%, and then moved up to 6.38%.

The equity risk indicators calculated according to Damodaran cover the period preceding the conflict outbreak in Ukraine on February 24, 2022. The spread of credit default swap (CDS)[1] premiums on RF 10-year eurobonds and US government bonds increased from 151.1 b.p. as of January 3, 2022 to 2436.1 b.p. as of March 24, 2022, or 16.1 times (*Fig. 15*). Over the same period, another sovereign credit risk indicator – the yield spread of RF and US long-term government eurobonds – jumped from 174.2 b.p. to 1,848.8 b.p, or 10.6 times. The growth from 1.5% to

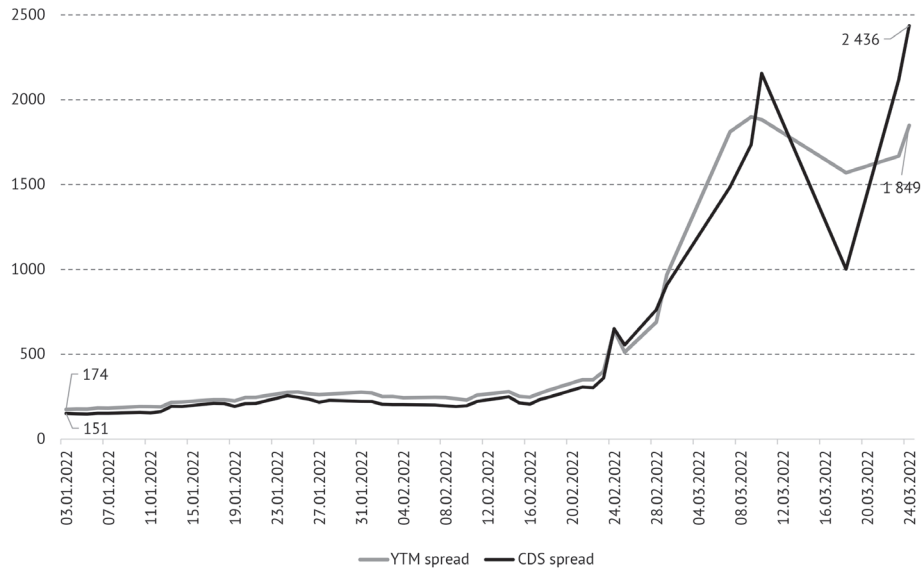


Fig. 15. The spreads of the yields to maturity (YTM) and credit default swap (CDS) premiums on RF 10-year sovereign eurobonds and US 10-year government bonds, January 3 – March 24, 2022, basis points

Source: own calculations based on data released by the Federal Reserve Bank of St. Louis, Cbonds and Bloomberg.

1 CDS premiums reflect the market default risk premium on bonds.

24.4%, in January-March 2022, of the sovereign debt premium included in the calculation of project risk premiums on Russian stocks inevitably caused a collapse of prices for the equity instruments of Russian issuers on foreign and domestic stock exchanges.

Thus, an analysis of the current trends in the Russian stock market demonstrates that the movement pattern of equity risk premiums points to a diminishing investment attractiveness of Russian stocks relative to bonds, while the equity risk premium indicators that assess the value of shares based on discounted cash flow have begun to grow, albeit with a lag, which bring down the value of stocks.

3.1.4. The fundamental characteristics of the stock market

Fig. 16 shows data on the parameters of returns and risks of 30 national stock indexes across 27 countries; for the sake of data comparability, the stock indices are recalculated in US dollars. The return and risk assessments of each country's index portfolios were done for 2021, the 5-year period from 2017 through 2021, and the 13-year period from 2009 through 2021.

In contrast to the situation in 2020 when the RTS Index lost 10.4%, in 2021, with a return of 15.0% per annum, it jumped above the corresponding average index for a sample of 31 national stock indexes amounting to 12.9%; and its risk of 17.1% was just above the sample average of 16.7% (*Fig. 16a*). By its return to risk ratio, it outperformed most of the national indexes of other developing markets. On a 5-year time horizon (2017–2021) (*Fig. 16b*), the return to risk ratio of the RTS Index was only slightly below the sample average. Over that period, the return of the RTS Index amounted to 6.7% per annum vs the sample average of 7.5%. The standard deviation (risk) of the RTS Index climbed to 23.6%, that is, above the sample average of 22.8%.

On a 13-year horizon from 2009 to 2021 (*Fig. 16c*), the RTS Index moved above the sample's average stock return, earning investors a return of 6.6% per annum, while the sample average was only 6.2%. The average annual risk index of the RTS index over the same period amounted to 30.6% per annum, while the sample average stood at just 24.9%.

Thus, against the backdrop of global stock markets, shares in Russian companies appeared to be quite an attractive investment, with an average return and a risk indicator higher than the world averages. This had largely been achieved due to the relatively rapid recovery of the Russian economy after the global crisis caused by the coronavirus pandemic, as well as the proactive dividend policies of many big Russian PJSCs.

The prices for Russian stocks, with their financial indicators of net return and dividend yield being higher than those in many other countries, and their leverage ratios being among the sample's lowest, have been consistently below the prices of their foreign counterparts. As shown in *Fig. 17*, out of the 30 national stock indexes, the price/book value per share (P/BV) ratio[1] of the constituent companies of the RTS Index was among the lowest in the world. In 2021, its average value

1 The P/BV ratio also describes the relative capitalization level of companies. It is the per share ratio between a company's market capitalization and the book value of its net worth.

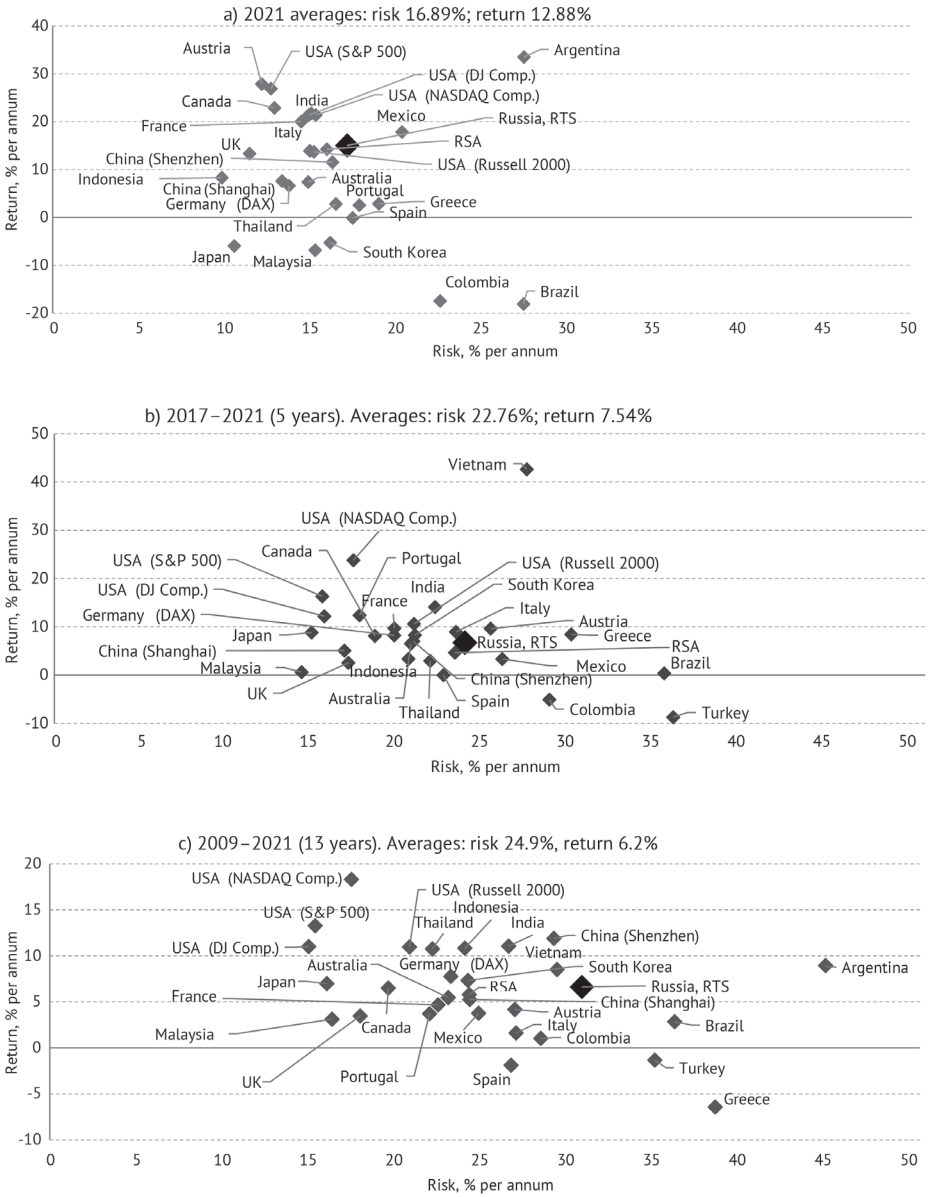


Fig. 16. The geometric mean values of return and risk parameters of 31 national stock indexes for the period from January 2009 through December 2021, in US dollars, on time horizons of 1, 5, and 13 years, % per annum

Source: own calculations based on data released by the Moscow Exchange and Bloomberg.

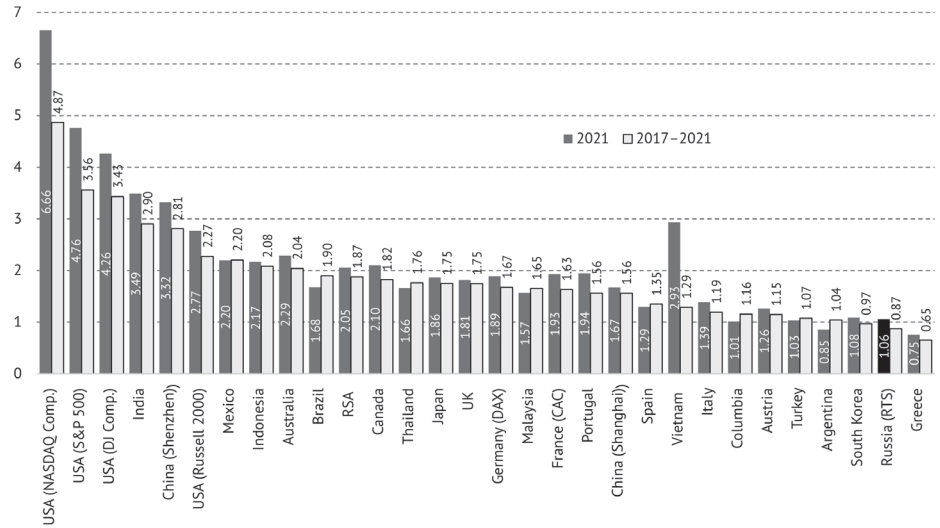


Fig. 17. The financial indicator price/book value per share (P/BV) as of December 31, 2021 and its mean value for the period 2017–2021 based on 30 national stock indexes

Source: own calculations based on data released by Bloomberg.

was 1.1; its mean value based on the period-end results of the 5-year period 2017–2021 stood at 0.9.

The stock prices of Russian PJSCs are lower than those of their competitors in other countries, even though their return on equity (ROE) ratio is significantly above that of the companies trading in other markets.[1] As shown in *Fig. 18*, in 2021, among the 30 national stock indexes, the ROE of 19.9% for the RTS Index was below only five of them (two US indexes, Turkey, the RAS, and Brazil). The average ROE of Russian companies on a 5-year time horizon (2017–2021) amounted to 12.7%, being below only four out of the sample's other 30 national stock indexes. According to data released by Rosstat, in 2021, total profits of Russian companies (less small businesses) increased to Rb29.6 trillion, from Rb13.4 trillion in 2020, or 2.6 times.[2]

In 2021, Russia's biggest public companies operated in conditions of a low debt burden. As shown in *Fig. 19*, in 2021, among 30 national stock indexes, Russia's RTS Index constituent companies had the lowest D/EBITDA Ratio[3] of 0.6, which was above the corresponding parameters only of the stock indexes of Argentina,

1 ROE is calculated as the ratio between the company's net profit and the book value of its net worth, which should not be confused with the company's capitalization, because the latter depends on the number of ordinary shares outstanding and their market prices.
2 URL: https://rosstat.gov.ru/finance
3 The D/EBITDA is the ratio of companies' debt burden to their operating earnings before interest, taxes, depreciation and amortization, thus reflecting their ability to cover their debt by the amount of income generated and available annually.

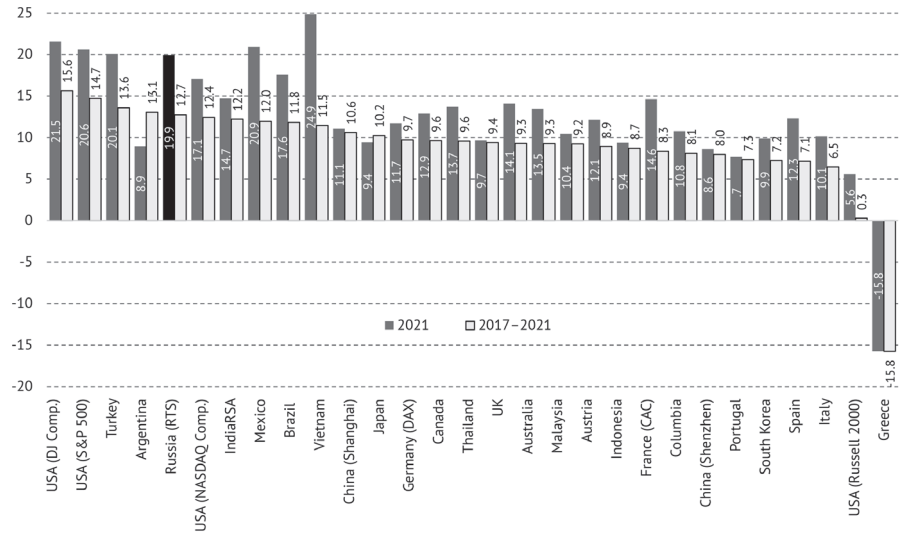


Fig. 18. The financial indicator 'return on equity' (ROE) as of December 31, 2021 and its mean value for the period 2017–2021 based on 30 national stock indexes across 26 countries, %

Source: own calculations based on data released by Bloomberg.

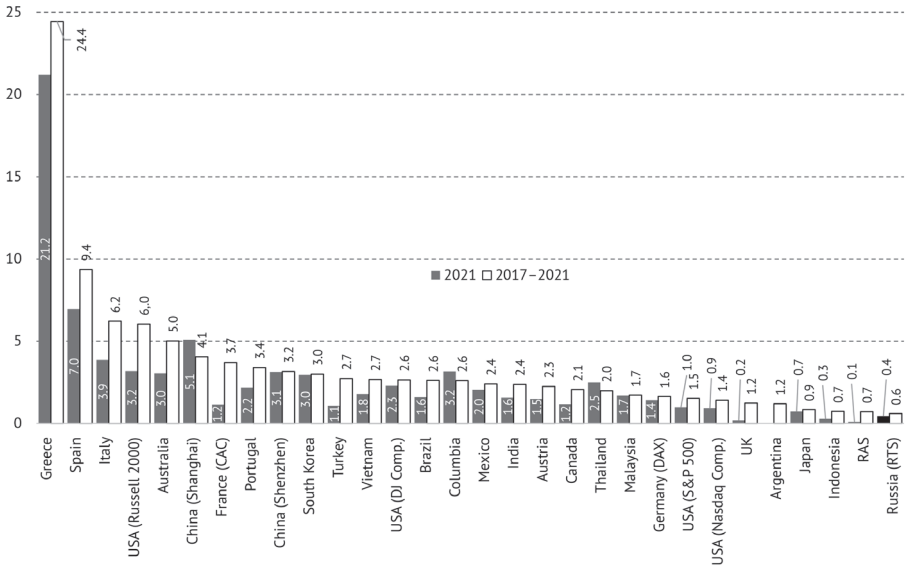


Fig. 19. The financial indicator 'Debt/EBITDA' as of December 31, 2021 and its mean value for the period 2017–2021 based on 30 national stock indexes of 26 countries

Source: own calculations based on data released by Bloomberg.

the RSA, Indonesia and the UK. On average over the period 2017–2021, that constituent of the RTS Index was also the lowest in the sample, amounting to 0.4.

One of the positive trends in the domestic stock market observed after the 2008 crisis has been a significant growth of dividend yield on Russian stocks, from 1.56% in Q4 2009 to 5.71% in Q4 2022, or 3.7 times (Fig. 20a).

The main factors that were pushing up the dividend yields during those years were the desire of issuers to keep up the investment attractiveness of their securities in the eyes of investors; the pressure put by the RF Ministry of Finance on the biggest state-owned companies (SOEs) to make them pay at least 50% of their net profit in the form of dividends; and in part, the desire of major stakeholders to receive additional payments from companies in the form of money that the latter had not invested.[1]

From July 1, 2021, some significant changes were introduced in the dividend policy of PJSCs with federal stakes. Now, in accordance with RF Government Edict No. 1589-r dated June 11, 2021, they are required to earmark not less than 50% of their adjusted net profit for the payment of dividends on their shares. It took 15 years to solve the problem of a legislatively established dividend payout floor, and throughout that period biggest state-owned companies, to the best of their administrative resources, tried to secure their individual rules of the game in the field of dividend payments.

The new approach to the dividend policy of state-owned companies introduced in 2021 resulted in a compromise solution with regard to the base that dividend payments were to be tied to (net profit or operating cash flow). The compromise scheme established by RF Government Edict No. 1589-r envisaged that the dividend base should be calculated by the amount of net profit entered by a company into its consolidated financial statement and adjusted downwardly by the income or upwardly by the expenses that were not confirmed by documented cash flows. Besides, net profit could be adjusted for the following items: inventory revaluation of fixed assets and intangible assets, and the fair value of financial assets; exchange rate differences; and some other factors. If the adjustment of net profit resulted in an excess of the amount of dividend payments over that of net profit, the company was to cover the difference by its retained earnings of previous years.

A policy of high dividend payouts is fraught with increased medium-term risks.[2] In some cases, an excessive redistribution of net profits towards dividend payments can push down the market value of shares in amounts that would exceed the dividend income of shareholders. As a result, companies with high dividend payouts will be offering to investors lower returns compared with the return on the market portfolio, not only in terms of stock price, but also in terms of total returns, dividends including.

In 2021, although the average dividend yield on stocks issued by Russian companies increased to 5.71% vs 5.40% in Q4 2020, the movement pattern of

1 *Abramov, A.E., Radygin, A.D., Chernova, M.I., Entov, R.M.* The "Dividend Puzzle" and the Russian Stock Market. Part 1 // Voprosy Ekonomiki. 2020. No. 1. P. 66-92. Part 2 // Voprosy Ekonomiki. 2020. No. 2. P. 89–85.

2 *Abramov, A.E., Belyakov, Yu.A., Radygin, A.D., Chernova, M.I.* Features and Risks of the Dividend Policy of Russian Joint-stock Companies // Russian Economic Development. August 2021. P. 37–46.

that indicator was unstable (*Fig. 20a*). After hitting an all-time high of 8.12% in Q1 2020, the dividend yield was on the decline for six consecutive quarters, moving to 4.42% in Q3 2021. This happened because companies, in order to sustain their financial strength during the coronavirus pandemic, were generally reducing the amount of dividends, while stock prices began to recover rapidly from mid-2020 onwards.

At the same time, even if we take into account the constraints on the dividend policy of companies during that period, Russia's RTS Index was the world's leader in terms of dividend yield. Over the period 2017–2021, the RTS Index, with a 5.5% dividend yield on stocks, demonstrated the best performance among the 26 major stock exchange indexes around the world, and in 2021 it was second only to the national stock index of Brazil (*Fig. 20b*). The policy of non-payment of dividends during the global recession caused by the coronavirus pandemic was shared by all countries, Russia including.

However, the dividend yield index by no means always objectively reflects the effectiveness of a company's dividend policy. It is understood as the quotient of the dividend payout ratio (as a percentage of net profit) divided by the price-to-earnings (P/E) ratio. The growth of dividend yield may result not only from an increasing dividend payout ratio (which is a positive factor for shareholders), but also from a declining P/E ratio in response to a company's falling stock prices relative to its net profit, which is a factor that can give rise to negative consequences for investors.

In spite of the adoption of RF Government Edict No. 1589-r dated June 11, 2021, whereby companies with state participation were required to allocate at least 50% of their net profits for dividend payments, in reality the dividend payout rate of the RTS Index constituent companies sharply shrank, from 87.9% of their net profits in Q3 2020 to 39.8% in Q4 2021 (*Fig. 20c*). This happened because in 2021, alongside a significant increase in their profits,[1] they still followed the practice of reducing the amount of their dividends in response to the coronavirus pandemic until the end of the year. Thus, in 2021, the decreased dividend payments of the largest Russian companies, including SOEs, translated into a decline in the dividend-generated budget revenue.[2]

The aggravation of geopolitical risks is also likely to prevent companies from resuming their dividend payments in 2022. On February 25, 2022, the Bank of Russia recommended that banks postpone the accrual of dividends to a later date.[3] According to RBC, while preparing for their general meetings of shareholders, the

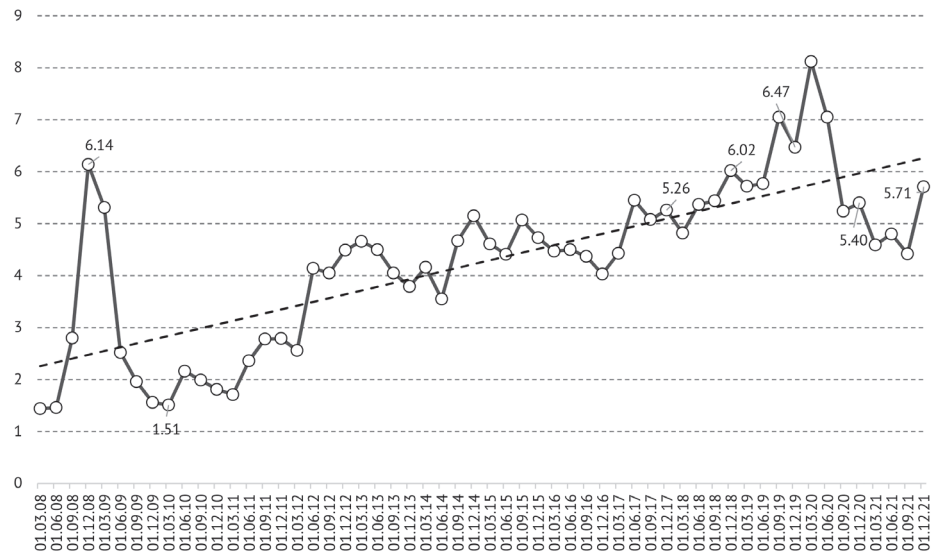
1 According to data released by Rosstat for 2021, total profits of Russian companies, less small businesses, increased 2.6 times on 2020.

2 According to available estimates, budget revenue in the form of dividends should decrease from Rb639.5 bn in 2020 to Rb560 in 2021 (projected value). Meanwhile, the budget revenue projections for 2022-2024, as stated in the explanatory notes supplied by the RF Ministry of Finance, envisage an increase in the revenues generated by dividends to be paid by SOEs, to Rb990 bn in 2022, Rb1.033 trillion in 2023, and Rb1.050 trillion in 2024, as a result of the subsequent growth in company profits and resumed dividend payments (The RF Ministry of Finance expects a significant increase in dividend receipts. Prime Business News Agency. September 21, 2021. URL: https://1prime.ru/News/20210921/834753693.html).

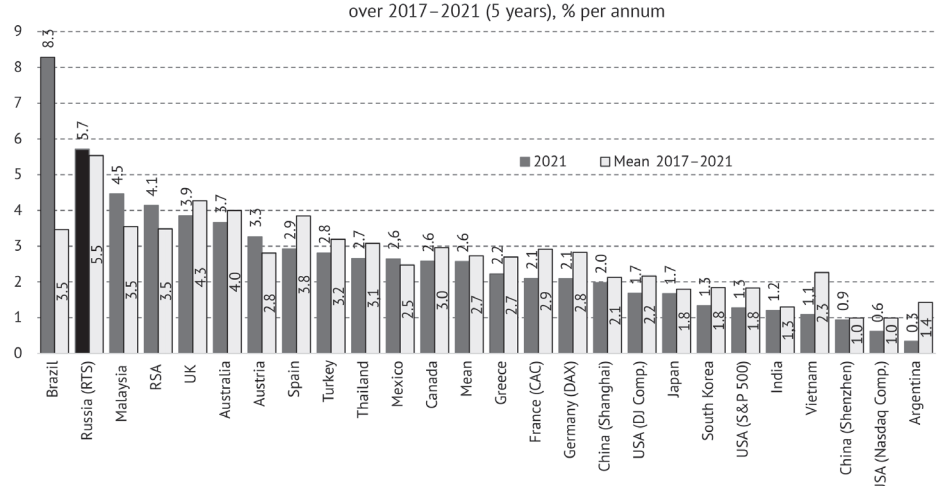
3 URL: http://cbr.ru/press/pr/?file=25022022_160000SUP_MEAS25022022_155231.htm

boards of directors of at least 10 PJSCs (the Moscow Exchange, Mother and Child Medical Group, Raspadskaya OJSC, Enel Russia, X5 Group, Rusagro, LSR Group, Cherkizovo, and NLMK) issued recommendations that the dividends based on the performance of companies in 2021 should not be accrued for that year.[1]

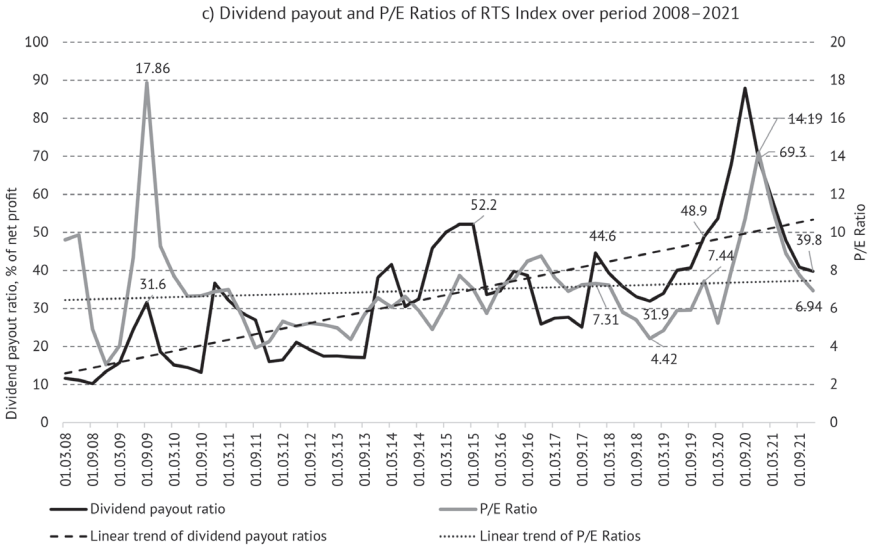
a) Dividend yield of RTS Index in 2008–2021, % per annum



b) Dividend yields of broad stock market indexes of different countries in 2021 and their mean value over 2017–2021 (5 years), % per annum



1 URL: https://quote.rbc.ru/news/article/6245a0b89a7947dc260e2ec3



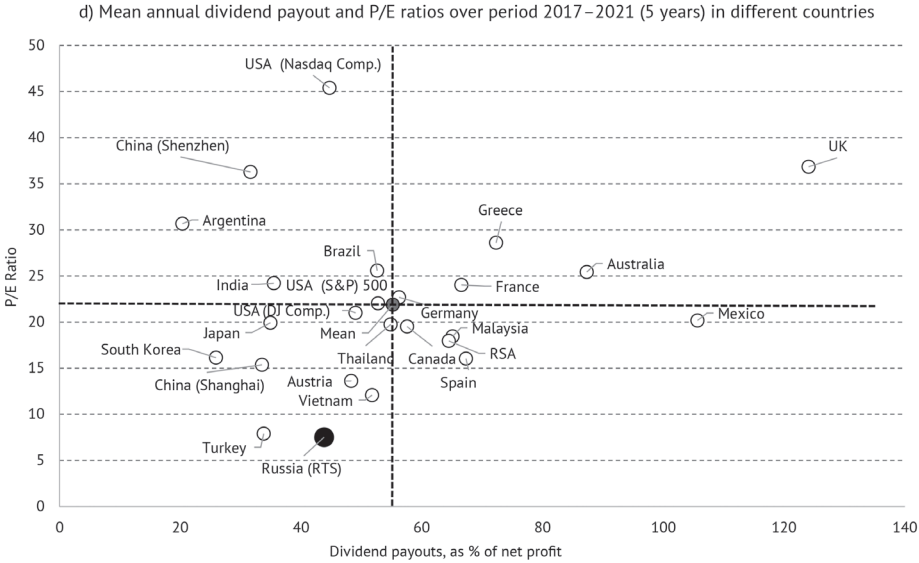


Fig. 20. The dividend yield on the RTS Index, as % of market stock price, as of December 31, 2021

Source: own calculations based on data released by Bloomberg.

Meanwhile, alongside a declining dividend yield, the shrinkage of the P/E Ratio from 14.2 in 2020 to 6.9 in 2021 (*Fig. 20c*) in response to the accelerated growth of companies' net profits relative to their capitalization (stock prices), as a result of the specific method of calculating the dividend payout ratio that we have

mentioned earlier, the year-end dividend payout ratio for 2021 did not decline, but even slightly increased.

Over the period 2017–2021, the RTS Index stayed below the other national stock indexes in terms of dividend yield and P/E Ratio (*Fig. 20d*). However, while by its dividend yield of 43.8% the lag of the RTS Index relative to the sample average value (55.2%) was moderate, its average annual P/E ratio was the sample's lowest, at 7.5 vs 21.9%. At the same time, the RTS average annual dividend payout ratio for the period 2017–2021 turned out to be the highest of the entire sample of 26 national stock indexes (*Fig. 20b*).

Over the period 2007–2021 (14 years), the cumulative equity risk premium on Russian stocks[1] amounted to 227.5% for the MOEX Total Return Index[2], and to 409.2% for our calculated broad market portfolio index (RMRF) (*Fig. 21*). This means that the more diversified RMRF index also included the stocks with higher yields that were not included in the MOEX portfolio.

Tradable shares in Russian companies and their issuers have certain specific features. In our classification of issues of shares, we applied the following criteria: capitalization index; liquidity on the secondary market; P/BV Ratio; dividend yield; the size of state-owned stakes; stock returns over the previous period; and P/E Ratio. A separate portfolio was compiled for each of these criteria, to be reviewed on a quarterly basis. This approach makes it possible to evaluate, on a monthly basis, the returns on stocks issues by different groups of companies, each group sharing one or other specific feature.[3] Besides, it becomes possible to evaluate their corporate strategies on the basis of these financial indicators, as well as to plot factor investment strategies, which are widely used by institutional investors all over the world.[4]

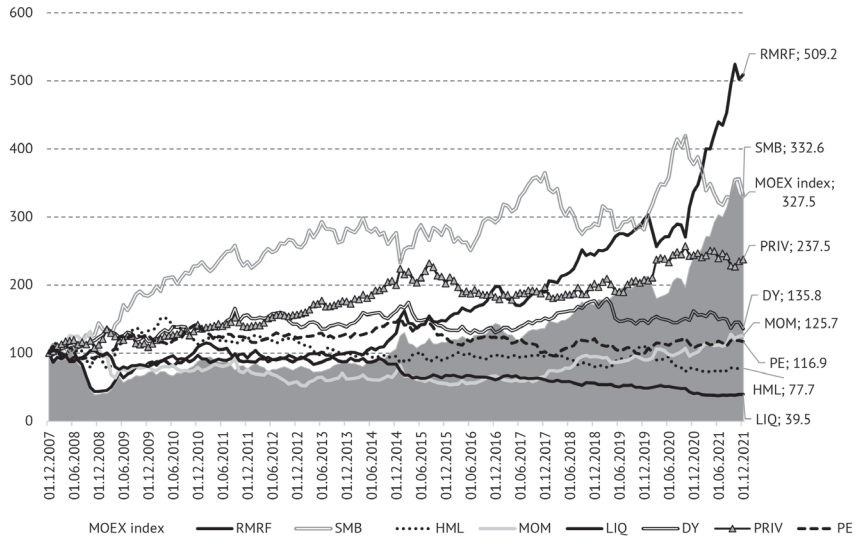
In 2021, the cumulative equity risk premiums for six of the seven factor investment strategies, calculated as the difference between the return on a stock portfolio with a high factor value, minus the return of a stock portfolio with a low factor value, did not result in additional returns compared to the returns of the broad market portfolio index (RMRF) and the MOEX index, minus risk-free returns (*Fig. 21*). It was only the return on shares in small-cap companies that slightly exceeded the cumulative return on the MOEX index. This is in line with the widespread theoretical assumption that during periods of a rising stock market, more diversified portfolios have a return advantage over less diversified ones.

1 The difference between the return on a market stock portfolio and on a risk-free asset. As market portfolios, we used in our calculations the MOEX Russia Total Return Index (MCFTR) and a broad market portfolio (RMRF) composed of all the stocks traded on the market, where each stock was weighted by the market capitalization index of its issuer (with weight cap of 15%). Unlike the MOEX index, a broad market portfolio is adjusted by survivorship bias, i.e. the yields on stocks no longer traded on the stock exchange.

2 Hereinafter, the total returns on the MOEX and RMRF indexes are understood as the sum of a proportional rise in the market value of stocks included in the index portfolio and their dividend yield.

3 We publish the regularly updated historical series of returns for each of these stock market factors at the official website of the RANEPA Center for Institutions Analysis and Financial Markets (RANEPA IAES) at https://ipei.ranepa.ru/ru/capm-ru

4 For more details on the use of factor pricing models in the Russian stock market, see *Abramov, A.E., Radygin, A.D., Chernova, M.I.* Pricing models of shares in Russian companies and their practical application // Voprosy Ekonomiki. 2019. No 3. P. 48–76.



Note. The MOEX index (MCFTR) is the market equity risk premium on stocks, calculated as the difference between the return on the MOEX Index, including dividend yields (starting from January 2009) and the return of a risk-free asset; the RMRF index is the market equity risk premium on stocks, calculated as the difference between the return on a broad market portfolio, including dividend yields, and the return on a risk-free asset. SMB is a size and value factor, calculated as the difference between the weighted average return on small-cap stock portfolios and that on large-cap stocks (including dividend yields). SMB is a size and value factor, calculated as the difference between the weighted average return on small-cap stock portfolios and that on large-cap stocks (including dividend yields). The companies were grouped into 'small-cap' and 'large-cap' ones once a year, with the market cap set at the median. HML is a cost factor calculated as the difference between the weighted average return on portfolios of value stocks and that on portfolios of growth stocks (including dividend yields). The stocks were regrouped into the categories of growth and value stocks once a year according to their book-to-market ratio. MOM is a momentum (inertia) factor calculated as the difference between the returns on portfolios with high and low total returns in the previous 11 months (including dividend yields). The stocks were redistributed between portfolios with high and low total returns once a year, with the quantile caps set at 30% and 70%. LIQ is a liquidity factor calculated as the difference between the weighted average return on low-liquidity stock portfolios and that on high-liquidity stock portfolios, including dividend yields. DY is a dividend yield factor calculated as the difference between the weighted average return on high-dividend stock portfolios and that on low-dividend stock portfolios. The dividend yield is understood as the ratio of the sum of all dividends payable for a calendar year to the stock price at year beginning. PRIV is a state ownership factor calculated as the difference between the weighted average return on stocks issued by private companies and that on stocks issued by state-owned companies (SOEs). A company was treated as a SOE if in its quarterly reports for the previous year the stake held directly or indirectly by the state amounted to more than 10% of its authorized capital. PE is a growth factor calculated as the difference between the weighted average returns on stock portfolios with high and low PE ratios (including dividend yields)1.

Fig. 21. The cumulative returns on the MOEX index (MCFTR), the broad market portfolio index (RMRF), and the investment factors that were influencing them from December 2007 through December 2021

Source: own calculations based on data released by CAPM-RU (RANEPA, IAES). URL: https://ipei.ranepa.ru/capm-ru

1 For further details concerning the methodology applied in calculating each return factor, see the CAPM–RU project on the official website of the RANEPA. URL: https://ipei.ranepa.ru/ru/capm-ru/metodika-rascheta-faktorov

The market patterns described in the Note to *Fig. 21* by no means imply that factor investment strategies do not work in the Russian stock market and do not generate an additional return relative to that on the broad market portfolio. Over the period 2007–2021, the factor portfolios composed only of selected stocks with certain high factor values (i.e., only long positions in the stocks portfolios) generated significantly higher returns for a number of factors compared with the market portfolios (the return on a risk-free asset was not subtracted from the latter). As shown in *Fig. 22*, on the time horizon 2007–2021, the cumulative returns on portfolios of stocks issued by private companies (819.4%), top dividend yield stocks (699.0%), growth stocks (with a high P/E Ratio) (595.9%), and top growth stocks (579.9%) were significantly above the cumulative returns on the broad market portfolio index (RMRF) and the MOEX index (MCFTR), which amounted to 477.9 and 271.3%, respectively.[1]

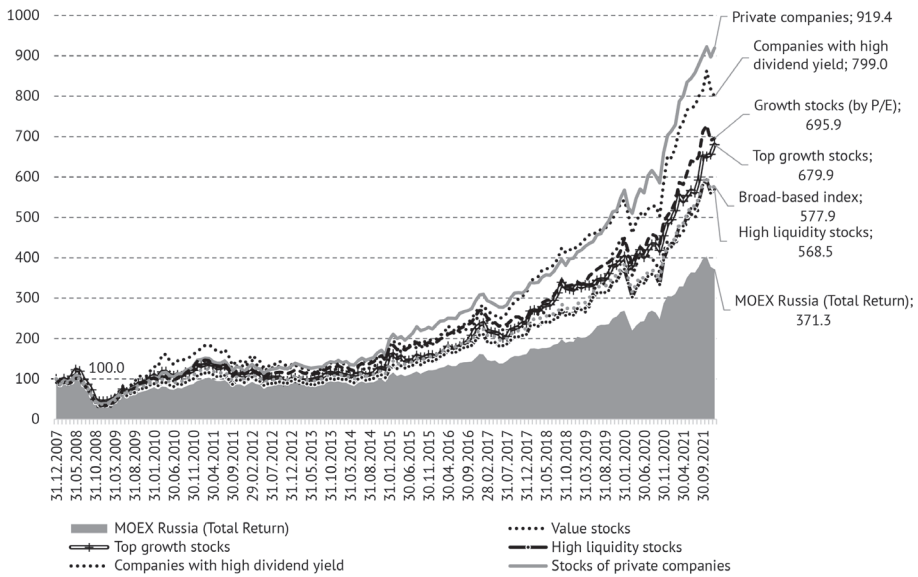


Fig. 22. The cumulative returns on the portfolios of best performing stock categories compared with the MOEX Russia Index, total return, December 2007 = = 100%, from December 2007 through December 2021

Source: own calculations based on data released by CAPM-RU (RANEPA, IAES). URL: https://ipei.ranepa.ru/capm-ru

1 Some differences in the cumulative market returns on the RMRF index and the MOEX Index in Fig. 21 and 22 are explained by the starting point for calculations in Fig. 19 being December 2007, and that for calculations in Fig. 20, January 20, 2008.

Table 5

Annual returns on all long factor portfolios, 2007–2021, %

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Mean return, 2007—2020
Risk free rate of return	-0.1	-12.7	24.8	2.5	-1.2	6.9	-3.5	-20.9	19.7	6.8	5.0	-5.1	12.1	1.7	-11.3	0.99
State-owned enterprises	11.0	-65.3	145.4	15.9	-19.1	-1.6	-2.4	-3.9	37.9	50.8	-3.8	19.4	32.4	5.6	33.0	8.98
Low liquidity stocks	41.5	-60.8	96.0	52.5	-20.4	8.4	4.1	-0.8	16.4	31.5	1.9	14.7	21.9	0.7	32.3	10.20
Lowest-growth stocks	14.2	-60.8	171.8	32.2	-24.3	20.1	0.5	-9.4	59.7	22.2	2.4	-7.6	28.0	7.2	9.9	9.13
Stocks without dividends	22.4	-64.7	176.1	55.5	-21.2	2.7	4.5	21.0	42.0	27.2	-2.6	-6.2	17.6	-5.8	36.6	10.93
Market risk premium	18.9	-56.4	95.1	28.0	-14.9	-2.3	11.1	28.5	13.9	34.1	-3.8	28.3	21.6	13.9	50.9	12.76
Stocks with low dividend yield	24.9	-64.3	136.1	12.9	-20.5	9.6	9.0	-7.9	52.6	47.7	-3.6	14.6	49.2	9.8	-16.2	8.82
Large-cap stocks	13.4	-63.7	133.6	28.9	-16.1	3.4	6.8	1.9	37.3	43.6	0.8	22.1	36.0	14.9	34.8	12.66
High liquidity stocks	13.4	-64.1	136.4	26.8	-15.1	3.6	7.0	2.2	39.6	45.0	0.7	22.6	39.7	17.2	34.7	13.25
Value stocks (by P/E)	18.7	-64.9	129.8	25.4	-8.3	3.3	7.3	-2.5	48.3	42.1	9.7	11.8	50.4	8.4	9.3	12.01
Broad-based index	18.7	-62.7	140.9	31.0	-16.2	4.2	7.4	2.2	37.6	43.2	0.9	22.0	36.0	15.3	34.7	13.70
Growth stocks (by P/E)	21.1	-65.1	187.8	42.7	-22.3	4.8	13.5	10.4	27.9	44.1	-7.5	33.7	24.9	21.1	37.9	15.26
Growth stocks	11.1	-64.3	172.9	65.9	-23.3	1.1	9.0	10.2	39.7	32.8	-2.5	24.4	25.5	38.8	25.2	15.07
Stocks with high dividend yield	8.2	-55.6	132.3	29.2	-3.5	0.8	6.6	8.0	29.8	42.4	13.0	33.4	27.8	21.9	22.4	15.41
Top growth stocks	48.0	-55.9	134.1	30.2	-21.3	-5.8	15.4	8.7	27.0	47.4	2.5	33.9	22.2	23.8	40.1	16.65
Value stocks	65.2	-66.6	259.8	41.9	-18.6	-2.9	-8.2	8.2	38.3	38.4	-3.4	5.2	72.1	-1.1	25.7	15.95
Private stocks	27.4	-61.1	148.5	51.2	-19.4	12.0	10.6	9.7	39.8	37.4	4.6	24.0	37.4	28.3		15.74
Small cap stocks	53.4	-44.3	196.5	60.7	-12.4	14.6	18.5	0.8	47.0	46.4	26.5	-1.3	33.0	56.7	20.1	26.21

Source: own calculations based on data released by CAPM-RU (RANEPA, IAES). URL: https://ipei.ranepa.ru/capm-ru

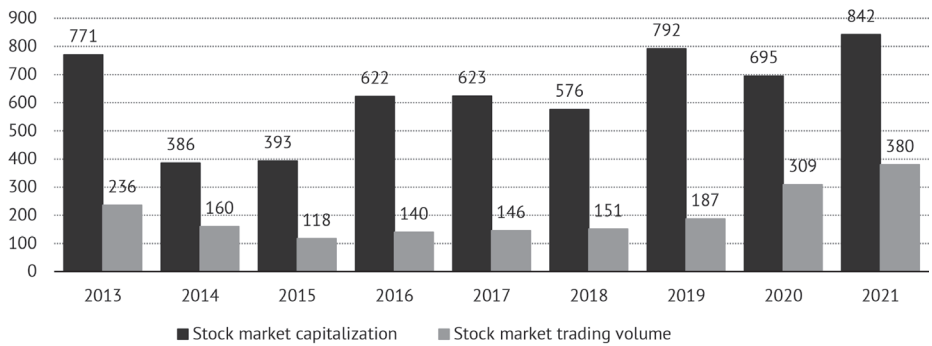
Table 5 demonstrates a similar pattern on a 15-year horizon (2007–2021): the average annual returns on the portfolios of stock issued by small companies, top growth stocks, and high-dividend stocks exceeded the return on the broad market portfolio index (RMRF). Thus, over the period 2007–2021, factor investment strategies provided investors in Russian stocks with an opportunity to significantly boost the return on their portfolio investments.

3.1.5. The organization of the stock market

In 2020, the positive upward trend in the total value of traded stocks continued on the stock exchange market, which primarily had to do with an inflow of individual investors. The total volume of market trades in shares on the Moscow Exchange increased to $380 bn, from $309 bn in 2020, or by 23.0% (*Fig. 23*). The growing demand for Russian stocks pushed up the total market cap of stock issuers, from $695 bn in 2020 to $842 bn in 2021, or by 21.2%.

Starting from 2013, for 9 years in a row, there has been a downward trend in the number of listed issuers on the Moscow Exchange (*Fig. 24*). In 2021, their number shrunk on 2020 by another 3 companies, to 210. The main obstacle to increasing the number of listed companies is a weak inflow of new Russian companies onto the stock exchange market.

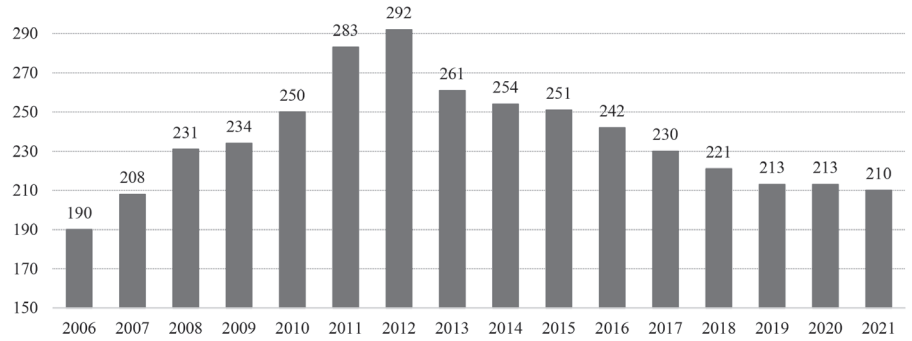
The period 2020–2021 saw a revival of public offerings of shares in Russian companies (IPOs and SPOs) on Russian and foreign exchanges. However, one serious problem of the Russian stock market is the lack of proper statistical records of such transactions kept by financial regulators and analytical databases. As a result, there exist some serious discrepancies in the statistics on IPO-SPOs by Russian companies available from the Moscow Exchange, the World Federation of Exchanges, Bloomberg, Preqveca.ru, and some other data suppliers. In this review,



* Market transactions are understood as the transactions concluded during an anonymous auction on the Moscow Exchange.

Fig. 23. The capitalization and volume of market stock transactions* on the Moscow Exchange in 2013–2021, billions of USD

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



* The figures for the period 2006–2011 are based on the listing data released by the MICEX; for the period 2012–2021, on the listing data released by Moscow Exchange PJSC.

Fig. 24. The number of companies listed on the Moscow Exchange in 2006–2020*

Source: own calculations based on data for 2006–2008 taken from NAUFOR's (Russian National Association of Securities Market Participants) factbook 'Russian Stock Market: 2015. Events and Facts'; and data for 2009–2021 released by the World Federation of Exchanges (WFE).

based on relevant data for 2020–2021, we for the first time attempted to develop a classification of public offerings of shares in companies registered in Russia and carrying out their main operations in Russia (Russian companies) on Russian and foreign exchanges.[1]

As can be seen in *Table 6*, the total volume of IPO-SPOs by Russian companies on the Russian stock exchanges (less ADDL) increased from $2.9 bn in 2020 to $4.9 bn in 2021, or 1.7 times. Out of the total amount of such transactions closed in 2021, 61.2% involved shares to the total value of $3.0 bn sold with the purpose of raising capital, while the remaining 38.8% were resales of shares by their previous owners. In the total value of the IPO-SPOs launched in 2021, $2.1 bn, or 42.9%, was taken up by transactions closed on Russian exchanges, and the remaining 57.1% were those closed on foreign exchanges.

The main directions in the development of the IPO-SPO market for shares in Russian companies have to do with the goals of increasing its share taken up by Russian stock exchanges in terms of trading volume and improving the parameters of trading on Russian stock exchanges, in particular, boosting the

1 Based on the classification of transaction categories applied by the World Federation of Exchanges, we identified 9 types of public offerings of shares on stock exchanges. The first group includes 4 types of transactions on Russian stock exchanges either in the form of an IPO or SPO launched by a stock issuer in order to raise capital, or a resale of shares by their owners (that is, without raising new capital for their issuer). The second group consists of 4 types of IPOs and SPOs similar to those in the first group, but these involve only trades on foreign exchanges in shares issued by companies that operate mostly in Russia. And the ninth type of transactions is the sale of a large block of shares in a public company through an accelerated bookbuild. In our opinion, transactions of the ninth type are not IPO-SPOs of corporate stocks, because the latter are unavailable to a wide range of investors and, as a rule, these transactions rely on an over-the-counter mechanism.

Table 6

Classification of IPO-SPO transactions of Russian companies in 2020–2021, millions of USD

	2020	2021	Change, %
1. Transactions on Russian stock exchanges, total	1,625.8	2,148.1	32.1
Including:			
IPO, capital raising	550.0	807.9	46.9
IPO, resale of block of shares by its current owner	1,075.8	1,100.1	2.3
SPO, capital raising	0	0	
SPO, resale of block of shares by its current owner	0	240.0	
2. Transactions on foreign exchanges, total	1,311.1	2,766.4	111.0
Including:			
IPO, capital raising	1,311.1	2,204.7	68.2
IPO, resale of block of shares by its current owner	0	561.7	
SPO, capital raising	0	0	
SPO, resale of block of shares by its current owner	0	0	
3. Transactions on Russian and foreign exchanges, total	2,936.9	4,914.5	67.3
Including:			
IPO, capital raising	1,861.1	3,012.6	61.9
IPO, resale of block of shares by its current owner	1,075.8	1,661.9	54.5
SPO, capital raising	0	0	
SPO, resale of block of shares by its current owner	0	240.0	
4. Trades with Accelerated Order Book Formation (ADDL)	136.5	2681	1,864.1

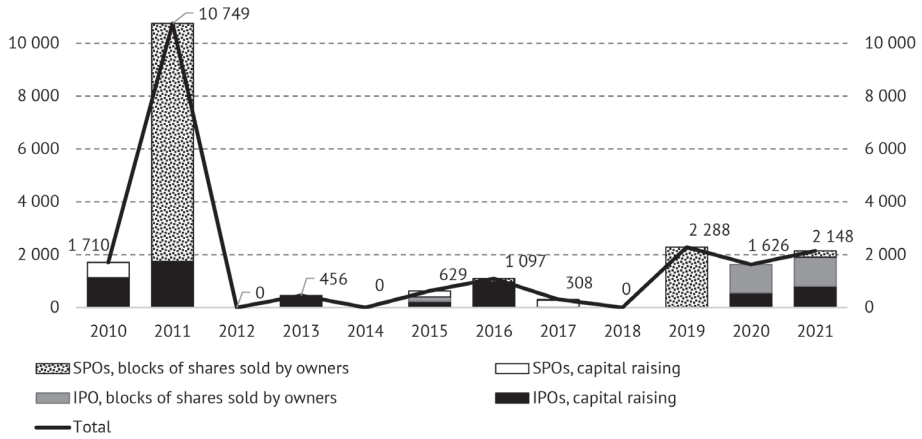
Source: own calculations based on primary statistics released by stock issuers and data released by the Bloomberg Terminal.

levels of underpricing[1] (all other conditions being equal) and the long-term excess returns on these shares.

The data on IPO-SPOs by Russian companies on Russian stock exchanges for the period 2010–2021, less similar transactions on foreign exchanges, are presented in Fig. 25. After a surge in IPO-SPO transactions by $10.7 bn in 2011, over the subsequent years they rarely moved above the threshold of $1 bn, and in 2014 and 2018 they were absent altogether. In 2019, 2020 and 2021, the value volume of IPO-SPOs on domestic stock exchanges amounted to $2.3 bn, $1.6 bn, and $2.1 bn, respectively.

The low activity in Russia's market for public offering of stocks has to do both with the problems presented by their low supply by issuers and the insufficient demand on the part of investors. In view of the banking system's high liquidity, it was easier for companies to obtain financing from banks because, while it is somewhat more expensive than the launch of new stock issues, they are not required to publicly disclosure information on their activities. Besides, in the

1 The difference, expressed as a percentage, between the set IPO or SPO price at which a stock is listed on the exchange and its first-day closing price. A low underpricing level, as a rule, means that a stock in a public offering was overpriced, and also that the investment demand on the first day of it being traded was low.



* An IPO (initial public offering) is an initial public placement of stocks on the market. In the WFE statistics, an IPO deal is understood as the initial sale on the stock exchange of newly issued stocks or bundles thereof owned by their issuer. A SPO (secondary public offering) is a deal of sale of stocks issued by listed public companies on a stock exchange. This type of transaction may also involve newly issued stocks or bundles thereof, which during a SPO already belonged to their previous owners.
Note. The WSE data for 2019 on the volume of IPO-SPOs were reduced by the value of SPOs of shares in PJSC Gazprom, sold on May 25, 2019 and November 21, 2019 to the total value of $5,067 mn, because these were non-market deals.

Fig. 25. The value of various IPOs and SPOs* on Russian stock exchanges in 2010–2021, billions of USD

Source: own calculations based on data released by the World Federation of Exchanges (WFE) and Bloomberg, and primary statistics released by stock issuers.

presence of an outflow of non-resident resources and underdeveloped domestic institutional investors, the advantages of cheaper borrowing in the form of capital raised on a stock exchange become lower.

Through mergers and acquisitions (M&A), stock markets contribute to the ongoing structural changes in the economy. As shown in *Fig. 26*, after two years (2019-2020) of decline in the global M&A index, in 2021 it once again climbed by 57.2%, to $5.1 trillion. In Russia, the value of closed M&A deals increased from $37 bn in 2020 to $38 bn in 2021, or by 2.7%, but their growth was lower than that of the global index. Since 2014, transactions of this type involving Russian companies have been displaying a trend towards stagnation, and their volume shrank from $59 bn in 2014 to $38 bn in 2021, or by 35.6%. Russia's share in the global M&A index declined over the same period from 1.5% to 0.7%.

By their key stock market volume indicators, Russian stock exchanges lag behind many of their foreign competitors. The Moscow Exchange's share in the total number of listed national companies plunged from 0.51% in 2013 to 0.39% in 2021 (*Fig. 27a*). By the capitalization index of its stock issuers, the Moscow Exchange's share in the global capitalization index shrank from 1.03% in 2013 to 0.68% in 2021 (*Fig. 27b*).

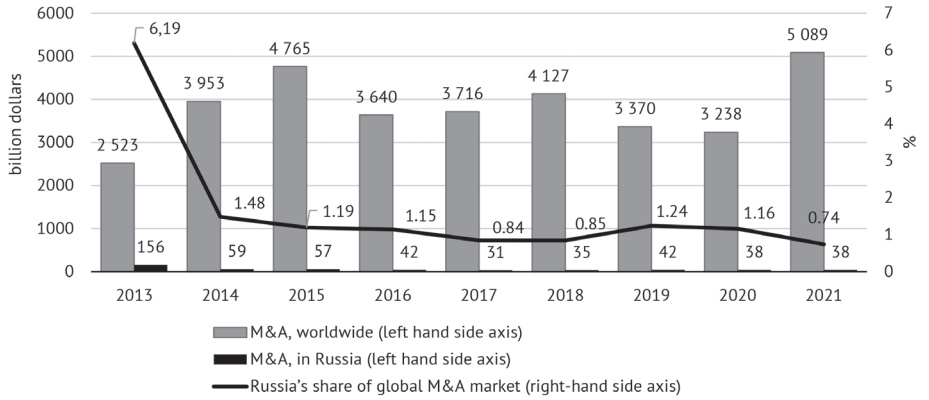


Fig. 26. The value volume of mergers and acquisitions (M&A) in the world and in Russia (billions of USD) and Russia's share of global M&A market (%), 2013–2021

Source: own calculations based on data released by Merger.ru (http://mergers.ru/) (Cbonds Group), the Institute of Mergers, Acquisitions and Alliances (IMAA). (URL: https://imaa-institute.org/mergers-and-acquisitions-statistics/) and PwC (URL: https://www.pwc.com/gx/en/services/deals/trends.html#:~:text=Global%20mergers%20and%20acquisitions%20(M%26A,an%20unprecedented%2024%25%20from%202020)

In terms of its stock exchange trading volume in 2021, the share of the Moscow Exchange in the global stock exchange trading volume decreased from 0.33% in 2013 to 0.22% in 2021 (*Fig. 27c*). In 2021, by its volume of market stock transactions, the Moscow Exchange's share did not change relative to the previous year, which testifies to the fact that the increased stock exchange trading volume on Russia's major stock exchange in response to the massive entry on the market of new investors was in line with the similar developments on foreign exchanges.

The slow growth of the market for shares in Russian companies and, in some cases, its worsening market depth indicators have been determined by a variety of factors, such as economic growth slowdown, economic sanctions, heavy regulatory burden, and weakness of institutional investors. So far, the massive entry on the market of individual investors by itself has produced no significant impact on the trends that created the lag between the domestic stock market and its foreign competitors. The stock market needs some profound changes to increase its attractiveness for different categories of investors

The Russian stock market is characterized by a high concentration of stock issuers in terms of their capitalization index; moreover, this index has been demonstrating an upward trend since the early 2010s (*Fig. 28, Table 7*). The combined share of the top 10 PJSCs in the total market capitalization index increased from 61.7% in 2011 to 65.8% in 2021, and that of the top 20 stock issuers of shares, from 77.0 to 80.6%, respectively. Unlike the USA and China, where hi-tech companies are dominant drivers in market capitalization, in Russia the top 10 companies by their market cap index operate in the fuel and energy

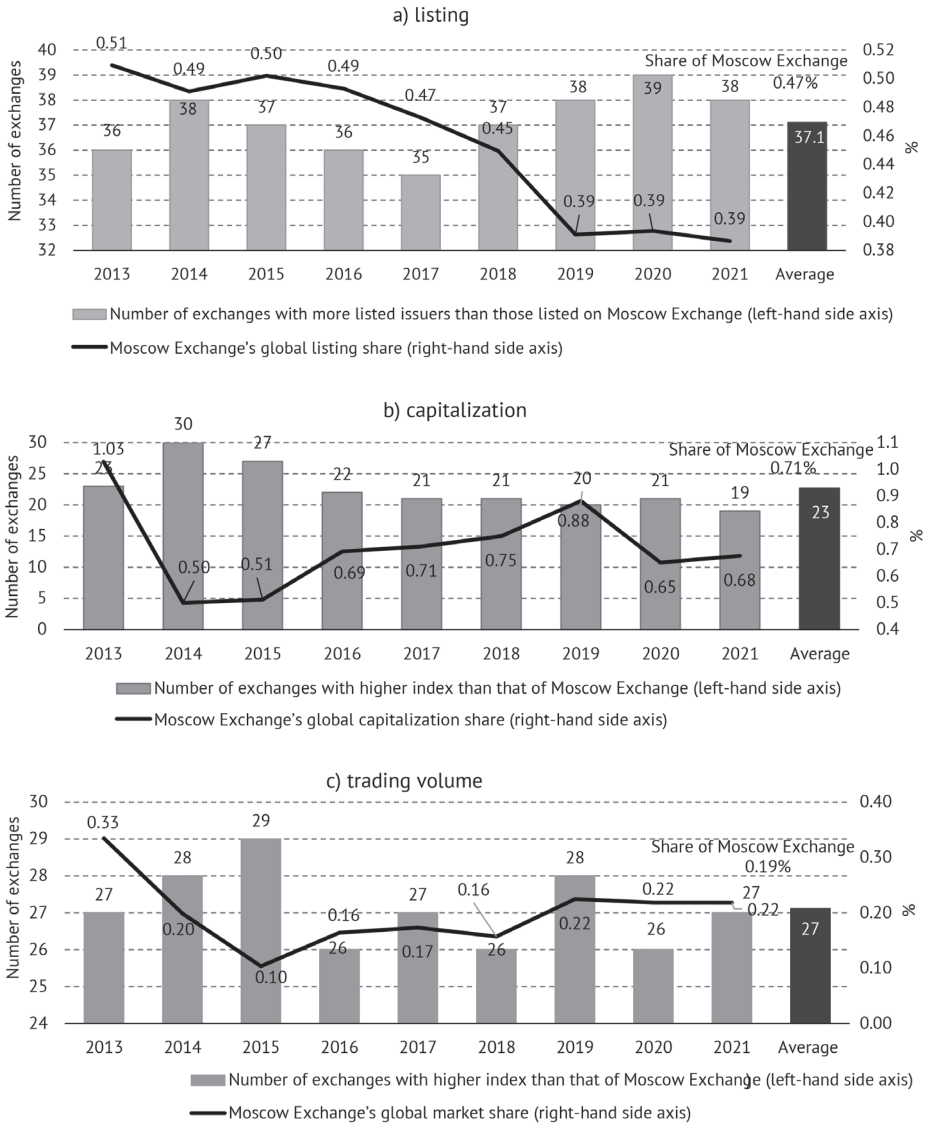


Fig. 27. The competitiveness indicators of the Russian stock market in 2013–2021: a) the number of foreign stock exchanges with more listed issuers than those listed on the Moscow Exchange, and the global listing share (%) of the Moscow Exchange; b) the number of exchanges with a higher capitalization index than that of the Moscow Exchange, and the global capitalization share (%) of the Moscow Exchange; c) the number of exchanges with a higher trading volume than that of the Moscow Exchange, and the share (%) of the Moscow Exchange in the global stock market trading volume

Source: own calculations based on data released by the WFE and the Moscow Exchange.

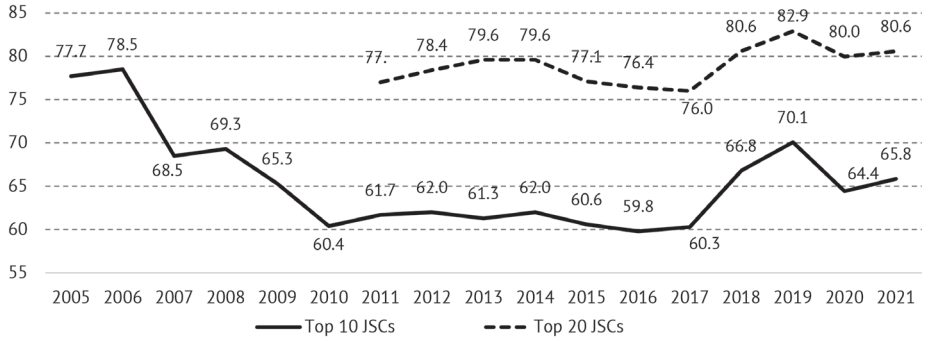


Fig. 28. The domestic stock market cap share of biggest PJSCs, %

Source: own calculations based on data released by the Moscow Exchange

complex, metallurgy, and the banking sector. The hi-tech sector is represented by just two companies, Yandex and (in part) Sberbank (a financial ecosystem). Lately, five companies — Gazprom, Sberbank, Rosneft, Lukoil, and Novatek – have been competing for the first place in the market cap ranking. In 2021, Gazprom had the highest market cap index due to the accelerated growth in gas prices that began in April 2021.

In 2021, the concentration level of the largest stock issuers increased on the previous year: from 80.0% to 80.6% for the top 20 PJSCs, and from 64.4% to 65.8% for the top 10 companies. In 2021, the accelerated recovery of the Russian economy was driven primarily by growth across pro-cyclical industries like the energy complex and the banking sector, where the largest public companies are the leaders. Therefore, in 2021, their combined share in the total market cap was on the rise.

In 2021, the market cap share of state-owned companies (SOEs)[1] increased to 51.0%, from 49.9% in 2020 (*Fig. 29*). Because state-owned companies with highest market cap indices prevail in the fuel and energy complex, as well as in the energy, transportation, and banking sectors, their combined market cap share usually expands during periods of rising oil prices (2010—2012, 2016—2018, and 2021), and declines alongside falling oil prices (in 2013–2014 and 2020). Before the crisis of 2008, this pattern did not work, perhaps due to the fact that, in parallel with the rise in oil prices, the capitalization of Russian issuers was then strongly influenced by the flow of foreign portfolio investments, as well as structural reforms, such as the restructuring of RAO UES of Russia and the creation of state development institutions.

Alongside the massive inflow of private investors into the stock market during the coronavirus pandemic, the role of individuals in shaping the stock market liquidity became more prominent. Against this background, there was a positive

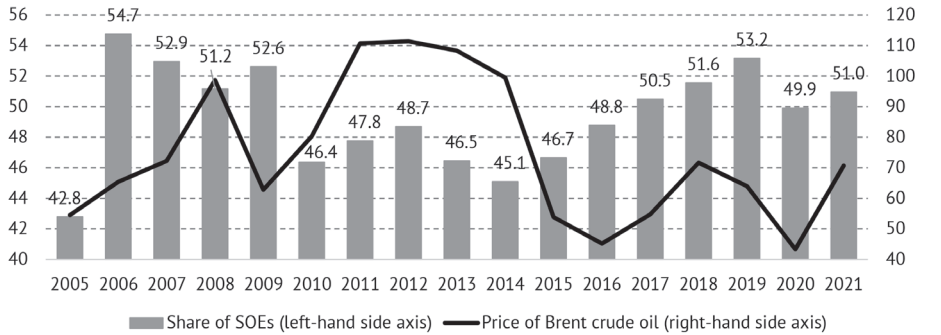
1 A state-owned enterprise (SOE) is an organization controlled by the state acting as its sole owner, or the owner of a majority stake or significant minority stake in its authorized capital in the amount of not less than 10% thereof.

Table 7

The market cap indices of Russia's top 10 public joint-stock companies (PJSCs) in 2019–2021

Issuer	2019		Issuer	2020		Issuer	2021	
	Capitalization, billions of rubles	Market share, %		Capitalization, billions of rubles	Market share, %		Capitalization, billions of rubles	Market share, %
Gazprom PJSC	6,077	12.5	Sberbank PJSC	5,873	11.4	Gazprom PJSC	8,078	12.9
Sberbank PJSC	5,482	11.3	Gazprom PJSC	5,024	9.8	Rosneft PJSC	6,336	10.1
Rosneft PJSC	4,776	9.8	Rosneft PJSC	4,620	9	Sberbank PJSC	6,329	10.1
LUKoil PJSC	4,405	9.1	NOVATEK PJSC	3,814	7.4	NOVATEK PJSC	5,248	8.4
NOVATEK PJSC	3,834	7.9	Norilsk Nickel PJSC	3,738	7.3	LUKoil PJSC	4,539	7.2
Norilsk Nickel PJSC	3,050	6.3	LUKoil PJSC	3,590	7	Norilsk Nickel PJSC	3,496	5.6
Gazprom Neft PJSC	1,995	4.1	Polyus PJSC	2,049	4	Gazprom Neft PJSC	2,568	4.1
Surgutneftegas OJSC	1,814	3.7	Yandex N. V.	1,634	3.2	Polyus PJSC	1,761	2.8
Tatneft PJSC	1,668	3.4	Gazprom Neft PJSC	1,507	2.9	Yandex N. V.	1,447	2.3
Polyus PJSC	945	1.9	Surgutneftegas OJSC	1,286	2.5	Surgutneftegas OJSC	1,423	2.3
Combined cap of all issuers on Moscow Exchange	**48,579**	**100**	**Combined cap of all issuers on Moscow Exchange**	**51,428**	**100**	**Combined cap of all issuers on Moscow Exchange**	**62,604**	**100**
Combined cap of Top 5 issuers	**24,574**	**50.6**	**Combined cap of Top 5 issuers**	**23,070**	**44.9**	**Combined cap of Top 5 issuers**	**30,528**	**48.8**
Combined cap of Top 10 issuers	**34,047**	**70.1**	**Combined cap of Top 10 issuers**	**33,137**	**64.5**	**Combined cap of Top 10 issuers**	**41,224**	**65.8**

Source: own calculations based on data released by the Moscow Exchange.



Note. The data for 2021 on the market cap share of SOEs are preliminary.

Fig. 29. The relative share of state-owned companies (SOE) in the domestic stock market cap and the per barrel price of Brent crude oil in 2005–2021

Source: own calculations.

shift in the structure of exchange trades, as the share of more transparent market transactions increased from 19.9% in 2019 to 32.8% in 2020 (*Fig. 30*). However, in 2021, the share of market transactions in the structure of exchange trades shrank to 31.3%, which could be caused by the increased share of REPO trading in shares, as a source of funding for securities transactions. Within the first two months of 2022, the share of market transactions increased to 44.3%, which was probably caused by the cash inflow from foreign portfolio investors into the domestic share market.

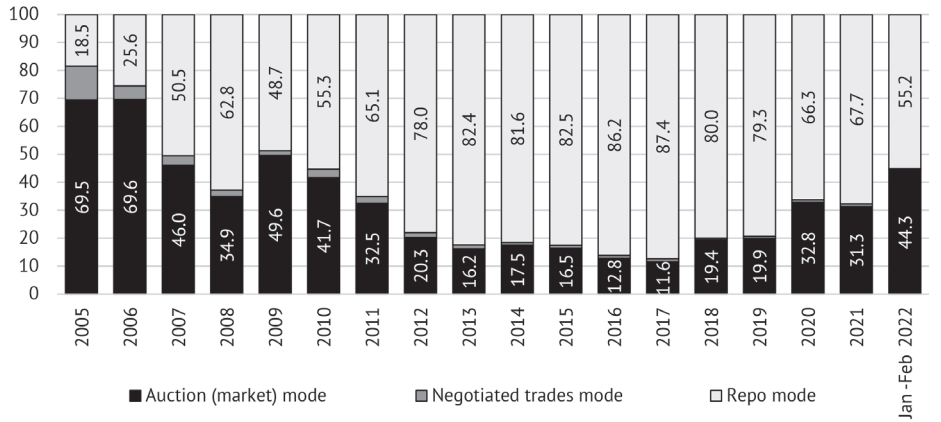


Fig. 30. The structure of trades in shares on the Moscow Exchange's Main Market from 2005 through February 2022, %

Source: own calculations based on data released by the Moscow Exchange and the World Federation of Exchanges.

Individual investors, in their role of the main liquidity drivers, now became second in importance after non-residents (*Table 8*). The share of non-residents in market stocks trades shrank from 47.5% in 2019 to 44.6% in 2020, and, conversely, the share of individual investors increased from 36.7% to 44.1% over the same period. However, in 2021 and January 2022, the share of non-residents increased markedly: in 2021, they mainly sold shares in Russian companies to individuals.

Table 8

The structure of investors participating in trades in shares on the Moscow Exchange's Main Market

	2017	2018	2019	2020	2021
Non-residents	47.5	51.2	47.5	44.6	47.7
Individuals	35.3	34.7	36.7	44.1	40.3
Dealers	8.9	8.2	8.1	5.8	6.7
Legal entities	5.1	3.8	4.7	3.3	3.1
Trust Managers	3.2	2.1	3.0	2.0	2.2

Source: own calculations based on data released by the Moscow Exchange.[1]

After the resumption of trades in shares on the Moscow Exchange on March 24, 2022, the share of individuals in exchange trading in shares increased to 58%. This is a new reality for the domestic stock market, when the liquidity of shares on the stock exchange will be driven in the main by domestic investors, who will be primarily individuals.

3.1.6. The general review of the domestic bond market

By contrast with a favorable bond market situation in 2020, the year 2021 saw a slowdown of bond market growth on the back of an upturn in the rate of inflation both in the world and Russia, in particular, increased geopolitical tensions and the RF Central Bank's tightening of its monetary policy in response to higher inflationary pressures. In 2021, the inflation rate in Russia picked up to 8.4% as compared with 4.9% in 2020. Amid this situation, in 2021 the RF Central Bank had to raise for seven straight times the key interest rate which increased from 4.25% per annum to 8.50% per annum. A rise in the key rate led to a higher cost of issuers' borrowings on the bond market and a decrease in the market value of the earlier issued bonds in investors' portfolios.

In 2021, an important factor in the development of the bond market was substantial growth in revenues of non-financial companies and banks amid economic recovery and a favorable price environment on global commodity markets. This factor brought about a contraction of supply of corporate bonds on the part of issuers with high credit ratings, thus opening up the bond market for borrowings by lower quality issuers, including those oriented on attracting private investors' funds.

1 URL: https://www.moex.com/s2184?fbclid=IwAR1Xl1wazyliXc5_77Q7usAilbS4BwecrqBWQ8XtdlHJ78fvoc0bejFDTLA

In 2021, a decrease in non-residents' demand for OFZ was driven by US sanctions which banned US investors from buying OFZ on the primary market, as well as the information on a possible ban on OFZ purchasing on the secondary market. The US Treasury forbade its banks and other financial institutions to buy on the primary market ruble- and foreign currency-denominated bonds issued by the RF Central Bank, the National Welfare Fund or the RF Ministry of Finance after June 14, 2021, as well as extending loans to the latter.

In 2021, the volume of the Russian bond market increased up to Rb34.4 trillion as compared with Rb31.8 trillion in 2020; the growth rates amounted to 8.5% against 24.2% a year ago (*Fig. 31*).

Within a year, the value of corporate bonds (CB), including non-market issues picked up from Rb16.2 trillion to Rb17.6 trillion or 8.6%; federal bonds (OFZ, GSO and other) – from Rb14.1 trillion to Rb15.8 trillion or 12.1%; regional bonds – from Rb0.9 trillion to Rb1.0 trillion or 11.1%. Late in 2021 the RF Central Bank bought back all its bonds from banks to refinance their operations amid increased geopolitical risks and a threat of sanctions.

The year 2021 saw a considerable decrease in the volumes of new bonds issues (*Fig. 32*). There was a decrease in the volumes of new corporate bonds issues from Rb4.2 trillion in 2020 to Rb3.4 trillion in 2021 or 19.0%; federal bond issues from Rb6.6 trillion to Rb2.6 trillion or 60.6%; regional bonds issues from Rb264.9 billion to Rb157.6 billion or 40.5% and the RF Central Bank's bonds issues from Rb5.5 trillion to Rb3.1 trillion or 43.6%.

The negative trend of shrinking liquidity of exchange-traded bonds observed in 2020 continued in 2021. By contrast with the equity market where market growth drivers were individuals and non-residents which accounted for 88% of the deals,

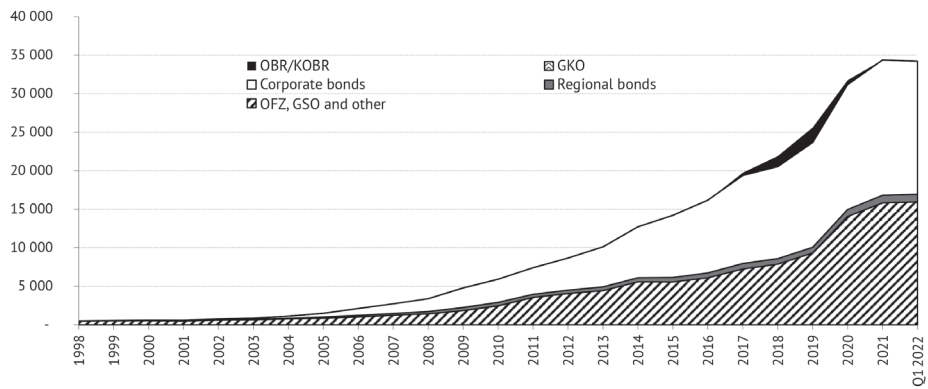


Fig. 31. The volumes of ruble-denominated bonds in circulation from 1998 till February 2021, billion rubles

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

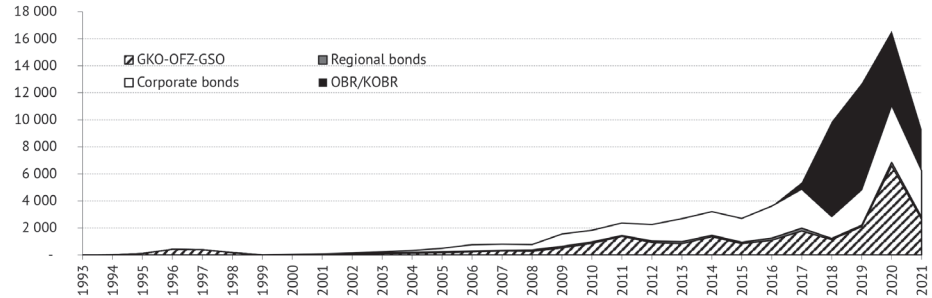


Fig. 32. The volumes of ruble-denominated bonds issues in 1993-2021, billion rubles

Source: Own calculations based on the data of Cbonds.

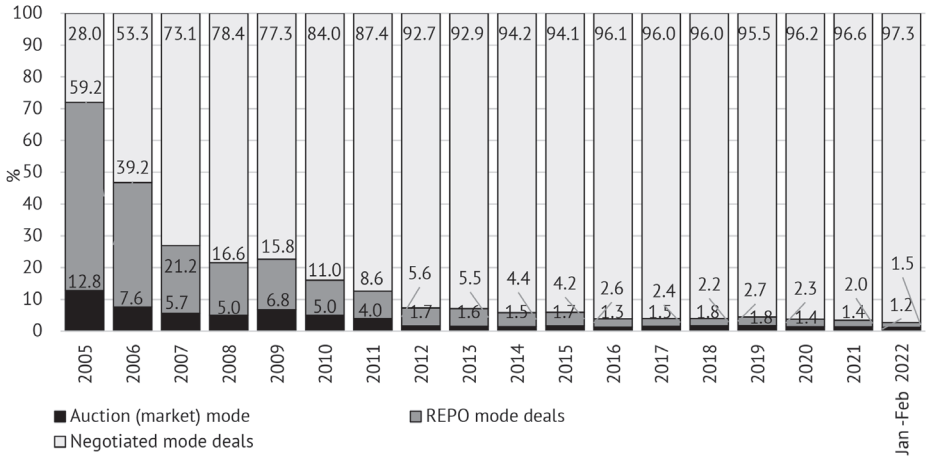
the share of such participants on the bond market was equal to the mere 23%.[1] Banks which are the main investors on the bond market find deals with bonds on the money market more attractive because they can receive additional profits by means of preferential funding of their resources on the pledge of bonds.

The value of market deals and negotiated mode deals (NMD) on the secondary exchange bond market decreased from Rb11.1 trillion in 2020 to Rb10.1 trillion in 2021 or 9%. By contrast, the money market volume in terms of REPO deals remained stable at the level of Rb283.4 trillion and Rb283.6 trillion in 2020 and 2021, respectively. As a result, the share of market deals and negotiated mode deals in overall volumes of bonds trading fell from 4.5% in 2020 to 3.4% in 2021 (*Fig. 33*). As the fair bond price is formed by means of market deals and negotiated mode deals, the shrinking of on-exchange liquidity of the bond market makes it less transparent and more risky to investors.

Our own calculations based on the data of the Moscow Exchange on monthly trading volumes[2] show that on the back of a temporary suspension of stock exchange trading from February 28 till March 24, 2022 the volumes of market deals and negotiated mode deals decreased from Rb2.1 trillion in Q1 2021 to Rb1.7 trillion in Q1 2022 or 48.0%. At the same time, the overall volume of REPO deals with bonds and securities portfolios on the money market increased from Rb62.3 trillion to Rb132.2 trillion or 112.3% in the specified period.

REPO deals do not form a fair (market) value of securities which normally gives a warning about issuers' credit risks and risks of an interest rate change. A lack of an option to sell bonds on the secondary market does not allow bond holders to react in a timely manner to market changes and changes in securities issuers' standing. This complicates portfolio management and reduces efficiency. Market trend changes, for example, an upturn in the inflation rate and the key interest

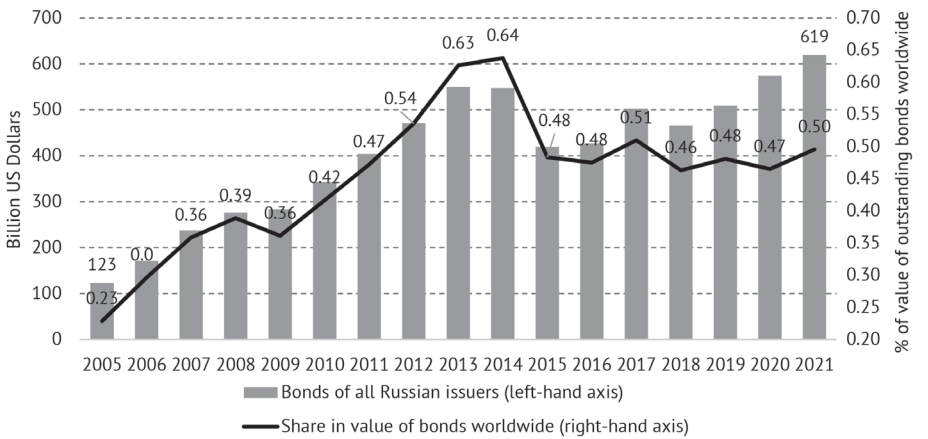
1 Based on the data of the presentation of the Moscow Exchange for its shareholders in March 2022. URL: https://www.moex.com/s865
2 URL: https://www.moex.com/s868



Note. REPO deals with bonds include direct REPO with the RF Central Bank, inter-dealer REPO and REPO deals with the central counterparty (REPO-REPO).

Fig. 33. The pattern of deals with bonds at the Moscow Exchange in 2005 — February 2022, %

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



Note. The value of outstanding bonds worldwide January through September 2021 as per the data of SIFMA (USA). Russian issuers' bonds include corporate, government, municipal domestic bonds and Eurobonds.

Fig. 34. The value of outstanding bonds of Russian issuers (billion Rb) and their share in the value of bonds worldwide (%)

Source: Own calculation based on the data of Cbonds and SIFMA.

rate, create serious problems for bond holders who cannot sell bonds timely on the market and restructure their bond portfolios.

All types of Russian bond issues are equal to the mere 0.5% of the value of outstanding bonds worldwide (*Fig. 34*). Strong growth in Russian bond issues from $123 bn in 2005 to $547 bn in 2014 was also accompanied by a pickup from 0.23% to 0.64% in the share of Russian bonds in the value of bonds worldwide because Russian bond market growth was ahead of the global one. However, later this trend changed. Growth in the value of Russian bonds from $427 bn in 2016 to $619 bn in 2021 was accompanied by stagnation of the share of Russian bonds in the world at the level of 0.5%, that is, in the past six years the Russian bond market was growing almost at the same rate as the global one.

3.1.7. Fundamental characteristics of corporate bonds

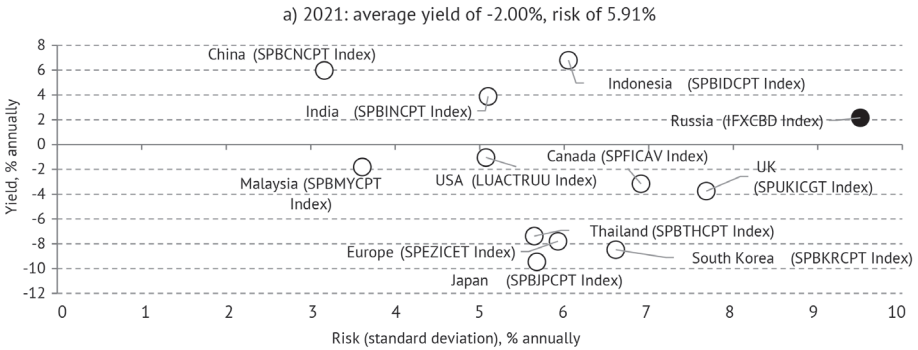
The comparison of yield and risk parameters (a standard deviation) of CB indices of 12 countries, including the Russian IFXCBD Index, on the time horizons of 1 year, 5 years and 12 years in 2010–2021 is shown in *Fig. 35* (*a, b, c*)[1]. For the sake of comparison of the outputs, historic yield series and, accordingly, risks are adjusted with the exchange rate of the US Dollar taken into account.

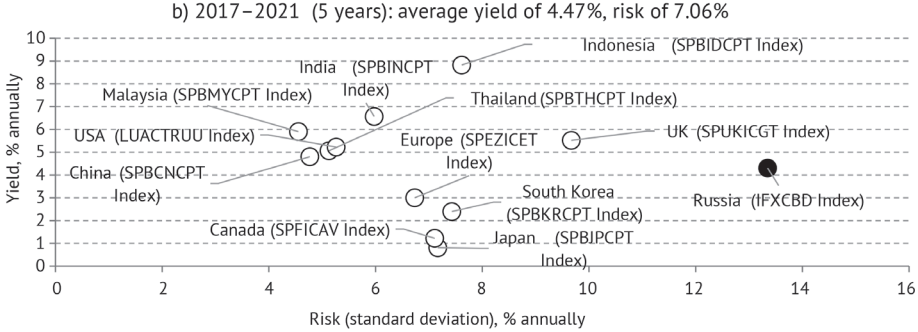
On all the reviewed time horizons, the IFXCBD index is characterized by the highest risk level which largely correlates with volatility of the Russian ruble, rather than the yield of the bond portfolio this index is made up of. In 2021, amid low yield on investment-grade bonds in different countries and expectations of an upturn in the interest rates of the US Federal Reserve and the European Central Bank the FXCBD index saw positive yield and outperformed in this respect numerous foreign indices and their average values on sample. The IFXBND yield amounted to 2.16% annually with the average yield on sample of -2.0%; a standard deviation on the Russian bond portfolio was equal to 9.5% with the average risk index of 5.91%.

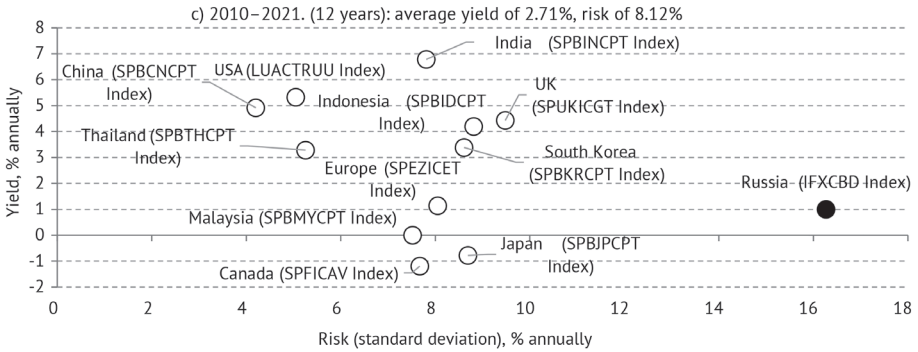
On the five-year horizon in 2017–2021, the average annual yield of 4.31% annually of the IFXBND index was somewhat smaller than that on sample (4.47%), however, the risk index of the Russian bond portfolio (13.35%) was nearly twice as high as the average index of 7.06% on sample. On the 12-year horizon from 2010 till 2021, the average yield of 1.0% annually of the IFXBND Index was lower than that on sample of countries (2.71%), while the risk index was again twice as high: 16.27% against 8.12%.

The main problem related with investment in ruble-denominated bonds is an unstable exchange rate of the ruble which regular devaluations reduce the appeal of such investments. A new factor keeping individuals from buying government and corporate coupon bonds was the personal income tax which started to be charged at the rate of 13% from coupon income since 2021. Non-residents have to pay a tax of 30% on coupon income of government and corporate bonds.

1 A relatively limited size of the sample is substantiated by the fact that the Bloomberg's information and analytical resource presents historic series of corporate bond indices on a relatively small range of countries.







* For the purpose of comparability, these yield series of respective country indices were translated in US dollars.

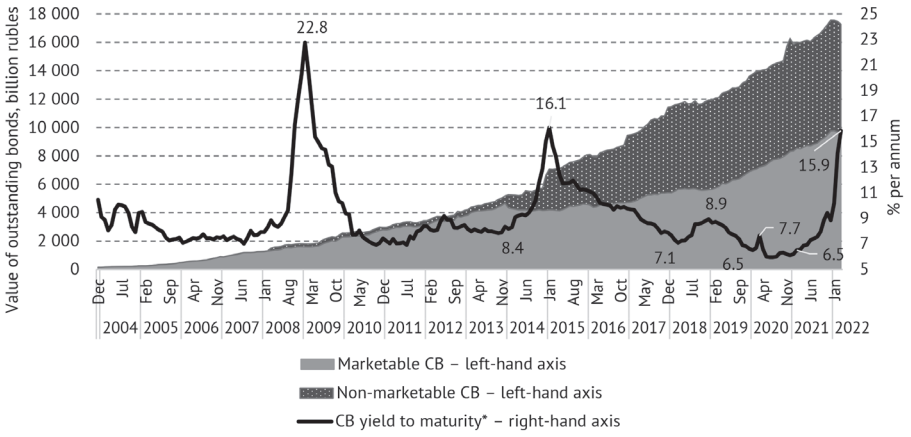
Fig. 35. The parameters of geometric mean yield and risk of 12 corporate bond indices of different countries* in the period from January 2009 till December 2021 on 1-year (a), 5-year (b) and 12-year (c) time horizons, % annually

Source: own calculation based on the data of the Bloomberg and Cbonds.

After the 2008 crisis, ruble-denominated yield of the IFXCND index grew now and then under the impact of depreciation of prices for oil and investors' concerns amid geopolitical risks and international sanctions (*Fig. 36*). Index portfolio yield-to-maturity peaks in 2014 and February 2022 coincided with the RF Central Bank's highest key rate levels. Specifically, corporate bond market growth has been largely driven by a pickup in non-marketable bond issues[1] without stock exchange quotations since 2014. In 2021, out of the overall value (Rb17.6 trillion) of outstanding ruble-denominated corporate bonds, marketable bond issues accounted for 55.6% or Rb9.8 trillion, while non-marketable bond issues, for Rb7.8 trillion (44.4%).

The period of low interest rates on corporate bonds underpinned by banks' and large non-financial companies' high liquidity amid moderate inflation expectations was over early in 2021. With the key interest rate increasing from 4.25% to 20.0% in March 2022 on March 2021, the average yield to maturity of the IFXCBND index bond portfolio picked up from 6.56% to 15.86% annually. Materialization of such a high interest risk did not bring about a large-scale sale of CB because of low liquidity of this market. However, in short-term such high interest rates will not only limit bond market growth, but also make corporate defaults more likely.

In 2021, the share of ruble-denominated corporate bonds with one or another form of defaults decreased to 2.7% as compared with 3.3% a year ago (*Fig. 37*). However, despite a decrease, this indicator on the 2013–2021time horizon



* Yield to maturity (YTM) on IFXCBN portfolio.

Fig. 36. The value of outstanding ruble-denominated corporate bonds and yield to maturity of the IFX-Cbonds corporate bond portfolio, December 2003 – February 2022

Source: own calculations based on the data of Cbonds.

1 As defined by the RF Central Bank, deemed as a non-marketable issue is the situation where the entire placed issue or a larger portion thereof is purchased by the lead bank or companies close to the issuer.

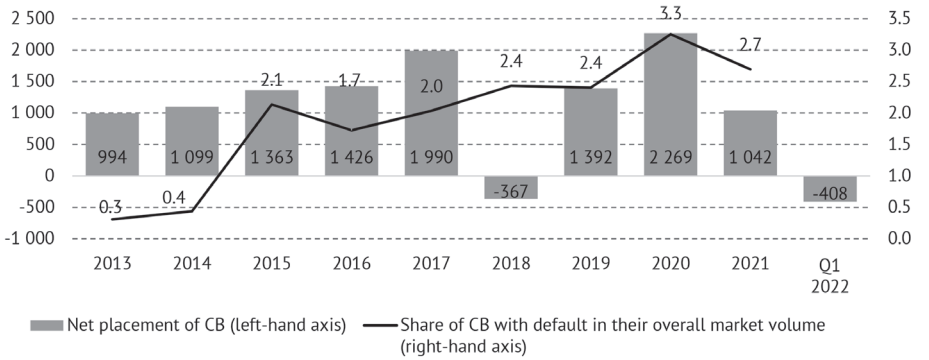


Fig. 37. The value of the net placement of corporate bonds (billion rubles) and the share of corporate bonds with a default in the overall volume of their market (%), January 2013 – March 2022

Source: own calculations based on the data of Cbonds.

remained at the historically high level. In 2021, the likelihood of defaults on some issues of corporate bonds increased owing to the abovementioned trends on the corporate bond market that year when it saw an influx of lower-quality borrowers.

The likelihood of defaults of corporate bonds largely increased in 2020. High geopolitical risks, sanctions preventing Russian companies' entry to global financial markets, the RF Central Bank's high key rate and a rise in the rate of inflation limit placements of new corporate bonds, thus making it infeasible to refinance outstanding debts. In Q1 2022, the volume of new corporate bond issues was small and the value of redeemed bonds in that period exceeded companies' borrowings worth Rb408 bn. In previous years, numerous CB issuers amassed funds, but these funds may turn out to be insufficient enough because the main sum of new CB issues is used for refinancing the outstanding debt. By our estimates, in 2021 the ratio of the sum of redeemed corporate bonds to that of placed corporate bonds was equal to 69.8%. In 2022, issuers will have to spend over Rb1.1 trillion on redemption of corporate bonds (without payment of coupon income).

3.1.8. The organization of the corporate bond market

The number of issuers on the Moscow Exchange corporate bond market exceeds largely the number of companies in the listing of shares. The corporate bond market is extensively used by issuers from various economic sectors for raising funds and refinancing outstanding debts.

Over a long period of time, the stock exchange saw a contraction of the number of CB issuers from 467 issuers in the pre-crisis 2007 to 198 in 2018 (*Fig. 38*). This was driven not only by changes in borrowing patterns where earlier large issuers used more often subsidiaries for issuing CB, while now they issue bonds directly, but also by the fact that large bond issues had an advantage in terms of issuers'

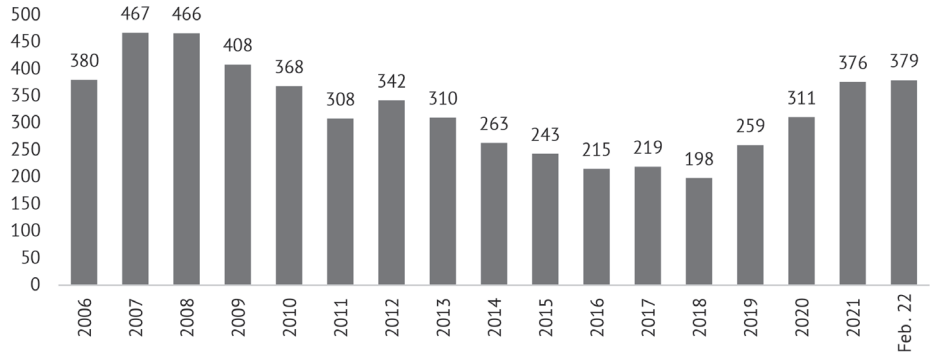


Fig. 38. The number of issuers of marketable CB issues on the Moscow Exchange

Source: Based on the data of the Cbonds Bulletin.

costs and listing requirements. In 2018, amendments were introduced in the stock market legislation to simplify corporate bond issuing as regard decision-making on issuing bonds, reduce the period of registration of bond issues, simplify reporting on the outputs of bond issuing and lift limitations as regards the deadlines of completion of bonds placement.

In February 2022, the stock exchange traded marketable CB of 379 issuers by contrast with 198 issuers in 2018, an increase of 90%. Until recently, the corporate bond market facilitated a more diversified distribution of investments between economic sectors than the domestic equity market.

According to the data of the RF Central Bank, in 2021 the share of placements by high-quality "first tier" issuers[1] with an investment rating fell considerably in the value of placed corporate bonds, while that of placements by "second-tier" issuers increased.[2] The share of bonds of "second-tier" issuers in the overall value of new CB issues increased from 21.0% in 2020 to 57.0% in 2021, while that of bonds of "first tier" CB issuers fell from 49.0% to 8.0%. This is evidence of a substantial rise in credit risks on the corporate bond market. In 2022, on the back of sanctions limiting export-import operations and external funds raising, as well as problems related with refinancing of debts on the internal financial market because of a high cost of borrowings numerous CB issuers may encounter a downward revision of credit ratings and defaults.

The credit exposure of corporate bonds is aggravated because "second-tier" CB issues account for the bulk of private investors' investments in corporate bonds. According to the data of the RF Central Bank, in the overall volume of CB bought by households the share of bonds of "second-tier" issuers increased from 21.0% in

1 "First-tier" bonds include bonds with ACRA ratings from BBB- and higher and Moody's Baa3 and higher. These ratings are the lower boundaries of investment ratings of Russian CB issuers. Under the RF legislation, the investment category of ratings under the ACRA scale for national issuers with some limitations regarding ultimate investments include also corporate bonds with the rating of BB+.

2 "Second-tier" bonds include bonds with ACRA rating of BB and Moody's Ba3.

2017 to 51.0% in 2021, while that of 'first-tier" issuers picked up somewhat from 16.0% to 20.0%.[1]

An upside trend on the corporate bond market is the formation of the market of ESG-financing. The new version of securities issuing standards which became effective on May 11, 2020 includes the standards of issuing three new types of bonds: "green" bonds, social bonds and infrastructure bonds. The value of "green" bonds increased from Rb119.2 bn in 2020 to 236.8%. In 2021 and Q1 2022 this indicator remained unchanged.

At the same time, the market volume of SME's corporate bonds was growing slower: from Rb274.1 bn in 2020 to Rb286.9 bn in 2021 or 4.6%; these growth rates were below those of the corporate bond market as a whole. In 2021, the overall value of outstanding marketable corporate bonds increased by 15.5% on the previous year.

Despite advanced growth in placement of bonds of "second-tier" issuers, the primary corporate bond market remains highly concentrated (*Fig. 39*). In 2021, the share of top-20 issuers in the overall volume of new CB issues decreased as compared with 2020 and amounted to 76.4%. The share of top-10 issuers decreased from 68.3% in 2020 to 64.4% in 2021. However, the concentration indicators stand at a relatively high historic level, for example, as compared with 2015. In 2021, for the first time in many years Rosneft is not among top CB issuers (*Table 9*), however, new leading CB issuers – Veresayeva-6, Alfa-Leasing, Gazprombank Kapital and OTEKO-Portservis – emerged and this points to a higher diversification of issuers across various economic sectors.

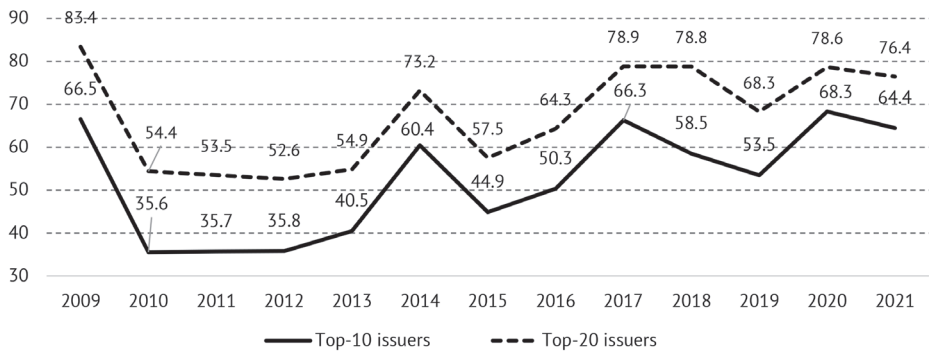


Fig. 39. The share of top-10 and top-20 issuers in new issues of ruble-denominated corporate bonds in 2009–2021, %

Source: own calculations based on the data of Cbonds.

1 The RF Central Bank. The Review of the Russian Financial Sector and Financial Instruments. Analytical paper. 2021. Moscow. p. 32. URL: https://www.cbr.ru/Collection/Collection/File/40903/overview_2021.pdf

Table 9

Top-10 CB issuers and their share in the overall value of CB issues

	Issuers	2019			Issuers	2020			Issuers	2021	
		Billion Rb	%			Billion Rb	%			Billion Rb	%
1	Sberbank of Russia	465	16.1	1	Rosneft	815	17.7	1	DOM.RF Mortgage agent	418	13.3
2	DON.RF	253	8.7	2	Sberbank of Russia	550	12.0	2	VEB.RF	411	13.1
3	VTB	172	5.9	3	VTB, including Demetra Holding	489	10.6	3	Sberbank of Russia	366	11.7
4	Vneshekonombank	170	5.9	4	DOM.RF	386	8.4	4	VTB, including Demetra Holding	273	8.7
5	RZhD	106	3.7	5	RZhD	353	7.7	5	Veresayeva-6	130	4.1
6	Gazprombank	95	3.3	6	GSP-Finans	243	5.3	6	Gazprom Kapital	120	3.8
7	Rosneft	80	2.8	7	Vneshekonombank	90	2.0	7	OTEKO-Portservis	96	3.1
8	MTS	78	2.7	8	Azot (Kemerovo)	88	1.9	8	Alfa-Leasing	76	2.4
9	Avtodor	69	2.4	9	GTLK	66	1.4	9	RZhD	69	2.2
10	RUSAL Bratsk	60	2.1	10	Gazprombank	59	1.3	10	AFK Systema	63	2.0
	Capitalization of all CB issues	**2 893**	**100**		**Capitalization of all CB issues**	**4 595**	**100**		**Capitalization of all CB issues**	**3 137**	**100**
	Capitalization of issues of top-10 CB issuers	**1547**	**53.5**		**Capitalization of issues of top-10 CB issuers**	**3138**	**68.3**		**Capitalization of issues of top-10 CB issuers**	**2022**	**64.4**

Source: own calculations based on the data of Cbonds.

Despite accelerated growth in ruble-denominated corporate bonds in the past few years, the volume of the market of dollar-denominated Eurobonds issued by Russian companies remained relatively stable (*Fig. 40*). In 2021, its size decreased from $107 bn to $99 bn or by 7.5%. Amid sanctions limiting foreign currency proceeds and Russian large issuers' feasibility to refinance external debt, the commercial bond market has entered the zone of different risks with a likelihood of a default of individual companies.

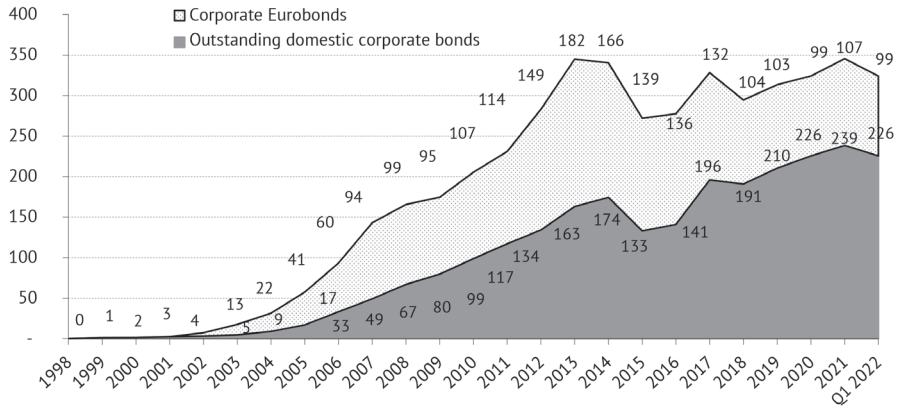
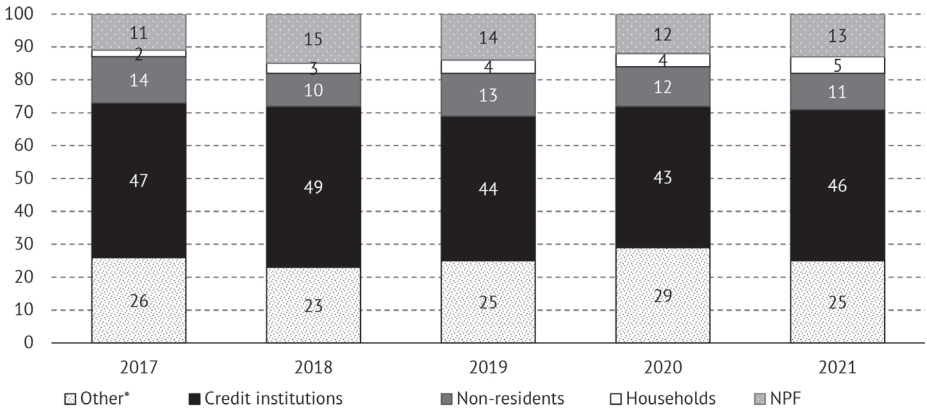


Fig. 40. The volumes of outstanding commercial bonds of Russian issuers, billion US Dollars

Source: Own calculaton the data of Cbonds and the Moscow Exchange.



* The public sector, non-banking financial institutions, insurers, investment funds and other resident entities.

Fig. 41. The pattern of corporate bond holders in 2017–2021, %

Source: own calculations based on the data of the RF Central Bank. URL: http://www.cbr.ru/securities_market/analytics/

In 2017–2021, the pattern of the main corporate bond holders remained relatively stable (*Fig. 41*). The main corporate bond holders were credit institutions whose share was equal to 47.0% and 46.0% in 2017 and 2021, respectively. The share of non-residents decreased somewhat from 14.0% in 2017 to 11.0% in 2021, while that of NPFs and private investors increased in the same period from 11.0% to 13.0% and from 2.0% to 5.0%, respectively, thus showing that private investors played a moderate role on the corporate bond market though in individual types of bonds (high-yield bonds, bank bonds and other) their role was much higher. As seen from a relatively stable pattern of corporate bond holders, no explicit growth drivers have emerged on this market in the past few years and, consequently, this may limit corporate borrowings growth in future.

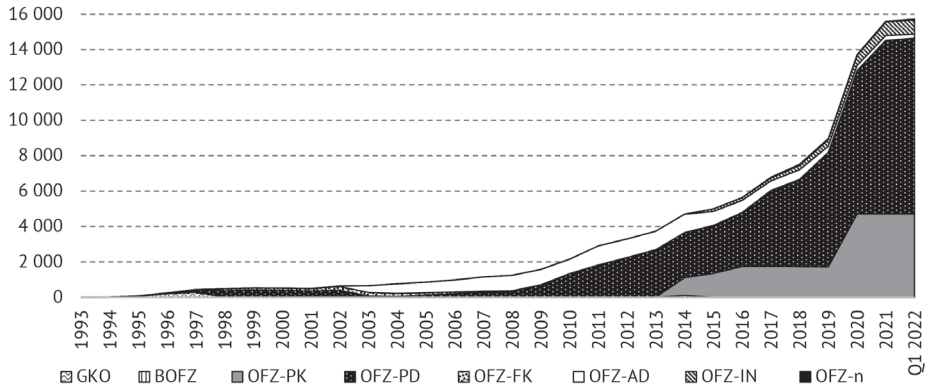
3.1.9. The government bond market

In 2020, the RF Ministry of Finance raised on the market by means of OFZ the record-high sum of borrowings (Rb6 trillion), an increase of 60% on the overall value of net borrowings over the previous five years, that is, from 2015 till 2019. A sharp increase in borrowing volumes on the domestic market began in H2 2020 owing to the need to finance the budget deficit amid the suspension of the fiscal rule which envisaged financing of the budget by selling foreign currency out of the NWF on the market. Growth in the government securities domestic market was facilitated by the RF Central Bank's policy of reducing its key rate, existence of excessive liquidity in the banking sector and the RF Finance Ministry's preparedness to pay a market premium on placed bonds.

In 2021, amid an upturn in the key rate the volume of net borrowings on the OFZ market amounted to the mere Rb1.6 trillion, a decrease of 73.3% on the previous year. In Q1 2022, the net borrowings volume amounted to the mere Rb128.1 bn with the average annual value of this indicator over the past five years being equal to Rb374.6 bn in Q1.

As of March 2022, the overall OFZ volume amounted to Rb15.7 trillion, an increase of 14.6% as compared with Rb13.7 trillion in 2020 (*Fig. 42*). As the main investors in newly issued government bonds were banks and partly non-banking financial institutions, it was necessary to change the pattern of OFZ in favor of OFZ with a floating coupon (OFZ-PK) providing banks with greater flexibility to manage liquidity and interest risks. The size of a coupon of OFZ-PK correlates with the RUONIA money market rate which is largely pegged to the RF Central Bank's key rate. The overall value of OFZ-PK issue increased from Rb1.7 trillion in 2019 to Rb4.7 trillion in 2020. In 2021 and Q1 2022, the market volume of these bonds did not change. In March 2022, their share in the value of the OFZ market was equal to 29.9%

The largest segment of the OFZ market is represented by OFZ-PD with a constant coupon income. The size of coupon income on such bonds is known in advance over the entire period of their circulation, thus making them an attractive financial instrument for various categories of investors. The value of OFZ-PD increased from Rb8.1 trillion in 2020 to Rb9.6 trillion in March 2022 or by 18.5%. Their share in the value of OFZ market was equal to 63.1% in March 2022.



Note. BOFZ is non-coupon federal loan bonds; GKO is government short-term non-coupon bonds; OFZ is federal loan bonds; OFZ-AD is federal loan bonds with amortization of debt; OFZ-IN is federal loan bonds with par value linked to the inflation rate in the Russian Federation; OFZ-PD is federal loan bonds with a constant coupon income; OFZ-PK are federal loan bonds with a floating coupon income "linked" to the RUONIA rate; OFZ-n is federal loan bonds for individuals ("people's bonds").

Fig. 42. The volume of outstanding GKO-OFZ issues in 1993 – March 2022, billion rubles

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

OFZ-AD bonds with amortization of the principal debt are convenient for investing pension savings amid market volatility, but difficult for the RF Ministry of Finance to manage the public debt. As the pension saving system's growth is slowing down, demand for this instrument is virtually decreases to zero. The value of OFZ-AD fell from Rb283 bn in 2020 to Rb242 bn in March 2022; their share in the overall value of OFZ fell to 1.5%.

Taking into account an upturn in the rate of inflation, OFZ-IN bonds are much in demand on the market of government securities because they envisage indexation of their par value depending on the level of inflation as measured by the consumer price index (CPI). For these reasons, these bonds are in demand with domestic institutional and private investors. The value of OFZ-IN bonds increased from Rb575 bn in 2020 to Rb803 bn in 2022 or by 39.7%; their share in the overall volume of OFZ is equal to 5.1%.

In 2021, OFZ-n bonds accounted for an insignificant share of the OFZ market (0.3%); these bonds are often called "people's bonds" because they are meant for individuals' investments and positioned by the RF Ministry of Finance mainly as an over-the-counter instrument aimed at promoting households' financial literacy. As OFZ-n bonds are sold via large retail banks, these bonds have to compete fiercely with bank bonds and structured products offered by such banks to their customers. Further, yield on them is often smaller than on other types of OFZ. Consequently, despite the mass influx of investors to the stock market, the value of OFZ-n after a decrease thereof in 2020 by contrast with the previous year resumed weak growth in 2021 and Q1 2022. The value of these bonds increased

from Rb41 bn in 2020 to $48 bn in March 2022 or by 17.1%. However, their share in the overall value of OFZ does not exceed 0.3%.

For a long period of time, starting from the mid-2000s, the Russian Federation has carried out the policy of advanced growth in domestic market borrowings in rubles as compared with accumulation of debts in foreign currencies (*Fig. 43*). In 2006, the values of domestic and external debts became equal and amounted to $38 bn, each. After that, the value of domestic ruble-denominated bonds (OFZ) was growing at a higher rate than that of external borrowings.

From 2019 till March 2022, the government debt volume on Eurobonds remained at the level of $40 bn–$42 bn. For comparison: as of March 2022, the volume of domestic government securities amounted to $208 bn. In 2022, amid western sanctions which brought about the freezing of over $300 bn worth of gold and foreign-exchange reserves, the Russian Federation encountered the risk of default on obligations to pay a coupon income on Eurobonds. The RF Ministry of Finance's proposal to pay in rubles because of the ban imposed on Russia's gold and foreign-exchange reserved failed to win support of foreign creditors.

On February 28, 2022, S&P, an international rating agency revised downwards the Russian investment rating from BBB- to BB+ (below the investment level), on March 4, 2022, straight downward to CCC-, while on March 16, 2022, downward to CC with a negative outlook. This rating means that default has not happened yet, but is highly likely. On March 3, 2022, Moody's, a rating agency, revised six grades downward Russia's long-term foreign currency- and ruble-denominated debt ratings from Baa3 to B3, downgraded Russia's sovereign rating from "junk" B3 to pre-default Ca, while on March 31, 2022 withdrew all ratings of Russia

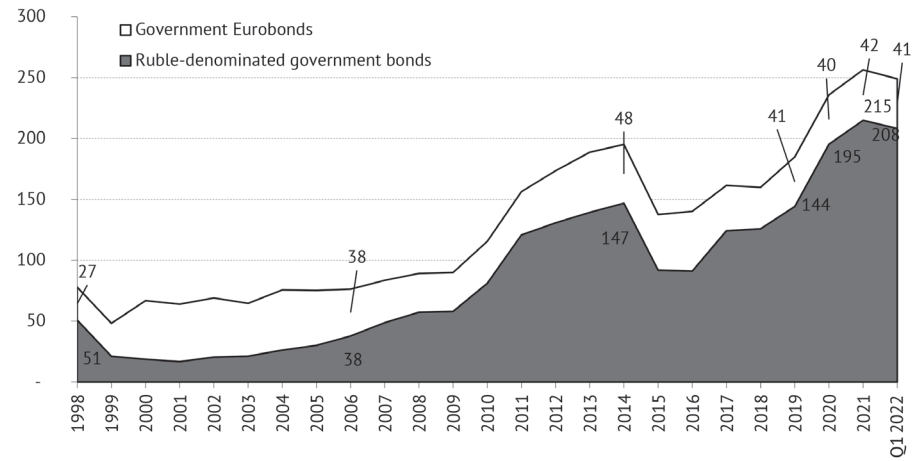


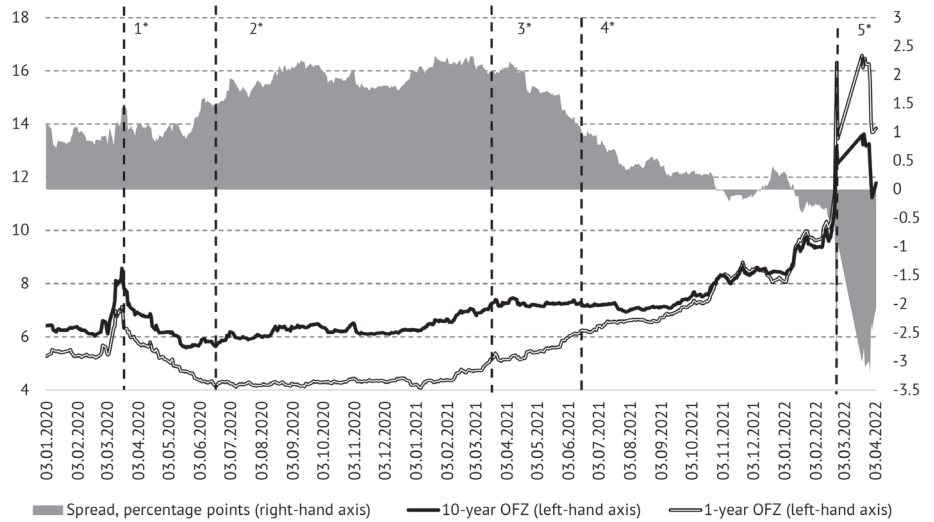
Fig. 43. The volumes of outstanding domestic public bonds and Eurobonds of the Russian Federation, 1998 – March 2022, billion USD

Source: own calculation based on the data of Cbonds and the Moscow Exchange.

and its regions. On March 3, 2022, another international agency, Fitch, revised downwards Russia's long-term default rating in foreign currency from investment BBB to speculative B, on March 9, 2022 they downgraded again Russia's rating to "default is imminent" and late in March withdrew Russia's ratings altogether.

If materialized, an artificially created risk of Russia's default on foreign debts on the back of sanctions is unlikely to lead to serious negative consequences for financial stability and new seizures of property of the Russian Federation abroad. However, in future if it persists, global financial markets may become inaccessible for Russia for years to come.

Shown in *Fig. 44*, the indicator of spread between yield to maturity of 10-year and 1-year government bonds is regarded by many economists as an effective predicator of recession. If the indicator is equal to zero or negative, this is called a reversal of a yield curve on bonds and normally means that recession is going to occur in a few months.[1] As shown in *Fig. 44*, the spread of yields on 10-year and



Note. 1* is a financial shock caused by the outbreak of COVID-19 and liquidity shock on global financial markets; 2* is growth in the program of government borrowings with emphasis on domestic investors; 3* is the beginning of the period of an upturn in the RF Central Bank's interest rate: from March 23, 2021 till February 28, 2022 this rate increased from 4.25% to 20.0% annually; 4* is the introduction of US sanctions barring US investors from buying Russian government securities on the primary market; 5*is the RF Central Bank's setting of the key rate of 20% annually.

Fig. 44. Yield to maturity of 1-year and 10-year OFZ (% annually) and the spread between the yield of 10-year OFZ and 1-year OFZ in percentage points from January 3, 2020 till April 4, 2022

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

1 Growth in yield to maturity of short duration government securities normally points to financial institutions' increased demand for liquidity, while a relevant decrease in yield on long-term bonds, to growth in market participants' expectations of a decline of the RF Central Bank's interest rate in response to a slowdown of economic growth.

1-year OFZ reached the zero level on January 10, 2022 and the negative peak of -3.2% on March 29, 2022. Dynamics of yield curves on long-term and short-term bonds depended largely on RF Central Bank's decisions to raise the key interest rate (events 3 и 5 on *Fig. 44*).

Probably, the reversal of the yield curve early in 2022 will predict this time recession of the Russian economy in 2022. At the same time, one cannot but agree with assumptions of the RF Central Bank's experts that lower yield on long-term government bonds by contrast with yield on shorter duration bonds early in 2022 may reflect market participants' expectations of a decline in inflation in the mid-term, particularly, owing to the RF Central Bank's decisions on the monetary policy.[1]

After foreign settlement and clearing institutions opened nominee accounts with the Russian Central Securities Depository in 2013, the Russian internal market of government bonds saw an influx of foreign investments. The share of non-residents on the secondary OFZ market increased from 6.5% in July 2012 to 28.1% in May 2013 (*Fig. 45*).[2] Later, non-residents owned nearly a quarter of OFZ,

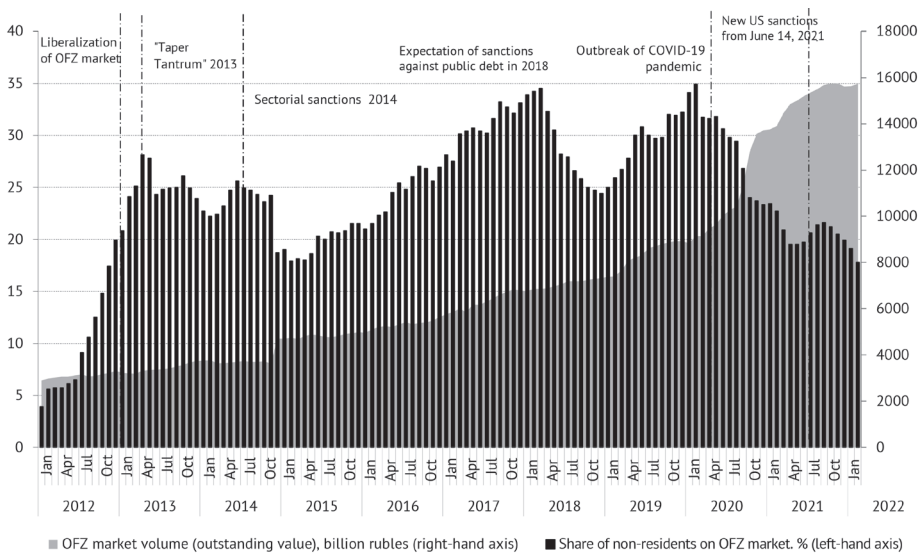


Fig. 45. The share of non-residents on the OFZ market, February 2012 – February 2021

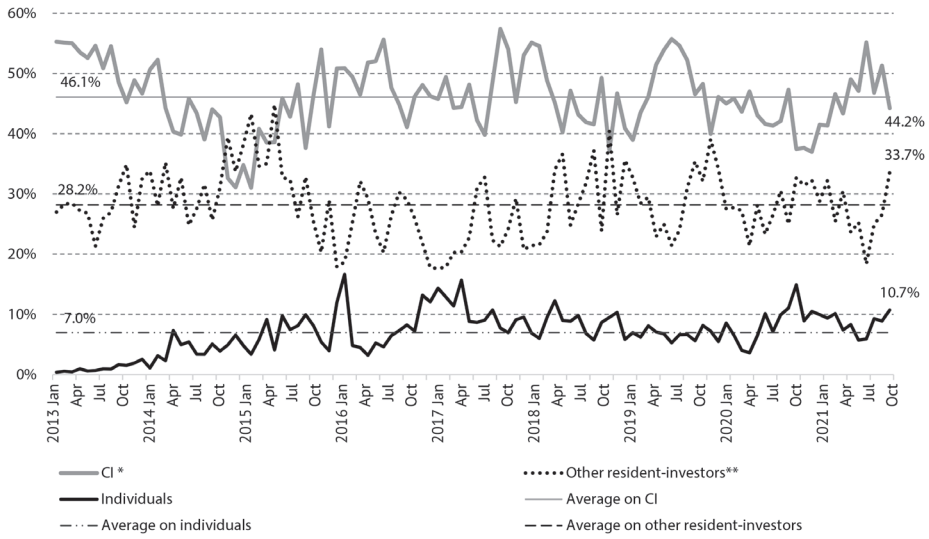
Source: own calculations based on the data of the RF Central Bank and Cbonds.

1 The RF Central Bank. The Review of the Russian Financial Sector and Financial Instruments. Analytical paper. 2021. Moscow. p. 2. URL: https://www.cbr.ru/Collection/Collection/File/40903/overview_2021.pdf

2 In our view, prior to the liberalization of the OFZ market in 2013, the actual share of non-residents in OFZ was higher than the official one of 6.5% because before opening by the Clearstream and the Euroclear of correspondent depo accounts with the National Settlement Depository, the custodian accounting system of that time failed to take into account non-residents' investments in OFZ via various indirect schemes.

however, their weight changed considerably on the back of non-residents' cash flows because of financial and geopolitical risks. For example, amid concerns over possible new sanctions barring global investors from buying Russian government bonds, in April 2018 the share of non-residents in the OFZ ownership pattern shrank from 33.1% in 2017 to 24.4% in 2018. However, after it became clear that such sanctions would not be applied to OFZ investors, favorable market conditions in 2019 facilitated the return of foreign investors' funds to this market segment and their share in the OFZ ownership pattern reached a historic peak of 34.9% in February 2020.

From March 2020 till February 2022, the share of non-residents fell to 17.8% owing to two major developments. During the pandemic-induced financial crisis, the share of OFZ non-resident-investors declined from 34.9% in February 2020 to 19.7% in June 2021 on the back of a sharp increase in the RF Ministry of Finance's OFZ issues which were placed mostly among domestic institutional investors. However, later the share of non-residents decreased mainly because of a risk of US sanctions barring non-residents from buying Russian government bonds on auctions. These sanctions came into effect on June 14, 2021. In February 2022, non-residents were forbidden to buy Russian government bonds on the secondary market, as well. A number of large foreign institutional investors started to sell



* CI – credit institutions. ** Other investors -non-residents - non-banking financial institutions, PIFs, NPF, trust management accounts and other resident-entities.

Fig. 46. The share of investments of banks, non-residents and other investors in OFZ. January 2013 – December 2021

Source: own calculations based on the data of the RF Central Bank

their Russian assets until the Russian regulator introduced a ban on fulfillment of non-residents' instructions regarding securities deals on the Russian exchanges. At present, non-residents' outstanding OFZ investments worth nearly Rb2.8 trillion remain frozen.

The value of foreign investments in OFZ increased from Rb3.0 trillion in January 2020 to Rb3.2 trillion in January 2021 (*Fig. 46*). At the same time, banks' investments in OFZ more than doubled: from Rb3.6 trillion to Rb7.6 trillion. Over the same period, investments by other investors, including NPF and insurance companies picked up from Rb2.3 ттrillion to Rb2.8 trillion or by 21.7%.

So, the domestic market of government securities remains stable despite suspension of non-residents' operations and higher yield on bonds related with an upturn in the key rate. Taking into account the fact that Russian gold and foreign-exchange reserves have been frozen, the stability of foreign debt remains to be seen and serious efforts need to be taken to resolve this situation.

3.1.10. Futures market

The futures market is important in economic terms because it ensures pricing of investment assets, as well as makes it feasible for market participants to hedge their assets against dramatic price volatility in future.

In 2021, high volatility of foreign-exchange yields and financial and commodity assets, as well as appreciation of global prices for oil and other raw materials facilitated futures market growth on the Moscow Exchange (*Fig. 47*). The futures market trading volume increased from Rb124.5 trillion in 2020 to Rb151.25 trillion in 2021 or by 21.5%; in 2020 its growth was equal to 60.9%. The volume of option transactions grew from Rb5.3 trillion in 2020 to Rb6.8 trillion in 2021 or by 26.6%; at year-end 2020 growth was almost at the same level (27.3%).

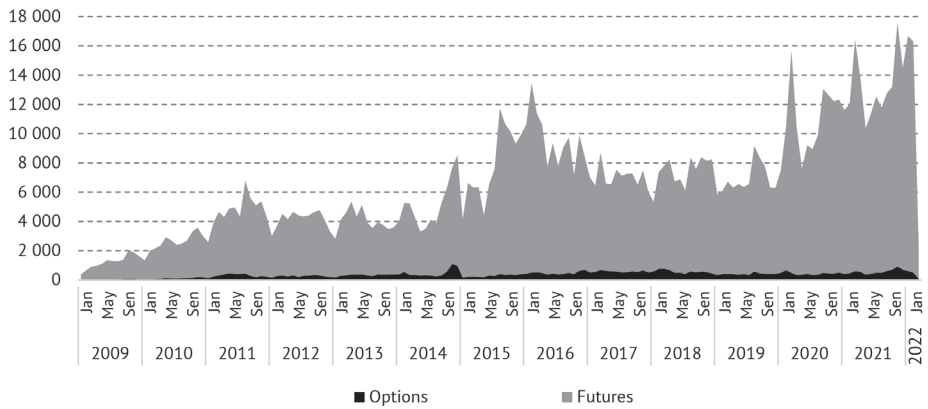


Fig. 47. The value of futures and options on the Moscow Exchange, January 2009 – March 2022, billion rubles

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

According to the data of the Moscow Exchange, in 2021 non-residents and private investors accounted for 48.0% and 43.0% of the overall futures market trading volume, respectively. The development of the futures market, particularly transactions based on securities, stock indices, as well as interest rates, is impeded because the presence of domestic institutional investors is rather limited on this market, while non-financial businesses do not often hedge their assets against foreign-exchange, interest rate and other risks. By contrast with the US market which saw rapid growth in individuals' option transactions in 2020–2021, expectations of similar trends failed to materialize in Russia, probably, because of insufficient liquidity of this market segment and a lack of offensive marketing on the part of large brokers.

In 2021, the Moscow Exchange futures market did not see any breakthroughs. The Moscow Exchange opened an additional morning trade session from 7 a.m., thus making the futures market accessible to participants from Russia's eastern and far eastern regions and Asia, introduced S&P500 index futures and options, expanded the range of futures contracts for equities and depository receipts of a number of issuers, including equities of large BigTechs from China.

In 2021, traditional exchange-traded contracts accounted for the bulk of deals on the futures market. Particularly, foreign exchange (US dollar and euro) futures played a major role on the Moscow Exchange futures market. The drivers of this futures market segment were high volatility of exchange rates and feasibility to buy foreign currency at more favorable exchange rates on the Exchange rather than at banks (*Fig. 48*). Foreign-exchange futures volumes increased from Rb63.4 trillion in 2020 to Rb66.7 trillion in 2021; the share of foreign-exchange futures deals on the futures market fell from 57.3% in December 2020 to 38.9% in 2021. However, on the back of high demand for foreign-exchange in Q1 2022, the share of foreign-exchange futures grew to 70.3% in March 2022.

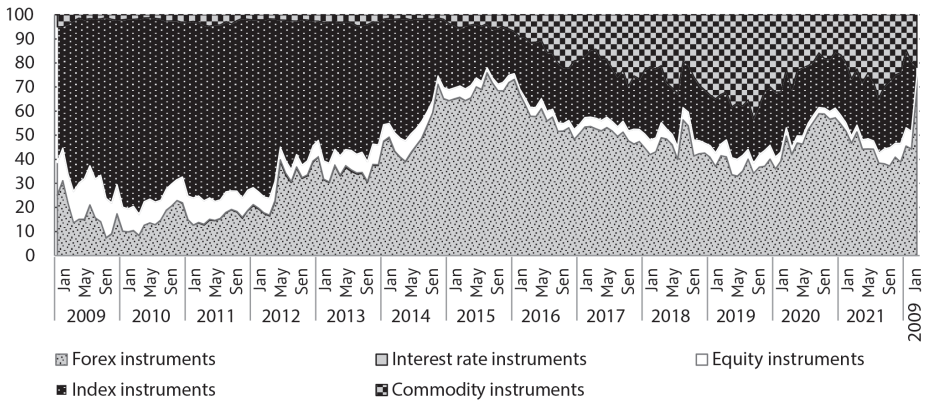


Fig. 48. The Moscow Exchange futures market pattern. January 2009 – March 2022, % of the deal value

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

The second most important futures market segment is stock index contracts, primarily, RTS and Moscow Exchange index contracts. Their volume increased from Rb29.8 trillion in 2020 to Rb38.9 trillion in 2021; the share of index futures grew from 23.4% in December 2020 to 29.4% at year-end 2021. On the back of the collapse of indices in February-March 2022 and suspension of equity trading from February 28 till March 24, 2022, the share of such contracts was equal to the mere 3.4% based on results for Q1 2022.

In 2021, commodity futures (for Brent oil, gold and other precious metals, natural gas, raw sugar, copper, nickel and other goods) were a vigorously developing futures segment on the Moscow Exchange. Amid inflation expectations and the risk of weakening of the ruble, investments in commodities were regarded by lots of investors as hedging. Commodity futures trade volumes increased from Rb27.4 trillion in 2020 to Rb38.6 trillion in 2021; as result, within a year the share of commodity futures grew considerably from 15.3% to 24.0%. In the crisis Q1 2022, their share in the futures market volume decreased somewhat to 21.8% owing to market participants' increased demand for investments in commodities.

In 2021, on the back of dynamic growth in equity and bond futures volumes their share in the overall futures market almost doubled from 3.9% in December 2020 to 7.6% in 2021. Individuals' increased interest in such deals reflected their optimism amid market growth.

As before, interest-rate futures and options are not in demand at all. Such futures deals are close to zero, although amid high inflation and an upturn in the RF Central Bank's key rate, interest rates increasingly affect business. The main challenges to growth are a lack of reliable indicators of inter-bank market interest rates and large investors which are prepared to take interest rate risks.

As the options market is probably used less markedly for hedging financial assets, the Exchange-traded options volume is relatively moderate. Contracts for index instruments are the most active options market segment: its volumes increased from Rb3.3 trillion in 2020 to Rb4.4 trillion in 2021, while the share in the overall exchange-traded options declines somewhat from 64.1% in 2020 to 63.0% in 2021 (*Fig. 49*).

The volumes of foreign-exchange options increased from Rb1.7 trillion in 2020 to Rb2.0 trillion in 2021, while their share in the overall volume of option deals declined over the same period from 34.1% to 30.8%.

Other options market segments are very small. In 2020 and 2021, commodity options were equal to Rb0.3 trillion and their share in the overall volume of the options market also remained at the level of 4.0%. The value of equity options is insignificant and has no effect on the options market's overall performance.

Consequently, the Moscow Exchange futures market is not balanced yet. Foreign-exchange, equity and commodity options still paly a dominating role on this market. Further impetus should be given to the markets of interest rate derivatives, futures and options for equities, bonds and various index-linked securities. Taking into account new realities, it is necessary to develop a liquid market for futures contracts for yuan and other emerging market currencies.

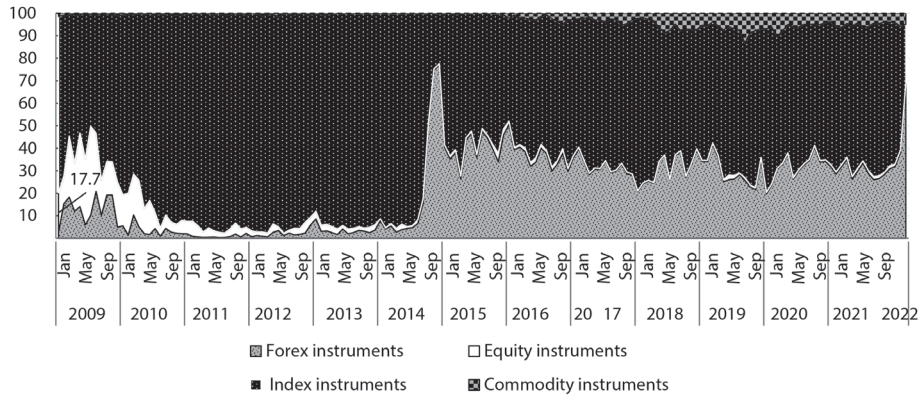


Fig. 49. The Moscow Exchange options market pattern, January 2009 – March 2022, % of deal value

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

3.1.11. Financial intermediaries and the exchange

In 2021, the number of professional securities market participants (PSMP) and licenses to various types of professional activities kept declining (*Fig. 50*). There was a decrease in the number of licenses to brokerage activity from 268 licenses in 2020 to 250 licenses in March 2022 or by 6.7%; licenses to dealer activities from 297 licenses to 276 licenses or by 7.1%; licenses to trust management from 189 licenses to 182 licenses or by 3.7%.

On the longer-term time horizon, the reduction in the number of PSMP licenses started as far back as the crisis of 2008 and reflects the general trend towards the domestic financial market's higher sustainability coupled with a reduction in the stock market's role in the economy.[1] The establishment of the financial mega-regulator in September 2013 sped up somewhat the reduction in the number of valid PSMP licenses, however, the main reasons for withdrawal of licenses and establishment of the mega-regulator were licensees' declarations of their exit from the business.

A more serious challenge to the development of the Russian stock market is a dramatic decrease in the number of new professional participants who are meant to promote competition. A considerable slowdown of the influx of new players took place in 2012. The upside is growth in the number of new PSMP licenses: 30 licenses in 2021 by contrast with 10 licenses in 2020. However, this is much below the number of licenses in 2007–2014.

The concentration of financial intermediaries and use of economies of scale are a reasonable strategy aimed at enhancing efficiency and it takes place to some extent in many countries. However, the specific of the domestic financial

1 For more details on the decline of the role of the stock market in the economy, see: *A.E. Abramov, A.D. Radygin, M.I. Chernova.* The Russian Stock Market: Trends, Challenges and Guidelines for Development // The Voprosy Ekonomiki. 2021. Issue No.11. p. 5–32.

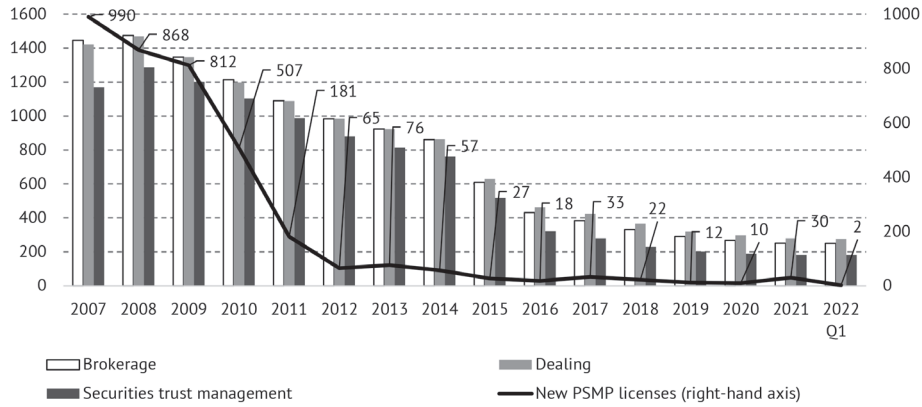


Fig. 50. The number of licenses to carry out brokerage, dealing and securities trust management activities (left-hand axis) and the number of licenses issued to professional securities market participants (right-hand axis) from 2007 till March 2022

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

market consists in the existence of large administrative barriers to growth of independent fintech and competition from financial platforms based on open architecture of sale of finance and investment products; domination of a few large financial ecosystems based primarily on government entities, as well as project activities by the RF Central Bank in areas where they compete directly with private financial institutions.[1] As regards fintech, no requirements – similar to the second European Payment Services Directive, 2015 (PSD2) – making the "open banking" standard and API addresses mandatory to large financial entities were set. The approval of the legislation on activities of operators of financial platforms (marketplaces) has led to artificially excessive requirements to their capital and limitation of such activities by commercial banks, brokers and asset management companies.

The situation on the Russian financial market after February 24, 2022 highlighted high risks of the stock market development strategy based on priority development of a limited number of financial ecosystems based on large state-owned banks and companies. Competition on the financial market could be promoted by legislative measures stimulating competition between investment platforms; creation of the environment for implementation of fintech projects; reduction of administrative barriers for new companies to enter the market; introduction of fiduciary standards of sale of finance and investment products[2];

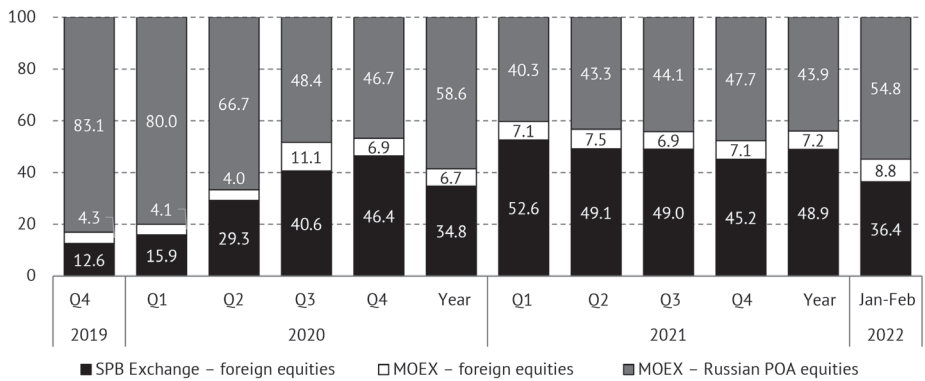
1 The Main Guidelines for the Development of the Financial Market of the Russian Federation in 2022 and in the 2023-2024 Period approved by the RF Central Bank include the latter's 14 projects which compete to some extent with financial services of private financial institutions.

2 These standards imply limitations on financial intermediaries' conflict of interests when selling financial products to customers.

more comprehensive orientation of important infrastructure development projects on the needs of financial intermediaries and their customers.[1]

In 2011, the deal on the merger of the MICEX with the RTS was completed and it sped up the development of exchange-related technologies and made it feasible to concentrate liquidity on auction participants' accounts with the integrated clearing and trading center. However, despite the upside of this merger, there were disadvantages in terms of a loss of competition between exchanges; competition used to be a powerful driver of exchange activities and higher efficiency. In 2020–2021, the sped-up development of the St. Petersburg Exchange (SPE) which became the organizer of foreign equity trading made it feasible to restore competition between the exchanges on the equity market. From 2020, the Moscow Exchange started to include foreign issuers' equities in its listing; in its turn the SPE declared its intention to include equities of Russian PAOs.

As shown in *Fig. 51*, the SPE's share in the domestic spot market of Russian and foreign equities increased from 12.6% in Q4 2019 to 48.9% at year-end 2021. On the back of competition between the exchanges on the market of foreign equities, private investors' investment demand shifted from domestic PAO equities to foreign equities. The share of foreign equities in the overall volume of equity trading on both Russian exchanges increased from 16.9% in Q4, 2019 to 56.1% at year-end 2021. In January-February 2022, amid increased operations of non-residents and private investors with Russian equities, the share of foreign equities in stock trading fell to 45.2%.



Note. On-exchange equity volumes include market transactions and negotiated deals.

Fig. 51. The shares of the Moscow Exchange (MOEX) and the Saint-Petersburg Exchange (SPB-Exchange in the overall volume of stock exchange equity transactions, %

Source: own calculations based on the data of the Moscow Exchange and the Saint-Petersburg Exchange.

1 On development of investment platforms and fintech, see: *A. Abramov.* To Stake Out a Platform // Expert. October 28– November 3, 2019. Issue No.44. pp. 64–68.

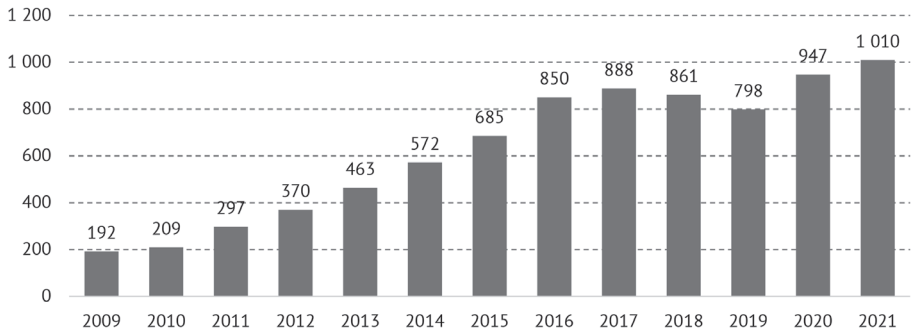


Fig. 52. The overall auction volumes of all instruments at the Moscow Exchange, 2009—2021, trillion rubles

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

Over the past years, the Moscow Exchange sought to realize its advantages on the market in terms of a universal organizer of auctions of various financial and investment assets. In 2021, the overall volume of stock trading in all financial instruments exceeded Rb1 quadrillion. Overall volumes of stock trading increased from Rb947 trillion in 2020 to Rb1010 trillion in 2021 or by 6.6% (*Fig. 52*).

The model of a universal exchange forms some risks which reduce market-based incentives in development of some or other segments which do not yield a high exchange fee income. At present, this is observed in equity and futures markets' becoming less prominent in the overall exchange trading volumes. In 2010-2018, the equity market share in the overall exchange trading volume decreased from 13.2% to 4.4% and then it began to increase again, but failed to recover to the former level (*Table 10*). In 2021, it was equal to 5.2%. The share of the futures market was growing more dynamically; it increased from 9.5% in 2017 to 15.7% in 2021.

Table 10

The pattern of the Moscow Exchange market, 2010 – March 2022, %

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Jan.-Mar. 2022
Stock market	**13.2**	**10.3**	**6.5**	**5.2**	**3.6**	**3.0**	**2.8**	**4.0**	**4.7**	**5.1**	**5.8**	**5.2**	**3.5**
Including:													
Equities, RDR and equity units	8.0	6.6	3.1	1.9	1.8	1.4	1.1	1.0	1.3	1.6	2.5	3.0	2.7
Bonds	5.2	3.7	3.4	3.3	1.9	1.6	1.7	3.0	3.5	3.5	3.2	2.2	0.8
Secondary bidding	3.4	2.9	2.8	2.7	1.5	1.2	1.1	1.2	1.2	1.3	1.2	1.0	0.5

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Jan.-Mar. 2022
Offerings market	1.8	0.8	0.6	0.6	0.3	0.4	0.6	1.7	2.3	2.2	2.1	1.2	0.3
Forex market	**72.0**	**70.6**	**80.0**	**84.3**	**85.6**	**83.3**	**83.6**	**86.5**	**84.8**	**84.5**	**80.5**	**78.9**	**85.9**
Including:													
Money market	33.9	41.3	48.3	50.7	45.7	38.0	44.8	47.3	44.3	45.9	45.7	47.2	56.1
REPO operations	31.5	38.3	45.8	44.8	32.0	26.4	34.8	38.3	36.0	36.7	40.0	41.5	46.4
Lending market	2.4	3.1	2.5	2.8	3.7	4.8	4.4	4.2	6.3	6.7	5.0	5.5	8.4
Currency market	38.1	29.3	31.6	33.7	39.9	45.4	38.8	39.2	40.5	38.6	34.7	31.7	29.8
Spot deals	18.0	15.8	16.6	12.4	13.6	15.1	12.6	8.8	10.1	8.4	10.2	9.4	8.9
Swap deals	20.1	13.4	15.0	21.3	26.3	30.3	26.2	30.3	30.4	30.2	24.5	22.2	20.9
Futures market	**14.8**	**19.1**	**13.5**	**10.5**	**10.7**	**13.7**	**13.6**	**9.5**	**10.4**	**10.3**	**13.7**	**15.7**	**10.3**
Derivatives financial instrument (DFI)	**0.0**	**0.0**	**0.0**	**0.0003**	**0.0002**	**0.001**	**0.002**	**0.01**	**0.1**	**0.1**	**0.1**	**0.3**	**0.4**
Commodity market	**0.001**	**0.003**	**0.006**	**0.005**	**0.003**	**0.02**	**0.02**	**0.01**	**0.02**	**0.01**	**0.01**	**0.02**	**0.01**
Total	100	100	100	100	100	100	100	100	100	100	100	100	100

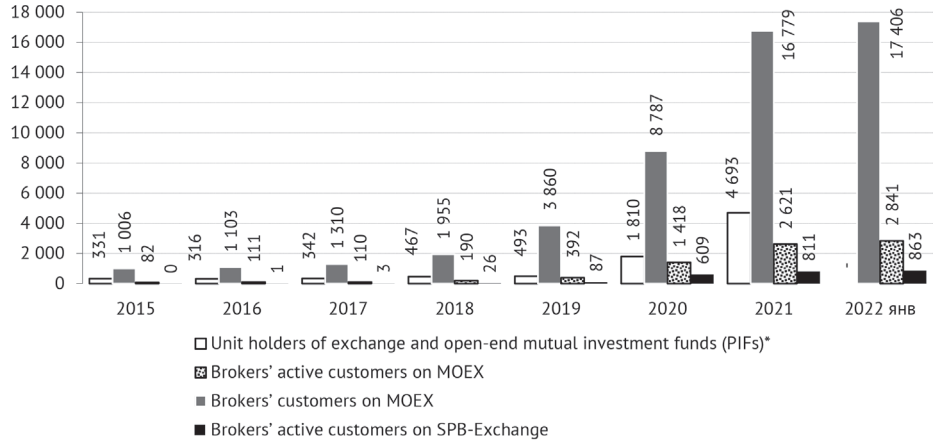
Source: own calculations based on the data of the Moscow Exchange.

3.1.12. Investors

Private investors

In 2019—2021, the mass influx of private investors was an important event on the financial market. As shown in *Fig. 53*, the overall number of investors' brokerage accounts with the Moscow Exchange increased from 2.0 mn accounts in 2018 to 17.4 mn accounts in January 2021[1], that is, 8.7 times over. The number of customer's active brokerage accounts, in which at least one transaction a month was carried out, increased over from 190,000 accounts to 2,841,000 accounts or 15.0 times over during the same period at the Moscow Exchange; at the SPB-Exchange the number of active customers grew from 26,000 customers to 863,000 customers or 33.2 times over. Also, the number of unit holders of market mutual investment funds (PIFs) increased markedly from 467,000 unit holders in 2018 to 4,693,000 in 2021 or 10 times over.

1 As a result of sanctions introduced against large Russian financial companies (these sanctions brought about a considerable restructuring of some brokers' customer bases), the Moscow Exchange has stopped publishing since February 2022 the data on its website on the number of accounts opened with different financial institutions.



*The data on the number of market unit holders of mutual investment funds (PIFs) in January 2022 is not available.

Fig. 53. The number of management companies' market retail customers and brokers at the Moscow Exchange and SPB-Exchange

Source: own calculations based on the data of the Moscow Exchange, SPB-Exchange and Expert RA.

The main drivers of the influx of millions of new private investors to the equity market were as follows: a decrease in the key interest rate of the RF Central Bank until March 2021; lower investment appeal of bank deposits; new technologies making investors' access easier to deals with risky assets (investment platforms of the Tinkoff-Bank, the Sber, the VTB and other banks); large retail banks' aggressive marketing of brokerage services; more free time at the disposal of individuals during the pandemic; an upturn in households' saving ratio amid unstable cash incomes.

According to the statistics of the RF Central Bank, in 2021 individuals' account balances with depositories and brokers were equal to Rb12.9 trillion in terms of investments in brokers' cash funds, debt securities, equities of Russian and foreign companies and equity units of Russian and foreign investment funds, including participation units in closed PIFs (*Fig. 54*). By contrast with 2018, the volume of households' specified financial assets increased 2.9 times over. Equities (Rb5.7 trillion), participation units (shares) of mutual investment funds (Rb3.3 trillion), debt securities (Rb2.9 trillion) and cash balances with brokers (Rb1.0 trillion) dominated in households' portfolio.

According to the data published by the RF Central Bank,[1] in 2021 Rb8.3 trillion worth of investments in securities were in accounts of 20.2 mn private customers (*Table 11*). Specifically, the distribution of clients' assets was rather uneven: out of 20.2 mn customer accounts 12.7 mn accounts or 63.0% were empty, in another 4.0 mn accounts (20.0%) the value of assets did not exceed Rb10,000, while in

1 URL: https://www.cbr.ru/securities_market/analytics/

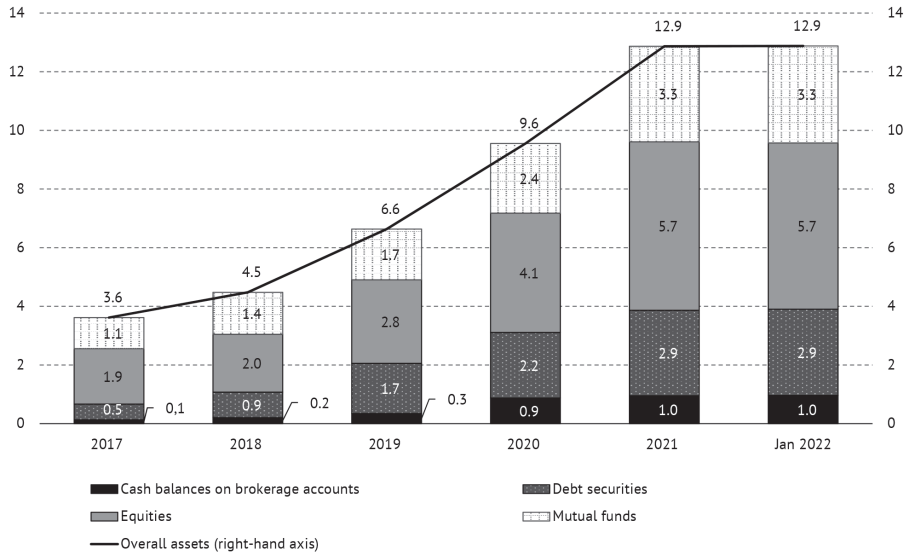


Fig. 54. The value of households' financial assets on the equity market, December 2017 – January 2022

Source: Own calculations based on the RF Central Bank's data on household savings.

Table 11

Distribution of the number of private investors and the value of clients' assets by the size of clients' brokerage accounts in 2021

Size of brokerage accounts	Distribution by:			
	Number of clients		Value of customer portfolio	
	Thousand persons	share, %	Billion Rb	share, %
From Rb6 mn and more	0.2	1.0	6151	74.1
From Rb1 mn to Rb6 mn	0.4	2.0	1411	17.0
From Rb100,00 to Rb1 mn	1.4	7.0	664	8.0
From Rb10,000 to Rb100,000	1.4	7.0	66	0.8
Up to Rb10,000	4.0	20.0	8	0.1
Empty accounts	12.7	63.0	0	0
Overall	**20.2**	**100**	**8300**	**100**

Source: own calculations based on the data of the RF Central Bank's Reviews of Key Performance of Professional Securities Market Participants, No. 4, 2021.

1.4 mn accounts (7.0%) it varied from Rb10,000 to Rb100,000. If it is believed that accounts with assets worth over Rb100,000 have a sufficient investment and diversification potential, then it turns out that there were only 2 mn such accounts or 10% of the overall number of private investors' brokerage accounts in 2021.

As regards assets value, only 1% of accounts of brokers' wealthiest clients accounted for 74.1% of the value of all customers' assets. Customer accounts with real investment potential (assets worth over Rb100,000) making up only 10.0% of the overall number of brokerage accounts accounted for 99.1% of the value of all clients' assets.

The above statistics brings into question in some sense a widespread idea about a mass influx of private investors to the stock market. In reality, 90% of individuals' brokerage account balances are not sufficient enough to diversify financial investments, while the share of assets in such accounts in the overall value of individuals' assets with brokers is equal to the mere 0.9%. Opening by millions of individuals of empty brokerage accounts or accounts with a symbolic asset value is the result of some large retail banks' aggressive marketing. Implicitly, it involves risks of misselling and touting of useless financial services and products to individuals.

Active marketing aimed at prompting individuals to open as many brokerage accounts as possible started in 2018 when the Tinkoff-Bank entered the equity market as an independent player (*Fig. 55*). Other competitor-banks (the Sber, the VTB and the Otkrytie) took advantage of new technologies to attract customers on the equity market, thus giving further impetus to growth in brokers' customer base.

As of January 2022, three large banks – the Tinkoff-Bank, the Sber and the VTB – accounted for 59.4% of registered brokerage accounts of which the leader, Tinkoff-Bank, accounted for 32.3% of registered brokerage accounts. The number

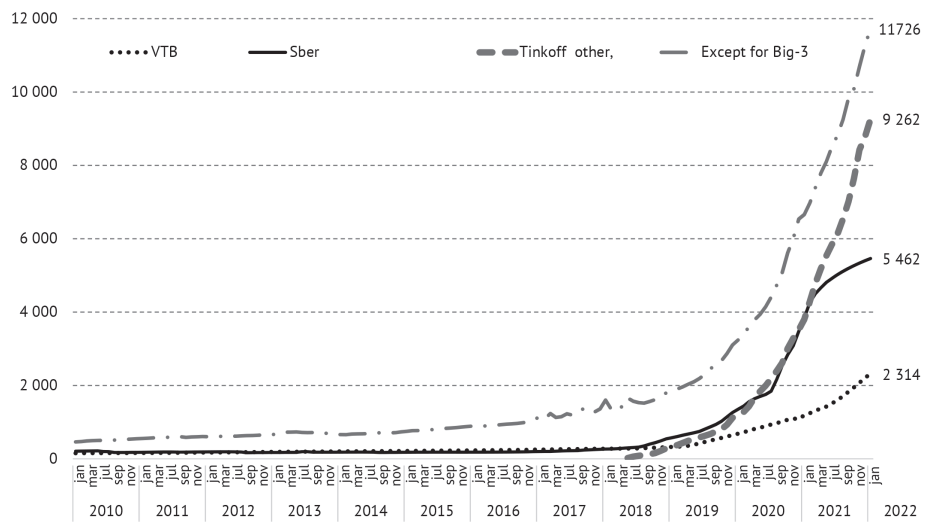


Fig. 55. The number of clients' registered (non-unique) brokerage accounts on the Moscow Exchange with top-3 brokers, thousand accounts

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

of brokerage accounts maintained with this bank increased from 286,000 in 2018 to 9.3 mn in January 2022 or 32.4 times over.

Business related with active clients' account maintenance is even more concentrated (*Fig. 56*). The Tinkoff-Bank, the Sber and the VTB account for 94.3% of the overall number of accounts, with the Tinkoff-Bank being the leader (69.9%). The number of active brokerage accounts maintained with the Tinkoff-Bank increased from 33,000 accounts in 2018 to 2.0 mn accounts in January in 2022 or 60.9 times over.

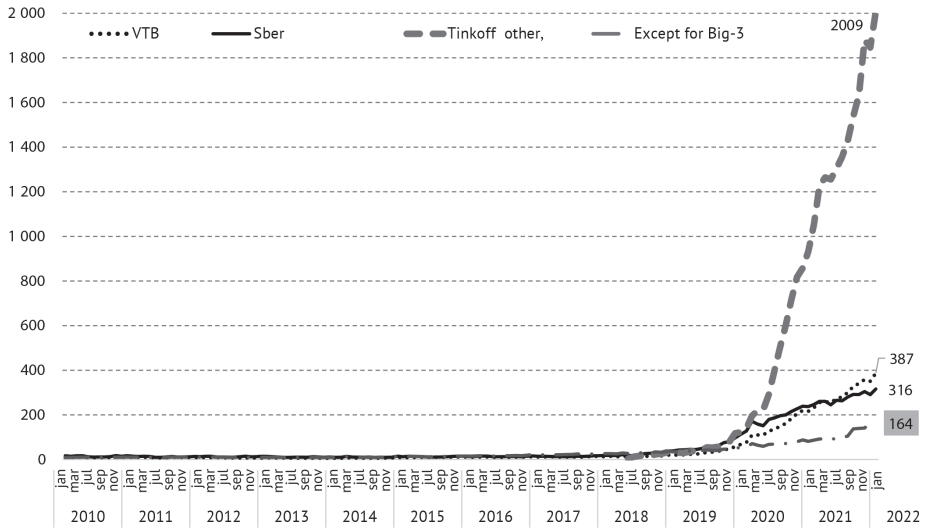


Fig. 56. The number of customers' registered brokerage accounts with Big-3 brokers at the Moscow Exchange, thousand accounts

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

Individual investment accounts (IIA) with personal income tax privileges and no serious limitations on investment of funds from these accounts have become an important development in the private savings sector in the past seven years. According to the data of the Moscow Exchange, as of January 2022, the number of brokerage IIAs was equal to 5.0 mn accounts (*Fig. 57*). Growth in the number of brokerage IIAs was driven by banks carrying out brokerage operations. From December 2018 till January 2022, their share in the overall number of specified accounts increased from 73.9% to 89.3%, while the share of brokers – non-banking financial institutions – fell from 24.8% to 10.1%.

The Tinkoff-Bank, the Sber and the VTB accounted for 83.5% (including the Sber's 43.3%) of the overall number of accounts in the IIA-servicing business (*Fig. 58*). The number of IIAs with the Sber increased from 291,000 accounts in 2018 to 2.1 mn accounts in January 2022 or 7.4 times over.

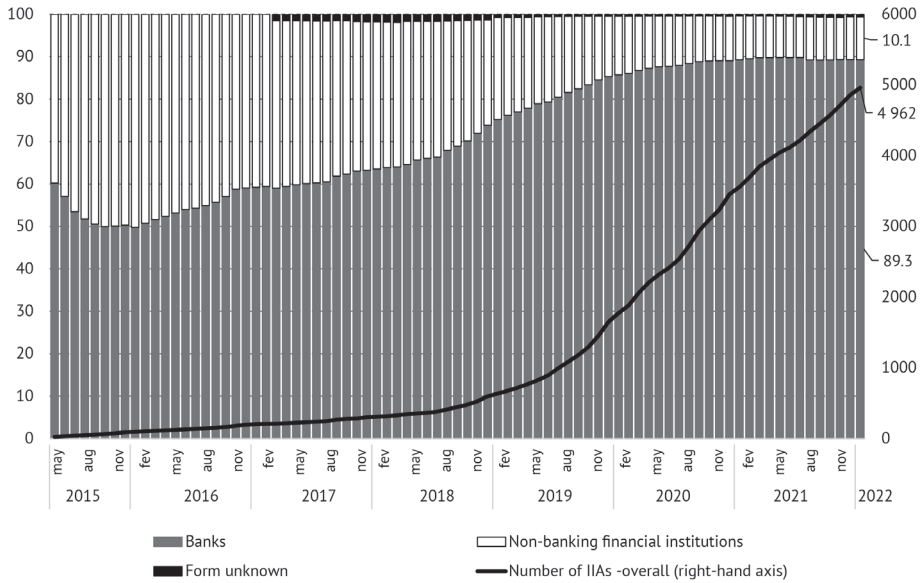


Fig. 57. The overall number brokerage individual investment accounts (IIA), May 2015 – January 2022, thousand accounts.

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

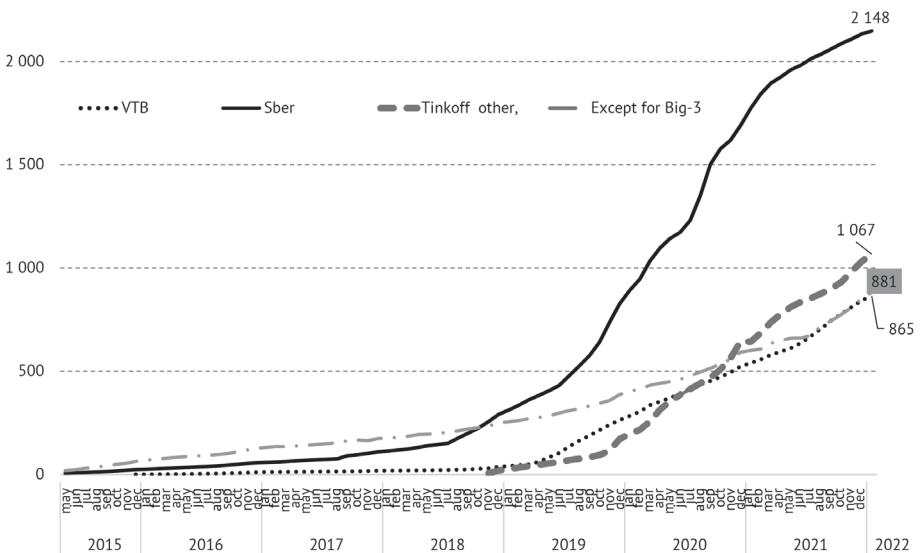


Fig. 58. The number of brokerage IIAs with top-3 brokers, thousand accounts

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

The existing IIAs have not become yet an instrument of long-term savings; assets in such accounts are much lower than in classical brokerage accounts and trust management accounts. However, IIA owners paid more attention to instruments making it feasible to better diversify the portfolio and protect it from risks of ruble volatility. Also, increased demand for collective investment effective products, primarily, index ETFs, as well as exchange-traded and index PIFs was driven by growth in IIAs.[1]

Domestic instructional investors

In 2021, the influx of private investors' funds to the equity market made up partially for the outflux of non-residents' funds on the back of sanctions introduced in June 2021 and global investors' expectations of tightening of the monetary policy both in the US and the EU. In March 2022, after opening up of Russian exchange auctions in securities, private investors have become the main players on the equities and derivatives market.

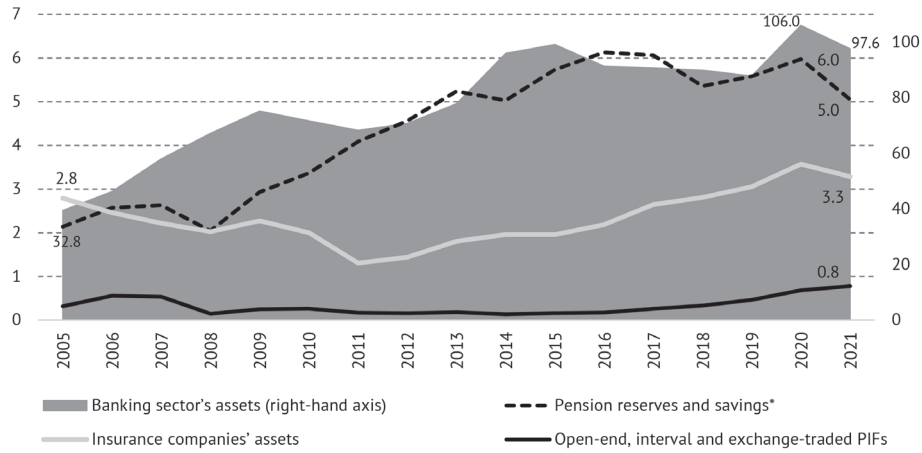
In 2021, the sector of domestic pooled investments saw no breakthroughs. PNFs' and asset managers' pension savings growth was constrained because of the "freezing" of the mandatory pension savings system starting from 2014. The financial regulator failed to create alternative corporate and individual pension plans.

In 2021, growth in the value of assets of most institutional investors, except for PIFs, lagged somewhat behind GDP growth rates; as a result, the share of specified assets in GDP decreased. As shown in *Fig. 59*, the share of banking assets in GDP decreased from 106.0% in 2020 to 97.6% in 2021. The share of pension savings and GDP reserves fell from 6.0% to 5.0%, the share of insurers' assets decreased from 3.6% to 3.3%, while the share of net assets of open-end, interval and exchange-traded PIFs in GDP increased from 0.6% to 0.8%.

In 2021, an upturn in the RF Central Bank's interest rate which brought about automatically a decline in the market value of the earlier bought bonds had an impact on depreciation of assets of banks, NPFs and insurers which traditionally had substantial assets in terms of fixed income instruments. At the same time, advanced growth in net assets of marketable PIFs was related with a substantial share of high-yield equities in their assets in 2021. In addition, a substantial growth driver of pooled investments was the sector of exchange-traded and open-end index-linked PIFs which are in high demand with private investors.

As shown in *Fig. 60*, the value of net assets of exchange-traded PIFs increased from Rb86 bn in 2020 to Rb213 bn in 2021 or by 147.7%; over the same period the value of traditional index-linked open-end PIFs grew from Rb79 bn to Rb164 bn or by 107.6%. Over the same period, the overall value of net assets of open-end PIFs increased from Rb666.1 bn to Rb921.2 bn or by 38.2%. It means that advanced

1 The need to form such synergy of savings accounts, PIFs and exchange-traded funds is justified in the monograph: *A.E. Abramov.* Institutional Investors in the World: The Specifics of Activities and Policy of Development: in two books. Book 2 / Scientific editor A.D. Radygin. Moscow: The Delo Publishing House, RANEPA, 2014.



* In calculating pension reserves and savings, the value of pension savings and reserves with the NPF was estimated as of Q3 2021.

Fig. 59. The share of bank assets (%, right-hand axis), pension reserves and savings, insurance companies' assets and the value of net assets of open-end and interval PIFs (%, left-hand axis) in Russian GDP in 2005–2021

Source: own calculations based on the data of the RF Central Bank, the Pension Fund of the Russian Federation and the Rosstat.

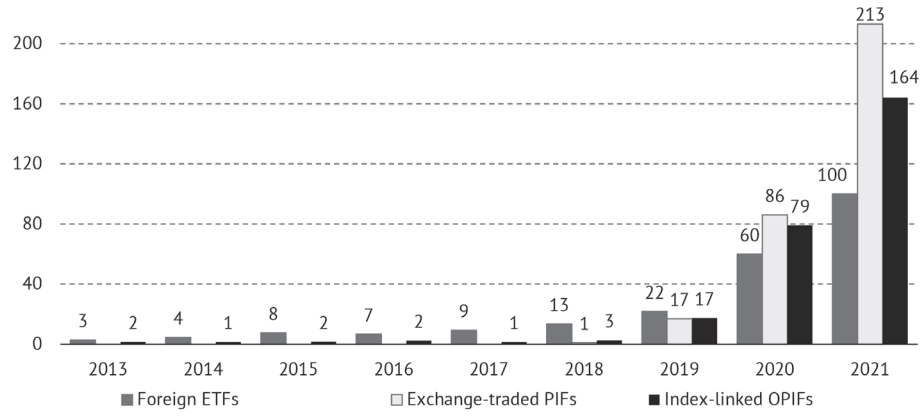


Fig. 60. The value of net assets of index-linked investment funds in the Russian Federation, billion Rb

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

growth rates of different types of index-linked PIFs were almost 2.5 times higher than those of assets of classical mutual investment funds.

The year 2021 saw appreciation of the value of exchange-traded funds (ETF), registered in the EU jurisdiction with equities marketable on the Moscow Exchange; their net assets value amounted to Rb100 bn. However, sanctions of February-March 2022 limiting non-residents' operations in Russia led to the freezing of their operations with units (equities) of the specified investment funds with Russian brokers because of the EU's bans on rendering financial services and sale of financial instruments to Russian investors. This case highlighted high relevance of transaction risks in case of Russian investments into foreign financial assets. In future, such risks should be insured within the framework of establishment of the system of individuals' guaranteed investments with brokers. This challenge is relevant not only in case of investments in foreign ETFs, whose equities are marketable on Russian exchanges, but also in case of any investments by Russian individual-residents in foreign issuers' financial instruments.

When investing in mutual investment funds, private investors' behavior is procyclical: a fall in base stock indices brings about sales of units of mutual funds, while in case of index growth, an influx of new investments. As a result, private investors increase volatility of equity and bond prices. As shown in *Fig. 61*, sharp growth in the RTS index during recovery from the coronavirus pandemic in April 2020 – October 2021 gave rise to a substantial influx of private investors' funds into equities of open-end PIFs. On the back of increased geopolitical risks and

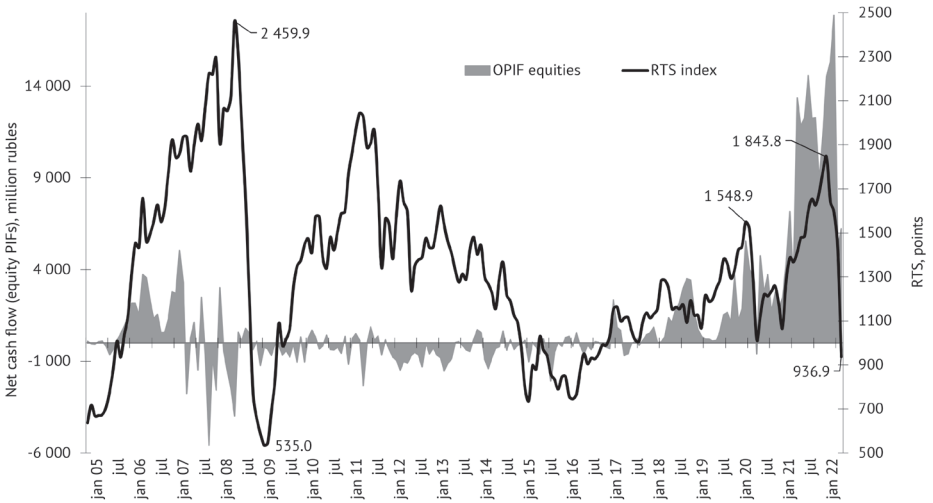


Fig. 61. Investors' monthly net cash flows in open-end PIF (OPIF) equities (billion rubles, left-hand axis) and the RTS index in points (right-hand axis), January 2005 – February 2022

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

an upturn in the key interest rate, a dramatic fall in the index in January-February 2022 led to a three-fold decrease in the influx of new investments in these funds.

Interestingly, in 2021 the net influx of private investors' funds – which accrued total is calculated from December 2004 – into open-end PIF equities surpassed in US Dollar terms the relevant indicator of the influx of investments in foreign funds of Russia-EMEA-Equity specializing in investments into Russian issuers' equities (*Fig. 62*), thus becoming a notable development in the pooled investments segment. Over 14 years, the overall influx of investments in Russian PIF equities amounted to $2.9 bn, while in Russia-EMEA-Equity funds, to the mere $0.7 bn. At the peak of popularity of investments in equities of Russian companies in April 2011, the net influx of private investors' investments into the funds of Russia-EMEA-Equity amounted to $14.1 bn, however, over the next 10 years foreign investors were mainly withdrawing from those funds. In 2021, the overall value of net assets of foreign funds was equal to $11.5 bn, while the relevant indicator of Russian open-end PIF equities, to the mere $4.5 bn.[1] To some extent, this trend is symbolic and shows that the role of domestic savings and investors in the development of the market of Russian issuers' securities should be enhanced.

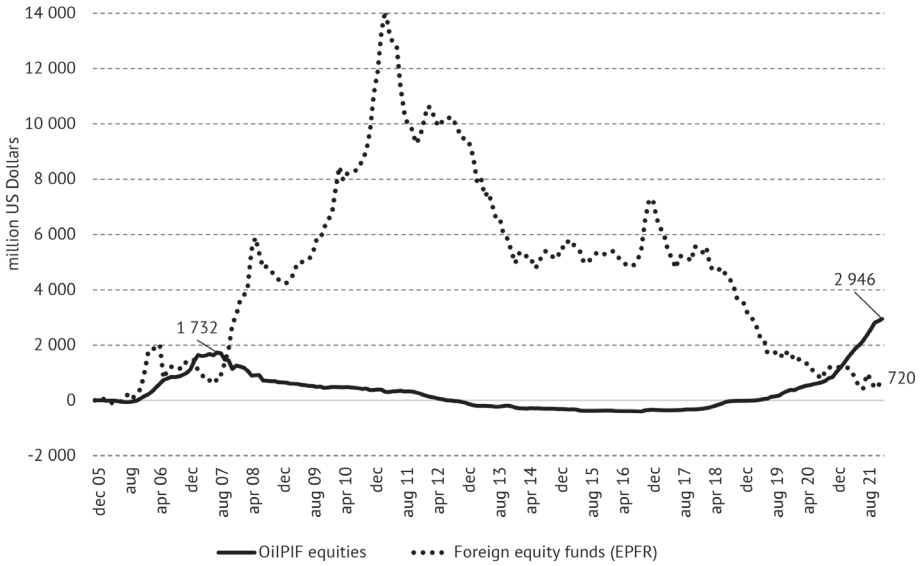


Fig. 62. Investors' net cash flows into open-end and interval PIF (OilPIF) equities and foreign funds of Russia-EMEA-Equity specializing on equities of Russian companies, accrued total, million US Dollars (December 2004 = 0), December 2004 – February 2022

Source: Own calculations based on the data of Investfunds.ru and Emerging Portfolio Fund Research (EPFR Global) web resource. URL: https://www.epfrglobal.com/

1 More information on the strategy of these funds' investments using the example of Russia, see: *A. Abramov.* Differences in the Behavior of Domestic and Foreign Private Investors on the Russian Equity Market // Russia's Economic Development. 2014. No. 11.

So, in 2021 with stagnation of the system of pension savings and reserves because of an undecided fate of funded pensions, pooled investments in terms of mutual funds demonstrated strong growth. The importance of development of domestic institutional investors consists in the fact that in most countries with a successfully developing financial market, pension funds and mutual funds play a key role in the domestic system of long-term savings. In Russia, the level of development of such institutions is quite moderate, thus complicating capitalization growth, regular IPO-SPO of equities, maintenance of liquidity on the stock market of equities and bonds and sustainable futures market growth. In new geopolitical realities, demand for securities of Russian issuers is most likely to be based on domestic investors. For this reason, the creation of the proper environment for accelerated development of institutional investors should become a priority of the Russian financial market development strategy.

Foreign investors

The domestic financial market became isolated from the global one because of the sanctions which followed after February 24, 2022. Non-residents are not allowed to buy Russian issuers' equities and bonds on the domestic market and sell securities which they own. Russian issuers are limited in placing securities on global markets. In the coming months and years, the domestic financial market will have to readjust to demand of domestic private and institutional investors, as well as banks.

By our estimates, in 2021 the overall investments of foreign portfolio investors in equities and bonds of Russian issuers amounted to $140 bn of which equity investments accounted for about 60% ($86 bn). For comparison: Russian private investors' investments into equities and bonds were equal to about $80 bn. Overall, if resources of non-financial companies and financial entities which funds wealthy individuals can return from abroad are taken into account, the domestic market volume is sufficient enough for efficient functioning of the financial market. Government measures aimed at supporting domestic investors and facilitating institutional investors growth become increasingly important.[1]

By estimates of experts of the Wall Street Journal, in 2020 the shares of individuals in equity trading volumes at the Shanghai Stock Exchange, China and the South Korean Stock Exchange[2] were equal to 80% and 84%, respectively, which data proves that national equity markets can potentially function owing to funds of primarily domestic private investors.

The reorientation of the domestic equity market from dependence on foreign portfolio investors to domestic demand is a trend which is typical of many emerging markets. This is evidenced by the statistics of cash flows of foreign funds

1 For more information, see: A.*E. Abramov, A.D. Radygin, M.I. Chernova*. The Russian Stock Market: Trends, Challenges and Guidelines for Development // The Voprosy Ekonomiki. 2021. Issue No.11. pp. 5–32.

2 *Osipovich A*. Individual-Investor Boom Reshapes U.S. Stock Market // The Wall Street Journal online. 31 August 2020. URL: https://www.wsj.com/articles/individual-investor-boom-reshapes-u-s-stock-market-11598866200

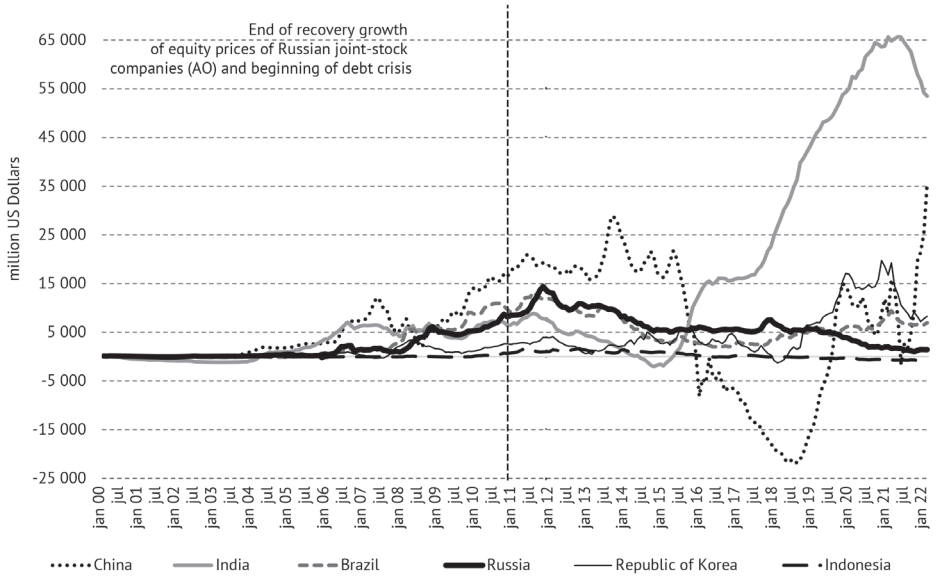


Fig. 63. Accumulated cash flows of foreign investment funds specializing on investments in equities of some or other countries with emerging markets, January 2000 – February 2022

Source: Own calculations based on the data of EPFR.

specializing in investments in equities of some or other emerging economies.[1] As seen from the data in *Fig. 63*, the Russian equity market encountered the mass outflow of foreign funds as far back as the mid-2011. Comparison with other five large emerging equity markets – Brazil, India, China, South Korea and Indonesia – reveals that mostly all of them encountered a similar phenomenon at that time.

In 2021, foreign investors withdrew from Russia-EMEA-Equity funds $0.76 bn as compared with $0.32 bn in 2020. Investors have been steadily withdrawing from Russia-EMEA-Equity funds since the mid-2011; this behavior reflects their pessimism about investments in equities of Russian companies. It is noteworthy that an influx of $286 bn worth of investments in these funds was observed only in January-February 2022.

* * *

In 2021 and early in 2022, the following major trends prevailed on the Russian financial market.

1 Though these funds are not the largest foreign portfolio investors, specialization of their investments in equities of some or other countries is an important indicator of attitude of a larger range of foreign investors to these financial investments.

Amid economic recovery after the pandemic and the influx of foreign-exchange revenues in 2021, Russian stock indices demonstrated high yield and moderate risks. Risk premiums, particularly Damodaran risk premium, used in assessment of Russian equity prices hit record-low values, thus driving up equity prices. Equity market growth was underpinned by a stable macroeconomic situation, companies' and banks' record-high profit, equity issuers' active dividend policy, an influx of private investors' funds and pooled investments growth.

The main domestic market challenges surfaced most commonly on mid-term and long-term time horizons. As regards yield and risks criteria of Russian equities, on specified horizons Russian equities were inferior to most stock markets, as well as income of long-term bonds of Russian issuers. Over the entire period of its existence, the Russian market regularly passes through recessions which in academic literature are referred to as "black turkeys". An unstable foreign exchange rate has reduced efficiency of long-term domestic savings strategies. The equity market encounters regularly challenges, such as a low influx of new issuers to the stock market, limited liquidity of securities, high concentration of a trading activity on equities of a few large issuers from the fuel and energy sector and banks and regular capital flight of foreign portfolio investors.

Also, a low capacity of the domestic equity market (capitalization, the number of companies in the listing, stock exchange liquidity, volumes of IPO-SPO deals and other) is a serious challenge reducing the influence of the equity market on the economy and impeding the solution of social issues.

In 2021, the domestic bond market was growing less aggressively than in the previous years because of an upturn in the key interest rate in March and the US ban introduced in June on US investors' purchases of Russian government securities. A pickup in revenues and cash flows of large Russian companies made it less interesting for them to issue new bonds. It is noteworthy that the activities of "second-tier" issuers increased considerably on the corporate bond market. With moderate activity of private investors on the bond market and insufficient level of development of domestic institutional investors, the bond market liquidity remained low, while the role the money market in terms of REPO deals increased.

Early in 2022, the trend of inversion of yield curves started to take shape when the yield of short-term borrowings surpassed that of long-term ones and this is often viewed as an effective predicator of oncoming economic recession.

In 2021, the financial mediation sector was characterized by a low level of competition between financial entities and slower growth in assets of banks, the NPF and insurance companies as compared with GDP growth.

In 2020–2021, stock markets saw a mass influx of investors. The number of individuals' registered customer accounts with brokers at the Moscow Exchange alone exceeded 17 million accounts. Households have serious investment potential on the equity market, but private investors' assets are distributed rather unevenly, while out of the bulk of brokers' customers only 2 mn customers have a real investment potential with assets worth Rb100,000 and more in their accounts.

Changes which took place in February 2022 create new realities for operation of the financial market both at present and in future. With closure of the domestic

equity market for non-residents, restrictions on Russian companies' and individuals' cross-border operations with foreign-exchange, exit from Russia of numerous foreign companies and banks and introduction of sanctions on trading operations by Russian companies, the domestic equity market can rely in short-term only on domestic investors' funds. Along with other factors, restrictions applied to bond issuers in refinancing of their debt increase risks of corporate defaults.

This challenge suggests implementation of an effective policy of adjusting the financial market and its participants to new realities and difficulties, while in future, an in-depth development policy aimed at facilitating growth based primarily on domestic potential should be elaborated. Late in 2021, the RF Central Bank approved the "Main Guidelines for the Development of the Financial Market of the Russian Federation in 2022 and in 2023 and 2024", as well as other development strategies in terms of focused reports on various lines of financial markets' activities. The RF Ministry of Finance prepared the draft of "the Financial Market Development Strategy of the of the Russian Federation till 2030" meant to facilitate a close networking between the RF Government and the RF Central Bank in developing the financial market and strengthening its ties with the government's economic and social policies. These documents aroused great interests in professional and investment communities. With new realities which emerged in 2022 taken into account, these documents can be further elaborated in order to become a reliable platform for maintaining stability and subsequent development of the financial market.

3.2. Banking sector[1]

3.2.1. Key indicators and financial performance of the banking sector

At the end of 2021, the Russian banking system boasted of 370 credit institutions. A year earlier, their number constituted 406. During the year, the number of active credit institutions decreased by 36. The number of license revocations amounted to 26, voluntary revocation of licenses – 11. The number of banks with a universal license at the end of the year stood at 232 banks (248 at the beginning of the year), and with a basic license - 103 banks (118 at the beginning of the year). The number of non-bank credit institutions dropped by 5 to 35 (*Fig. 64*)

The reduction in the total number of credit institutions was accompanied by the consolidation of the banking sector – in 2021, there was an increase in assets, own funds and profits. Due to the rapid economic recovery, last year total assets of credit institutions gained 15.9% (in 2020 the increase amounted to 16.5%), banks' own funds went up by 12.2% (in 2019 – by 11.3%). Thus, the growth rates of assets and capital approximately remained at the level of the previous year.

1 This section was written by: *Zubov S.A.*, Candidate of Economic Sciences. Senior Researcher, Structural Studies Department, IAES RANEPA.

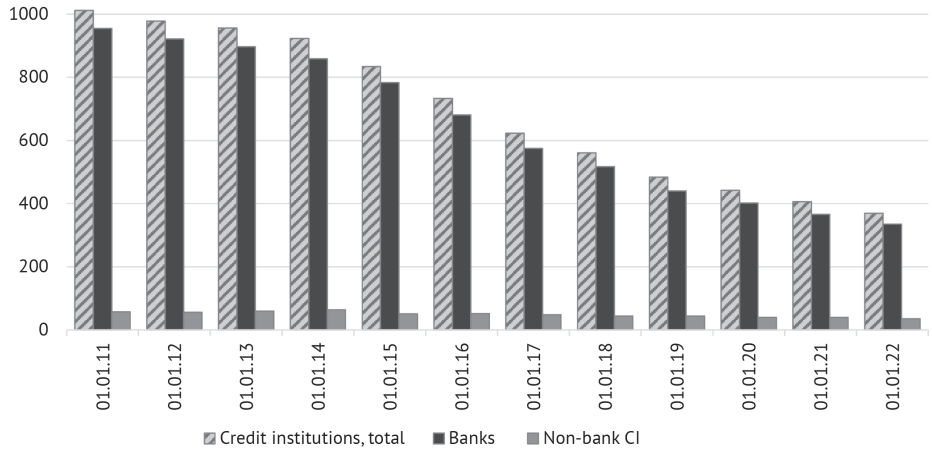


Fig. 64. Dynamics of the number of credit institutions over the last 11 years

Source: Bank of Russia.

As of January 1, 2022, the aggregate profit of the banking sector amounted to Rb2,362.9 bn (in 2020 – Rb1,608.1 bn), at the end of 2021, the number of profitable banks came to 84% (in 2020 – 80%). At present, approximately 20% of the sector (of the total number) consists of loss-making banks and banks with low operating efficiency, which are in the default zone and, in all likelihood, most of them will cease to exist as credit institutions during 2022.

Throughout the year, banks maintained a high level of profit (around Rb200 bn monthly). At the end of the year, the stock market crisis significantly adjusted the volume of bank profits downward (*Fig. 65*).

On the whole, Russia's banking sector was prepared for a long-term crisis largely thanks to the stabilization policy of the Central Bank of Russia implemented in recent years. Maintaining a high level of liquidity, liquidation of insolvent banks, as well as increased requirements to the quality of banking products and services by implementing the Basel standards made the domestic banking system more resilient. Increased business volumes and high transactional activity in the context of economic recovery contributed to the growth of positive financial performance of banks.

Profit upsurge has significantly exceeded the growth of assets and capital, which affected the growth of bank profitability: at the end of 2021, ROA[1] constituted 2.2% (1.4% a year earlier), ROE[2] – 21.7% (at the end of 2020 – 15.1%). The Russian banking sector remains one of the most profitable in the world, compared to the average return on capital for banks in the U.S. which is 12–13%, and for European banks – 6–8%.

1 ROA (Return on assets) – return on assets, the ratio of net profit to total assets of the credit institution.
2 ROE (Return on equity) – return on equity, the ratio of net profit to equity (capital) of a credit institution.

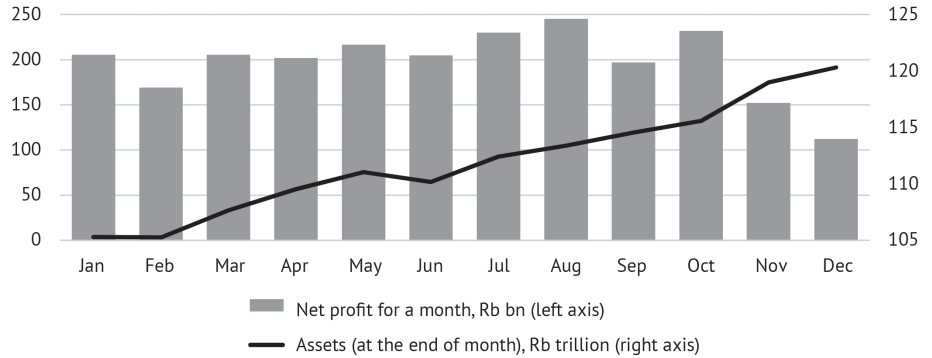


Fig. 65. Net profit (per month, Rb bn) and the volume of total assets of the banking sector (at the end of the month, Rb trillion) in 2021.

Source: Bank of Russia.

The leading banks managed to take advantage of the current situation in different ways. At the end of the year, the top five most profitable credit institutions were the same banks as a year earlier: Sberbank (52.4% of total banking sector profit, annual growth of 58.3%), VTB (10.3%, annual growth of 332.4%), Alfa-Bank (5.7%, annual growth of 14.5%), Gazprombank (3.9%, annual growth of 45.0%) and FC Otkrytie (3.6%, annual growth of 4.4%).

In terms of return on capital, the leaders are small banks and non-bank credit institutions offering a wide range of payment and settlement services, as well as business on marketplaces. The highest return on equity at the end of 2021 demonstrated – NCO Mobile Card (ROE – 395.6%), NCO Settlement Solutions (83.11%), Modulbank (67.5%), NCO Western Union DP East (62.17%), Kiwi Bank (58.0%). These institutions and similar small banks and non-bank credit institutions markedly raised the level of profitability in 2021.

Let's analyze the main components of the net profit of banks in 2021.

Net interest income amounted to Rb4,075.1 bn, or by 15.1% (Rb533.8 bn in absolute terms), exceeding the value of the preceding year (Rb3,541.3 bn). In the context of low interest rates on loans, the growth rate of interest income was not so high: interest income from corporate lending grew over the year by 5.3%, while that from retail loans – by 7.3%. The growth of these indexes was provided by the growth in the volume of loans and the end of favorable conditions for loan restructuring due to the pandemic of rapid economic recovery.

Having said that, low interest rates allowed banks to significantly optimize interest expenses by reducing the rates on term deposits of households and enterprises; the short-term increase in interest rates on open-end and savings accounts in the first half of the year did not affect the overall reduction of interest expenses – interest expenses on accounts and deposits of enterprises fell by 14.4%, and on accounts and deposits of households by 14.7%. Thus, the overall reduction of market rates on attracted resources contributed to the growth of

net interest income. It should be noted that the banks managed to significantly increase fee and commission income on credit operations, thus compensating for the losses from the low interest margin. For example, in 2021 the growth of fee and commission income on corporate loans was 41.6% and on retail loans – 82.7%. This type of income includes fees for services provided when granting loans (for consideration of an application, SMS-notification, credit card service, etc.).

Due to the development of electronic settlement forms and high transactional activity of bank customers, the net fee and commission income from intermediary transactions (money transfers, brokerage services, issuance of guarantees) spiked, growing by Rb252.1 bn to Rb1,536.8 bn by the end of the year under review (Rb1,284.7 bn by the end of 2020), and its annual growth amounted to 19.6%.

In 2021, the most significant contribution to the growth of bank profits was associated with the recovery of reserves. In absolute terms, their total volume decreased by Rb740.9 bn, or 60.1% against 2020, amounting to Rb491.4 bn. The reason behind this phenomenon was the preventive provisioning for potentially high-risk debts during 2020, which was restored in 2021 on the back of the improvement in the overall economic situation, as well as the activity of debt collectors and the possibility of assigning problem loans.

The most significant contribution, reducing the financial performance of banks in absolute terms (for the year – Rb2,568.2 bn), were operating costs associated with the provision of credit institutions. The annual growth amounted to Rb304 bn, or 18.1% (1.4% growth a year ago), while personnel costs rose by 10.0% (2.8% growth in 2020). Thus, the reduction in the number of departments and personnel of banks does not yet give a noticeable positive effect from the introduction of the latest IT-technologies.

The situation on the stock market was not so favorable for the banks. Starting from the Q3, banks faced a negative revaluation of securities due to the growth in yields of OFZs because of the increase in the key rate, as well as owing to the fall of the stock market in Q4. As of the end of 2021, the net income from operations with securities was lower than the expenses on the issued securities. The final negative result of operations with securities amounted to Rb65.2 bn (in 2020 a positive result was registered – Rb115.4 bn).

In the near term, banks will face pressure on margins due to a slowdown in the high-yield unsecured lending sector and the need to raise deposit rates. The situation on the stock market at the beginning of 2022 significantly deteriorated and will remain extremely tense in the context of increased geopolitical risks and sanctions pressure. In February this year, Russian systemically banks proposed the Central Bank of Russia not to take into account the negative revaluation of securities when calculating the capital adequacy ratio, fixing the securities value as of the beginning of the year. The capital reserve (norms H20.0,[1] H20.1[2] and H20.2[3]) has remained at a low level recently, forcing banks to curtail their market activities. On February 22, 2022, the Bank of Russia acknowledged the increased

1 H20.0 – Tier I capital adequacy ratio.
2 H20.1 – the basic capital adequacy ratio.
3 H20.2 – capital adequacy (own funds) ratio.

market volatility and announced support measures for Russian banks:[1] until October 1, 2022, banks were entitled not to recognize losses due to depreciation of securities, reporting shares and bonds at their market value as of February 18, 2022. A similar regulatory relief in the recalculation of securities at favorable quotes was used in 2015 amid a sharp increase in the key rate. Also, the regulator allowed credit institutions to use foreign currency exchange rates as of February 18, 2022 when calculating mandatory banking standards until October 1.

It is possible that a new round of geopolitical problems may trigger an increase in financial risks, for which banks will have to raise provisions for possible loan losses. Thus, in the first half of the year one should expect a decrease in the size of profits and the level of profitability of banking activities against the 2021 indexes.

3.2.2. Corporate lending

Economic recovery and the expected increase in interest rates stimulated credit demand from companies during 2021. The quality of the aggregate corporate loan portfolio of banks was improving: the average level of overdue debt was gradually declining, the level of profitability was growing.

As of January 1, 2022, the aggregate corporate credit exposure[2] to Russian banks reached Rb51.9 trillion. The growth of the corporate credit portfolio over the past year amounted to Rb7.2 trillion or 16.1%, which corresponds to the growth in total bank assets (15.9%). A year earlier, the corporate loan portfolio of Russian banks went up by Rb5.8 trillion or 14.8%. Since the high rates of the previous year were due to the currency revaluation and the state stimulation of concessional lending, we can conclude about the growth of corporate lending resulting from the improvement of the business climate in the business environment in 2021.

Since the beginning of 2021, ruble portfolio of corporate loans grew by 19.8% to Rb39.7 trillion, which exceeds the growth rate of 2020 – 11,4%. The share of ruble loans in the total loan portfolio remained virtually unchanged – 76.4%. The foreign currency portfolio in 2021 grew insignificantly by 5.3%, while in the previous year there was a spike of 25.5%, due to the depreciation of the ruble.

Loan growth, as well as higher interest rates and the introduction of a variety of bank commissions has a positive effect on the growth of bank revenues from corporate lending. After their level fell in 2019—2020 on the back of a decline in interest rates, in 2021 there was a clear change in the trend (*Fig. 66*). Also, the growth of bank revenues was due to the subsidization of loans provided under preferential government programs.

The level of outstanding debt during 2021 decreased both in absolute and relative terms. According to data reported for January 1, 2022, the volume of overdue debt on corporate loans amounted to Rb2.9 trillion, having declined over the year by Rb231.2 bn, or by 7.3%. Having said that, the ratio of outstanding debt to the total portfolio of corporate loans has also dropped from 7.1% to 5.6%. Thus, most Russian banks have generally adequately assessed the creditworthiness of their clients and managed to employ various mechanisms for dealing with bad

1 URL: https://rg.ru/2022/02/22/bank-rossii-obiavil-o-merah-podderzhki-rynka.html
2 With loans to non-financial and financial organizations, as well as individual entrepreneurs.

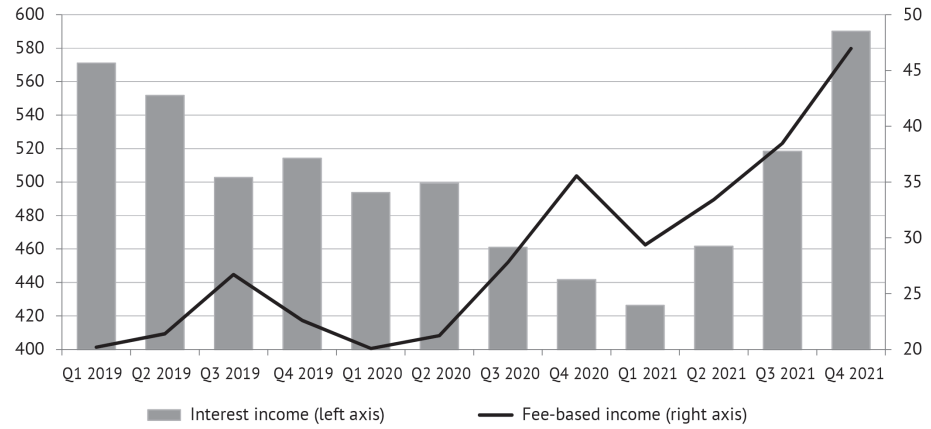


Fig. 66. Interest and fee-based income of the banking sector from corporate lending in 2019–2021, Rb bn

debts (reassignment to collectors, sale of collateral, use of insurance instruments, etc.). In general, the formed loan loss provisions covered bad loans by about 75% and do not represent a significant risk

The sectoral structure of corporate loans did not undergo significant changes compared to the previous year. The leaders in terms of the volume of loans attracted are the following industries: "Financial and Insurance Activities" (Rb41.0 trillion, or 47.9% of total loans), "Wholesale Trade, except for wholesale trade in motor vehicles and motorcycles" (Rb14.3 trillion, or 18.7%) and "Manufacturing Activities" (Rb10.5 trillion, or 13.8%).

The most significant increase in the volume of loans was recorded in the following industries: "Professional, scientific and technical activities" (an increase of 55.4%), "Provision of other services" (an increase of 42.2%), "Mining and quarrying" (an increase of 39.8%).

Despite the continuation of concessional lending programs and other support measures by the government and the Bank of Russia to enterprises in vulnerable industries in 2021, many areas of activity still experienced serious difficulties in attracting bank loans and were forced to reduce the volume of borrowing. As of January 1, 2022, 31 classes of OKVED-2 (32.3% of all types of activity) saw a decline in the amount of outstanding loans against the 2020 level. The most significant drop in volumes was recorded in the following industries: "Other activities" (down 49.9%), "Activity in the field of information and communication" (down 23.5%) and "Activity in the field of healthcare and social services" (down 17.3%).

It should be noted that the effects of the pandemic were reflected in the concentration of corporate lending: despite the portfolio growth, the total number of corporate borrowers fell by 27.6% compared to a year ago (*Fig. 67*). This is due to the fact that the main users of support programs were borrowers who had no significant credit indebtedness during the year before the pandemic.

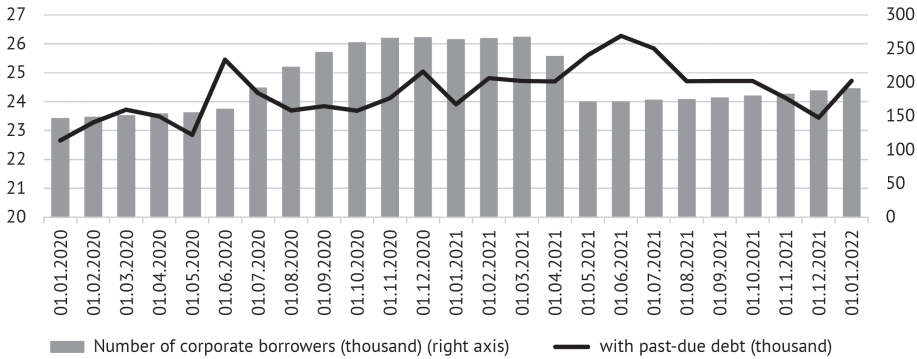


Fig. 67. Number of resident legal entities that have debts to banks (including past-due debt) in 2020–2021

Source: Bank of Russia.

Support for small and medium-sized enterprises remained one of the government's economic priorities. At the end of 2021, loans to SMEs accounted for Rb7.1 trillion, or 13.7% of the total aggregate portfolio. In this regard, the government developed new measures to support SMEs.

At the end of October 2021, the government announced the launch of the second phase of the concessional lending program "FOT 3.0", as well as the mechanism of grant support for business.[1] The difference between the second phase of the program "FOT 3.0" from the first is that the list of recipients of credit has been significantly expanded, as well as increased the term of the loan (up to 18 months) and the loan repayment period (from 6 to 12 months). The new program was valid from November 1 through December 30, 2021.

The loan was granted at the rate of one minimum wage (minimum wage – Rb12,792) for each employee, for a period of 12 months, the loan rate – 3% per annum. Under the terms of the program in the first six months the borrower can make no payments on the loan – neither interest nor on the principal, then within 12 months to repay the loan in equal installments, including interest. Meanwhile, 75% of the loan is secured by the surety of VEB.RF.

Representatives of the 17 most affected industries could receive support under the second phase of the preferential lending program "FOT 3.0" (under the first phase of the program "FOT 3.0" there were 11). At the request of businesses, the list was enlarged by such areas of activity as additional education for children and adults, day care services for children, consumer services, dry cleaning, dentistry, hairdressing and beauty salons.

During the pandemic crisis, the Russian government and the central bank managed to minimize banking risks and stimulate lending to the corporate sector. However, the high concentration of corporate liabilities is a potential source of systemic risk for the domestic banking sector. Accordingly, measures stimulating

1 URL: http://government.ru/news/43700/

diversification of the banks' corporate loan portfolio will be required in the medium term; their success will largely depend on the development of small and medium-sized enterprises, as well as on the implementation of the strategy for the development of competition and antimonopoly regulation in the country.

3.2.3. Retail lending

As of January 1, 2022, the total retail credit exposure to Russian banks hit Rb25.1 trillion. The increment of the aggregate portfolio for 2021 amounted to Rb5023.9 bn, or 25.1%, which exceeds the annual growth rate of total bank assets (15.9%), as well as the growth rate of corporate loans (16.1%). A year earlier, retail loans during the same period rose by Rb2,392.8 bn, or 13.6%. Thus, the growth rate of retail lending last year markedly exceeded the corresponding index for 2020 and is a record-breaking in the history of the Russian credit market.

The share of ruble loans accounts for Rb25.0 trillion, or 99.8% of the total volume of credit exposure. The instability of the ruble exchange rate and high currency risks led to almost complete abandonment of foreign currency loans, which during the past year fell by 40.2% and amounted to only Rb56.2 bn.

The growth of overdue debt since the beginning of the year came to 8.1%, and its total volume reached Rb1,008.3 bn. The share of overdue debt in the credit portfolio slightly dropped and made 4.0% as of 01.01.2022. As of January 01, 2012, the share of overdue debt in the credit portfolio declined slightly to 4.0%, while a year ago it stood at 4.7%. On the whole, the overdue debt ratio remains at a low level, lower than in the corporate lending segment (5.6%). However, despite the relatively high quality of the loan portfolio, systemic risks accumulate along with its growth: according to the central bank of Russia, by mid-2021 45.6% of debts are owed by borrowers with DBR[1] above 80%.

The level of profitability of credit operations on retail loans in 2021 increased (*Fig. 68*): interest income went up every quarter as the market rates surged and at the end of 2021 exceeded the level of 2020 by 7.3% (in the previous year – the increase of 6.0%), the commission income spiked more significantly – by 82.7% (in 2020 – by 23.5%).

The portfolio of consumer loans spiked by 20.1% to the level of Rb11.7 trillion, the highest growth rate at relatively low interest rates were recorded in the middle of the year (up to 2.2% in May and August), by the end of the year, when interest rates increased, the rate dropped to 0.5% (December). In general, the cost of debt service for various types of consumer loans (targeted, non-targeted, POS-loans) by the end of the year went up by 2–3 p.p. Car loans demonstrated similar dynamics in terms of growth in volume and cost of service, the annual gain amounted to 22.1% to the level of Rb1.3 trillion.

The Bank of Russia has clarified the methodology for calculating the debt service ratio (DSR) for individuals. This coefficient is the ratio of the total amount of planned payments of individuals on loans to the total income of the population. In order to avoid double count, interest payments on loans, according

1 Debt burden ratio (DBR) – the ratio of all payments on the debtor's credit obligations to his income.

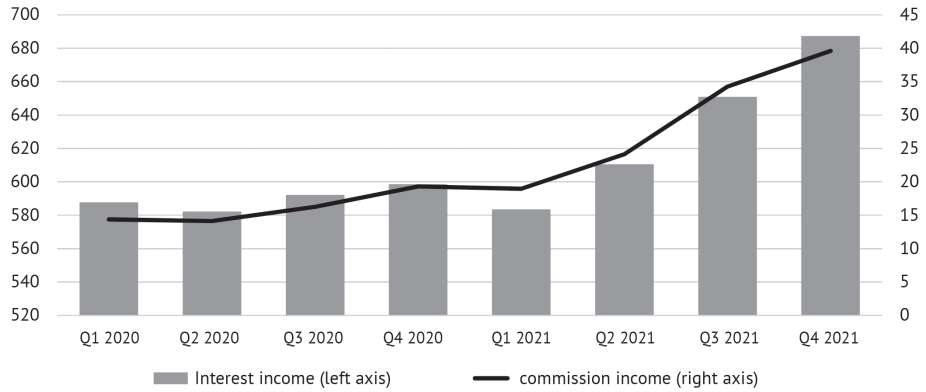


Fig. 68. Bank interest and commission income on retail loans in 2020–2021

Source: Bank of Russia.

to the new methodology, do not reduce the disposable income of households, as they are already taken into account in the amount of planned payments. The new methodology uses additional data from credit bureaus (NBKI, OKB, and Equifax), which allows you to segment the loan portfolio, and provides for the separation of scheduled payments on credit cards,[1] arrears, as well as penalties and fines. These changes lead to a decrease in the debt burden of the population (for the year DRS declined from 11.5% to 9.8%), while the overall dynamics of DSR index under the new methodology has not changed significantly and shows a steady growth over the past four years.

The acceleration in the debt growth rate is largely owing to the attraction of borrowers from new client segments, including the least secured, who spend more than 50% of their income on debt servicing. Thus, the decision made by the Board of Directors of the Bank of Russia to raise the increments to risk ratios for unsecured consumer loans extended from 1 July 2021, which was designed to reduce the risks of market overheating, has not yet affected the banking credit policy: in August we recorded a record-high 2.1 million consumer loans to the tune of Rb646.7 bn. This situation is partly due to seasonal factors (the end of the vacation season, preparation for the new school year), but at the same time, a certain incentive to the growth in demand is provided by the remaining low interest rates with their expected growth owing to the increase in the key rate of the central bank.

With nominally low interest rates on retail loans, banks increase lending margins by raising commissions, in particular, in the cost of the product increases the share of insurance, for which the bank receives commission income from insurance companies. With nominal rates of 5–12%, the average FC[2] (for all types

1 The scheduled monthly payment on the credit card is taken as 7.6% of the amount owed (the annual payment of 68% of the amount owed).

2 Finance charge (FC) — the borrower's payments under the credit agreement, the amounts and terms of which are known at the time of its conclusion, including payments in favor of third

of consumer loans) ranges around 14-15%, and for certain types of loans (non-targeted consumer loans, loans for debt refinancing) the average FC is over 20%. According to the Federal Law "On Consumer Credit (Loan)" banks can conclude contracts with one third higher than the current average market FC calculated by the Central Bank of Russia. This allows us to conclude that this index has the potential to grow and in the near future we can expect an increase in the cost of loans on the back of both growth of interest rates and growth in commissions.

Under increased sanctions pressure, the government and the central bank will be forced again, as in the case of the crisis induced by epidemiological factors, to stimulate the lending activity of banks by introducing additional anti-crisis measures to support the population.

3.2.4. Mortgage lending

As of January 1, 2022, the aggregate portfolio of mortgage housing loans (MHL) on the balance sheet of banks hit Rb12.0 trillion,[1] an increase of 26.4% over the year, which exceeds the growth in 2020 (21,1%). The growth in mortgage lending in 2021 exceeded the corresponding figures in other retail segments (consumer lending and car loans).

In H1 2021, there were still favorable conditions for mortgage growth thanks to low market rates and preferential lending programs put in place during the pandemic in 2020, correspondingly the semiannual growth came to 13.8%. In H2 2021, rising market rates, the reduction and reformatting of government programs, and an increase in risk premiums on loans with LTV[2] in the 80–85% range from August 1, 2021 contributed to a slowdown in market growth, which, however, was partially offset by high demand for real estate and the development of new offers under the partnership programs of banks and developers (growth of 11.0% in the second half of the year). Also, the growth of market rates reduced the demand for refinancing of the previously taken loans; their share in the total volume of loans fell from 14.5% to 9.9% during the year.

In H1 2021, there were still favorable conditions for mortgage growth, thanks to low market rates and concessional lending programs introduced during the pandemic in 2020, respectively, the semiannual growth of 13.8%. In H2 2021, rising market rates, the reduction and reformatting of government programs, and an increase in risk premiums on loans with LTV in the 80–85% range from August 1, 2021 contributed to a slowdown in market growth, which, however, was partially offset by high demand for real estate and the development of new offers under the partnership programs of banks and developers (growth of 11.0% in the second half of the year). Also, the growth of market rates reduced the demand for

parties, determined by the contract, if the borrower's obligation to make such payments arises from the terms of the contract. The full value of the loan shall be calculated in annual percentage.

1 Taking into account securitization, the volume of the mortgage portfolio amounted to Rb12.9 trillion.

2 Loan-to-Value Ratio, LTV – is the percentage ratio of the principal amount of the loan to the appraised value of the asset that secures it. The LTV ratio is usually calculated by dividing the loan amount by the appraised value of its collateral. An 80% ratio requires that the loan be no more than 80% of the last purchase price of the collateral.

refinancing of the previously taken loans; their share in the total volume of loans declined from 14.5% to 9.9% during the year.

The bulk of mortgage lending accounts for the secondary segment (75%), while the share of loans issued in the primary market dropped from 27% to 25% during the past year. The quality of the mortgage portfolio remains high against the background of other retail segments – the share of debt overdue for over 90 days does not exceed 1%.[1]

In Q3 the activity of borrowers decreased noticeably, the number of mortgage transactions declined by 11.3%, and the total volume of loans originated went down by 11.8% as compared to the previous quarter. The main reason for the change in market dynamics is the new terms of the state program "Preferential mortgage" which came into effect in July and increased the interest rate from 6.5% to 7%, and the maximum loan amount for all regions was reduced to Rb3 mn, which almost completely brings to naught the implementation of this program in Moscow and St. Petersburg.[2]

At the same time, rising inflation and, as a consequence, changes in the monetary policy of the Bank of Russia (increase in the key rate) also has a cooling effect on the behavior of banks and consumer activity: market rates, having reached their historical minimum in June – 7.07%, began to rise. Until the end of the year, the growth of interest rates remained less significant (*Fig. 69*), however, we can talk about a change in the trend. Since the beginning of the year, the rates at the primary market have been growing moderately (up to 6.3%, +0.7 p.p.) and remain quite low. At the secondary market, the rates were generally higher so the banks practically did not raise them in order to support the demand (an

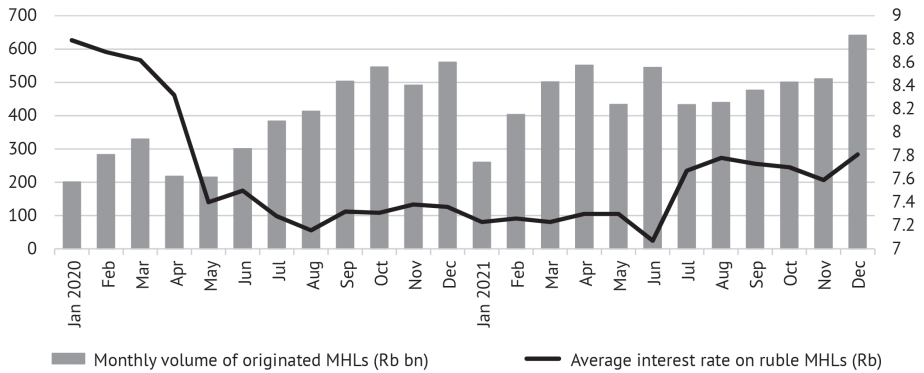


Fig. 6. Dynamics of monthly lending volumes and interest rates in the housing mortgage lending market in 2020–2021

Source: Bank of Russia.

1 URL: https://xn--d1aqf.xn--p1ai/upload/iblock/5a5/5a5d4aef263441a366e4fb5296b93270.pdf
2 Under previous terms and conditions of the program in Moscow, Moscow region, St. Petersburg and Leningrad region, the maximum loan amount was Rb12 mn, in other regions of the Federation – up to Rb6 mn.

insignificant increase to 8.3%, +0.2 p.p.). Despite the growth of interest rates, banks managed to retain their clients and, together with the developers, introduced into the market a number of offers which provided for a below-market mortgage rate for a fixed pool of apartments or a fixed term. Overall, the average rate in the ruble mortgage lending sector has increased since the beginning of the year by approximately 0.5 p.p.

During the pre-pandemic period in Russia, as well as in other countries, the dynamics of mortgage lending rates correlate with the dynamics of long-term government bond yields. Taking into account the level of risk, loan rates are usually 2-5% higher than government bond yields. However, by the end of the year, average mortgage rates were lower than government bond yields by about 1 p.p.[1] due to two main reasons.

Firstly, back in 2020, a procedure was established for compensating banks for their shortfalls in income on retail mortgages. According to the RF Government's decree No. 566 dated April 23, 2020, the bank's shortfall in income from mortgages is the difference between the key rate of the central bank moved up by 3 p.p. and the preferential mortgage rate (according to the 2021 revision, for individual houses on land plots – 5 p.p.). Thus, an increase in the key interest rate is beneficial to banks, as the government compensates for the deviation of the preferential interest rate from its market value. Although the share of subsidized loans was steadily declining in 2021 (from 37% in Q4 2020 to 18% in Q4 2021), this factor was still affecting the cost of mortgage loans.

Secondly, in recent years, banks are increasingly compensating for the low interest income by increasing the commission income (in mortgage lending – commission for consideration of the application for a loan, for reducing rates, for changes in the terms of credit and collateral agreements, for issuing bank references and consents and other services), so banks are interested in high volumes of loans and growth in the number of credit transactions.

On the whole, according to the reports, the quality of the aggregate MHL portfolio is improving. As of January 1, 2022, the overdue debt on MHL amounted to Rb67.7 bn, or 0.6% of the total debt (for comparison, the overdue debt on consumer loans – 4.4% and on corporate loans – 5.6%).

The volume of NPL 90+[2] non-performing loans remains at a fairly low level — Rb73 bn (0.9% of the total volume), in 2021 their volume decreased by Rb14 bn, primarily due to write-offs of bad debts.

The share of refinancing in early 2021 was at a relatively high level – over 16% of the total number of originated mortgage loans, by the end of the year this value decreased to 9.4%. In the near future, the demand for loans for refinancing purposes will be further supported by extending the "family mortgage" to families with one child. The terms of the program allow you to refinance a mortgage loan

1 The yield on long-term (20—30 years) government bonds is 8—8.5%.
2 NPL (non performing loans) — the volume of loans in the bank's loan portfolio for which the terms of the loan agreement are not met. As a rule, loans fall into the NPL after they are overdue for more than a certain period, usually 90 days.

issued for the purchase of housing in new buildings at a preferential rate of up to 6%.[1]

In the short term, due to the exacerbation of the crisis, depreciation of the ruble, strengthening of inflationary processes and growing construction costs, prices on the market of new construction and secondary housing will increase. In this context, banks in partnership with developers will try to stimulate demand by expanding the discount range and offering mortgages on special terms. At the same time, inflation will depreciate household savings and keep private investors interested in investing in real estate, which will also stimulate the demand at the mortgage market.

The full potential of the Russian mortgage market will be unlocked by introducing a wide range of financial instruments, which are now being actively developed by leading players: mortgage bonds, digital lending, development of mortgage marketplaces, scaling of electronic mortgages and other products and projects. The introduction of these tools will reduce average mortgage rates, make them more affordable for the borrower, simplify and accelerate the processing of mortgage transactions, raising its affordability.

As long as the international situation and macroeconomic processes stabilize and the epidemiological situation normalizes, the recovery of the population's real disposable income will gradually raise the share of mortgages in GDP to the level of developed countries, thereby improving the housing availability indexes.

3.2.5. Credit institutions resources

Slowdown in growth rates of the volume of retail deposits was owing to the policy of low rates in H1 2021 and introduction of tax on interest on retail deposits, which came into force in 2021. Increase in the Bank of Russia key rate contributed to the growth of bank interest rates on deposits and reduced the rate of outflow of funds from fixed deposit accounts. The low level of interest rates on deposits led to a gradual redistribution of resources of individual clients, which was reflected in the growing popularity of savings accounts and further promotion of bank products related to investments in the stock market.

The funds of individuals[2] remain one of the most important resources for banks: as of January 1, 2022, they amounted to 28.8% of bank liabilities. For comparison: the funds of corporate customers – 31.5%, funds of banks – 9.8%, government funds – 7.9%, loans from the Bank of Russia – 2.3%. The share of equity capital stood at 10.1%.

The total volume of retail deposits at the end of the year reached Rb34.7 trillion, in absolute terms the growth amounted to Rb1.9 trillion, or 5.7% (on January 1, 2021, there was an increase of Rb2.4 trillion, or 8.0%).

Funds in rubles amounted to Rb27.8 trillion and the past year recorded a decrease of 6.8% (in 2020 – growth of 6.5%). Foreign currency deposits amounted to Rb6.9 trillion (up by 1.4% from early 2021, up by 13.8% in 2020 on the back

1 URL: https://xn--d1aqf.xn--p1ai/upload/iblock/063/063a1e46bc8c6bd983ae41064cbd06ed.pdf (ДОМ.РФ).
2 Including deposits and funds on accounts.

of the fall of the ruble). Despite extremely low interest rates on foreign currency deposits, the level of dollarization[1] remains the same, at the beginning of 2022, the share of foreign currency deposits in the total volume of individuals' funds amounted to 19.9% (20.7% at the corresponding date of the previous year). The stability of foreign currency deposits is ensured by two main factors: the relative stability of the ruble exchange rate and rising inflationary expectations, which restrain the flow of foreign currency deposits into ruble accounts.

Significant growth was recorded in the indicator of escrow accounts of individuals under contracts of shared-equity construction, their growth amounted to Rb1,856.4 bn, or 158.2%. The growth of this indicator is largely due to the growing popularity of mortgages and extension of state support of preferential mortgage lending.

According to the Deposit Insurance Agency, the average size of a deposit placed with a single bank amounted to Rb283,000 (excluding small deposits of less than Rb1,000). The average size of depositors' funds in escrow accounts constituted Rb5.2 mn.

The attracted funds of non-resident individuals amounted to Rb547.0 bn, having decreased since the beginning of the year by 2.0%. At the same time, funds in accounts (accounts used for settlements) gained 14.1% in the period under review, while deposits (interest-bearing savings accounts) declined by 19.9%.

The number of savings certificates is also dropping. Over the year, their value fell by 52.9% to the level of Rb5.7 bn. This financial instrument has practically lost any attractiveness owing to the introduced restrictions on transferability.[2]

The term structure of deposits has not undergone serious changes. As a year ago, the greatest demand is for funds in accounts (38.5% of total deposits), the growth of which amounted to 8.2%. This category includes savings accounts, the advantages of which are relatively high interest rates (corresponding to time deposits) and the possibility of flexible account management (the number of transactions in the form of additions and withdrawals in the absence or low level of minimum balance is virtually unlimited). The share of long-term deposits with maturity over one year accounted for 34.4% of deposits, while the reduction came to 4.8%. On these deposits banks sometimes offer relatively attractive interest rates, thus ensuring stability of the resource base at low cost of funding. *Fig. 70* shows how over the past years the interest expenses on deposits have been decreasing and at the same time the share of interest expenses on accounts has been growing.

The reduction in the total number of credit institutions leads to the insured events in the market of bank deposits. The Deposit Insurance Agency (DIA) paid insurance compensation to 155 thousand depositors for the total amount of Rb52.5 bn in 2021. Last year insured events occurred in relation to 22 banks-participants of the deposit insurance system. The Agency started paying out compensations on the sixth-seventh business day after the insured event. The current limits

1 With all deposits in foreign currencies.
2 Amendments to the Civil Code (Federal Law No. 212-FZ of 26.07.2017) prohibit the sale of bearer securities from 01.06.2018.

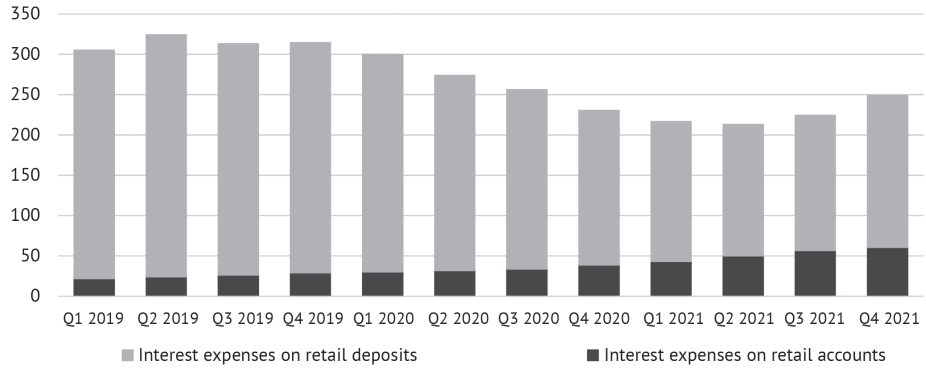


Fig. 70. Dynamics of interest expenses of banks on accounts and deposits of households in 2019–2021, Rb bn

Sources: Bank of Russia, own calculations.

of insurance coverage provided 98% of depositors with the opportunity to fully recover their funds from the mandatory deposit insurance fund.

Following the decision of the DIA Board of Directors, dated 27 April 2021, starting from Q3 2021, the basic rate of insurance premiums to the Compulsory Deposit Insurance Fund (CPIF) is raised from 0.1% to 0.12% of the estimated base. The amount of additional and increased additional rates of insurance contributions remains at the same level – 25 and 300% of the prime rate respectively. Taking into account the insignificant increase of the prime rate, this decision will not fundamentally affect the level of bank deposit rates.

No significant changes are expected in the deposit market in the absence of external shocks. At the end of 2021, the weighted average rate on retail deposits with maturities up to one year amounted to 3.86%, which is by 0.48 p.p. higher than at the end of 2020. The average rate on deposits with maturities exceeding one year increased to 5.8% (plus 1.63 p.p. against December 2020). The growth of bank interest rates associated with the increase in the key rate will probably stop the outflow of funds from the retail deposit accounts, but in the near future their real yield will be close to zero or remain in the negative zone, taking into account the expected inflation.

In the short term, there may be a slight increase in the nominal yield on deposits, which will allow balancing the outflow of funds from term deposits to savings accounts. In this context, credit institutions will be able to stabilize the structure of their resource base, as well as to reduce interest and liquidity risks.

On the whole, the bank policy with regard to household deposits will remain unchanged: low interest rates on household deposits will be combined with the active promotion of investment services, which, in particular, include trust management of client assets (for instance, investments in mutual investment funds), brokerage services (clients' independent purchase and sale operations with various financial instruments in the Russian stock market and in foreign

markets), as well as various structural (comprehensive) services. On the one hand, conservatism of the population in the form of adherence to traditional products will contribute to maintenance of high volumes of funds on bank deposits and accounts, which will allow banks to continue optimization of interest expenses and increase profits. On the other hand, a gradual transition to investment banking products (mutual funds, individual investment accounts, brokerage accounts, etc.) will give banks an opportunity to diversify market risks and, at the same time, to increase their commission income on trade and intermediary operations. Another task for the bank management will be to restore customers' confidence in the structured products developed in previous years; with an increase in their transparency, banks will be able to resume offers of investment (ILI)[1] and accumulative (ILA)[2] life insurance, contributing to an increase in the long-term resource base.

1 ILI is a mixed investment and insurance product, a combination of life insurance and investments in shares and bonds of Russian issuers.
2 ILA is a long-term investment program that combines two tools: insurance protection and accumulation of money.

Sector 4. The real economy

4.1. Dynamics and structure of GDP and investments[1]

4.1.1. Demand and supply

The economic situation in 2021 demonstrated recovery of both demand and supply in domestic and foreign markets after the pandemic crisis of 2020. The positive dynamics were supported by a simultaneous recovery of domestic consumer and investment demand and by increased contribution of net exports to the economic growth.

GDP in 2021 rose by 1.9% compared to the pre-crisis level of 2019 and increased by 4.7% compared to 2020, showing growth acceleration to 7.2% in Q 2 and 3 and to 6.9% in Q 4 2021 compared to the corresponding periods of the previous year.

The change in the structure of provision and use of resources in 2020—2021 was marked by a shift in priorities towards supporting the domestic market. According to preliminary estimates, consumer demand in 2021 increased by 9.6% and investment demand by 7.7% compared to the previous year. Moreover, the rate of production recovery (supply) was inferior to that of demand. The output of goods and services by basic types of economic activity increased by 6.2% in 2021 with the aggregate demand growing by 7.5% (*Table 1*).

Economic recovery has been significantly influenced by the starting conditions for recovery from the 2020 pandemic recession, characterized by a sharp fall in services and a decline, albeit less profound, in the goods sector. Other challenges were associated with volatile global hydrocarbon market, reduced external trade and disruptions in value added chains. In addition, longer than anticipated internal and external health constraints at the beginning of the pandemic increased the differentiated functioning of various economic activities.

As the economy emerged from the crisis, it became fundamentally important to assess adequately the gaps in demand, production and potential ability

1 This section was written by *Izryadnova O.I.,* Leading researcher, IAES RANEPA, Head of Structural Policy Department of the Gaidar Institute.

Table 1

GDP dynamics: internal factors, % to corresponding period of the previous year

	2019	2020					2021				
	Year	Year	Q1	Q2	Q3	Q4	Year	Q1	Q2	Q3	Q4
GDP	**102.0**	**97.3**	**101.4**	**92.2**	**96.5**	**98.2**	**104.7**	**99.7**	**110.5**	**104.0**	**105.0**
Investment in fixed assets	102.1	99.5	104.2	95.4	94.9	103.0	107.7	103.3	111.0	107.9	107.6
Consumer demand	103.2	91.4	102.2	78.3	90.9	94.3	109.5	97.8	127.4	109.5	107.1
Output of goods and services by basic economic activity	102.0	97.6	102.9	91.8	97.1	98.9	106.2	100.1	113.3	105.0	106.7
Industry	103.4	97.9	103.2	93.8	95.7	99.2	105.3	98.6	109.6	106.0	107.1
Mining and quarrying	103.4	93.5	101.2	91.3	88.8	92.7	104.8	93.0	107.5	109.0	110.5
Manufacturing industry	103.6	101.3	106.2	95.3	100.5	103.3	105.0	100.7	110.8	103.6	105.2
Electricity, gas and steam supply	99.2	97.6	96.4	96.2	97.0	100.2	106.8	108.3	107.0	107.8	104.5
Agriculture	104.3	101.3	102.8	102.9	103.0	96.8	99.1	100.0	99.70	96.2	106.7
Construction	102.1	100.7	102.6	95.8	100.9	103.0	106.0	102.9	110.6	103.7	106.4
Transport	100.7	95.3	96.1	91.8	94.8	98.3	105.3	100.5	110.1	106.8	104.1
Retail turnover	101.9	96.8	104.9	84.9	99.2	98.3	107.3	98.6	123.6	105.5	104.3
Food market	101.8	98.4	104.2	93.7	98.4	97.6	102.2	96.5	107.4	102.5	102.5
Non-food market	102.0	95.4	105.6	76.7	100.1	99.1	112.3	100.8	142.4	108.2	106.0
Paid services to population	100.5	85.2	100.4	65.4	85.5	89.6	114.1	94.0	148.9	114.0	110.5
Passenger turnover	107.3	54.8	95.3	21.2	55.6	54.3	139.6	66.4	350.0	148.9	149.5

Source: Rosstat.

of Russian business to respond to changes in domestic and foreign market environment. Differences in production technologies, structure of intermediate and final consumption of resources, volume of value added, branching and length of production chains have become significant factors both in speed of specific types of economic activities to the pathway of post-pandemic development, and in establishing measures of targeted support for specific types of economic activities. The specifics of overcoming the effects of the 2020 pandemic crisis consisted of faster growth in manufacturing, construction and services, whereas the usual pattern of recovery from the financial and economic crises consisted of faster growth in extractive industries and an increase in raw material exports.

Supply recovery was differentiated quite substantially by type and by economic activity, depending on the structure of gross resource influenced by changes in the national currency exchange rate, different flow rates of domestic demand,

exports and imports, pricing policies of domestic producers, cost dynamics and efficiency.

The structure of industrial recovery was determined by the continued outperformance of manufacturing, electricity and water supply relative to the dynamics of mineral extraction. The 5.0% growth of manufacturing in 2021 and 6.8% growth of electricity, gas and steam supply created opportunities to significantly exceed the pre-crisis figures for 2019. In mining production, despite accelerating growth to 104.8% in 2021, given the previous year's low base, output remained 2.0% below the pre-pandemic level for 2019. A 6.0% increase in construction activity relative to 2020 contributed positively to the acceleration in annual and quarterly trends. The mild sanitary and epidemiological restrictions in construction and active government action to maintain the capacity of the construction industry as one of the conditions for economic recovery have defined a specific feature of the post-pandemic recovery and avoided a recession in this type of economic activity.

In the difficult weather conditions of the previous year, for the first time in five years, one of the factors slowing down production of goods for domestic and foreign markets was the drop in agricultural production to 99.1% compared to 2020.

Simultaneously with the recovery of positive trends in goods production, the transport and logistics complex (107.8% by 2020), information and communication services (108.1%) and financial services (109.2%) were on the rise. Russia's transcontinental railway became more attractive for transit traffic and an alternative to maritime freight transport. Although the balance of international trade in services remained low, telecommunication, computer and information services showed confident growth.

The recovery of services was more dynamic relative to the goods sector. With accumulated delayed household demand, retail turnover increased by 7.3% in 2021 and the non-food market grew by 12.3%, resulting in an excess of 3.9% and 7.1% over pre-pandemic levels respectively, while the food market has stabilized. The changing structure of household demand in 2021 along with the accumulated scale of involuntary private savings was accompanied in 2021 by a dynamic quarterly growth of the paid services market, but the negative effects of the previous year's severe decline in demand, especially in activities such as transport, recreational and tourism services, remained in the economy.

In 2021, the dynamics of recovery processes were significantly influenced by domestic resource generated from domestic and imported goods along with demand outpacing supply, and by changes in prices. Adaptation of Russian producers to shrinking domestic market and the ruble depreciation followed the path of both concentrating activities in production replacing more expensive imports in the domestic market, including due to disruption of transport, logistics and production chains, and building the export capacity of manufacturing to fill market niches that experience the most severe restrictions of cross-border interaction in a pandemic.

Practical implementation of these trends was supported, on the one hand, by systematic anti-crisis government measures aimed to assist economy and, on the other hand, by inertial developments towards a gradual recovery of activity in the global goods market as from H2 2020.

Rising prices and demand for almost all raw materials, easing of restrictions on oil production under the OPEC+ accompanied the global economic recovery, having a special meaning for Russian exports of mineral products dominating the total value of commodity exports.

At the end of 2021, the value of foreign trade turnover rose by 39.3% compared to the previous year and was 18.5% higher than in the pre-pandemic period of 2019. The recovery of positive dynamics of foreign trade turnover in 2021 was marked by outpacing growth of exports (148.2% by 2020) compared to imports (126.8%) (*Table 2*). The contribution of net merchandise exports to the value structure of GDP (by SNA methodology) increased from 5.2% in 2020 to 9.6% in 2021.

Table 2

GDP dynamics: external factors, % to the corresponding period of the previous year

	2019	2020					2021				
	Year	Year	Q1	Q2	Q3	Q4	Year	Q1	Q2	Q3	Q4
GDP	102.0	97.3	101.4	92.2	96.5	98.2	104.7	99.3	110.5	104.3	106.9
Foreign trade turnover											
As per methodology of national accounts (2016 prices)											
Total	101.8	92.1	99.4	89.4	86.1	94.0	109.3	97.7	111.3	112.6	114.5
Exports	100.7	95.9	97.6	100.1	91.9	93.5	103.2	97.6	97.3	107.4	111.2
Imports	103.1	87.8	101.8	77.4	80.1	94.5	116.7	97.9	131.9	118.8	118.0
As per methodology of national accounts (current prices)											
Total	97.4	85.1	91.9	76.1	82.7	89.4	139.3	108.7	153.9	151.3	145.0
Exports	94.6	79.4	87.0	69.4	76.5	84.2	148.2	104.4	163.2	168.2	161.6
Imports	102.3	94.4	100.9	87.0	92.3	97.6	126.8	115.4	141.6	129.3	122.5

Source: Rosstat; CB RF.

Positive factors for the economic recovery were, firstly, a faster growth of non-energy exports, secondly, an acceleration of exports of high-tech goods and, thirdly, a change in the structure of non-energy exports in favor of products with a high share of value added.

In December 2021 vs December 2020, the growth rate of non-resource exports amounted to 129.6%, including 162.9% for middle-value added goods and 120.2% for high value added goods, while exports of high technology goods increased by 29.3% on a year earlier. Although exports of high-tech goods have been growing at a faster rate than imports in recent years (128.0%), the Russian economy remains a net importer of this commodity group. High-tech products accounted for 73.4% of total Russian imports in 2021, while the share of this product group in exports was 22.7%.

The outstripping growth of imports relative to domestic production and an increase in the share of imports in the gross resource mix to 21.4% (+0.9 p.p. by 2020) has partially mitigated the impact of the supply-demand gap.

The structure of imports by function was marked by a gradual increase in the share of investment goods, which makes it possible to balance the standard structure of domestic investments in fixed capital at the expense of imported machinery, equipment and technological complexes. The import of investment goods and high-tech products is a significant factor in the dynamics of investment in fixed capital, intensification of production modernization processes and implementation of the best available technologies.

A rise in the share of capital goods to 29.0% (+4.1 p. p. by 2020) in imports in 2021 had a positive effect on the dynamics of manufacturing industries, particularly the machine-building and chemical-pharmaceutical facilities based on the widespread use of foreign equipment and technology (*Table 3*). The attraction of foreign direct investment into the national economy, thus creating efficient jobs and contributing to changing the competitive environment, follows the same direction and is more productive generally, however, in recent years there has been a sharp slowdown in the activity of foreign direct investors in the Russian market.

By the end of 2021, foreign direct investment in the Russian economy amounted to $30.4 bn compared to $9.5bn in 2020. Despite the recovery of business and investment activity in the Russian market, there was an increase in net capital outflow to $72.0bn in 2021 against $50.4bn in the previous year.

Table 3

Imports by function and foreign trade of high-tech products in 2019—2021

	Structure of imports by functional use of goods, % of total			High-tech products			
				USD bn.		share in total volume, %	
	Consumer	Investment	Provisional	Exports	Imports	Exports	Imports
2019	33.8	24.4	41.8	74.7	183.3	11.1	72.0
2020	32.6	24.9	42.5	86.7	174.1	26.1	72.4
2021	31.3	29.0	39.7	112.0	223.1	22.7	73.4
Q1	33.2	25.4	41.4	20.5	47.2	22.0	73.1
Q2	30.3	31.6	38.1	27.0	56.3	23.4	73.9
Q3	31.2	30.5	38.3	30.8	57.9	22.9	74.3
Q4	30.9	28.2	40.9	33.7	61.7	22.0	72.3

Source: Rosstat.

The share of imported goods in the commodity composition of retail trade in 2021 remained at the level of the previous year and amounted to 39.0% with the current dynamics of consumer-oriented industries.

The increased inflationary pressure determined a shift in consumption from services to goods with a sharp rise in the price of food products amid the influence of changes in domestic and foreign market environment. Despite the measures

taken to regulate the prices of socially important commodity groups and certain foodstuffs, the food price index reached 110.6% in 2021 evidencing the highest level in five years.

In the non-food market, the 8.6% increase in prices, together with a marginal increase in domestic production and imports, was due to the pent-up demand accumulated over the two years of pandemic (*Table 4*).

Table 4

Price index in 2015–2021, December vs December of the previous year, %

	2015	2016	2017	2018	2019	2020	2021
Consumer prices	112.9	105.4	102.5	104.3	103.0	104.9	108.4
Foodstuffs	124.0	104.6	101.1	104.7	102.6	106.7	110.6
Non-foods	113.7	106.5	102.8	104.1	103.0	104.8	108.6
Services	110.2	104.9	104.4	103.9	103.8	102.7	105.0
Manufacturing prices							
Industrial goods	112.1	107.5	108.4	111.7	95.7	103.6	128.5
Mining operations	111.0	108.5	123.9	120.7	90.8	96.7	159.2
Manufacturing	113.2	107.6	104.2	110.3	96.6	106.0	125.3
Agricultural products	108.5	101.8	92.2	112.9	95.5	113.1	113.6
Investment goods	110.3	103.2	103.1	107.3	105.1	104.8	107.8
Freight traffic	111.5	106.6	109.4	101.4	101.5	105.2	104.8
Change in the dollar-ruble exchange rate	129.5	83.2	95.0	120.6	89.1	119.3	100.6

Source: Rosstat.

Despite the measures taken to regulate the prices of socially important commodity groups, the food price index reached 110.6% in 2021 and was at its highest level in five years. Growth in prices in the non-food market by 8.4% was provoked by delayed demand accumulated over two years of pandemic amid the restrained increase of domestic production and imports.

The rise in producer prices for industrial goods was mainly driven by higher prices in the mining and manufacturing industries for the production of construction materials in the metal, timber and construction sectors. In December 2021, the price index in manufacturing industry was 125.3% and in construction industry 107.8% against December of the previous year.

Profitability throughout the economy as of January-September 2021 amounted to 14.5% and went up by 4.6 p.p. vs the indicator of the year before. Growth in the financial results in the mining industries was marked by changes in the global prices for fuel and energy, mineral and raw material products and the volumes of their production. Active government implementation of measures to support mortgage lending resulted in growth in the efficiency of the financial, credit and insurance markets for real estate transactions (*Table 5*).

Table 5

Profitability of goods, products, works and services sold by economic activities in 2019—2021, %

	2019	2020	2021
Economy, total	11.4	9.9	14.5
Agriculture, hunting and forestry	18.6	22.9	28.9
Mining and quarrying	29,6	23,0	37,3
Manufacturing industries	12.1	12.2	16.7
Electricity, gas and steam supply, air conditioning	9.2	8.4	
Construction	7.0	8.1	7.1
Wholesale and retail trade	6.4	5.1	8.8
Hotels and catering	5.9	-0.9	5.1
Transport and storage	8.7	3.4	8.0
Information and communication	16.0	12.8	13.6
Financial and insurance	11.8	34.7	29.9
Real estate	13.7	24.3	28.9
Public administration and military security; social security	15.2	19.3	4.9
Education	6.7	9.5	5.6
Health care and provision of social services	9.8	9.9	14.7

Source: Rosstat.

4.1.2. GDP generation by source of income: wages, employment, labor productivity

The government's measures to support enterprises and organizations focused to maintain employment and wages while reducing the tax burden have significantly decreased the impact of administrative restrictions on economic activity and on nominal wages, ultimately resulting in changes in labor costs and profitability of production.

The share of wages in GDP in Q2 2020 at 52.3% is the highest value in the observation period since 2013. The redistribution of income between households and businesses allowed to avoid shocks in the labor market and social unhappiness over a short period of time.

However, the ratio of actual hours worked and full-time employment associated with economic recovery and gradual refusal of flexible working hours resulted in the need to adjust labor costs according to productivity, qualification requirements and skills, which has changed the proportions of GDP income and labor demand. In 2021 the share of wages dropped to 41.1% of GDP (-5.1 p.p. by 2020) while the gross income of the economy increased to 48.3% of GDP — the highest level in a decade (*Table 6*).

With the recovery of business activity, the change in the structure of cash income was determined by growth in the share of labor income to 63.5% in 2021, including income from entrepreneurial activity to 5.9%. The government measures

Table 6

Structure of GDP by revenue source in 2019—2021, % of total

	2019	Quarters 2020				2021	Quarters 2021			
		I	II	III	IV		I	II	III	IV
Gross domestic product	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Including:										
Salaries of employees (including hidden income)	44.1	49.6	52.3	44.9	43.0	41.1	47.9	44.9	39.8	34.6
Net taxes on production and imports	11.1	11.3	10.9	10.1	11.4	10.6	12.3	10.9	10.6	9.2
Gross profit of economy and gross mixed income	44.8	39.1	36.8	45.0	45.6	48.3	39.8	44.2	49.6	56.1

Source: Rosstat.

to support the unemployed, families with children, people with disabilities, and working pensioners have had a significant impact on the volume and share of social payments in the income structure, but when the economic dynamics become positive the contribution of social payments in the income structure of households dropped to 20.8% in 2021 against 21.5% in 2020 (*Table 7*). The average monthly nominal wage rose by 9.7% in 2021 and the average amount of granted pensions rose by 11.2%.

Table 7

Structure of cash income generated in 2020—2021, % of total

	Total	Including					
	Cash income	Incomes from entrepreneurial activity	Labor wage	Employees' wages as part of labor wage	Social payments	Real estate incomes	Other cash incomes
2020	100	5.2	57.5	42.1	21.5	5.8	10.0
Q1	100	5.9	62.2	45.4	21.7	4.9	5.3
Q2	100	4.0	59.3	45.5	21.6	5.1	10.0
Q3	100	5.6	56.3	41.3	22.7	6.1	9.3
Q4	100	5.4	53.6	37.7	20.2	6.8	14.0
2021	100	5.9	57.6	41.7	20.8	5.2	10.6
Q1	100	5.9	64.3	47.2	20.9	4.3	4.6
Q2	100	5.7	58.5	44.1	23.4	4.3	11.1
Q3	100	6.1	55.7	38.9	23.1	5.2	9.6
Q4	100	5.8	53.9	38.3	18.8	6.4	15.1

Source: Rosstat.

Taking into consideration the current structure of economic and household income and the increasing role of labor income, a set of measures aimed at reducing unemployment risks was an unconditional priority in 2021. By the end of 2021, the unemployment rate had fallen to a record low of 4.3% since 2017 due to creation of new jobs. In 2021, the load per 100 job applications to the

employment services was roughly in line with the pre-pandemic level of 2019 accompanied by a dynamic growth in job vacancies.

The economic recovery in 2021, marked by high inflation, followed a path of falling unemployment, restrained wage growth and sluggish productivity dynamics. Measures to support output by keeping jobs at pre-crisis levels resulted in higher business costs and an inflationary spiral.

The demand surge observed in 2021 resulted in record capacity utilization rates on the one hand and, on the other hand, exacerbated labor shortages. This has increased the demands on monetary policy as a tool for managing aggregate demand.

4.1.3. Use of GDP: household final consumption expenditure

The coronavirus pandemic increased the impact of structural imbalances, but in contrast to previous critical situations, the economic situation in 2020—2021 was marked by a subdued drop in consumption along with systematic support measures for households and businesses.

Growth in public expenditure on final consumption played a key role in maintaining social confidence and reducing tensions at the labor market. Increasing the share of public expenditure on individual and public consumption to 20.1% of the GDP in 2020 against the multi-year average of 18.2% of GDP has mitigated the shock of changes in real income dynamics and guaranteed the fulfilment of social obligations.

Existing and new programs based on information systems infrastructure and payment mechanisms have increased the coverage of social support measures, and although the intensity of public expenditure on final consumption has weakened somewhat in 2021, this has been mitigated by growth in real household incomes (*Table 8*).

Table 8

Dynamics and structure of final consumption expenditure in 2019–2021

	2019	2020					2021				
		Year	Q1	Q2	Q3	Q4	Year	Q1	Q2	Q3	Q4
% of previous year/quarter											
Gross domestic product	102.0	97.3	101.4	92.2	96.5	98.2	104.7	99.3	110.5	104.3	106,9
Final consumption expenditure	102.9	95.1	102.6	85.4	94.4	96.8	107.1	98.1	118.8	107.3	109,1
— households	103.2	92.7	102.2	78.3	90.9	94.3	109.6	97.2	128.1	110.3	114,8
— public administration	102.4	101.9	103.6	104.1	104.2	104.1	101.1	100.3	101.0	100.0	95,2
% of total (in current prices)											
Gross domestic product	100	100	100	100	100	100	100	100	100	100	100
Final consumption expenditure	69.7	71.2	77.4	70.5	70.1	66.3	69.7	75.9	69.0	65.0	64,0
— households	51.2	50.7	54.9	46.4	49.3	47.5	49.7	53.4	49.1	47.4	49,8
— public administration	18.1	20.1	22.0	23.5	20.3	18.5	17.8	22.0	19.5	17.2	14,0

Source: Rosstat.

As a result of the recovery in economic activity, household incomes and wages showed an increase in 2021 compared to the previous year. The main driver of wage growth was the recovery of activity in the sectors of social service infrastructure, which suffered the greatest losses during the pandemic (trade, catering, hospitality, cultural and leisure activities and construction). In 2021, real disposable incomes rose by 3.1% and real wages by 2.9% compared to the previous year.

The reaction of households to changes in incomes during 2020—2021 was highly heterogeneous. While in Q2 2020 expenditures for purchasing goods dropped by 26.7% and payments for services by 31.4% compared to the indicators of the year before, and their share in total expenditures of household by the end of this period corresponded to the lowest level since 2013, during 2021, household reacted to the increase in consumer prices and increased inflation expectations by a surge of activity in the goods market. The share of current consumption expenditure in 2021 in the household income was 80.3%, 4.7 p.p. higher than a year earlier (*Table 9*).

Table 9

Structure of household income aimed at current expenditure and savings in 2019—2021, % of total

	2019	2020					2021				
		Year	Q1	Q2	Q3	Q4	Year	Q1	Q2	Q3	Q4
Incomes, total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Current expenditures	80.8	75.6	87	66.9	80.3	70.2	80.3	87.7	80.7	81.4	74.2
Purchase of goods	59.8	58.7	64.9	53.4	63.1	54.5	61.5	67.1	61.7	62.2	56.9
Payment of services	18.0	15.,9	19.9	12.9	16.4	15.1	17.5	19.7	17.9	17.7	15.6
Mandatory payments and fees	15.3	15.3	15.3	14.2	15.9	15.5	15.3	15.3	15.1	14.9	15.8
Savings	3.9	9.1	-2.3	18.9	3.8	14.3	4.4	-3.0	4.2	3.7	10.0
Deposits, securities, purchase of real estate, changes in outstanding loans and accounts receivable of individual entrepreneurs	3.4	4.4	-2.8	6.9	1.5	10.1	5.8	-2.7	7.8	5.6	10.3
In cash, on hand	0.5	4.5	2.4	8.3	4.1	3.3	0.9	2.2	0.5	1.0	0.4

Source: Rosstat.

Throughout 2020—2021, the household saving behavior has changed. In 2020, changes in household consumption were reflected in an indicator of the increased propensity to save, due to both forced savings with a decline in domestic market supply and an increased interest in purchasing real estate under the implementation of state-sponsored concessional mortgage lending programs.

Increased expectations of rising inflation and mortgage interest rates motivated investment activity at the real estate market and in 2021 the increase in mortgage loans to 4.4% of GDP and 8.2% of disposable income was a significant factor in the acceleration of housing construction in 2021 (*Table 10*).

Table 10

Household investment potential and activity, 2015–2021

	2015	2016	2017	2018	2019	2020	2021
% GDP							
Deposits of individuals	27.9	28.3	28.3	27.4	27.7	30.6	26.6
Loans granted to individuals	12.9	12.6	13.3	14.3	16.1	18.7	19.2
including housing mortgages	1.4	1.7	2.2	2.9	2.7	4.2	4.4
% of household cash incomes							
Deposits of individuals	43.7	44.5	46.2	48.5	48.7	51.8	49.6
Loans granted to individuals	10.9	19.9	21.7	25.4	28.4	31.9	35.9
including housing mortgages	2.2	2.73	3.6	5.2	4.6	6.9	8.2
% of banking sector assets							
Deposits of individuals	30.0	32.7	33.3	33.0	34.4	31.6	28.4
Loans granted to individuals	13.8	14.6	15.6	17.3	19.9	19.3	20.8
including housing mortgages	1.5	2.0	2.6	3.5	3.2	4.1	4.7
For reference: weighted average interest rate	12.89	11.56	9.79	9.66	9.05	7.36	7.81
Prices index at real estate market, % of the previous year							
Primary real estate market	99.7	99.6	101.0	106.3	108.0	112.0	126,1*
Secondary real estate market	96.8	97.0	98.4	104.1	103.8	109.5	117.2*

* Q4 2021 vs Q4 2020.

Source: CB RF.

4.1.4. Investment in fixed assets

Structural features

Specific features of the economic activities in 2020 related to structural changes in the domestic market, a decline in GDP, a reduction in fixed capital investment (although insignificant), and stabilization of the volume of construction works, determined the starting conditions for the next year. In 2021, the acceleration of GDP dynamics was supported by a faster growth of fixed capital investments compared to final consumption and a positive dynamic in construction compared to 2020 indicators (*Table 11*).

Table 11

Dynamics of investment and construction business in 2019–2021, % of the respective period of the previous year

	2019	2020					2021				
	Year	Year	Q1	Q2	Q3	Q4	Year	Q1	Q2	Q3	Q4
GDP	102.0	97.3	101.4	92.2	96.5	98.2	104.7	99.3	110.5	104.3	106.9
Investment in fixed assets	102.1	99.5	104.2	95.4	94.9	103.0	107.6	103.3	111.0	107.9	107.6
Construction	102.1	100.7	102.6	95.8	100.9	103.0	106.0	102.9	110.6	103.7	106.4
Commissioning of living space	102.1	100.2	104.0	83.0	107.7	102.2	112.7	115.2	147.2	129.0	88.7

Source: Rosstat.

The recovery growth was accompanied by growth of revenues of enterprises and organizations under the influence of the output growth and financial support

of systemic enterprises. The balanced financial result of large enterprises and organizations in the economy as a whole in 2021 was 2.6 times higher and almost fully covered the losses of the previous year.

The share of gross profit and mixed incomes of enterprises and organizations increased in the income structure of GDP. The share of gross fixed capital in GDP in 2021 remained close to that of the previous year, however, growth in the level of transformation of gross savings into fixed capital investment became a special feature. The dynamics and structure of the investment and construction activity in recent years were shaped in the environment of tougher competition in the global markets, restrictions on the movement of investment imported goods, changes in the ruble exchange rate versus foreign currencies. However, in spite of external pressures, government measures and the active use of financial and monetary policy instruments have helped to mitigate the impact of the adverse environment.

Growth in domestic business investment activity in 2021 was supported by the attraction of foreign direct investment into the Russian economy. In 2021, the inflow of foreign direct investment into the Russian economy exceeded the previous year's volume by $30.4bn. (*Table 12*).

Table 12

Key parameters of the investment funds sources in 2015—2021, % of GDP

	2015	2016	2017	2018	2019	2020	2021
% GDP							
Gross savings	24.6	24.2	26.6	33.2	31.2	31.6	32.1
Gross accumulation	20.6	21.9	22.0	20.6	20.9	21.6	20.0
Gross profit and other mixed income	41.1	40.8	41.3	43.6	44.8	43.8	48.3
Consolidated budget revenues	32.3	32.9	33.8	35.8	36.2	35.6	36.8
National Wealth Fund	6.1	4.7	3.6	3.7	7.2	11.7	11.7
Budgeted funds for investments	2,3	2.2	2.2	2.0	2.2	2.7	2.4
including funds from federal budget	1.4	1.2	1.1	1.0	1.0	1.2	1.1
Loans granted to:							
Corporate clients	42.1	38.4	36.8	36.6	35.7	41.7	39.7
Individuals	12.9	12.6	13.3	14.3	16.1	18.7	19.2
Deposits:							
Corporate clients	32.6	28.4	27.0	27.0	25.8	22.70	22.8
Individuals	27.8	27.9	28.3	27.4	27.7	30.6	26.5
Billions of dollars							
Foreign direct investment in Russian economy	6.9	32.5	28.6	8.8	32.0	9.5	39.8
Russia's direct investment abroad	22.1	22.3	36.8	31.4	21.9	5.8	62.5
Private sector financial transactions (net lending (+)/ borrowing (-))	57.1	18.5	24.1	65.5	22.6	50.4	72.0

Source: Rosstat; CB RF.

Own funds of enterprises and organizations played the main role in financing investment: in 2021, the share of investment from organizations' own funds was 56.6% of total investment in fixed assets. The maintenance of a high share of own funds in the sources of financing was supported by high dynamics of the financial results of enterprises, profitability of production and assets.

The share of Russian banks' loans in the volume of investment resources was 9.8% in 2021 (-0.1 p.p. versus the previous year). The reduction in the share of Russian banks in the structure of capital investment funding sources was compensated for by the increase in the share of foreign banks' loans to 1.9% of investments from abroad.

The share of budget financing in the structure of capital investment rose to 19.2% in 2020 in the acute phase of the pandemic crisis, reversing its decline to 17.8% in 2021, but remaining above the average values of the past decade (*Table 13*).

Table 13

Structure of investments in fixed capital by sources of financing (excluding small businesses and informal activity parameters) in 2018—2021, % of total

	2018	2019	2020	2021
Investment in fixed assets, total	100	100	100	100
Own funds	53.0	55.0	55.2	56.6
Borrowings	47.0	45.0	44.8	43.5
including:				
Banking loans	11.2	9.8	9.9	9.8
Russian banks loans	6.8	7.8	8.1	7.9
Foreign banks loans	4.4	2.0	1.8	1.9
Borrowings from other organizations	4.3	4.8	4.9	4.6
Investment from abroad	0.6	0.4	0.3	0.4
Budget funds	15.3	16.2	19.1	17.8
Of which:				
Federal budget	7.6	7.6	8.7	7.7
Budgets of subjects of Russian Federation	6.6	7.4	9.2	8.9
Local budgets	1.1	1.2	1.2	1.2
Extrabudgetary funds	0.2	0.2	0.2	0.2
Funds received for shared participation in construction (organizations and households)	3.5	4.3	3.3	2.1
Including public funds	2.5	3.2	2.6	1.7
Other	11.9	9.3	7.1	8.6

Source: Rosstat.

The nature of investment activity in 2021 was influenced by changes in financial and credit conditions. In 2021, the key rate was changed 7 times upwards from 4.5% to 8.5% per annum.

After a period of temporary forced demand suppression, disruption in production and transport-logistics supply chains, the situation in the construction and investment environment was challenged in 2021 by increasing inflationary

pressure amid dynamic growth in the price of construction materials and rising costs of construction and installation works and equipment (*Table 14).*

Moreover, the construction and investment businesses were negatively affected by the rising cost of supply of investment goods under a high dependence of investment activity on imports of capital goods. Imports of investment goods amounted to 7.1% of GDP in 2021 and grew at a faster rate than public capital investments.

Table 14

Investment activity in 2019–2021 (financial conditions), %

	2019	2020	2021
Key rate (as of end of December)	6.25	4.25	8.5
Price indexes against December of previous year			
Goods manufacturers	95.7	103.6	128.5
for investment products	105.1	104.8	107.8
Including:			
Construction products	105.0	102.9	111.3
Purchase of machinery and equipment	107.1	109.3	104.6

Source: Rosstat; CB RF.

The contribution of Russian companies increased in the structure of investment by form of ownership as well as the role of the state as a subject of the investment process. The share of state-owned investments in 2021 was 21.3%, mainly due to a reduction in the share of foreign and joint Russian and foreign ownership (*Table 15*).

Table 15

Structure of investments in fixed capital by form of ownership in 2017—2021, at current prices

	For full range of businesses				Excluding small businesses and informal activity parameters	
	2017	2018	2019	2020	2020	2021
Investment in fixed assets, total	100	100	100	100	100	100
Including by form of ownership						
Russian	83.8	85.1	85.6	88.0	84.1	83.4
State	14.4	14.8	15.6	17.1	22.7	21.3
Municipal	2.5	2.3	2.7	2.9	3.6	3.5
Private	58.1	58.9	59.9	61.9	49.7	51.6
Mixed Russian	7.5	7.9	6.4	5.1	6.9	5.7
State corporations	1.2	1.2	1.0	0.9	1.1	1.3
Foreign	7.4	6.6	7.0	5.2	6.9	6.8
Joint Russian and foreign	8.8	8.3	7.4	6.8	9.0	9.8

Source: Rosstat.

Investment in fixed assets by type of fixed asset and type of activity

In 2021, the structure of investments by types of fixed assets was shaped under the influence of the operational response to the current situation on the capital goods market along with the acceleration of construction works. Changes in the structure by types of fixed assets showed a tendency towards growth in the share of expenditure on machinery, equipment and vehicles.

Growth in the share of investments in information, computer and telecommunication equipment was also positive providing conditions for an operational solution to accelerate the dynamics of digitalization (*Table 16*).

Table 16

Structure of investments in fixed capital by types of major funds 2019—2021, % of total (excluding small businesses and informal activity parameters)

	2019	2020	2021
Investment in fixed assets, total	100	100	100
Including:			
Residential buildings and premises	5.5	5.9	6.0
Buildings (except for residential) and facilities	44.5	43.2	43.7
Expenditures for land improvement	0.1	0.1	0.1
machinery, equipment, vehicles	38.5	38.3	37.7
Including information, computer, telecommunication (ICT) equipment	4.0	4.7	4.3
Intellectual property	4.3	5.3	5.8
Other	7.2	7.2	6.7

Source: Rosstat

Growth in the volume of investments in fixed assets was determined by the combined effect of the accelerated growth rates of the domestic investment productions and the increased contribution of imported capital goods in the structure of investment resources up to 39.9% in fixed assets investment in 2021 versus 34.9% a year earlier.

A positive trend in the dynamics of investment in fixed capital in 2021 was the increase in capital investment in the machine-building sector and in the production of construction materials (*Fig. 1*).

The changes in the structure of investments by types of activities were determined by the outstripping dynamics of investment in manufacturing (108.0% by 2020), construction (117.8%), trade (129.8%), transportation and storage (113.5%), cultural and recreational activities (116.4%).

The structural change in mining industries in 2021 was driven by investment growth of 2.6%, but this did not buy in to the 3.1% fall of the previous year. An alarming factor in 2021 was a 4.0% fall in investment in production of crude oil and natural gas against a growth rate of 102.0% in the previous year.

In manufacturing, the pharmaceuticals and medical supplies industry retained the lead in terms of average annual investment activity in 2020—2021, with a growth rate of 111.8% over 2019. The expansion of the pharmaceutical and

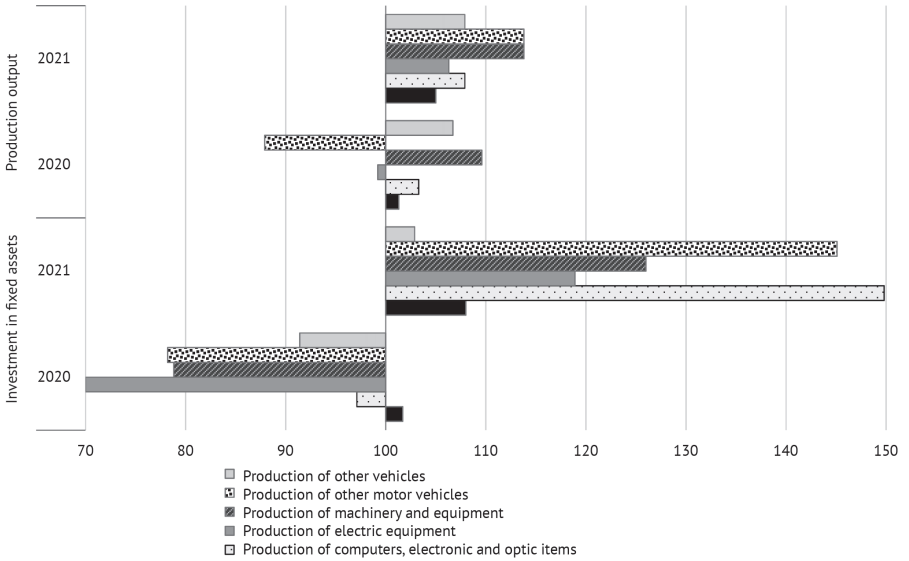


Fig. 1. Investment in fixed capital and output by machine-building activity in 2020—2021, % of previous year

Source:Rosstat

related industries helped to mitigate some of the disruption in production chains to the supply of raw materials, substances and equipment.

Operational management of production has highlighted the need to address the fundamental challenges of innovation in pharmaceutical production, taking into account the conditions for training skilled personnel in drug development, production and distribution and aligning industry priorities with health system development goals.

In 2021, growth of capital investment in the production of construction materials was recorded under the increase in construction and investment activity. Capital investment in metal production increased by 20.2%, production of construction materials grew by 30.3% and by 16.9% in timber industry compared to the previous year.

Investments in food processing (107.3% relative to 2020), textiles (180.0%) were recorded along with increased demand in the consumer market.

Positive developments should be noted in the services sector, such as the outrunning growth of investments in information technology (107.6% by 2020), professional and scientific-technical activities (116.3%).

The slowdown in investment in transport and logistics services is worrisome, especially in the context of plans to modernize and expand trunk infrastructure. Despite an offsetting increase by 13.3% in investment in transport and storage compared to the previous year, the negative effects of the acute 2020 crisis persisted in almost all modes except road transport and warehousing.

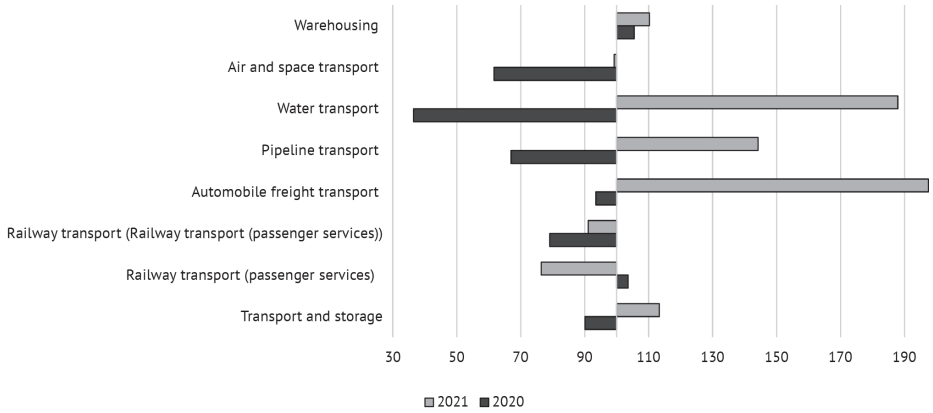


Fig. 2. Dynamics of investment in the fixed assets in transport in 2020–2021, % of the previous year

Source: Rosstat.

The extremely slow recovery of freight and passenger turnover remained a common transport problem in 2021. Efforts to maintain as much as possible the transport investment programs and infrastructure development made it possible to save production links, jobs, incomes both in the industry and in the related sectors, railway engineering, automotive plants and shipbuilding, and the construction industry (*Fig. 2*).

The acceleration in housing construction is due to the increased demand for housing under preferential mortgage programs, attractiveness of housing as a saving amid falling deposit rates, higher inflation expectations and increased volatility of the ruble, and banks' interest in increasing their loan product portfolios.

The increase in the contribution of individual housing construction at the expense of the population/developers and borrowings has compensated for the slowing down trend in the commissioning of apartment housing. A significant increase in the share and dynamics of individual housing commissioning (taking into account changes in statistical methodology) has been recorded since 2020, and in 2021 these figures were 103.0 and 123.1%, respectively.

It has to be noted that in 2021 the acceleration rate of the housing commissioning was due to an increase in the household demand on the one hand and to adaptation of construction companies to new conditions of project financing and cooperative housing using escrow accounts on the other hand (*Table 17*).

Almost a third of residential property is being built using escrow accounts, which has a positive effect on the people confidence to participate in investment projects. Household spending on real estate continued to increase and mortgages with a wide range of lending programs, including concessional lending, remained the growth driver.

Table 17

Volumes and dynamics of residential space commissioning by type of construction in 2014—2021, %

	Commissioning of residential space, million square meters	Including		Rate of residential space commissioning, % to previous period		
	Total	Apartment housing	Individual housing construction (IHC)	Total	Apartment housing	Individual housing construction (IHC)
2014	84.2	48.0	36.2	119.4	120.6	117.9
2015	85.3	50.1	35.2	101.3	104.4	97.2
2016	80.2	48.4	31.8	94.0	96.6	90.3
2017	79.2	46.2	33.0	98.8	95.5	103.8
2018	75.7	43.2	32.4	95.6	93.7	98.2
2019	82.0	43.5	38.5	108.3	100.5	119.2
2020	82.2	42.4	39.8	100.2	97.5	103.4
2021	92.6	43.5	49.1	112.6	102.8	123.1

Source: Rosstat

However, it should be taken into account that rise in real estate prices outpacing consumer prices, longer mortgage terms and higher interest rates resulted on the one hand in an increased debt burden with real housing improvements and, on the other hand, increased investment demand for housing as a means of saving, thus provoking imbalances in the real estate market in the short term. By the end of 2021, the availability to purchase housing up to income has reduced, while real estate prices rose, which determined the dynamics of housing commissioning in apartment buildings and individual construction, as well as the level of participation in cooperative construction. The government's anti-crisis measures in 2020—2021 combined with support for systemic enterprises, continued funding of infrastructure projects and stimulation of demand in the housing market, have supported fixed investment during the acute crisis period and identified the capacity for economic recovery.

4.2. Sectoral dynamics of industrial production in 2021[1]

In 2021, output in the extractive sector of the Russian industry went up due to the influence of factors that appeared at the beginning of 2021: growth of demand for thermal coal and natural gas from European and Asian countries; weakening of the effect of restrictions related to the OPEC+ agreement on the back of higher quotas for daily oil production by the member countries. The manufacturing sector

1 This section was written by: *Kaukin A.S.,* Candidate of Economic Sciencesк, Head of the Industrial Organization and Infrastructure Economics Department of the Gaidar Institute; Head of the Systemic Analysis of Sectoral Markets Department, Sectoral Markets and Infrastructure Economics Institute, IAES RANEPA; *Miller E.M.,* Senior Researcher, Systemic Analysis of Sectoral Markets Department, Sectoral Markets and Infrastructure Economics Institute, IAES RANEPA. The authors are grateful to M. Turuntseva and T. Gorshkova for assistance in conducting statistical analysis.

also demonstrated growth in 2021, which was achieved owing to high prices and growing external demand for the products of industries that occupy a significant share in the structure of industrial production (metallurgy, chemical industry, oil refining industry).

For a correct interpretation of the existing trends in individual industries, it is necessary to decompose their output into components: calendar, seasonal, irregular and trend;[1] the interpretation of the latter is of substantial interest. The Gaidar Institute experts cleaned the series of indexes of all the branches of industrial production for 2003—2021 from the seasonal and calendar component and singled out the trend component[2] on the basis of the current statistics published by Rosstat on the production indexes in the industrial sectors of the economy.

The findings of time series processing for the industrial production index as a whole are shown in *Fig. 3*. *Fig. 4* demonstrates the findings for the aggregated indexes of the extractive and manufacturing sectors, as well as the production and distribution of electricity, gas and water. For the rest of the series, the decomposition results are presented in *Table 18*.

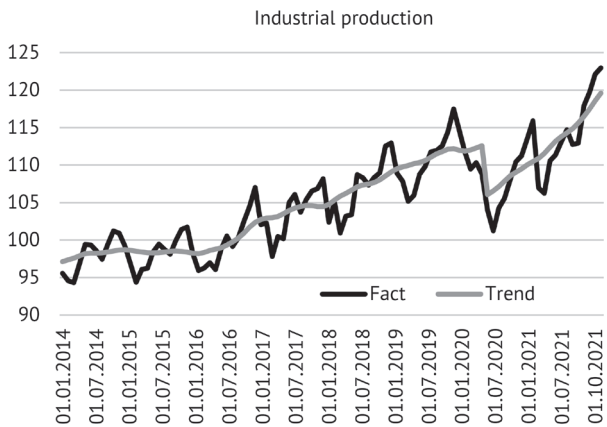


Fig. 3. Dynamics of the industrial production index in 2014–2021 (Actual data and trend component), in % to the annual average 2016

Sources: Rosstat, authors calculations.

1 "Trend component" is a well-established term used in the literature, but it should be noted that this component is not a "trend" in the strict sense used in econometrics when analyzing time series: in this case it is the residual from the separation of calendar, seasonal and irregular components from the series.
"Trend component" is incorrect to use for time series forecasting (for most of the indexes of industrial production it is non-stationary in levels (and stationary in differences), but it can be used for interpretation of short-term dynamics and its comparison with the events that took place.

2 The trend component was extracted with the Demetra package using the X12-ARIMA procedure.

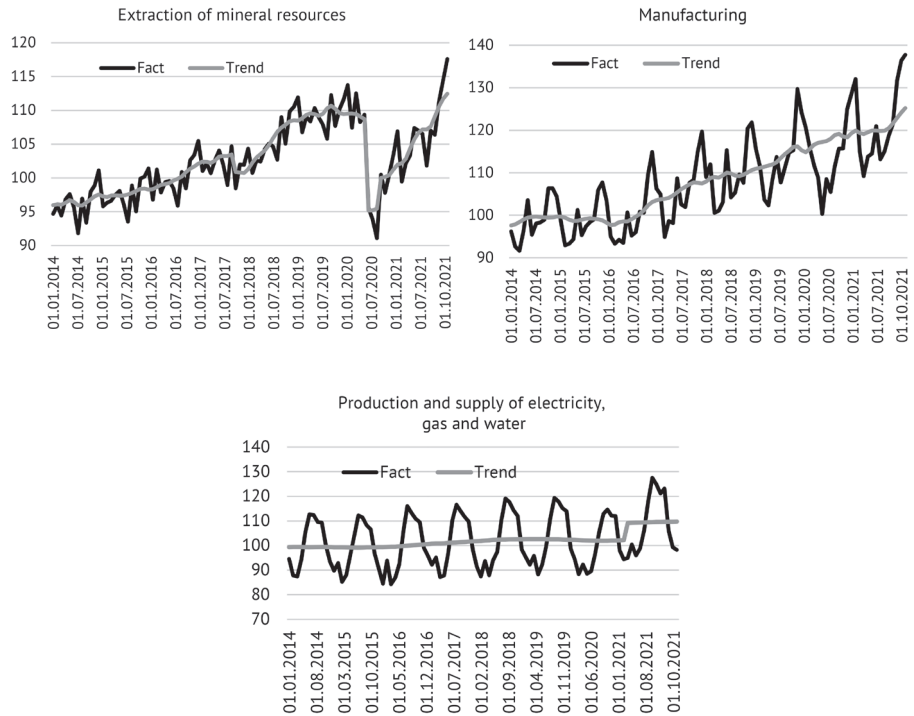


Fig. 4. The dynamics of production indexes by industry in 2014–2021 (Actual data and trend component), in % to the annual average 2016

Sources: Rosstat, own calculations.

4.2.1. Dynamics of the industrial production index in Q1[1]

In Q1 2021, the trend component of the extractive sector demonstrated slow growth, mainly by virtue of the gas and coal sectors. The factors having a positive impact on the trend component of the extractive sector remained the same at the end of 2020. Growth of external demand for Russian coal from Europe and China: first, as a consequence of the current ban imposed by China in November 2020 on coal imports from Australia; second, owing to a sharp increase in natural gas prices and a decline in Europe's own production. Additional influence was exerted by harsh weather conditions, which significantly raised natural gas export volumes in these areas in January-February 2021. Despite the gradual relaxation of quotas on oil production, the OPEC+ deal[2] continued to have a negative impact,

1 *Kaukin A.S., Miller E.M.* Dynamic of industrial production in January-February 2021 // Russian Economic Development. 2021. No.4 (28), pp. 10-14.; *Kaukin A.S., Miller E.M.* Dynamic of industrial production in March-April 2021 // Russian Economic Development. 2021. No. 6 (28), pp. 18-22.

2 At the December 3, 2020 OPEC+ meeting, it was decided to gradually ease restrictions on oil production in 2021: in particular, to increase total oil production by 0.5 million bpd, not 2 million bpd, from January 1, 2021 (from 7.7 million bpd to 7.2 million bpd, not 5.8 million bpd), which

and preventive maintenance work on infrastructure facilities of the oil and gas industry also made a negative contribution.

The analysis of the trend components in the manufacturing sector showed that a number of industries demonstrated a slight positive trend in Q1 2021 (nevertheless, manufacturing as a whole continued to stagnate):

- the light industry due to the import substitution, including the shift of consumer demand to a lower price segment on the back of lower incomes recorded in Q1;
- the chemical industry through continued growth in production of medicines and materials used for medical purposes in the face of another wave of coronavirus infection; and through increased demand for chemical and mineral fertilizers on domestic and foreign markets (mainly as a result of rising global fertilizer prices);
- machine-building through the production of passenger cars, demand for which continued to grow on the back of continued shortages (including a shortage of imported components - electronics)[1].

Given the decline in real disposable household income, there were negative dynamics in the segment of paid services to the public. The development of the trend component of freight turnover continued to show a slight decline, despite the growth of exports of fuel and energy minerals and fertilizers. Wholesale and retail trade in Q1 2021 demonstrated an uptick mainly owing to the growth in sales of drugs, chemical fertilizers, and motor vehicles.

Therefore, the OPEC+ agreement and the coronavirus pandemic were the key factors affecting the manufacturing and extractive industries in Q1 2021; some easing of conditions for Russia under the OPEC+ deal at the beginning of the year and opportunities to contain the pandemic through mass vaccination suggested the potential for growth in the short term. Nevertheless, at the end of the first three months of 2021, the manufacturing industry as a whole exhibited around zero growth rates.

4.2.2. Industrial production index in Q2[2]

In Q2 2021, the trend component of the extractive sector continued its sluggish growth. The main growth drivers for the coal and gas industry remained the same. The advance in natural gas exports to European countries was ensured by the low level of occupancy of local UGS facilities prior to preparations for the heating season: the growth in demand for Russian gas from European countries, particularly Germany, Italy, Turkey, France, the Netherlands and Poland, was

allowed Russia to raise production by only 125,000 bpd. On January 5, 2021, Russia also agreed to additional relaxation of those conditions until the end of March 2021, which gave it the right to produce an additional 65,000 barrels a day. Russia's production quota for January-March 2021 was increased as an exception (the total quota remained unchanged), and from April 2021 the easing of the deal's terms continued for all the OPEC+ members.

1 Sales of new automobiles in Russia went up by 4-fold in April // Vedomosti. 12.05.2021. URL: https://www.vedomosti.ru/auto/news/2021/05/12/869349-prodazhi-novih-avtomobilei-rossii-virosli

2 *Kaukin A.S., Miller E.M.* Dynamic of industrial production in May-July 2021: factors of growth. // Russian Economic Development. 2021. No. 9 (28), pp. 27–32.

ensured by the fact that by Q2 2021 owing to heavy snowfalls and cold weather in Q1 2021, there was low occupancy of local UGS facilities, as PJSC Gazprom met the demand through its UGS facilities in Europe rather than by gas transportation from Russia. Increased exports of thermal coal to Asian countries (due to China's refusal to import coal from Australia) and European countries (by virtue of reduced affordability of natural on the back of increased demand for electricity and reduced supplies from Colombia). In addition, oil production increased due to the easing of restrictions under the OPEC+ deal.[1]

The trend component of the manufacturing sector showed sluggish growth at the end of Q2 2021, the main positive contribution to this dynamic continued to be made by:

- chemical industry. Mainly driven by external demand surge. Export growth is a resulting from global economic recovery, particularly in China (export of chlorides, fluorides, insecticides, herbicides, amino compounds, etc.) in H1 2021 and favorable price terms in the world market. Meanwhile, the domestic market showed negative dynamics stemming from advanced purchases of raw materials at the end of 2020 and the beginning of 2021 - early 2021, resulting in large stocks of fertilizers and primary polymers, which were carried over to subsequent periods;
- metallurgical industry. Stemming from an increase in export and domestic supplies as a result of higher world prices for metallurgical products, as well as expectations of new increased customs duties on a wide range of goods produced by the industry from the end of July;
- machine-building mainly due to output growth of passenger cars, for which there has been a supply shortage since late 2020, as a result of the shutdown of many plants during the lockdown, and in early 2021 amid a shortage of imported components - electronics, mainly microchips, whose production was reduced because of the pandemic. The surge in demand for passenger cars at the end of H1 2021 is associated with the expectation of higher prices, as manufacturers have increased costs against the backdrop of rising global steel prices (the share of metal in the cost of a car is up to 40%);
- the oil refining industry driven by the ongoing recovery of economic activity in Russia.

The trend component of paid services to the public maintained a negative dynamic. The restrictions associated with the pandemic, which were in effect in different regions of Russia were the possible reason. The dynamic of the trend

1 *Kaukin A.S., Miller E.M.* Situation of the oil market in Q2 2021 // Russian Economic Development. 2021. No. 8 (28). p. At the OPEC+ meeting in early July, OPEC ministers voted to raise oil production by 2 million bpd until the end of 2021 (or 400,000 bpd monthly in August and December) and to extend the agreement until the end of 2022. (The proposal was blocked by the UAE delegation (only a consensus decision can be made), which had insisted on raising its production benchmark from 3.168 mn b/d to 3.8 mn b/d because the current level did not match OPEC production. In order to avoid a repeat of the April 2020 situation, when the OPEC+ agreement was terminated, a compromise was reached by revising the baseline level of oil production reduction for the UAE and increasing it to 3.5 mb/d starting from May 2022. In return, the UAE supported a proposal to extend the current deal to limit oil production until the end of 2022.

component of freight turnover showed growth on the back of export supplies of fuel and energy minerals, fertilizers and metallurgical products. Wholesale and retail sales demonstrated sluggish growth by the end of Q2 2021. Wholesale trade was mostly driven by growth in sales of chemical fertilizers, wood processing products and motor vehicles, while retail sales were driven by growth in sales of food and textile products.

In Q2 2021, particular concern was caused by industrial growth in combination with a recovery of the labor market, as well as a spike in inflation in the manufacturing sector, which was caused by a strong increase in world prices for products of the metallurgical, chemical and petrochemical industries (the possible beginning of the recovery of the world economy after the pandemic). Rising prices for products of the metallurgical, chemical and petrochemical industries began bringing about price growth in the related segments of the Russian economy, and the rapid recovery of the labor market began to lead to higher wages, which could subsequently put additional pressure on inflation in the consumer segment.

4.2.3. Index in Q3[1]

In Q3 2021, the trend component of the upstream sector exhibited growth. The increase in oil production was ensured by the continuing recovery of oil demand and OPEC+'s response to this surge: an increase in the total level of oil production by 400,000 barrels per day per month starting from August 2021 (Russia's increase was about 100,000 barrels per day). Factors influencing the growth of natural gas and coal production remained the same. For gas production, it is the continued low level of UGS occupancy in Europe,[2] coupled with growing demand for gas on the domestic market and in China (increased gas supplies for export through the Power of Siberia "Sila Sibiri" pipeline). For coal production, it is the growth of demand in Asian and European countries, which was triggered by the growth of natural gas prices, which made coal-fired generation competitive.

The trend component of the manufacturing sector at the end of Q3 2021 showed around zero growth rates; the main positive contribution to this dynamic continued to be made by:

- Light and food industries (production of food, textile and leather products) – on the back of the shift of consumer demand to a lower price segment (as a rule, more represented by domestic rather than foreign-made products), as well as owing to the presence of a minimum share of Russian-made goods in the implementation of public procurement (for most items on the list, quotas are set at 50-90% of the finished volume of purchases)[3];
- Chemical industry. Mainly due to growth in domestic and foreign demand for drugs and medical materials. And also by virtue of external demand

1 *Kaukin A.S., Miller E.M.* Industrial production index in Q3 2021 // Russian Economic Development. 2021. No. 11 (28), pp. 39–44.

2 52.2% in July 2021 against 83.3% in July 2020; 62.5% in August 2021 against 88.9% in August 2020; 74.1% in September 2021 against 93.3% in September 2020.

3 Decree of the Government of the Russian Federation of January 03, 2020 No. 2013 "On the minimum share of purchases of goods of Russian origin".

for nitrogen fertilizers, which require large amounts of natural gas in production. A significant increase in natural gas prices made nitrogen fertilizer production in Europe unprofitable, which raised demand for export products from Russia;

- Metallurgy industry – driven by growth of export and domestic supplies driven by an increase in global prices for metallurgical products, abolition of China's VAT refund for exports and import duties on a number of ferrous metallurgy products. In addition, at the beginning of Q3 2021, export growth was influenced by the introduction of new elevated customs duties in Russia from the end of July on a wide range of goods produced by the industry;
- Machine building. The shortage of semiconductors and the increase in the cost of raw materials had no effect on the output volumes of transport vehicles, machinery and equipment in Russia, which continued to grow in Q3 2021. Possible reasons were the ongoing shortage[1] of products on the market due to the fact that the enterprises did not operate at full capacity during the lockdown in 2020, which coincided with the expectations of price growth owing to a possible increase in the scrappage fee and exchange rate fluctuations at the end of H1 2021, and the government measures stimulating demand for certain types of engineering products.

The trend component of paid services to the public retained its negative dynamics. A possible reason was the continuing pandemic-induced restrictions in different regions of Russia. The dynamics of the trend component of freight turnover showed a slow drop in Q3 2021 against the backdrop of decline in exports of fuel and energy minerals, which was caused by infrastructure constraints[2] associated with the transportation of coal in the Far East for export to China and an increase in domestic demand for natural gas. Wholesale and retail trade demonstrated sluggish growth: wholesale trade was driven mainly by higher sales of drugs and medical supplies, chemical fertilizers, vehicles, machinery and equipment, retail sales by higher sales of food and textile products, and by payments (designed to support consumer demand) for school-age children in August and the September payment to pensioners and military personnel.

According to the findings of the trend components analysis of the series of the industrial production indexes and other related industries, we can conclude that the main risk factors of slowdown in industrial growth in Q3 2021 remain the same: the deteriorating epidemiological situation inside the country and in the countries with which Russia is connected by large trade flows (for example, export of metallurgical and chemical industry products to China); rising prices of commodities on world exchanges; termination of state programs and measures, stimulating the consumer demand.

1 According to the Association of Russian Automobile Dealers (ROAD), demand for cars is not satisfied, and their equipment is getting worse - some models are produced with no multimedia functions, navigation, etc. due to lack of chips.

2 The throughput capacity of railroad lines in the eastern direction does not allow to raise exports of Russian coal to China.

4.2.4. Dynamics of the industrial production index in Q4[1]

At Q4-end 2021, the trend component of the industrial production index was growing. All three sectors contributed: mining, processing and production and supply of electricity, gas and water.

The growth in the extractive sector was due to an increase in production of fuel and energy minerals (oil, gas, and coal), as well as an increase in production of metal ores. At the same time, the extractive sector failed to exceed the pre-pandemic level in 2021, which is fully owing to the limitations of oil production in the framework of the OPEC+ agreement concluded in 2020 (oil production occupies the most significant share of the extractive sector).

Oil production, including gas condensate, grew during all three months of Q4 2021 compared to the same period of the previous year. The factors driving the sector's growth remained the same: a recovery in global oil demand and the response of OPEC+, which began raising the agreed level of oil production under the deal in August 2021.[2]

Gas production volumes were on the rise throughout Q4 2021 despite lower export deliveries via the Yamal-Europe pipeline and the cessation of sales in 2022 via Gazprom Export in October-November 2021, amid record high prices and partial replacement of gas by coal (in October a historic high of $1.900 per thousand cubic meters was reached). Production growth during this period was due to demand on the domestic market (amid increased production of nitrogen fertilizers) and increased gas supplies to China via the Power of Siberia pipeline (steady recovery of the Chinese economy after the pandemic and preparations for the Olympics forced an increase in gas reserves on the back of an acute shortage of thermal coal in the country, which caused power supply limitations in H2 2021 in a number of provinces).

Coal production was on the rise in Q4 2021. One of the main factors that continued to influence production volumes was the growth in demand in Asian and European countries, which was facilitated by a spike in natural gas prices that made coal-fired generation competitive. The growth in demand from Asian countries has not been fully realized due to the existing infrastructure limitations in the Far East, which do not allow the entire additional volume of coal to be transported to the Asia-Pacific market by rail.

Metal ore production increased during all three months of the quarter compared to the same period of the previous year. The increase in metal ore production was driven both by increased demand for ore from domestic machinery producers and by export shipments as a result of a 5% reduction in export duties on scrap and ferrous metal waste from September and the elimination of 15% export duties on aluminum alloys to support producers from the end of November 2021.

The trend component of the manufacturing sector at the end of Q4 2021 demonstrated growth, the main contribution into the dynamics being made, like in

1 *Kaukin A.S., Miller E.M.* Dynamics of industrial production in Q4 2021 // Russian Economic Development. 2022. No. 2 (29), pp. 9–13.

2 This increase is extended until the end of January 2022, see: 23st OPEC and non-OPEC Ministerial Meeting concludes // OPEC. 02.12.2021. [https://www.opec.org/opec_web/en/press_room/6736.htm].

Q3: by the light and food industries (production of food, textile and leather goods); chemical industry; machine-building (production of motor vehicles, trailers and semi-trailers; machine-tool construction, production of metallurgical, mining and agricultural equipment; production of aviation equipment, shipbuilding). Whereas in the first two branches of industry the factors that have an upward effect remained the same, in machine-building the growth was ensured by the pent-up demand, supply deficit at the market and the measures of the state support. The output growth of motor vehicles, trailers and semi-trailers was fueled by the supply shortage, which remained in H1 2021 owing to the shortage of the import components — electronics, mainly microchips, production of which was reduced because of the pandemic. In the machine tool industry, the greatest contribution

Table 18

Change of production index by sectors of the economy, %

Sectors	Share in industrial production index, %	December 2021 on December 2020	December 2021 on September 2021
Industrial production		108.25	102.67
Extraction of minerals	34.54	110.28	103.10
Manufacturing, including:	54.91	104.40	102.97
Production of food, including beverages and tobacco	16.34	113.81	103.34
Textile and apparel production	1.14	104.51	102.21
Manufacturing of leather, articles thereof and footwear	0.27	105.45	102.07
Wood processing and wood ware manufacturing	2.02	104.08	101.67
Pulp-and-paper industry	3.35	88.14	97.22
Production of charred coal and petrochemicals	17.25	106.87	101.42
Chemical industry	7.56	115.11	104.39
Manufacturing of rubber and plastic articles	2.14	102.48	105.29
Manufacturing of other nonmetallic mineral products	4.02	108.56	101.34
Metallurgy and manufacturing of ready-made fabricated metal products	17.42	124.33	107.15
Manufacturing of machinery and equipment	6.97	117.01	103.54
Manufacturing of electrical, electronic and optical equipment	6.27	104.17	103.11
Manufacturing of transport vehicles and equipment	6.75	111.02	104.30
Other industries	2.42	100.57	102.82
Electricity, gas and water supply	13.51	100.54	100.09
Wholesale trade		106.18	102.63
Retail sales		100.65	99.46
Cargo turnover		106.00	100.81
Construction		105.98	101.55
Volumes of paid services to households		109.80	102.48

Sources: Rosstat, own calculations.

was made by the production of agricultural machinery. High world prices for agricultural products in 2021 provided additional funds to their producers, who had the opportunity to invest them in the renewal of the machine park, which increased the demand for the export of the Russian agricultural equipment and, correspondingly, the volume of its production. In addition, a number of importing countries of Russian products saw a high pent-up demand for agricultural equipment. In aircraft engineering and shipbuilding, the increase in production volumes was caused by the closure of state orders, in particular, production of gas tankers for the Arctic LNG 2 project, construction of the Sibir icebreaker, etc.

The trend component of paid services to the public retained negative dynamics. A possible reason was the pandemic induced restrictions at the beginning of Q4, acting in different regions of Russia (visits only by QR-codes, PCR-tests, etc.). Dynamics of the trend component of freight turnover showed around zero growth rates: rail and road transportation made a negative contribution by the end of 2021 (mainly growth is provided by commodities — coal, the export direction to the ATC countries experienced infrastructural restrictions on its increase). Air freight went up (compared to the pre-pandemic level, it tripled): airlines ship goods together with passengers on passenger flights, but when bans on passenger traffic were put in place in spring 2020, goods still had to be shipped and this type of transportation began to grow in the overall structure, which continued in 2021.

Wholesale and retail trade demonstrated slow growth: wholesale trade was driven mainly by growth in sales of medicines and medical supplies, chemical fertilizers, vehicles, machinery and equipment, and retail trade by growth in sales of non-food items amid a sharp acceleration in consumer lending (according to the Central Bank of Russia, unsecured consumer lending surged to 20.1% in 2021 from 8.8% a year earlier).

4.3. Russian industrial sector in 20211
(based on business survey findings)

This Chapter has been prepared on the findings of business surveys of industrial enterprises, which have been conducted by the Gaidar Institute using a European harmonized method in monthly cycles since September 1992.

Business survey questionnaire contains a limited number of questions (not more than 15—20). The original composition of questions of the IEP questionnaire was developed in 1992 on the basis of recommendations from the Organization of Economic Cooperation and Development that monitor business surveys in all countries of the world. Present IEP business questionnaire numbers not only the minimum set of questions recommended by OECD but includes other questions developed on the many years' experience of monitoring the state of the Russian economy and allowing to better understand the features of the dynamic and state of the industry. The analysis of the 2020 crisis and the vigorous exit of the Russian industry from it in 2021 once again demonstrated the advantages of business.

1 This section was written by *Tsukhlo S.V.*, Candidate of Economic Sciences, Head of the Business Surveys Laboratory, Gaidar Institute.

The questions in the business survey questionnaire deal with actual and projected changes in the key indexes of enterprises performance as well as with assessment of the current state. Enterprises are offered to give responses across scale "go up", "no changes", "go down" or "above normal", "normal", and "below normal." We use specific derived index, which we call balance, for the analysis of business surveys' findings. Balances are calculated as difference between the percent of those who answered "go up" (or "above normal") and percent of those who answered "go down" (or "below normal"). The obtained difference allows us to present responses to each question by one number with "+" or "- ". Business survey questionnaires practically lack classic quantitative questions (customary for economists).

A simple construction of questions and responses gives the respondents the chance to fill out questionnaires quickly and without turning to consult documentation. It is paramount that the respondent at each enterprise be a manager of the highest rank having complete idea about the state of affairs at the enterprises and be directly involved in the administration.

4.3.1. Q1 2021

In January 2021, demand quite expectedly exhibited negative dynamics under the influence of a large and extremely unusual for the economy set of factors. The balance of actual sales change decreased by 10 points, which looked modest against the expected 30 points decline a month earlier. Most likely, the rigidity of lockdown measures, successes of both the domestic medical science and pharmaceutical industry allowed the country as a whole and the industry in particular to avoid a negative epidemiological scenario at the beginning of the year. The same circumstances ensured recovery of demand forecasts after the December collapse. In January, they regained 12 points out of the 30 points lost a month earlier.

In January 2021, the Russian industrial sector tried to abandon the policy of minimizing stocks of finished products. The share of responses "above normal" rose to 8% after reaching an all-time high of 5% in December 2020 (since March 1992!). Such dynamics of the index testified to the confident control of enterprises over their stocks and to their minimum hopes for the realization of positive forecasts. On the other hand, this is the second crisis that the industry "passes" without the crisis growth of the estimations "above normal". The events of 2015—2016 epitomized the first crisis that was unproblematic in terms of stocks of finished products. In January 2015, (i.e., at the beginning of the crisis), the proportion of "above normal" responses fell to a near historic low at the time, while the proportion of "below normal" responses rose to a 4-year high. As a result, that crisis, for some reason, commenced for the industry with a lack of stocks of finished products.

The industry's human resources policy at the end of 2020 and the beginning of 2021 — early 2021 demonstrated greater resilience to the influence of the actual and expected epidemiological situation. From September 2020, businesses switched to hiring and maintained this positive trend in early 2021. In December,

the industrial sector reported the most intensive recruitment of workers for the second decade of the 21st century. In January 2021, the balances of both actual and expected changes in the number of employees dropped, however remained at the level of absolutely non-crisis levels.

In January 2021, the industrial sector reported such a robust increase in its prices compared to the previous month's mark, which surveys have not recorded for 10 years — since January 2011. However, a similar result (+31 points after seasonal clearance) was achieved in January 2015 — after, as we recall, the devaluation of December 2014. In 2020—2021, there was no comparable one-step devaluation of the ruble. However, the industrial sector was forced to increase the balance of actual changes in its prices from +10 in December to +31 points. Meanwhile, price forecasts of enterprises in December 2020 did not foresee such a rise in prices. Moreover, in December the balance of expected price changes went down from +20 points in November to +6.

Following January's slump, the sales growth rate in February fully recovered and reached the post-crisis maximum registered in November 2020. Amid clear successes against the Covid, the industry reported a continued vigorous recovery in demand for domestic products. The balance of sales forecasts also continued to recover.

In February, the Russian industrial sector boasted of an upbeat output growth that had halted in January. The balance was positive again and reached +9 points, which was so far inferior to the November-December 2020 index. However, the resumption of the positive dynamics of industrial production combined with the consolidation of optimistic output plans in February indicated the readiness of the industrial sector to continue its vigorous exit from the viral crisis. This point was also confirmed by the continuation of the actual recruitment of workers discharged during the viral crisis in other sectors of the economy. The hiring plans, which peaked in December 2020, retained their non-crisis optimism in early 2021 as well — the industry was determined to continue selecting from the labor market the candidates needed by domestic industrial enterprises and unwanted in the crisis in other sectors of the economy.

In the context of the Covid crisis and lockdown, which dealt a crushing blow to the service sector, the Russian industry was able to maintain, according to its own estimates, quite competitive wages even at the peak of the crisis (April 2020), brought the share of normal wage estimates in July 2020 to an all-time maximum (85%) and even in early 2021, when the service sector began to recover, 81% of industry considered their wages as normal. Thus, there was no crisis decrease in wages in the Russian industry during the 2020 crisis.

The acceleration of inflation in late 2020 supported high industry inflation expectations at the beginning of the new year. In January 2021, the balance of expected price changes reached a 6-year high and remained at this level in February.

In January-February, the Russian industrial sector reported the continuing tightening of its lending terms by the banking system. In February 2021, the share of enterprises with normal credit availability had already dropped to 55%,

after hitting 69% in August 2020, having reached the pre-crisis level. The crisis minimum was recorded in May 2020 and amounted to 46%. The tightening of credit terms for the industry was coupled with a decline in the rate offered to businesses. In February 2021, this index fell to 8.6% per annum in rubles.

In March, the positive demand dynamic for the industrial products continued. The demand continued the post-crisis recovery, which began (according to the traditionally underestimated estimations of the enterprises) only in October and was traditionally interrupted in January, a traditionally difficult vacation period for the Russian economy. Sales forecasts were gaining optimism throughout Q1 after the December dip, provoked by expectations of an upsurge in disease incidence. The recovery of sales growth in February-March after the January decline stabilized the satisfaction with demand. In February-March, it was considered as normal by 61% of the enterprises. The best result after the crisis collapse in April 2020 (when the proportion of the normal estimations of the demand plummeted from 60% to 37% within a month) was obtained in November and came to 62%.

The positive balance of actual output changes, which remained in March, confirmed the conclusion about the transience of the viral crisis 2020. After the logical April (2020) failure of the index from -2 to -38 points, from May the balance began to recover unexpectedly for most observers and in July it became "positive". Thus, it took the Russian industry only three months to achieve a positive growth rate (against the previous month). In 2008—2009, this period dragged out to 8 months, and in 2015—2016 the negative balance (reduction of output against the previous month) began to be recorded by surveys only from June 2015 for some reason and reached its peak (but very modest) values in August 2015.

If the personnel pessimism of enterprises amid a chronic shortage of qualified workers reported in 2020 was replaced by personnel optimism, the investment optimism according to the results of Q1 2021 did not replace the investment pessimism in the Russian industry. The balance of investment plans has remained negative since April 2020, although it approached the zero line.

4.3.2. Second quarter

At the beginning of Q2, demand maintained its positive dynamics. Though the balance of sales fell after the February record, it remained an 8-year high — such an intensive growth of demand has not been registered by surveys since 2013. Note that back then in 2013, it was a one-time and, most likely, accidental growth of the index. Now the balance of actual sales hit the pre-crisis level already in July 2020, and in November it reached the positive values that have not been registered for a long time. Sales forecasts after the December (2020) dip continued to gain optimism, improving in April by another 3 points.

The continuing positive dynamics of actual sales and growing optimism of demand forecasts strengthened enterprises' faith in the resumption of industrial growth and forced them to replenish stocks of finished products. The balance of inventory estimates after hitting a 20-year low in December 2020. By April, the balance of assessments of stocks increased by 12 points after reaching a 20-year low (which can be interpreted as the minimum hope for growth in demand)

but remained negative. There were still more "below normal" responses than "above normal" ones. The demand growth and the lack of stocks of finished products allowed the Russian industry to ramp up output from July 2020. This positive dynamics of output (growth against the previous month) was successfully maintained by enterprises throughout the first months of 2021.

The Russian industry inflation expectations continued to rise in April, adding another 4 points to the March result, repeating the record of 2010 and 2015. Since July 2020. (i.e., since the start of post-crisis output growth), the balance of enterprises' price forecasts has gained 32 points, with the only exception in December, when industry, together with the whole country, expected a critical growth of morbidity and a second lockdown. It fortunately did not happen, but allowed industry to recover both actual price increases and plans for further growth.

The strong optimism of both the demand forecasts and the output plans supported the high demand for labor on the part of industrial enterprises. In April, the balance of hiring plans gained 3 points and reached its 13-year high - more optimistic plans in the Russian industry were registered in early 2008. Another feature of current recruitment plans of businesses remains their stability. Since November 2020, (i.e. for 6 months in a row already) the balance has been in the range of +8...+12 points.

The investment plans of the Russian industrial sector, which logically collapsed in April 2020, finally came out "in the plus" after 12 months. The recovery of this index was slower than other plans and forecasts. However, in Q2 2021 they became definitely positive, which was another sign of the end of the crisis 2020.

The March increase of the key rate by the Bank of Russia, according to April estimates of enterprises, had no effect on the minimum rate on ruble credits offered to the industry. Since February 2021, this figure has been staying at minimum levels and amounted in April to 8.6% per annum in rubles. The aggregate availability of credit (which includes not only the nominal rate, but also other terms of crediting), on the contrary, underwent significant changes in these months. In February, the index fell to a local minimum, almost hitting the crisis minimum, recorded in May 2020, which amounted to 46%. However, already in March banks began to facilitate the Russian industry access to borrowed funds, and in April brought normal (according to borrowers' estimates) availability of credit to the pre-crisis level of 74%.

In May 2021, the demand dynamic for the industrial products, according to the enterprises' estimates, remained positive, that is the sales in May as compared to April (the balance is positive), but to a lesser extent than in April as compared to March. However, this outcome was calmly accepted by businesses when the whole first ten-day period of the month was declared non-working. Satisfaction with May sales extended gains to 66% and dissatisfaction dropped to 28%, which was the best result since 2007. In May, the balance of estimates of finished products decreased again by 5 points, signaling the growth of the deficit of this type of accumulation in the Russian industry. Apparently, the actual dynamics of sales and output in the context of optimism of enterprises' expectations and pessimism

of official forecasts did not allow industry to finally get rid of "defeatism" and move to confident growth, which requires a moderate managed surplus (positive balance of estimates) of finished products.

Nevertheless, from the beginning of 2021, the output forecasts demonstrated surprisingly stable optimism, staying for five months in a row in the interval of +18...+21 points. In other words, for almost half a year businesses were ready to spin the flywheel of the stable industrial growth. This desire was also supported by positive forecasts of demand and a lack of stocks of finished products. It should be noted that forecasts of changes in output at the enterprise level became positive as early as May 2020 — industry was ready to demonstrate a "rebound from the bottom" of the crisis as never before.

In May, industry inflation expectations rose by another 7 points, breaking the record of the 21st century (July 2008), and approached the post-default plateau of October 1998-October 2000. In those two years, the price forecasts of industry were steadily in the range of +38...+47 points with the average value of +44 points.

Recruitment plans in May underwent a significant adjustment. The balance declined from +11 points (the maximum since March 2008) to +5 points. That is the industry was ready to continue the recruitment, but less intensively. Such an adjustment was caused by the failure of the enterprises in the process of hiring the workers. In Q2 2021, the balance of the actual changes in the number of the staff dropped to zero (there was no increase in the number of staff), whereas the plans for these months suggested a rather intensive increase in the number of employees.

In May, Russian banks finally responded to the March and April increase of the Bank of Russia key rate - the minimum rate offered to the industry has increased from 8.6% (the all-time low) to 9.2% per annum. However, this circumstance had little effect on the final terms of borrowing. The level of normal (by estimates of borrowers from the Russian industry) availability of credit has declined from 73% (the eight-year maximum) to 71%. Having said that, the borrowing plans in Q2 2021 rose to +11 points after +4 points in Q1.

In June, the demand growth for the industrial products, according to the enterprises, continued. The balance of actual changes in sales remained at the level of +4 points, demonstrating stability throughout Q2. The resulting value was not as good as in February and March 2021 results, but significantly exceeded the sales growth rates recorded in 2018—2019. The positive demand dynamic was observed by the enterprises from November 2020 with the only and logical exception in January 2021. The recovery to the pre-crisis values of the index took place in July 2020. The vigorous post-crisis sales recovery in 2020 and the five months' period of the demand growth in 2021 led the satisfaction with the demand to the astonishing 70% by the mid — 2021. The above value is only 2 p.p. behind the absolute record of all previous 349 surveys of 1992—2021. In August 2007, 72% of respondents estimated the demand for their products as normal. In March 1996, there were 45 of such estimates.

In June, the shortage of stocks of finished products in the warehouses went up again. The balance of estimates dropped to -9 points. Enterprises were unable

to replenish their stocks even in the context of positive dynamics of actual sales and growing optimism of their own demand forecasts. The balance of estimates of finished goods inventories turned negative in August 2020, reached a local minimum in December 2020, and for 11 months in a row testified to the uncertainty of businesses regarding the end of the viral crisis of 2020. However, the above span is a far cry from the record 30 months of inventory shortages reported by the IEP surveys after the 1998 default.

In June, the plans of changes in output added another 6 points, breaking the previous record of November 2017 and turning out to be a ten-year high; there had not been such optimistic intentions concerning industrial production since June 2011. It should be noted that the balance of output change plans became positive as early as May 2020. Thus, in the second month of the 2020 Covid crisis, the industry was ready to ramp up the output volumes as compared to the previous month. The enterprises persistently stuck to this attitude, with the only and logical exception in December 2020.

The presence of current and expected personnel issues in the Russian industrial sector is confirmed by direct assessments of enterprises. Thus, 26% of enterprises referred to the shortage of staff as the factor restraining the output growth in Q2 2021, whereas in Q1, 16% of such responses were received. As a result, the shortage of qualified personnel took the first place among the resource restrictions according to the producers' opinion.

At first glance, prospective estimates of the supply of personnel for the expected changes in demand in Q2 2021 were not so pessimistic. Only 13% of enterprises reported the expected shortage of staff. Apparently the industry retained the hope to replenish the ranks of its employees by means of hiring. The estimates to the contrary (excessive number of employees) were also given by 13% of enterprises. The traditional balance of estimates was equal to zero. And such situation with the provision with staff was registered by surveys for the third quarter in the row.

The investment plans of the Russian industrial sector demonstrated surprisingly stable optimism throughout Q2. Having come out in April 2021 for the first time "in the plus", the balance of investment intentions up to June inclusive maintained the value of +10 points. As a result, the satisfaction with the investments was fully restored and even reached its historical maximum of 69% at the end of Q2 2021.

4.3.3. Third quarter

In July, according to the estimates of enterprises, the sales continued to grow, the balance of the index retained a positive value (i.e., in the reporting month more products were sold than in the previous month). After having reached in June its multi-year maximum (since June 2008), sales forecasts were slightly adjusted, having declined by 3 points. Apparently, the traditionally vacation August and the official announcement by the WHO about the beginning of the third pandemic wave made the industrial sector reduce the optimism of demand forecasts.

From August 2020, the Russian industry has been facing a 12-month shortage of stocks of finished products. By the end of the summer of the crisis year (2020),

enterprises confidently got rid of excess inventories, the maximum of which took place in the pre-crisis March 2020. The rapid revision of inventory estimates ensured the unusual nature of the viral crisis, the industry decided to build up its inventories in the face of lockdown and logistical issues. The reluctance of businesses to bring their stocks of finished products to a manageable surplus in the context of the obvious growth in both demand and output spoke to the uncertainty of the industry in the near end of the unusual 2020 crisis.

In July, the Russian industrial sector once again spurred price growth. Following the June decline by 3 points, in July the balance of the index moved up by 6 points and hit a 23-year maximum. According to the IEP surveys, the output prices of businesses have not increased so intensively since the post-default October 1998. Meanwhile, inflation expectations of the industry declined for the second month in a row. Over June-July, the index lost 14 points out of the 43 points gained by May 2021. The May 2021 result remains a record for the 21st century. In the 1990s, the balance of expected price changes in the Russian industry hit +99 points.

Since a three-month hiring freeze, when the balance of actual changes in the number of workers in April-June made a symbolic +1 point, in July the industry managed to increase the hiring rate up to +5 points. Having said that, the plans of the enterprises envisaged an increase in the number of employees with the rate of +11 … +12 points. The obvious issues in Q2 2021 with the recruitment of the personnel forced the industrial sector to revise the estimates of the provision with the qualified personnel due to the expected demand changes at the beginning of Q3. The balance of these estimates ("more than enough" minus "less than enough") plummeted by 15 points between April and July. As a result, there appeared a shortage of staff in the industry, the most large-scale since July 2008. And such a sharp decrease in the estimates has never been registered by the surveys during a quarter of the century of the monitoring of this index.

In August, according to the businesses' estimates, demand for industrial products showed a sharp rise. The balance of actual changes in sales increased in August by 8 points at once after relatively low values in March-July. As a result, 78% of enterprises evaluated the volumes of sales of industrial goods achieved by August as normal, the proportion of unsatisfactory estimates of the demand ("below normal") dropped to 17%. The forecasts of the enterprises' demand have undergone the same decisive positive adjustment. In August 2021, the balance of expected changes in sales added 12 points.

The demand growth, which lags behind output, and the logical caution in the context of the ongoing pandemic continued to keep manufacturers from decisively restocking their finished products inventories. In August, the shortage of these stocks went up again, while the scale of excesses, on the contrary, declined to an all-time low: only 5% of enterprises evaluated their stocks of finished products as "above normal". By the end of three quarters of 2021, 18% of enterprises had the deficit of raw materials and supplies (a 10-year maximum), and only 2% of producers had the excess of these reserves (the absolute minimum of this index in 1993—2021). As a result, the traditional balance of estimates of industry's

provision with raw materials and supplies dropped to -16 points, which was a 12-year minimum.

In August, the Russian industry proceeded to a definitive slowdown in the growth of wholesale factory prices. Over the month, the balance of price changes (growth rate) shed 17 points. At the same time, over the preceding 12 months the index increased by 50 points. The August deceleration of price growth is not the first attempt of enterprises to stop the inflationary wave triggered by the lockdown and support of the affected sectors of the economy by the authorities. For the first time the industry tried to restrain its price growth in Q4 2020, and then in February and June 2021. However, all the previous attempts were insignificant and were immediately replaced by a more significant index growth.

Clear problems with recruitment in Q2 2021 forced the Russian industrial sector in July-August to take decisive measures to restore recruitment — the balance of actual changes in the number of employees rose to +6 points after the 0...+2 points registered in Q2. However, this result is far behind the recruitment plans (+10...+13 points) that the industry had for these months. In September-October the industry planned to increase the hiring rate up to +16 points.

The industry reported a sharp slowdown in demand growth in September. The balance of changes of actual sales shed 9 points. This circumstance immediately affected the satisfaction with sales volumes: the share of "normal" evaluations fell by 7 points. However, it should be kept in mind that by August this index extended gains to an astonishing 79%, which is an all-time high, towards which the industry has been persistently going since May 2020, with an eye on other sectors of the economy. Probably, it is the look at other sectors of the economy, which suffered very much during the viral crisis, that brought the satisfaction with demand to such heights in the Russian industrial sector.

However, sales issues did not affect the estimates of finished products inventories. Moreover, in September the industry reported a growing shortage of stocks: the balance of their estimates declined again and reached -12 points. Thus, extremely cautious production policy and the obvious revision of the approaches to the estimates of stocks in the context of lockdowns, logistical issues and price growth for all and everything have saved the Russian industry from the problem of excessive stocks, traditional and extremely painful for the 90s of the 20th century, and brought to the fore the issue of forming the stocks (both the finished products and the raw materials) sufficient to support production and maintain the sales.

In Q3 2021, the industrial sector's inflation expectations stabilized at +29 points after the May record. Consequently, the enterprises planned to maintain the growth of factory prices (the balance has a "+" sign), but without acceleration (the balance did not go up). The balance of actual price changes stabilized only in August-September after the July record. The growth rate of prices in July 2021 was the maximum one since the default of 1998. Then (in October 1998), the index after the August devaluation of the ruble in three months increased from -12 points to +42 points. As a result of a gradual pumping of money into the economy,

the balance has been growing during the year 2020—2021: from -9 points in July 2020 to +40 points in July 2021.

As a result of the authorities' successful struggle against unemployment, the Russian industry faced a shortage of workers. This circumstance forced enterprises to switch over to robust and quite successful (as compared with the failing results of the 2nd quarter) recruitment. However, the industry was ready to continue the hiring. In September, the balance of plans added three more points and hit the absolute maximum — there had never been such high optimism of such intentions registered by our surveys before.

The July increase in the key rate had no effect on the lending rate offered to the Russian industrial sector in August. Like a month earlier, the banks were ready to lend to enterprises at best 9.4% per annum in rubles. However, in September, the banks raised the minimum rate offered to the Russian industry to 9.8% per annum in rubles. The increase in the rate logically reduced the normal availability of credit for industry from 70% to 63%. In April-August 2021, this index reached the pre-crisis level and stood in the range of 69—73%.

4.3.4. Fourth quarter

According to enterprises' estimates, the growth of demand for industrial products, which commenced in early 2021, continued in October. There has not been such a long positive dynamics of sales for a long time in the Russian economy. As a result of 10 months of 2021, the balance of the actual changes in demand made +8.7 points. The best value of this figure had been registered earlier only in 2007. As a result, the satisfaction with the sales according to the data for 10 months of the year moved up to 67% and considerably exceeded the surprisingly non-crisis result of 2020. At that time, 53% of enterprises considered the demand for their products as normal on average for the year after 56% in 2019. A similar surprising result was recorded in 2015, when the share of normal assessments remained at the level of the previous three non-crisis years and amounted to 52%.

Positive demand dynamic combined with a cautious production policy still spared Russian industrial sector from the problem of excessive stocks of finished products. In September-October 2021, the share of "above normal" estimates stood at 5%, which is a historic low of all 352 surveys. This low was first recorded in November 2020. In this context, the balance of estimates of finished stocks ("above normal" — "below normal") decreased to -13 points and almost reached the previous local minimum of -14 points rerecorded in December 2020, when the industry was preparing for the consequences of the second wave of coronavirus.

The peculiarities of the Covid crisis have spared the Russian industry not only from surplus stocks of finished products, but also from the overhang of idle capacities, as well as aggravated the shortage of personnel. In Q4 2021, businesses drastically revised their estimates of the provision with the capacities and the personnel in connection with the expected changes in demand. As a result, the overhang of excess capacity was replaced with the near-record shortage of capacities, and the shortage of personnel intensified and repeated the record of 2008. The deficit of production capacities (that is the excess of the

estimates "less than enough" over "more than enough") was earlier registered in the Russian industry only in 2007—2008 and hit the maximum (-10 points) in the first and the second quarters of 2008. Neither before nor after 2007—2008 has the Russian industry experienced a shortage of capacities. In Q4, the deficit of capacities was estimated by the balance to be -8 points, whereas a quarter before that, there had been a surplus of +6 points. Meanwhile, the shortage of workers is a chronic disease of the Russian industry. Enterprises faced it for the first time back in 2000. The negative average annual balances of the estimates of the provision of industry with personnel were received for 15 out of 26 years, during which the monitoring had been going on. At the beginning of Q4 2021, 26% of businesses reported the shortage of workers. The record of this index (27%) was registered in Q3 2007.

In the context of a record shortage of personnel, the Russian industrial sector continued to recruit and did not reduce the optimism of its hiring plans. In October, the rate of actual hiring grew up to +14 points and broke the 2007 record, when the index reached +10 points. The catastrophic situation on the labor market forced the enterprises to keep the robust recruitment. In October, the hiring plans remained at the September level, which is the record-breaking for the whole period of the monitoring of this index in 1998—2021.

In November, businesses reported a slowdown in demand growth. The balance of actual changes in sales fell again after the October surge to a near 14-year high. This being said, demand forecasts continued to lose optimism for the third month in a row. In September-November, the balance of sales forecasts lost nine points out of the +24 points accumulated by the Russian industry by August. However, it was only in November that the Russian industry began to adjust its output plans downward. Apparently, a stable (for many months) shortage of stocks of finished products supported both actual output and plans of enterprises even against the backdrop of the continuing struggle against the coronavirus. The shortage of finished goods inventories under the influence of the negative adjustment of demand forecasts decreased by 5 points in November. However, the balance of assessments ("above normal" minus "below normal") remained negative — the industry was still dominated by enterprises with a deficit of stocks.

In November, inflation expectations of the Russian industry under the influence of a combination of factors (which included a decisive October increase in the key rate by the regulator) did not undergo any significant changes. According to the data received by December 1, the balance of expected changes in prices rose only by 3 points. Thus, the peak of inflation expectations in the Russian industry remained in May 2021, when the balance of expected price changes reached +43 points. In November, the index stood at +31 points and was significantly inferior to the level of inflation expectations in most European countries.

In 2021, enterprises reported the most robust growth of costs since the post-default 1999. At the end of the year, the balance of actual changes in the cost of industrial production made +46 points, repeating the 2008 result. The record of the index for the period of its monitoring in 1997—2021 made

+51 points. The actual result on the growth of the cost of production in 2021 coincides with the forecast changes in costs, which surveys registered on a quarterly basis during the year. However, the final 2021 forecast (+46 points) surpassed the previous local high of 2008. (+42 points), also falling short of the 1999 record (+53 points).

In November, the Russian industry decreased the rate of recruitment after reaching a historical maximum of +14 points in October (the difference between the shares of responses "growth" and "decrease"). The previous maximum was recorded in 2007 and amounted to +10 points. In the context of chronic staff shortage, which was aggravated by the quick recovery from the Covid crisis, the enterprises continued to recruit personnel. The plans for the recruitment of workers, which reached the historic maximum in September 2021 and lost only 1.5 points in October-November, testified that the industry was ready to continue taking personnel from the shrinking Russian labor market.

4.3.5. 2021 is the year of the Russian industry's exit from the viral crisis of 2020

At the end of 2021, the demand dynamic demonstrated impressive results. The average annual balance of the actual changes of sales after the crisis 2020 value of -13 points moved up to +8 points and became the best since 2007. In 2021, the demand forecasts went up to +14 points after the -5 points received in 2020 and also became the best for the period of 2008—2021. Vigorous and surprisingly successful overcoming of the crisis by the Russian industry resulted in the satisfaction with the sales in 2021 reaching the record figure of 68%. The same result was obtained in 2007. Note also that the last two crises (2015 and 2020) did not lead to a crisis collapse of satisfaction with demand at the level of enterprises. The share of estimates "normal" in these years did not fall below 50%. Whereas in 2009, this figure plummeted to 28%, and in 1994—1998 it was in the range of 8—14%.

In 2021, according to the estimates of enterprises, output showed the same surprising growth as demand for industrial products. The balance of actual changes in output (the share of answers "growth" minus the share of answers "decline") increased from -2 points in 2020 to +14 points in 2021. The latter value was the best for the period 2011—2021. The optimism of the output plans also demonstrated growth in 2021 and was also the best since 2010.

According to the results of the post-crisis year 2021, there was a shortage of stocks of finished products, i.e. there were more "below normal" responses than "above normal" ones. Such a situation has not been registered by surveys since 2000. However, the balance of estimates of stocks in the crisis year of 2020 was also quite non-crisis — a modest +1.5 points. In the crisis year of 2015, the situation was also strange: the balance was +3 points and turned out to be better than the result of the pre-crisis year of 2014, when the excess of reserves was estimated by enterprises at +6 points.

In 2021, the pricing policy of the Russian industry underwent radical changes. The balance of actual price changes showed a record growth at the end of the year:

from +1 to +29 points. In 1999, the growth of this index was from +7 to +35 points. The balance of expected price changes grew in 2021 from +8 to +32 points and repeated the record of 2009, when this balance increased from +19 to +43 points.

The recovery of the Russian economy after the Covid crisis of 2020 required from the Russian industry intensive hiring. And the restrictions imposed by the authorities on the activities of other sectors of the economy allowed enterprises to bring the recruitment of new workers to such an intensity, which was not registered in the period of monitoring of this index in 2003—2021.

However, the chronic shortage of skilled workers forced the industry to plan a record hiring in 2021. The balance of expected changes in the number of workers repeated in the past year the absolute maximum of this index registered in 2000. Both then, on the way out of the prolonged crisis of the 1990s, and now the balance of expected changes in the number of workers reached +13 points.

Despite of intensive recruitment, the Russian industrial sector ended 2021 with a negative balance of supply of personnel of the expected changes in demand. At the end of the year, the index dropped to -9 points. The shortage of staff was registered even worse only in 2007 and 2008. In 2007—2008, the industry also had a capacity deficit. In 2021, no such deficit was registered (the average annual balance was +7 points), but in Q4 2021 the figure plummeted from +6 to -8 points.

The credit crisis of 2020 in the Russian industry turned out to be shallow, apparently due to the support of the authorities. The availability of credit at the end of the year decreased only by 5 p.p. and recovered to inter-crisis levels in 2021. The average minimum rate offered by banks to industry was able to fall by the end of the crisis year 2020 to 8.8% per annum in rubles, which was a historic low. However, the active use of the key rate by the Bank of Russia in the fight against inflation raised this index to 10.2% in Q4 2021.

The short-lived Covid crisis of 2021 did not (could not) affect the financial and economic situation of enterprises. The sum of evaluations "good" and "satisfactory" by enterprises of their condition (91%) remained in 2020 at the level of 2019, which, moreover, was an all-time high of 1995—2019. In 2021, the cumulative figure reached another record high of 93%. Thus, at the end of 2021, only 7% of Russian industrial enterprises evaluated their financial and economic situation as "bad" or "extremely bad". In 1995—1998, such estimates stood at 75—77%.

4.4. The transportation industry[1]

4.4.1. Post-pandemic recovery of the transportation industry

After a dramatic decline of the main performance indicators of the transportation industry on the back of acute implications of the coronavirus

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pandemic in 2020, the year 2021 saw the signs of recovery of this sector, however, the indicators (the transportation volume) remained below the pre-pandemic level. The rates of recovery of the transportation industry correlate closely with the dynamics of related industries (intersectoral linkages), such as tourism, the building industry and retail trade. A pickup in transportation services was driven by the lifting of restrictions and a revival of global production, business activity and logistics chains.

According to the data of the Central Bank of Russia,[1] in 2021 exports and imports of transportation services sped up and at year end this sector fixed surplus of $3.518 bn owing to growth in the volumes of transit and container freight between Russia and China, Central Asia and the EU, recovery and integration of global supply chains into the single market of transportation services, for example, on the basis of the Eurasian Economic Union (EEU), as well as a pickup in export shipments by sea.[2] In 2021, exports and imports of transportation services increased by 12% and 27%, respectively, relative to 2020 and 87% and 94%, respectively, relative to 2019. Shortages remain in the segment of business and private travelling: in 2021 exports and imports decreased and amounted to $3.5 bn and $11.8 bn, respectively, (32% relative to 2019) primarily on the back of the existing restrictions on international service.

As in 2020, a decrease in the volume of international transportation services was largely made up for by a pickup in transportation and haulage inside the country. Owing to high recovery growth rates in the segment of transportation of staple goods and development of e-commerce,[3] the cargo turnover and freight traffic volumes surpassed those seen in 2020 and approached the pre-pandemic level.

Unlike freight traffic, passenger services recovered only by 80% in 2020 because of the population's low mobility[4] compared with the 2019 level. Full recovery of passenger services can be impeded by enhanced epidemiological measures: as seen from Russian regions' experience the introduction of QR-codes on the public urban transport can lead to a 20%-30% decrease in a daily passenger flow.[5]

According to the Rosstat's data, in 2021 the share of the transportation industry in gross value added[6] was equal to 6% (a decrease of 0.8 p.p. and 0.4 p.p. relative to 2019 and 2020, respectively). Overall, in January-November 2021 across the sector the balanced financial result (profit less losses) of entities related to the "Transportation and Storage" group without mid-sized and small companies taken into account grew by Rb582.6 bn (+110.8%) on the relevant period of 2020.[7] In 2021, the operations of land passenger transport (except for

1 URL: https://cbr.ru/statistics/macro_itm/svs/
2 URL: https://iz.ru/1195666/ekaterina-vinogradova/servisnyi-epitcentr-eksport-uslug-iz-rossii-vpervye-prevysil-import
3 URL: https://ratings.ru/upload/iblock/9c8/NCR_Transport_comment_Oct2021.pdf
4 URL: https://www.kommersant.ru/doc/4910137
5 URL: https://www.interfax-russia.ru/volga/news/passazhiropotok-v-transporte-tatarstana-posle-vvedeniya-qr-kodov-snizilsya-na-20-30-mintrans
6 The Rosstat. (GDP produced. The annual data on OKVED 2 (NAC Edition 2) (since 2011) in current prices. URL: https://rosstat.gov.ru/accounts)
7 URL: https://rosstat.gov.ru/storage/mediabank/13_02-02-2022.html; https://www.gks.ru/bgd/free/B04_03/IssWWW.exe/Stg/d02/16.htm

railways), as well as mail and courier services were loss-making.[1] At the same time, hyperlocal delivery (a direct delivery from the seller to the buyer within the limits of a confined geographical zone, that is, one district), courier services and all forms of vehicle rental services, including micro-transport (bicycles and electric scooters) picked up.[2] The coverage of the electric scooter rental service (kick sharing) – it is used for 70%—85% for transportation services – increased by 50% as compared with 2020 and is available in 90 Russian cities.[3] Demand for delivery services increased simultaneously with the strengthening of restrictions in individual regions or on the federal level. For example, October saw a 10% growth on the previous month[4] when non-working days were declared. Overall, in 2021 demand for courier services increased five-fold.[5]

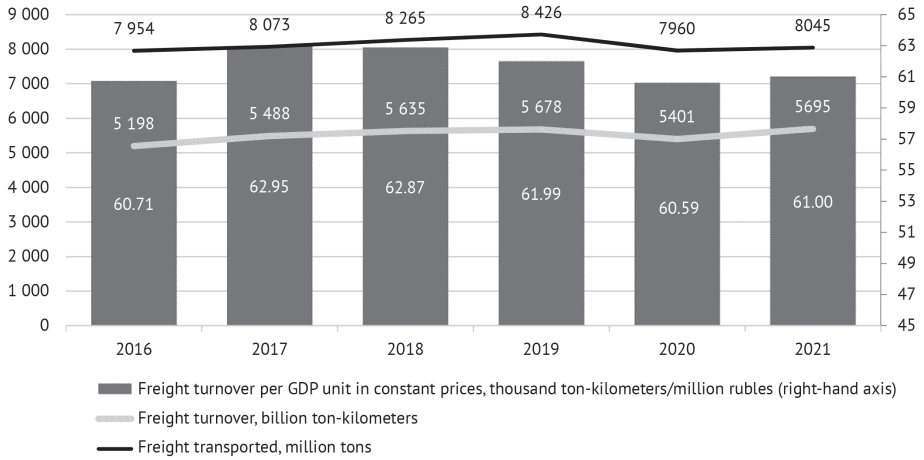
It is noteworthy that late in November 2021 the Transport Strategy till 2030 with the Outlook till 2035[6] (Strategy), which development took several years, was approved. Within the scope of this Strategy, it is planned to solve large-scale objectives, such as the formation of the nationwide backbone transportation network, including all types of transport links; fast-track upgrading of transportation infrastructure, including airfields and airports; building of motorways and high-speed railways, as well as the development of city transport infrastructure and upgrading of the public urban transport facilities. A particular attention is paid to the transportation industry's digital development which gained momentum in the past few years,[7] including the introduction of platform services in logistics, development of remotely piloted (autonomous) transport[8] to reduce the cost of freight and passenger transportation, as well as "decarbonization" with taking particularly into account the development of the strategy of shifting to carbon-neutral transport and ecological fuels in order to reduce an environmental load.

4.4.2. Performance indicators

Freight transportation

The revival of business activity and related industries' growth, as well as improvement of the global commodity market environment gave an impetus to the recovery of freight traffic to the pre-pandemic level. By estimates of the RF Ministry of Economic Development,[9] at year-end 2021 freight traffic dynamics surpassed the level seen in 2019 (+0.3%).

1 URL: https://www.hse.ru/pubs/share/direct/document/556362954.pdf
2 URL: https://www.eg-online.ru/article/446104/
3 URL: https://truesharing.ru/tp/28275/
4 URL: https://www.superjob.ru/research/articles/113138/spros-na-kurerov-v-rossii-za-god-vyros-v-5-raz/
5 Ibid.
6 URL: http://government.ru/docs/43948/
7 URL: https://tv.rbc.ru/archive/rbc_plus_dnv/61940ece2ae5967c16d43e6e
8 In accordance with the Strategy of Digital Transformation till 2021–2030.
9 URL: https://economy.gov.ru/material/file/6211dc39795bea0da2120d1d8df9d646/20220209.pdf



Note. 2021 – updated information.

Fig. 5. The dynamic of freight turnover per GDP unit in constant prices of 2016 (thousand ton-kilometers/million rubles), cargo traffic volume (million tons) and transport freight turnover (billion ton-kilometers), 2016–2021

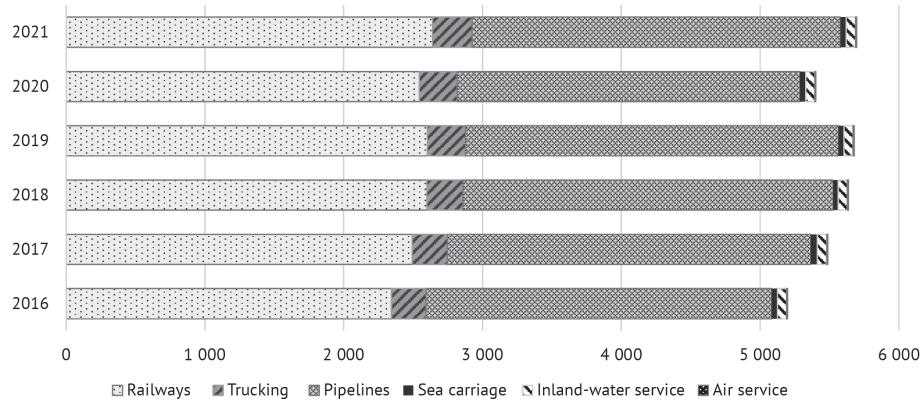
Source: Rosstat, own calculations. URL: https://fedstat.ru/indicator/30990; https://rosstat.gov.ru/folder/23455; https://rosstat.gov.ru/accounts

Freight traffic upside dynamics and volume in nominal terms influenced the indicators of cargo capacity[1] of the economy: at year-end 2021 cargo capacity was below the 2019 pre-pandemic level, an increase of somewhat less than 1% relative to the previous year, that is, a very slight decrease in efficiency of transport utilization (value added creation) in terms of units.

According to the Rosstat's data, in 2021 overall freight turnover (on the back of upside dynamics of all types of transport) increased by 5.3% as compared with the previous year and surpassed the 2019 pre-pandemic level (*Fig. 5*). Air service saw the highest recovery growth in freight turnover (29% on 2020), while sea carriage, the lowest one (0.37%). There was almost equal recovery of freight turnover of railway service and inland-water service (growth within the range of 2%–3% relative to 2020), as well as of trucking and pipelines (5%–7%). It is noteworthy that no substantial changes took place in the freight turnover pattern (*Fig. 6*).

In 2021, freight traffic increased by 2.5% relative to the previous year, however, failed to achieve the level seen in 2019 (-3.2%). Freight traffic dynamics by the type of transport was multidirectional: the volumes and shares of sea carriage and inland-water service decreased in the freight transportation pattern as compared with 2020, while those of trucking, air service and pipelines picked up (*Fig. 7*).

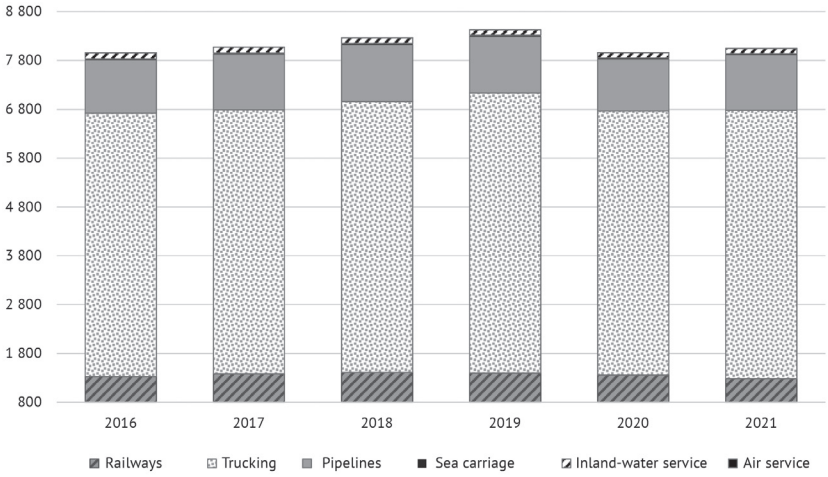
1 Cargo capacity is the value of freight turnover (sum of productions of weight of each freight shipment by a transportation distance) per GDP unit and shows the extent of the "load" on the economy by the work of transport.



Note. 2021 – updated information.

Fig. 6. Freight turnover by the type of transportation (billion ton-kilometers), 2016–2021

Source: Rosstat, own calculations. URL: https://fedstat.ru/indicator/30990; https://rosstat.gov.ru/folder/23455



Note. 2021 – updated information.

Fig. 7. Freight traffic pattern by the type of transportation (million tons), 2016–2021.

Source: Rosstat, own calculations. URL: https://fedstat.ru/indicator/31314; https://rosstat.gov.ru/folder/23455

According to the Rosstat's updated information, in 2021 the volume of freight traffic by railway increased, too, relative to the previous year.

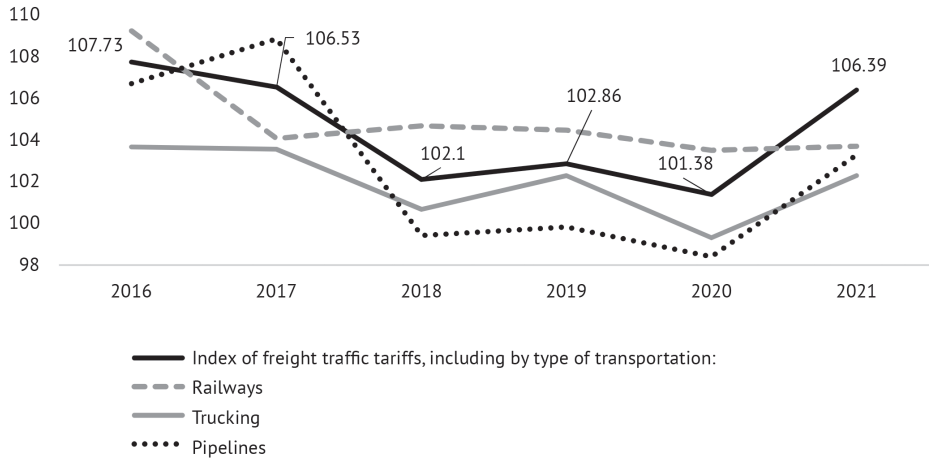


Fig. 8. Dynamics of freight tariffs index (aggregate and by the type of transportation), % change relative to the previous year (January-November)

Source: The Unified Interdepartmental Statistical Information System, own calculations. URL: https://fedstat.ru/indicator/31076

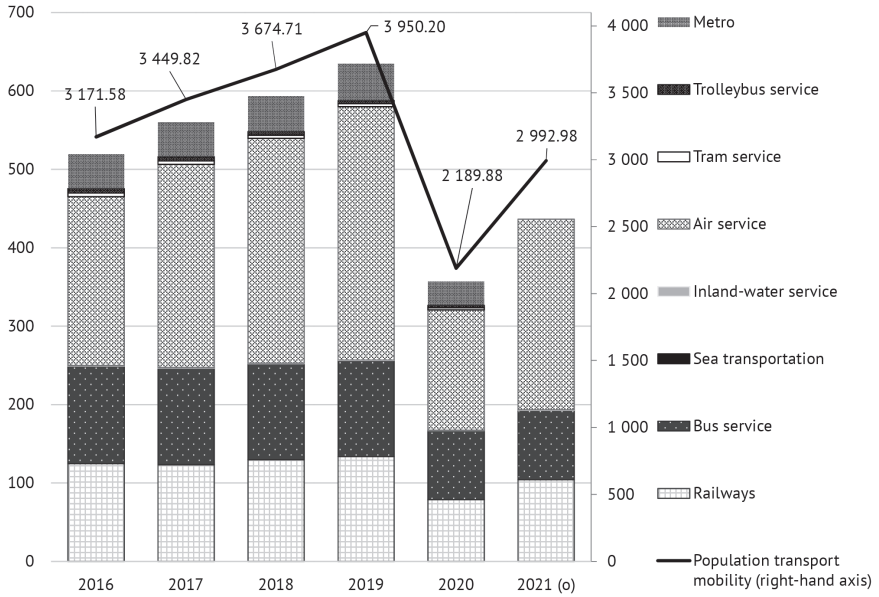
The overall dynamics and changes in the freight traffic pattern were affected and driven by freight tariffs dynamics (*Fig. 8*). In 2021, there was fast growth in the average level of freight tariffs comparable with the level seen in 2017; at the same time the index of railway freight tariffs saw relatively sustainable dynamics and stabilized at a higher level as compared with other types of transportation. A pickup in freight tariffs and appreciation of prices for logistics services was driven by a sea freight crisis in 2021: sea freight tariffs growth led to an increase in demand for multimodal freight transportation and sped up tariffs growth in related transportation industries (railways, motor and air transportation).[1] An upward trend of tariff indices correlates with the overall dynamic of consumer prices: according to the Rosstat's data[2] the consumer price index in 2021 on 2020 was equal to 108.39%, including the index of consumer prices for services (104.98%).

Passenger traffic

In 2020, passenger traffic was hit hard by the coronavirus pandemic: transport mobility of the population decreased by almost 50% (*Fig. 9*).

At year-end 2021, passenger traffic (without taking into account tram, trolleybus and metro traffic) recovered by 75% relative to the level seen in 2019 and its growth was equal to 39% relative to 2020. Recovery dynamics are similar across the types of transportation: there is growth as compared with the indices of the previous year, however, the pre-pandemic level failed to be achieved. In 2021, the highest pickup in passenger traffic was registered for inland-water

1 URL: https://www.retail.ru/articles/pochemu-dorozhayut-gruzoperevozki-v-2021-godu/
2 URL: https://rosstat.gov.ru/price



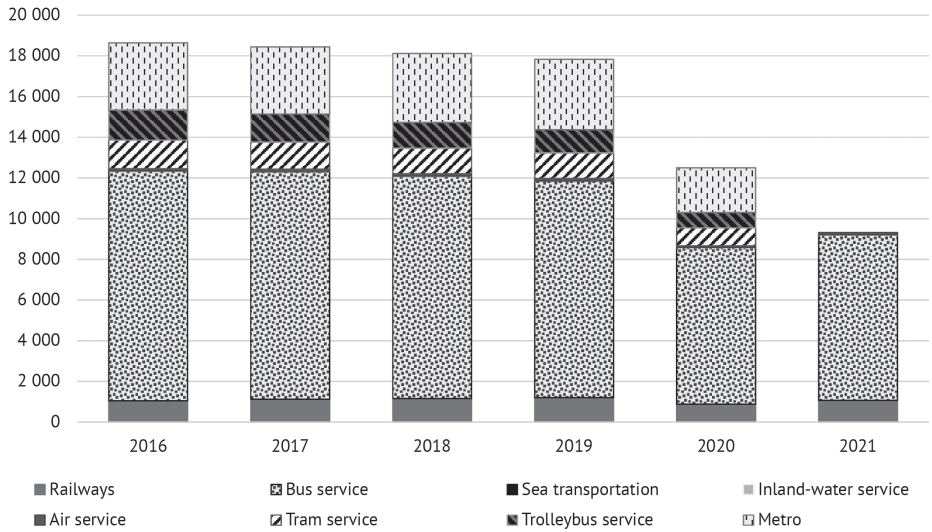
Note. Transport mobility of the population is a correlation between passenger traffic without tram, trolleybus and metro traffic taken into account and the average annual number of the population (million passenger kilometers /million persons); the year 2021 is represented by updated information without tram, trolleybus and metro traffic taken into account.

Fig. 9. Passenger traffic by the type of transportation (billion passenger kilometers), 2016–2021

Source: Rosstat, own calculations. URL: https://rosstat.gov.ru/folder/23455; https://fedstat.ru/indicator/43534; https://fedstat.ru/indicator/31313; https://rosstat.gov.ru/folder/12781

service (92%) and air service (58%); this can be substantiated by a low base effect on the back of a considerable decrease in transport work in 2020. Air passenger traffic recovered mainly owing to domestic air traffic. At the same time, railway, bus and sea passenger traffic increased only by 32.6%, 10% and 7%, respectively. The passenger traffic pattern did not undergo serious changes, however, the share of air and railway passenger traffic grew as compared with 2020 and this can be explained by the fact that passenger traffic returned to its pre-pandemic pattern.

The year 2021 saw a revival of passenger traffic: its overall volume increased by 11% relative to 2020 and amounted to 80% of the 2019 pre-pandemic level. By the type of transportation, the highest increase in passenger traffic volume was registered for air service (60%), which saw a large-scale decline in 2020. It is noteworthy that there was almost equal passenger traffic growth in railway service (21%), inland-water service (16%) and bus service (10%) as compared with the previous year, while sea transportation saw negative passenger traffic growth (-8%) (*Fig. 10*).



Note. 2021 is represented by updated information without tram, trolleybus and metro traffic taken into account.

Fig. 10. The passenger traffic pattern by the type of transportation (million passengers), 2016–2021

Source: Rosstat, own calculations. URL: https://rosstat.gov.ru/folder/23455; https://fedstat.ru/indicator/31315

In the passenger traffic pattern, the share of railway and bus services picked up. In 2020, the share of air service decreased and was adjusting to the pre-pandemic level, while the shares of sea transportation and inland-water service were relatively stable.

4.4.3. Transportation dynamics, the state of transport infrastructure and rolling stock of individual types of transport

Railway service

With a revival of business activity after the pandemic, "delayed" growth potential is carried out by freight traffic. According to the updated information for 2021, overall railway freight traffic increased by 3% relative to 2020, but less than 1% relative to the pre-pandemic 2019.

A pickup in railway carriage was driven by growth in transportation of raw materials (primarily ferrous scrap, fossil coal and charred coal[1]), a switchover from other types of transport (in particular, from motor transportation of grain over a distance of 400 km) and an increase in transit carriage. At the same time, the pattern of railway freight traffic underwent some changes: a decrease in

1 URL: https://www.gudok.ru/newspaper/?ID=1585044&archive=2021.11.02

the share of high tariff class freight and a 60.4% growth in the share of low-income freight in 2020,[1] as well as an increase in the share of container cargo in overall freight handling. In H1 2021, an average transportation range of all cargo increased by 1.8% as compared with the relevant period of 2020 on the back of an increase in the range of transportation of the industrial sector's freight (cars, fabricated metal products, engines and machinery).[2]

According to the estimates of the OAO RZhD, in 2021 transit railway carriage increased two-fold[3] on the back of expansion and upgrading of transportation services, diversification of transit routes (for example, the opening up of multimodal transit traffic from China to the UK via the city of Kaliningrad) and establishment of competitive prices.[4] A pickup in demand for railway container carriage was driven by a considerable increase in global sea freight rates in 2021; in the light of this, consignors refused to ship goods by sea and gave preference to multimodal services via seaports, including those in the Far East, which situation led to congestion thereof in October 2021. The development of multimodal freight traffic is limited by an insufficient freight capacity of the railway infrastructure, particularly, shortages of containers and freight trains; the railway network requires upgrading[5] and cargo transshipment port capacities need to be enhanced.[6]

On the back of modernization of the regional railway infrastructure in 2021, its traffic capacity increased, transport operators' maintenance costs declined and conditions for enhanced freight traffic flow to the Far East were created. In particular, the Borzya-Zabaikalsk electrified railway section and the double line working of the Kutykan-Kuvykta BAM run were put into operation.[7]

Like other types of transportation, amid restrictions the railway passenger service reorientated itself on in-country service. To motivate the population's transport mobility and promote demand for railway travelling, a program was endorsed to subsidize family trips in compartments on long-distance trains and new excursion trains and theme railway routes (tours) to cities across Russia were offered.

The Metro

In 2021, the transport work volume was recovering fast: in October the Moscow Metro passenger flow was equal to 83% relative to the pre-pandemic level, having surpassed on this indicator the metro service of other large cities (Paris, Istanbul, Berlin and Beijing).[8]

1 URL: https://www.ng.ru/vision/2021-08-24/100_08_24082021.html
2 URL: https://www.rzd-partner.ru/zhd-transport/comments/operatory-podveli-itogi-polugodiya-rastut-pogruzka-park-i-stavki/
3 URL: https://www.interfax.ru/russia/814821
4 URL: https://rg.ru/2021/04/25/rossiia-uvelichila-obemy-zheleznodorozhnyh-tranzitnyh-perevozok.html
5 URL: https://gudok.ru/newspaper/?ID=1586407&archive=2021.11.17
6 URL: https://www.rzd-partner.ru/logistics/opinions/infrastruktura-portov-dalnego-vostoka-odnoznachno-ne-gotova-k-rastushchemu-obemu-gruzov-sleduyushchi/
7 URL: https://rosavtodor.gov.ru/press-center/specproekty/455921
8 URL: https://www.m24.ru/news/transport/07102021/186436

Further, the Moscow Metro infrastructure was actively developing. Overall, 25 kms of metro lines and 12 stations of the Big Circle Line (BCL),[1] including the modernized Kakhovskaya Station and the Sokol electric engine house[2] were put into operation in 2021 (for comparison: 7 stations and 17.9 kms of metro lines[3] in 2020). According to the data of mobile service providers, on the back of redistribution of passenger flows in the metro system and attraction of passengers from land transport modes the daily number of passengers at new stations increased by over 20% in the first few days after these stations were opened.[4]

Road haulage

In 2021, haulage volumes (68.3% of all freight) remained at the level of the previous year and failed to recover in full because of the following factors: a decrease in a road freight flow, the reorientation of a portion of freight from international routes to railway traffic and some companies' exit from the market.[5] On the back of growth in e-commerce and delivery services, motor freight transportation is still in demand as it accounts for a large volume of haulage of food products and staple goods. However, the pattern of motor freight transportation underwent some changes: the distance of routes decreased with simultaneous growth in intra-city freight transportation. In 2021, the number of vans – placed at the ATI.SU road haulers exchange – which are much in demand for intra-city freight transportation was steadily declining.[6]

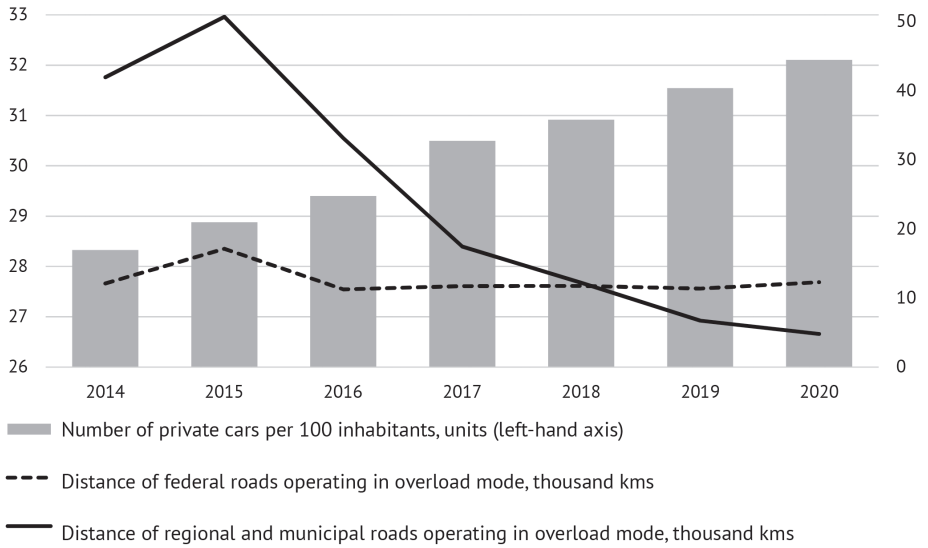
A decrease in a motor freight flow is driven by rising tariffs and appreciation of prices for logistics services. According to the data of the ATI.SU index, growth in tariffs on long-distance haulage was equal on average to 23% in 2021.[7] On some routes, road haulage tariffs increased considerably: from Moscow to St. Petersburg — 32.8%, from the Amur Region (on average, on all routes) — 154%, from the Zabaikalye Territory — 114%, from the Maritime Territory — 97% and from the Khabarovsk Territory — 71%.[8] Tariff growth was driven by imbalances between demand and supply (a pickup in domestic demand and import supplies, transport shortages and a lack of drivers), appreciation of prices for fuel, increased costs on modernization of the fleet of vehicles[9] and transportation costs (for example, due to growth in tariffs on heavy-duty transporters)[10], local limitations of routes, for example, closure of MKAD for transit heavy-duty and medium-duty

1 URL: https://icmos.ru/news/mer-moskvy-nazval-itogi-goda-po-stroitelstvu-metro
2 URL: https://realty.rbc.ru/news/611d0e829a79472436f8276d
3 URL: https://stroi.mos.ru/news/pochti-18-km-linii-i-7-stantsii-mietro-postroieno-v-moskvie-v-2020-ghodu
4 URL: https://www.m24.ru/news/transport/10122021/195783
5 URL: https://www.kommersant.ru/doc/4967143
6 URL: https://transportrussia.ru/razdely/avtomobilnyj-transport/8131-indeks-gruzoperevozok.html
7 URL: https://www.rzd-partner.ru/auto/comments/logisticheskiy-sboy-na-rynke-dalnemagistralnykh-avtoperevozok-rastut-stavki/
8 URL: https://news.ati.su/article/2021/12/14/rost-stavok-na-rynke-dalnemagistralnyh-avtomobilnyh-gruzoperevozok-nadolgo-li-092300/
9 URL: https://logirus.ru/news/transport/ekspert-_novye_gruzovye_mashiny_uzhe_podorozhali_na_15.html
10 URL: https://tass.ru/ekonomika/10590657

trucks.[1] Tariffs growth affects to a greater extent small haulers which account for 80% of the road haulage market.

To reduce costs and speed up freight transportation, it is proposed to introduce remotely piloted vehicles and seamless freight logistics. These initiatives are actively debated and elaborated. In particular, the work began within the scope of the pilot project on establishing a high-speed remotely piloted logistics corridor for freight transportation on route M-11 (Moscow-St. Petersburg) by the year 2024.[2] The introduction of a high-tech road infrastructure will ensure a seamless movement of goods en route and seamless border-crossing (owing to e-document flow) and reduce by 10%[3] the cost of freight transportation for logistics companies (with costs exceeding the standard cost of building of 1 km of a federal route by less than 0.5%[4]).

Despite the pandemic, active work on national projects, including those in the field of road building was underway. The construction of the Central Circle Motor Road (CCMR)[5] was completed and the first stage of building of A-289 route, a new federal motor road linking the city of Krasnodar and the Crimean Bridge



Note. The values specified in each diagram are the values of the indicator's growth rates relative to the previous period.

Fig. 11. The level and growth rates of indicators of overloading of federal and regional roads and automobilization of the population in 2014–2020

Source: Rosstat

1 URL: https://www.retail.ru/articles/pochemu-dorozhayut-gruzoperevozki-v-2021-godu/
2 URL: https://ria.ru/20210603/koridor-1735376880.html
3 URL: https://rosavtodor.gov.ru/press-center/specproekty/455921
4 URL: https://www.rbc.ru/business/03/06/2021/60b878a09a7947f108341ffb
5 URL: https://www.mos.ru/mayor/themes/2299/7482050/

was started.[1] According to the preliminary results of project implementation,[2] in 2021 the shares of regional roads meeting the existing standards and roads in metropolitan areas were equal to 45.8% (46.4%[3] in 2020) and 73% (71.9%[4] in 2020); death rates in road accidents declined from 10,8 death cases per 100,000 inhabitants in 2020 to 10.2 death cases in 2021.[5]

Despite sustainable growth in automobilization of the population (the number of private cars has increased by 13% since 2014 to 32.1 cars/100 inhabitants in 2020) associated with increased load on the road infrastructure, the length of regional or inter-municipal roads operating in an overload mode tends to decline (*Fig. 11*).

According to the data of the Avtostat think tank, in 2021 the sales volume of new cars was equal to 1.5 mn units, an increase of 3.3% as compared with the volume seen in 2020,[6] owing largely to a revival of the economy and households' increased buying activity early in the year. By estimates, car market capacity in money terms exceeded Rb3 trillion.[7] Also, the market volume of new trucks increased 33% by the year 2020.[8] However, shortages of electronic components and appreciation of prices for cars (an increase of 17% for new cars in 2021)[9] had a negative effect which slowed down growth in commercial road transport.

Air service

Air passenger service was hit the hardest by the pandemic: before the crisis in the economy in 2020, this sector saw sustainable traffic volume growth both domestically and internationally.

In 2021, air service succeeded in overcoming largely the downturn and increasing transport work volumes: traffic flow amounted to 128% relative to the volume in 2019 and passenger flow, to 124%. According to the data of Rosaviatsia,[10] there was a pickup in the percentage of payload (5.3% and 3.2% on domestic and international flights, respectively) and seat occupancy (8.9% and 2.9%, respectively). However, the expected timescales of complete recovery of this sector are shifting and depend directly on stabilization of the epidemiological situation.

Despite growth in domestic traffic volumes, Russian airlines incur financial losses: by estimates of the Russian Air Transport Operators Association (RATOA), airlines' overall losses may amount to Rb70 bn–Rb80 bn at year-end 2021 because of appreciation of prices for aviation fuel (an increase of 34.76% from January till December[11]), unutilized capacity,[12] as well as the need to service the leasing debt.[13]

1 URL: https://rosavtodor.gov.ru/press-center/news/457851
2 URL: https://www.rzd-partner.ru/auto/comments/realizatsiya-natsproekta-bkd-v-2021-godu-prinesla-oshchutimye-rezultaty/
3 URL: https://www.fedstat.ru/indicator/59308
4 URL: https://www.fedstat.ru/indicator/59307
5 URL: https://www.fedstat.ru/indicator/36230
6 URL: https://www.autostat.ru/infographics/50454/
7 URL: https://www.autostat.ru/infographics/50249/
8 URL: https://www.autostat.ru/news/50479/
9 URL: https://www.vedomosti.ru/auto/articles/2021/11/21/896883-snizhenie-prodazh
10 URL: https://favt.gov.ru/dejatelnost-vozdushnye-perevozki-osnovnye-proizvodstvennye-pokazateli-ga/
11 URL: https://favt.gov.ru/dejatelnost-ajeroporty-i-ajerodromy-ceny-na-aviagsm/?id=7379
12 URL: https://ratings.ru/upload/iblock/9c8/NCR_Transport_comment_Oct2021.pdf
13 URL: https://www.rbc.ru/business/16/04/2021/607840769a7947e8ba2ecc09

In 2021, air carriers took steps to reorientate their activities: a shift to budget service models[1] and a low-price segment of air carriage; a reduction in air fleet[2]; creation of new low-costers[3] (for example, Citrus, a Russian low-coster plans to start flights in June 2022). The pandemic gave an impetus to the emergence of new trends in air service and restructuring of the existing air carriage models to boost demand for transportation services. Particular examples include a sharing economy business model (the launch of a jet rental service for private flights[4]), "door-to-door" multimodal (composite) routes for travelers, including flights and road travel,[5] freighter transportation, that is, reprofiling of airplanes from passenger to freight service[6] and cargo dispatch services on domestic flights for legal entities.[7]

Apart from high operating losses, in 2021 the main obstacles which this sector encountered included the depreciation of the regional infrastructure of the air service and air fleet. It is noteworthy that modernization of air fleet is carried out in compliance with the policy of decarbonization and emission reduction.

Sea transportation

In 2021, freight turnover increased by 1.7% as compared with the relevant period of the previous year and amounted to 835.2 mn tons.[8] Specifically, growth is observed in all cargo shipment routes, except for coastal shipping (*Fig. 12*).

In terms of geographic breakdown, cargo turnover picked up at Baltic seaports (252.8 mn tons or +4.7%), seaports of the sea of Azov and the Black Sea (256.8 mn tons, +1.9%) and those of the Far Eastern basin (224.3 mn tons, +0.6%), while it declined at Arctic seaports (94.34 mn tons, -1.9%) and Caspian seaports (6.5 mn tons, -13.0%) (*Fig. 13*). Specifically, if the share of Arctic seaports fell on the back of a decrease in transshipment both of dry cargo (-2.8%) and liquid cargo (-0.7%), the share of Caspian seaports declined because of a reduction in transshipment of dry cargo (-25.2%).

A gradual lifting of coronavirus restrictions had a positive effect on sea passenger traffic: in 2021, seaports served 20,900 passenger ships (+39.9%), about 12.2 mn persons, with seaports of Sevastopol (11.5 mn passengers), Yalta (about 0.36 mn passengers) and Sochi (about 0.185 mn passengers) accounting for the bulk of sea passengers.

1 URL: https://www.interfax.ru/business/736832
2 URL: http://www.ato.ru/content/v-rossii-bolshe-net-aviakompaniy-s-flotom-prevyshayushchim-200-samoletov?mpop=yes
3 URL: http://www.ato.ru/content/novyy-loukoster-vybral-goroda-rossii-dlya-bazirovaniya-pristupil-k-naboru-ekipazhey
4 URL: http://www.ato.ru/blogs/blog-alekseya-sinickogo/s7-airlines-testiruet-biznes-model-sheringovoy-ekonomiki
5 URL: http://www.ato.ru/content/aeroflot-zapustil-onlayn-servis-perevozok-ot-dveri-do-dveri-raznymi-vidami-transporta?sea=37429
6 URL: http://www.ato.ru/blogs/blog-alekseya-sinickogo/preighters-novyy-segment-rynka-gruzoperevozok
7 URL: http://www.ato.ru/content/aviakompaniya-nordstar-zapustila-onlayn-uslugu-samostoyatelnoy-otpravki-gruzov?sea=37429
8 URL: https://www.morport.com/rus/news/gruzooborot-morskih-portov-rossii-za-12-mesyacev-2021-g

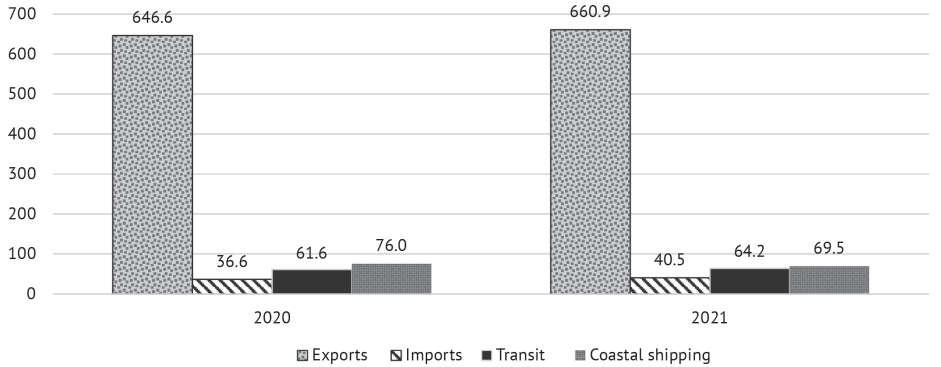


Fig. 12. Russian seaports' cargo turnover in 2020 and 2021 across routes, million tons

Source: The Maritime Merchant Transport Association.

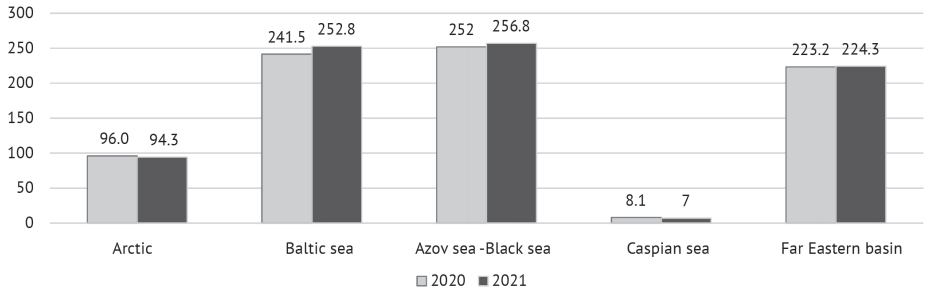


Fig. 13. Russian seaports' cargo turnover in 2020 and 2021, million tons

Source: The Maritime Merchant Transport Association.

In 2021, the maritime transport infrastructure included over 900 port complexes with overall capacity of about 1.23 bn tons. The waterside length is equal to about 155.7 thousand running meters.

In 2021, the following terminals were put into operation: one with a capacity of 12 mn tons in the Ust-Luga seaport area, another (25 mn tons) in the seaport of Taman and still another (1.5 mn tons) in the seaport of Novorossiysk.

Inland-water service

Based on results for 2021, inland-water transportation amounted to 103.6 mn tons[1], an increase of 4.5% as compared with the relative period of 2020. Specifically, if domestic traffic increased by 5 mn tons, international traffic fell by 0.85 mn tons. The overall length of domestic water routes is equal to 101,592 kms of which 78% are non-alternative in terms of transportation of cargo and passengers.[2]

1 URL: https://rosstat.gov.ru/storage/mediabank/otpravlvoda.xlsx
2 URL: https://www.gtlk.ru/press_room/transport-v-detalyakh/transport-v-detalyakh-vodnyy-transport/

There are 117 inland harbors in Russia and over 2000 companies engage in inland-water cargo transportation.[1]

The passenger flow tends to recover and slowly returns to the pre-pandemic level. So, in 2021 the passenger traffic was equal to 8.94 mn persons, an increase of 15.8% as compared with the previous year and a decrease of nearly 19% relative to 2019.

At present, Russia operates about 11,000 river cargo vessels and nearly 1,500 passenger ships.

Depreciation of facilities and equipment has been a major problem in this sector. At present, nearly 40% of the fleet is in need of replacement.[2] Further, at year-end 2021 the average age of cargo vessels, passenger ships and cruise ships is 37 years, 38 years and 49 years, respectively. Most ships operate beyond their useful life time. For example, the share of such vessels in the river cargo fleet is equal to 50%, while in the passenger fleet, to 65%.

Pipelines

In 2021, pipeline service managed to reduce the gap to the pre-crisis level owing to gas pipeline transportation (an increase of 12% relative to 2020) which surpassed the 2019 index. Weak dynamics of transportation volumes of oil pipelines and petroleum products pipelines correlates with relatively low production outputs: in 2021 oil production increased by 2.2% (natural gas – 10%) on the previous year.[3]

The introduction of energy-saving equipment is a current trend in the pipeline industry; this reduces the rate of use of electric power in transportation of oil (an overall decrease of 2,000 kW·hrs/mn tons·kms in 2010—2020) and petrochemicals (3,000 kW·hrs/mn tons·kms), as well as facilitates the sector to enhance and upgrade the existing production capacities.[4]

4.5. The second year of the pandemic: food security [5]

4.5.1. Impact of the pandemic on food security

At the beginning of 2020,[6] the FAO set out guides about risks that can arise during a pandemic. The key world-wide risks are: panic buying, which can lead to temporary shortages; a decrease in allocations from donors to the poorest countries; the threat to population movement (including migrant workers), limiting the mobility of resources for agriculture and finished products; a high

1 URL: https://morflot.gov.ru/portyi_rf/perechen_rechnyih_portov.html
2 URL: https://news.ati.su/news/2021/09/23/po-kontseptsii-razvitija-vvt-rossii-dolja-vodnogo-transporta-v-obschem-gruzooborote-strany-vyrastet-s-2-do-44-561016/
3 URL: https://neftegaz.ru/news/finance/719930-rossiya-v-2021-g-uvelichila-dobychu-nefti-na-2-2-gaza-na-10/
4 URL: https://www.transneft.ru/u/journal_file/1381/august_2021.pdf
5 This section was written by: *Shagaida N.I.,* Doctor of Economic Sciences, Director of Center for Agro-Food Policy, IAES RANEPA; *Uzun V.Ya.,* Doctor of Economic Sciences, Main Researcher at the Agro Policy Department, Gaidar Institute; Main Researcher at the Center of Agro-Food Policy, IAES RANEPA; *Ternovskiy D.S.*, Doctor of Economic Sciences, Leading Researcher at the Center for Agro-Food Policy, IAES RANEPA.
6 UN FAO.

probability of restrictions on economic activity and, as a result, a decline in income, jeopardizing economic access to food.

The first challenge, panic buying for certain food groups, was quickly overcome in Russia. Despite that in February-March the surge in purchases was significant, by January-April 2020 cumulative purchases only exceeded the level of 2019 by tenths of a percent. Negative risks of the pandemic for Russian agriculture were largely avoided, because by spring 2020 resources were available. One year later, in 2021, countries generally learned to live with the pandemic, despite the problems of providing certain types of resources due to supply failures. As a result, in 2021 agricultural production in Russia was at a reasonable level — not as good as in some years, but higher than in many years before. Problems noted by agricultural producers were related to the restriction of labor migration and rising prices for resources, which were a consequence of rising prices for agricultural products in foreign markets. Rising food prices became a problem for both the population and the government.

4.5.2. State of agricultural production

In 2021, the physical volume of agricultural production was 0.9% lower than in the previous year. At the same time, the spirited growth of producer prices of agricultural products, which began in the second half of 2020, continued in 2021 — for the year it amounted to 18.1%. Thus, the volume of agricultural production in current prices not only did not decrease, but also grew by 17.1%.

The main contribution to the reduction of agricultural production was made by a decrease in the harvest of grain crops, which amounted to 9.0%. Under the influence of this factor the gross output of agriculture dropped by 2.2%. The growth of sunflower and sugar beet harvest (+17.6% and +21.6% respectively) fully compensated for the decrease of potatoes and vegetables production (-6.7% and -2.8% respectively) in the structure of gross output. The change in livestock production was very insignificant, the contribution to the dynamics of the gross agricultural output in general did not exceed 0.1% for any of the types of products (*Fig. 14*).

The decrease in grain production in 2021 was due to unfavorable weather conditions. Despite the comparable size of all sown areas under cereals and leguminous crops (98.0% in 2021 against 2020), the reduction in winter wheat sowing constituted 7.5%. This was due to the ruin of winter crops in almost 10% of the sown area. Nevertheless, the 2021 grain crop is more than 10% above the average for the past decade, and only 3% below the average for the last five years, which saw record harvests in 2017 and 2020.

Despite the large absolute value of its impact on gross agricultural output, the grain harvest has less impact on the domestic market than the reduced harvest of potatoes and vegetables compared to 2020. This is owing to the fact that in relation to domestic consumption, grain production is excessive and the industry is export-oriented. Over the past 5 years, 2016—2020, grain exports have accounted for more than 1/3 of grain production. Accordingly, yield fluctuations affect the income of agricultural producers and the volume of exports, but do not threaten domestic consumption and do not determine the dynamics of domestic prices in general.

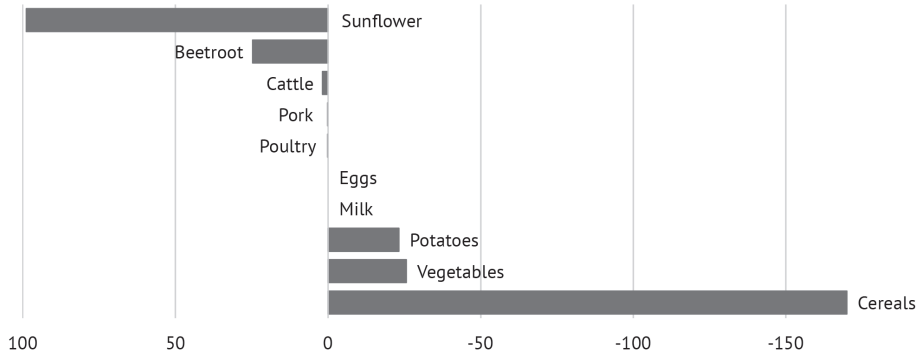


Fig. 14. Contribution of main agricultural products to gross output growth in 2021, Rb bn. (estimates in 2021 prices)

Source: own calculation on Rosstat data.

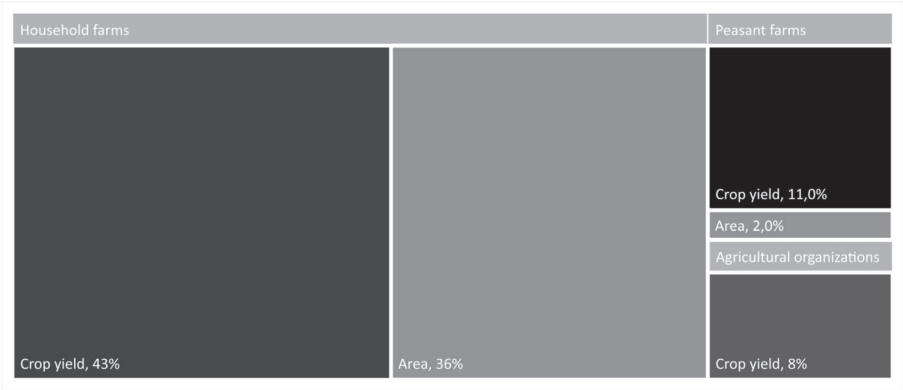


Fig. 15. Factors of potato harvest reduction in Russia in 2021

Source: own calculations on Rosstat data.

In contrast to grains, almost all of the volume of potatoes and vegetables grown is consumed domestically. Therefore, a lower harvest, firstly, reduces the market supply and therefore leads to higher prices, and, secondly, a low harvest leads to increased imports, usually more expensive, which also leads to higher prices.

The drop in potato production by 7% is due to both a decrease in the area sown in 2021 (-3.1%), as well as a decrease in yields (-4.0%). These phenomena were characteristic of all categories of farms in various degrees, but if for agricultural organizations (AO) and peasant farms (PF) the main factor of production decline was the reduction of crop yields, the reduction of production in household farms was primarily due to the reduction of the area. The results of the analysis (*Fig. 15*) show that 79% of the decline in potato production in 2021 is connected with

household farms, of which 36% is the reduction of cultivated areas, i.e. a deliberate withdrawal from the market as a potato producer.

A similar situation has developed in the vegetables production — sown areas for their cultivation declined by 3.1%, including in peasant farms by 8.9%, in household farms — by 1.4%, and in agricultural organizations increased by 0.1%, the main problem with the production of vegetables and potatoes - the decline in production in household farms and no guarantees of production growth in agricultural organizations and farms, which — in the case of farms are not narrowly specialized in the production of these products — can easily be redirected.

4.5.3. Limits on labor migration

One of the issues in the second pandemic year was the disruption of the inflow of migrant workers. This problem manifested itself unexpectedly, because the statistical reporting forms for agricultural production did not allow precautionary identification of such a fall in numbers. The problem was made evident in an appeal by large agricultural producers to the Russian Ministry of Agriculture and the Russian government.[1] Our comparison of the fact of the appeal to the government and the absence of data about seasonal workers in the reports of agricultural producers gave insight into the widespread use of outstaffing in agriculture, when workers are not directly hired by producers but by agreement with a third party organization for the provision of services, that is, workers. The spread of this pattern owes to numerous problems associated with recruiting foreign labor. However, "shadow" labor employment not only increases the risks of distortion of the labor market, wages, social protection of such workers (which is lacking), and underpayment of local workers, but also increases the risk of the spread of disease. A sick service worker simply does not turn up at work without naming his employer, the agricultural organization or meat processing plant, when at the health care institution. This risk requires regulation. It should be reflected in the report of the number of average annual workers through third-party services at a minimum, and by imposing the obligation on the organization-consumer of services to notify Rospotrebnadzor in the event of the illness of workers. At a maximum – it should be reflected by the introduction of a form about the attraction of migrants, indicating their number and payment, both directly and through intermediaries, by the reporting organizations.

4.5.4. Rising food prices

One of the main risks during the pandemic was the risk of sharp and long-term increases in food prices. Until mid-2020, external markets were fairly stable and grain prices were even declining. A good 2020 harvest did not maintain trends in markets: prices began to rise from mid-2020. Following the rise in prices on the foreign market, domestic prices began rising. At the same time, the growth in the Russian domestic market was at a maximum for products that were not exported and mostly not imported (*Fig. 16*).

1 The Ministry of Agriculture allowed migrants come to Russia for seasonal work in the fields. URL: https://www.rbc.ru/business/10/02/2021/602284149a79477561239575

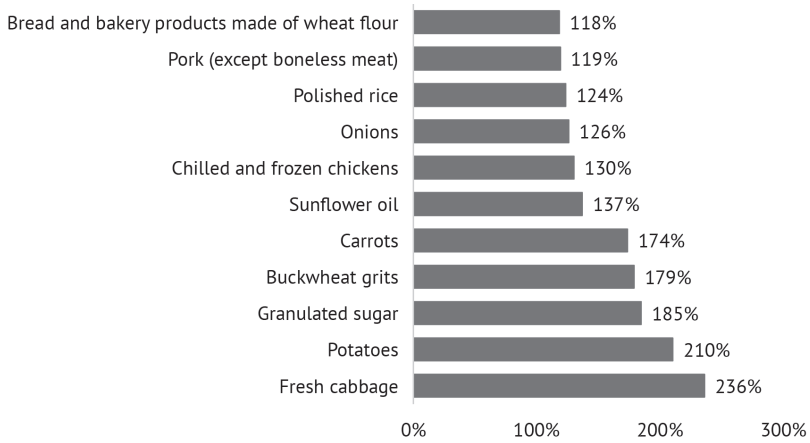


Fig. 16. Changes in consumer prices for basic foodstuffs, December 2021 on December 2019, %

Source: Rosstat.

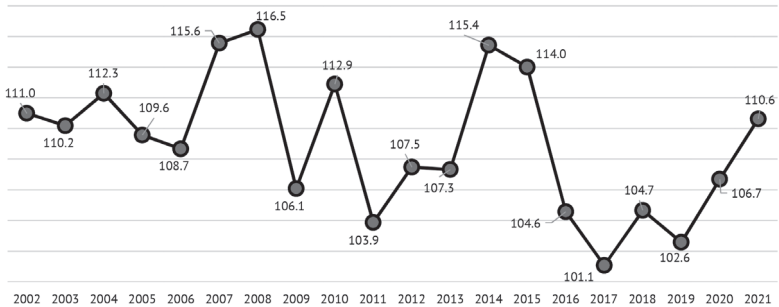


Fig. 17. Consumer price index for food, December to December of the previous year, %

Source: Rosstat, data as of 15.02.2022.

Rising prices caused social tension in society in late 2020—2021, while food inflation was lower than in 2015—2016 (*Fig. 17*).

In December 2021 as compared with December 2020, retail prices for foodstuffs went up by 10.6%, and for the main kinds of foodstuffs excluding catering — by 11.8%. The main contributors to the price rise were meat and meat products (3.8 p.p., 32% of the total increase) and vegetables (1.6 p.p., 14% of the total increase) (*Fig. 18*).

In the composition of meat and meat products the greatest contribution to the growth of consumer prices was made by poultry (1.0 p.p.), the impact of which on prices is higher than the combined effect of pork and beef (0.6 p.p. and

Fig. 18. Contribution of individual commodity groups to the growth of retail food prices in 2021

Source: own calculations on Rosstat data.

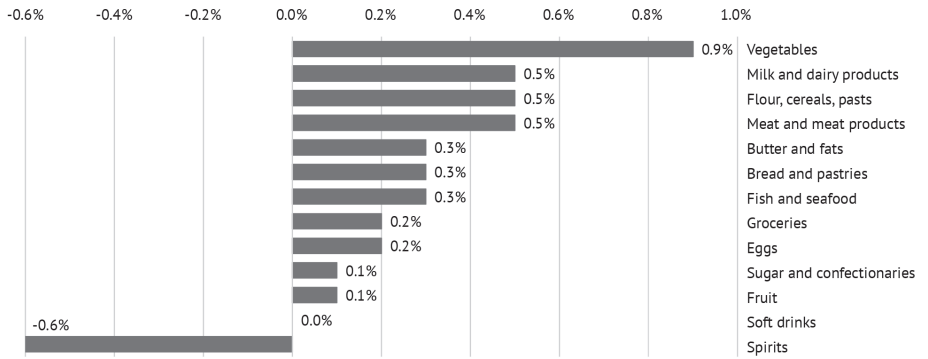


Fig. 19. Contribution of individual commodity groups to the growth of real retail food prices in 2021 compared to the average value for 2016—2020, %

Source: own calculation on Rosstat data.

0.4 p.p., respectively). The contribution of price growth for sausages and other meat products (0.9 p.p. each) is probably also connected with the price growth for poultry, the main raw material in them. The contribution of vegetable price dynamics to the total price growth (1.6 p.p.) was mainly due to the rise in prices of borsch set vegetables — potatoes and other borsch set vegetables accounted for 1.5 p.p. of the increase.

Comparison of prices in 2021 with those observed in the previous 5 years — from 2016 to 2020 (taking into account the core inflation) demonstrates that with equal volumes of food consumption the population would pay 3.3% more than in previous years (*Fig. 19*). The largest contribution to the formation of such overpayment is made by vegetables (27% of the overpayment amount, including potatoes — 15%), flour, cereals and pasta (15%, including buckwheat 6%, flour,

pasta, rice — 3% each), milk and dairy products (15%, including cheese — 9%). As the list of products shows, if we exclude dairy products, those relatively cheap became more expensive.

4.5.5. Measures to reduce/restrict consumer price growth

The Government of the Russian Federation has taken a number of measures to protect the domestic market. According to the mechanism in force through December 30, 2020, there were no grounds for restricting consumer prices on socially high valued goods (24 product groups) at the end of December 2020: there had been no growth of prices by 30% over the previous 30 days. Nevertheless, on December 14, 2020, the Decree of the Government of the Russian Federation No. 2094 on changes to the existing mechanism was adopted. First, it introduced the practice of agreements between federal executive bodies and economic entities. Secondly, it changed the criterion when a restriction could be imposed on socially high valued goods — price growth by 10% over 60 days. Thirdly, in accordance with Decree No. 2094, the duration of the restriction could be unlimited and could be extended.[1]

Two products fell under the restriction — refined deodorized sunflower oil and granulated sugar of a certain category. On behalf of producers the Agreement was signed by representatives of producers' unions (producing 85% of oil and 92% of sugar). Representatives of seven network companies and unions signed on behalf of trade. In addition, the category "voluntarily joined", not provided for in the normative documents, was used. Around 13,000 sugar and sunflower oil producers fell into that category. However, as of January 20, 2021, there was not a single entity in 12 Russian regions that had voluntarily joined the butter market and only one retail outlet in the 5 regions.

The list of socially important products often includes groups of products, within each of which the types and varieties differ significantly in price. For example, sunflower oil and granulated sugar are recognized as socially important, and the 2021 prices were controlled only for refined deodorized sunflower oil and granulated sugar of category TC-2. For all other types of oil (unrefined, for example) and granulated sugar (extra, categories TC-1, TC-3) prices faced no ceiling. It was still possible to raise average prices by changing the structure of production by types of sugar and types of sunflower oil.

For Russia, with its variety of natural and economic conditions, a maximum price could hardly be set. This is reflected in Decree No. 2094, which deals with agreements between federal authorities and economic entities. In the agreements themselves, 22 subjects of the Russian Federation and the northern regions are allowed to determine the maximum prices independently. Some subjects set increasing coefficients of 3—5% (the Altai Krai, the Republic of Khakassia,

1 The transition from the statutory procedure for restriction of prices by decisions of the Government of the Russian Federation to agreements between business entities and government authorities requires a more thorough legal justification of the new procedure's compliance with Article 11 of the Law on Protection of Competition, which "Recognizes cartels and prohibits agreements between competing business entities …if such agreements lead or may lead to the establishment or maintenance of prices", and also Article 16 of that law, which prohibits similar agreements between federal, regional and local authorities.

the Tyumen Region). Other regions used their right in a very peculiar way: they differentiated the maximum price by zones or districts within the region. Each region of the Russian Federation, zone or district, sets its own maximum acceptable prices. For this they have a challenging task: to select the main production and trading companies in their territory or outside it and conclude agreements with them.

The state was the initiator of the agreements, but at the first stage it did not undertake any obligations to compensate for related business losses. Subsequently, subsidies were provided (5 rubles per kg of white sugar and 10 rubles per liter of refined oil). Subsidies were paid for products supplied to retailers at a price no higher than the maximum. The subsidies were limited, so they might not be enough for the entire volume of supplies.

The implementation of the Decree faced the problem of accounting for seasonal price fluctuations. During the transition from the summer season to the autumn and winter some types of agricultural products advance in price by leaps and bounds. If there is a price growth of more than 10% for the previous 60 days, there is a problem of fixing the price ceiling for the next 90 days, as it is impossible to limit it to the price ceiling for the previous 60 days, there is a need to set several price ceilings for the next period.

The introduction of maximum retail prices for oil did lead to their reduction, albeit insignificantly: at the end of March 2021, the price across the country as a whole was 0.6% lower than in mid-December 2020. At the same time, prices in 42 subjects went down, and in 43 — increased, including in seven subjects by more than 10%. Despite control over observance of limits within the period that the agreement is valid (not more than Rb110 per liter — Rb118.9 kg of refined deodorized oil), to the end of March 2021, the actual retail price for sunflower oil in the country amounted to 126.5 rubles/kg and was 7.6 rubles above the price ceiling. Only in 21 regions the average price was not higher than the ceiling level. In other regions it was higher than the established level, in some of them significantly. This was probably due not only to price increases in individual regions, but also to changes in the structure of the oil sold.

This makes it necessary to use other ways to counteract the price rise:

- competition in the domestic market should be ensured. According to economic theory, in order to lower prices, the state must take measures to ensure fair competition. When agreements were made between the state and the largest producers and traders, a step in the exact opposite direction was taken: the largest producers, traders, and their unions were given the right to negotiate prices. Such a measure reduced competition rather than promoted it;
- it is important to ensure that the state enters the market with the sale of products from intervention funds. To curb the price rise for socially important products, it is necessary to develop and implement special measures to strengthen competition for each product. In Russia an intervention fund was created for this purpose, but its work was criticized. In general we can characterize its effect as positive. At the very beginning of the pandemic, in the spring of 2020, the intervention fund was almost

empty, however, and so its mechanism needs to be improved. Possibly, one can consult the experience of China, which uses reserves of grain for intervention purchases and sales;

- foreign suppliers of cheaper products should be attracted to the domestic market. Measures to reduce barriers to entry for foreign suppliers are the elimination or reduction of import duties and quotas, as well as non-economic measures to contain imports. Such a measure was used by the Russian government during the pandemic;
- it is necessary to attract exporters of domestic products to the internal market. If prices in the world market exceed domestic prices, exporters tend to send more products to the foreign market. To counteract this, measures can be applied to reduce state support for exports. If an exporter sells products in the foreign market below the domestic market price, then such an exporter should not be subsidized, and no subsidies should be paid for the transportation of exported products;
- a system of food aid should be introduced. When the prices of socially important foodstuffs rise sharply, the population groups with the lowest income find themselves in a critical situation. Instead of imposing price ceilings for socially important products in order to ensure food security in the context of high price volatility, food aid for low-income groups can be used. This measure is socially more fair and much less costly for the budget than price caps with subsequent subsidization of the major producing companies.

As the analysis shows, the administrative limitation of retail prices for individual items of commodity nomenclature of sunflower oil and granulated sugar did not succeed in ensuring their threshold level — the example of oil is shown in *Table 19*.

Table 19

Changes in sunflower oil prices after the conclusion of agreements (fragment)

	Prices as of 14–21.12. 2020, Rb/kg	Prices as of 29.03–4.04 2021, Rb/kg	Prices as of 29.03–4.04 on prices as ofa 14—21.12. 2020, %	Top price, Rb/kg (from 17.12.2020)	Price change as of 29.03—4.04 2021, of top price, Rb/kg
Russian Federation	127.2	126.5	99.4	118.9	7.6
Altai Krai	117.7	124.5	105.7	122.5	2.0
Moscow	129.4	123.3	95.3	118.9	4.4
St. Petersburg	143.1	133.6	93.4	118.9	14.7
Krasnodar Krai	132.5	120.2	90.7	118.9	1.3
Republic of Dagestan	133	142.0	106.8	118.9	23.1
Omsk region	128.4	124.5	96.9	136.9	-12.4

Sources: data on weekly prices – UISIS of Rosstat. Price ceilings: calculations according to the RF Government Decree of 14.12.2020 and decisions taken by authorities of RF subjects.

4.5.6. Export of agricultural products

Domestic requirements were the reason export restrictions were put in place in 2021, which affected the two main export items of agricultural products - grains and products of the oil and fats industry. The peculiarity of these restrictions introduced in the form of floating export duties was the fact that they were not aimed at physically restricting the volumes of grain and vegetable oil exports, since they were in surplus on the domestic market, but they were designed to reduce domestic prices for consumers through redistribution of producers' incomes. Therefore, there was no reduction in exports under the direct influence of restrictions. For 2021, it amounted to $36.1 billion, which was 21.3% higher than in the previous year. Oil and fats industry products (36.7% of the total growth), crops (20.0% of the total growth), fish and seafood (19.3% of the total growth) made the biggest contribution to the change in the value of exports. Furthermore, products of oil and fats industry became the leader by growth rate — +47.5%, while grain export moved up by only 12.6% — the lowest value for the commodity groups listed in the federal project "Export of Agribusiness Products".

The increase in the value of Russian agricultural exports in 2021 was accompanied by a rise in world food prices. The results of the analysis presented in *Fig. 20* show that the physical volume of Russian agrarian exports dropped by 5.4% relative to the previous year (when calculated by 6 digits of the TN VED). However, the growth of prices in the market ensured the growth of income of Russian exporters.

Of the six commodity groups included in the federal project, an increase in the physical volume of exports is observed only for products of the food and processing industry, or, meat and dairy products. The rest of the commodity groups experienced decline, with a rational explanation. The drop in grain exports

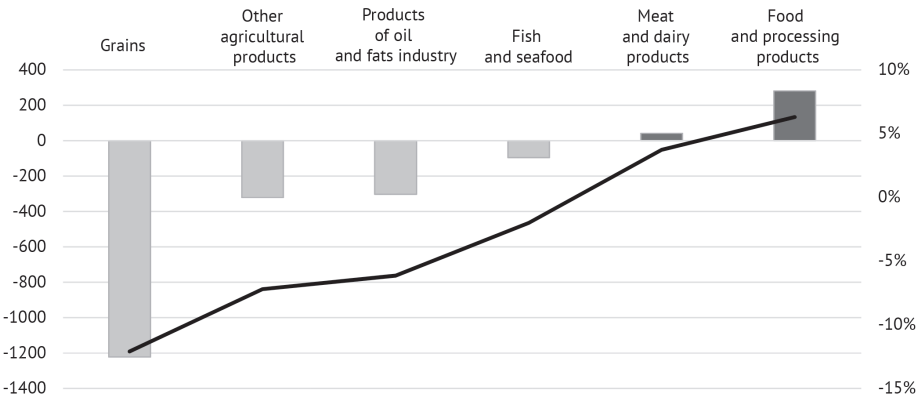


Fig. 20. Dynamics of Russian agrarian exports in 2021 in comparison with the previous year (in constant prices of 2020, million dollars — left axis, % of growth — right axis)

Source: own calculations on FCS data.

is due, firstly, to a poor crop this year, and, secondly, to the robust export of grain in the last months of 2020, before the introduction of export restrictions, which reduced the volume of supplies in H1 2021. The decrease in exports of other agro-industrial products may be owing to oilseed export restrictions imposed in late 2020. The lower export volumes of oil and fats industry products are connected with the low volumes of production and export of sunflower oil in H1 2021 due to the low yield of sunflower seeds in 2020.

Consequently, a reduction in the physical volume of exports does not represent problems in agriculture, for which exports in recent years have been one of the main factors of development. However, the development of exports once again raises questions about the validity of the target values of the federal project "Export of Agricultural Products" and assessment of the effectiveness of its implementation. According to the project data sheet, growth of exports in comparable prices in 2021 should have amounted to 12% (from $25 to $28 billion). Based on the above dynamics indicators we can say that this goal was not achieved.

In 2021, import of food products and agricultural raw materials gained 14.3% in value terms and amounted to 98.3% of the value of agricultural export. Import growth was also largely predetermined by rising global food prices — for the main products of the Russian food import prices climbed by 9.0%, while the growth in the physical volume of imports constituted 4.9%.

The products that contributed most and least to the positive movement of Russian food imports were, on the one hand, beverages, palm oil, soybeans, fish and coffee, and, on the other hand, meat, fruits and grains (*Fig. 21*).

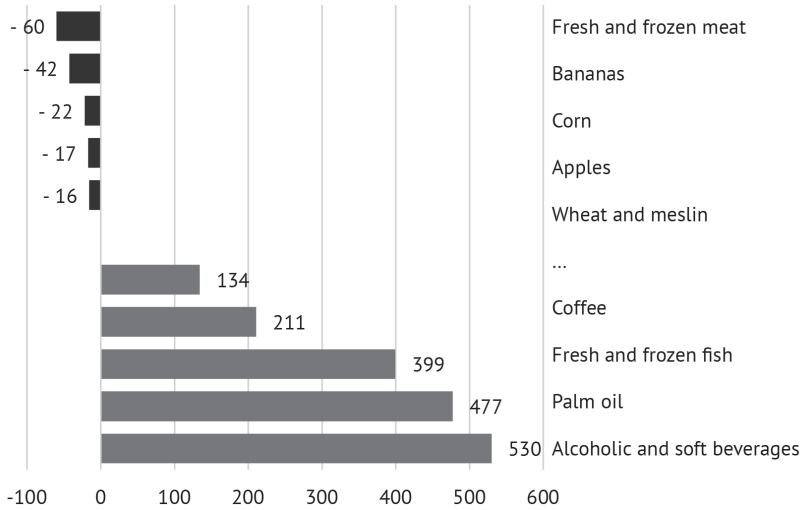


Fig. 21. Growth of imports of important food products in 2021, USD mn.

Source: own calculations on FCS data.

In 2021, there was a transition to new tools of food import regulation, focused primarily on the economic availability of food. Despite the fact that there is a sufficient amount of domestically produced sugar, cattle, poultry and pork on the domestic market, the government used a tariff quota instrument with a zero rate of customs duty. Taking into account that, according to the values of the nominal producer protection coefficient calculated by the OECD, domestic Russian prices for these types of products are steadily overvalued relative to free trade prices, their duty-free import can exert downward pressure on retail prices or, at least, act as a constraint to their further growth.

4.5.7. The state of food security

General patterns in consumption changes during crisis periods were highlighted by the FAO on the basis of the experience of past crises and were confirmed in Russia during the pandemic. Trends in 2020 relative to 2019 were as follows:

1. Increase in the share of food in the structure of retail trade turnover (maximum since 1986 — 49%);
2. A sharp decrease in the amount of consumer spending on non-food items (almost 11.4%);
3. Increase in the share of food expenses in total final consumption expenditures (up to 37%);
4. Reduction in the share of out-of-home food expenses (from 10.5% to 6.5% in the city, to 2% in some quarters; to 2.2% in the countryside);
5. Enhanced growth rate of consumer prices compared to global average food prices (133.7% in Russia vs. 125.3% globally in June 2021 vs. June 2015, FAOSTAT).

The fact that access to food for economic reasons worsened during the pandemic year was indicated by the breaking of the downward trend in the share of natural incomes in nutrition. The share continued to be high in rural areas even before that, although steadily declining, but began to climb at the end of 2020: in Q1 2021, the share rose to 4.1% in urban areas (3.5% in Q1 2020) and to 19.9% in rural areas (from 16.8%). Food expenditures in household consumption expenditures rose from 34.6% to 37% from 2019 to 2020 and nearly reached 2015 and 2016, the highest levels of the decade (the share was declining before 2013). Overall, nutritional differentials between income groups of households did not increase in 2020: in both 2019 and 2020, about 3.8 sets of food in group 10 could be bought for the cost of food in group 1. About the same amount could be bought in Q1 2021, while in Q1 2020 — 4.3 group 1 sets. This is the first positive sign of improved economic access to food for families as early as 2021.

The analysis of consumption revealed a paradox that is not characteristic of the situation of falling incomes — an increase in spending on food traditionally indicates deterioration of nutrition. In 2020, the growth of expenditures (*Fig. 22* and *23*) was accompanied by no deterioration or even a slight improvement of the diet in H2 2020.

Clearly, unspent money for travel, vacations, attending cultural and sporting events, and clothing due to periods of self-isolation and restrictions during the pandemic, households spent on food, providing themselves with a familiar set of

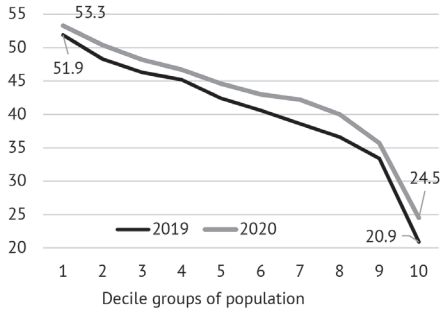
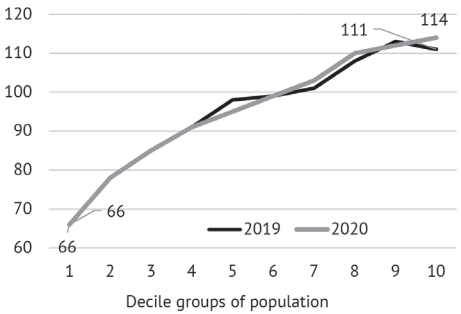


Fig. 22. Share of food expenses in consumption expenditures, %



Puc. 23. Ratio of the cost of the actual and rational set of food, %

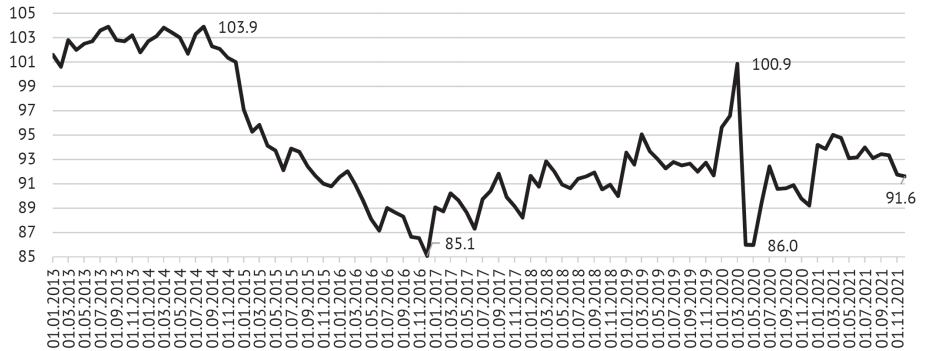


Fig. 24. Index of physical volume of food purchases, % to the corresponding month of 2012 (in 2012 prices)

Source: Rosstat, data as of 15.02.2022.

meals for more money than before the pandemic. This allowed food purchases to climb back up to 2015 levels after falling since August 2014, surpassing 2016—2020 levels — *Fig. 24*.

Consequently, the Russian agricultural sector ensured a sufficient level of food security during the ongoing COVID-19 pandemic. The decline in agricultural production is largely due to fluctuations in the grain harvest, which have been within the historical limits of recent years. Total harvests are quite sufficient to meet any reasonable domestic needs and do not affect the level of food security. The decline in production of potatoes and vegetables is a consequence of the reduction of cultivated areas in household farms — a change in the model of food supply — an increasing shift from production for family needs and sale of surplus to the purchase of potatoes in the retail trade. Significant increases in food prices had no noticeable impact on the average ration of food consumption — the additional costs of providing it were compensated by savings on items affected

by the pandemic — leisure, entertainment, travel. Despite the inconsistency of applied measures of internal market regulation, changing the parameters of the market mechanism, they partially achieved the main goal — the movement of prices for basic foodstuffs was detached from the development of world prices. At the same time, the traditionally higher growth rate of food prices in Russia indicates that there is room for improvement of policies to stimulate structural shifts in production, export-import regulation.

The growth of world food prices has leveled the risks of deterioration of agricultural producers and reduction of production and supplies to the domestic market due to regulation, however the potential danger of over-regulation continues. In this regard, the task of regulation in the field of food security remains the reduction of the use of administrative measures to restrict prices and the transition to a flexible export-import tariff policy. Measures to stimulate potato and vegetable production should include support for production in household farms through cooperation with farms that can act as strongholds in organizing the supply of resources, mechanization of work, storage and sale of products. It is advisable to support highly specialized agricultural organizations and farms that cannot promptly switch to the cultivation of other, more profitable crops.

4.6. Foreign trade[1]

4.6.1. The state of the world economy and the global trade

In 2021, the global economy recovered from the COVID-19 pandemic outbreak of 2020. However, the pandemic continued to be a serious problem throughout 2021, especially with the emergence of new strains such as Delta in Q2 2021 and Omicron in Q4 2021. Vaccination has proven effective in mitigating the adverse effects of coronavirus on human health. However, unequal access to vaccines and the higher invasiveness of new strains have left many people still vulnerable to the virus, which fuels the pandemic and puts pressure on the sustainability of the global economic recovery. In addition, its recovery has been held back by persistent disruptions in supply chains and pressure from rising tradable commodity prices.

The World Bank estimates[2] that the global economy grew 5.5% in 2021, the fastest pace in 80 years, as the lifting of most pandemic-induced restrictions contributed to explosive demand growth in many countries. However, the new COVID-19 pandemic outbreaks later in the year and widespread supply disruptions notably affected global activity in H2 2021. Moreover, emerging and developing economies saw a fragile recovery compared to advanced economies due to weak vaccination rates, fiscal and monetary tightening and the more persistent effects of the pandemic.

The IMF in its World Economic Outlook (WEO) report estimates global economic growth in 2021 at 5.9% and advanced economies at 5.0%. The UK is

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2 WB official website. URL: // https://www.worldbank.org/en/publication/global-economic-prospects#data

expected to grow the most in 2021 (7.2%), followed by France (6.7%) and the US (5.6%). Emerging and developing economies will grow by 6.5%. India (9.0%) and China (8.1%) are leaders in this region. Russian economy, according to IMF estimates, grew by 4.5% (*Table 20*).

Table 20

Growth rates of world GDP and world trade, in % to the previous year

	2013	2014	2015	2016	2017	2018	2019	2020	Estimate 2021
World GDP	**3.5**	**3.6**	**3.5**	**3.3**	**3.8**	**3.6**	**2.8**	**-3.1**	**5.9**
Developed economies	1.4	2.1	2.3	1.7	2.5	2.3	1.7	-4.5	5.0
USA	1.8	2.5	2.9	1.6	2.4	2.9	2.2	-3.4	5.6
Euro zone	-0.2	1.4	2.1	1.9	2.5	1.9	1.3	-6.4	5.2
Germany	0.6	2.2	1.5	2.2	2.5	1.5	0.6	-4.6	2.7
France	0.6	1.0	1.0	1.1	2.3	1.7	1.5	-8.0	6.7
Great Britain	2.0	2.9	2.3	1.8	1.7	1.4	1.5	-9.4	7.2
Emerging and developing economies	4.7	4.6	4.0	4.3	4.7	4.5	3.7	-2.0	6.5
Russia	*1.3*	*0.6*	*-3.7*	*-0.2*	*1.5*	*2.3*	*1.3*	*-2.7*	*4.5*
Developing countries in Asia	6.6	6.8	6.6	6.4	6.5	6.4	5.5	-0.9	7.2
China	7.7	7.3	6.6	6.7	6.9	6.6	6.1	2.3	8.1
India	5,0	7,3	7,6	7,1	6,7	6,8	4,2	-7,3	9,0
Latin America and the Caribbean	2.7	1.3	0.0	-0.9	1.3	1.0	0.0	-6.9	6.8
Brazil	2.5	0.1	-3.8	-3.6	1.4	1.1	1.1	-3.9	4.7
Mexico	1.1	2.1	2.5	2.3	2.2	2.0	–0.3	-8.1	5.3
World trade in goods and services	**3.0**	**3.3**	**2.6**	**2.2**	**5.2**	**3.9**	**0.9**	**-8.2**	**9.3**

Source: IMF official website. World Economic Outlook, January 2022: Rising Caseloads, A Disrupted Recovery, and Higher Inflation. URL: // https://www.imf.org/en/Publications/WEO/Issues/2022/01/25/world-economic-outlook-update-january-2022

The global economic crisis induced by the COVID-19 pandemic has destabilized the global trading system, causing unprecedented upheaval in global supply chains and in trade relations between countries. In 2020, the value of global trade in goods and services fell by 8.2% in nominal dollar terms. However, the trading system has proven more resilient than expected at the beginning of the crisis. Although the pandemic initially severely disrupted international trade flows, supply chains adapted and goods continued to flow across borders, helping countries cope with the pandemic, facilitating access to essential medical supplies, food and consumer goods, and supporting economic recovery. The IMF estimates that global trade in 2021 gained 9.3% from 2020.

During 2021, global trade growth remained strong as its value continued to increase in every quarter of 2021. Trade in services also gained momentum during 2021, reaching pre-pandemic levels in Q4.

According to the UNCTAD report,[1] the value of world trade hit a record $28.5 trillion in 2021, up 25% from 2020 and 13% from the pre-pandemic level of 2019. The main growth in world trade came in H1 2021. The high annual growth rate in merchandise trade is largely a reflection of the previous year's decline, which bottomed out in Q2 2020. Because of the low base, annualized growth in Q2 2021 was 22.0%. After slowing in Q3, trade growth accelerated again in Q4, when global trade volume was up 3% from the previous quarter. In Q4 2021, trade in goods grew by nearly $200 bn to $5.8 trillion. In the same period, services trade increased by $50 bn to $1.6 trillion, slightly above pre-pandemic levels.

In 2021, the annual growth rate of world trade depends largely on the depth of the recession endured by each region in 2020. The WTO estimates that the growth rate of exports in 2021 was 8.7% in North America, 7.2% in South America, 9.7% in Europe, 0.6% in the CIS, 7.0% in Africa, 5.0% in the Middle East, and 14.4% in Asia. Imports were up 12.6% in North America, 19.9% in South America, 9.1% in Europe, 13.1% in the CIS, 11.3% in Africa, 9.3% in the Middle East, and 10.7% in Asia.

4.6.2. Price environment for the main goods of Russian exports and imports

Commodity prices surged in 2021 after declining across the board in early 2020, with some commodities reaching historic highs.

In 2021, the Energy Price Index stood at 92.9%, up 22.5% from 2019 and 82.5% from 2020. All components of this Index (coal, crude oil, and natural gas) saw price increases.

The price index for non-energy commodities was 110.7% in 2021, 35.9% higher than in 2019 and 2020 — by 33.6%. Among the four major components of this Index, agricultural products and precious metals are about one-third above their pre-pandemic levels, while metals and fertilizers are about one-half higher (*Fig. 25*)

Crude oil prices in 2021 recovered from their lows in 2020 due to the COVID-19 pandemic. In October 2021, the price of Brent crude oil reached a seven-year high: — $83.65/bbl, which is 27% higher than the pre-pandemic level (in December 2019 — $65.85/bbl). The average price for Brent crude oil in 2021 was $70.44/bbl, 10% higher than in 2019 and 2020 — by 66.5%. WTI crude oil is up 19.2% in 2021, compared to 2019, compared to 2020 — by 72.9%, reaching the level of $67.96/bbl

Oil prices rose as demand went up as a result of the global economic recovery. However, production grew slower than expected: after rising through most of 2021, crude oil production fell in August and September. There were disruptions in the United States due to the impact of Hurricane Ida on production in the Gulf of Mexico. OPEC and its partners (OPEC+) gradually raised production during H1 2021, the group decided at its July meeting to ramp up production by 0.4 million bpd from August 2021 to September 2022. At its October meeting, OPEC+

1 UNCTAD official website. URL: https://unctad.org/webflyer/global-trade-update-february-2022

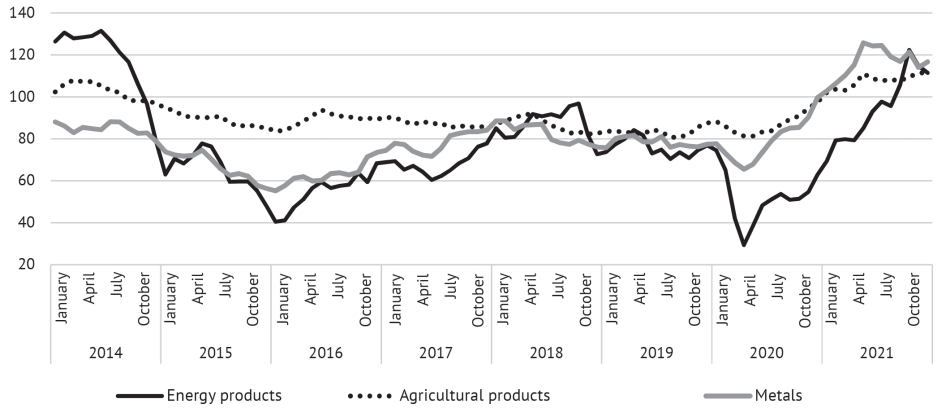

Fig. 25. World Bank commodity price indices (2010 -100%)

Source: URL: http://www.worldbank.org/en/research/commodity-markets#1

announced that the group intended to maintain its earlier production increase quota. Oil prices have also been supported by rising natural gas prices as oil becomes increasingly competitive as a substitute for heat and power generation.

The average price for Urals oil in 2021 is $69/bbl (in 2020 — $41.73/bbl). Thus, in 2021 the price of Russian export oil rose by 65%.

Natural gas and coal prices rose sharply during 2021. Australian thermal coal prices and spot natural gas prices in Europe and Asia reached record highs in October. As the global economy began to recover from the pandemic, demand for natural gas and coal rose, both for power generation and industrial purposes. China's January-August 2021 electricity consumption was up 11% from the previous year, and India's was up 17%. Hotter-than-normal weather fueled demand for electricity for cooling in major economies, including China and the United States. On the supply side, the drought reduced hydropower production in several countries, including Brazil, China, Turkey and the United States. Low wind speeds led to lower wind power generation in Europe. Taken together, these events have further increased the demand for fossil fuels.

In 2021, compared to 2020, gas prices went up 91.2% in the U.S., nearly 5-fold in Europe, and 29.5% in Asia; compared to 2019, gas prices went up by 50.1% in the U.S., 3.3-fold in Europe, and 1.9% in Asia.

Natural gas prices in Europe rose sharply in June 2021, with the average price at Europe's gas hub, the Title Transfer Facility (the Netherlands), rising 16% against May to $10.3/MBTU. The average prices for January-June were 2.1-fold higher than for the same period in 2020. In July 2021, natural gas prices in Europe continued to rise: the average TTF price rose by 21% over the previous month, to $12.5/MBTU, and by the end of September the figure had more than doubled. In October, gas prices in Europe moved up another 36%. After falling by 11% in November, prices began to rise again in December. The average TTF price ganed 37.7% year-on-year to $38/MBTU. The price increase was mainly due to lower

inventory levels. Average storage injection capacity increased 36.8%, from 1.9 bn m^3 in November to 2.6 bn m^3 in December. However, this was not enough to compensate for the 45% increase in withdrawals, which led to a 19.8% decrease in the average monthly volume in storage, from 2,796 bn m^3 to 2,268 bn m^3, against the background of the onset of the cold season.

The historical maximum on the futures market was reached on December 21 — $2,190 per 1,000 meters^3. Then quotations adjusted downward, but in general there have not been such steady high prices in the history of gas hubs in Europe — since 1996. Natural gas prices in Europe ended 2021 with a record high growth — almost 5-fold higher than in 2020 (*Table 21*). The rise in prices is due to several factors: the low level of occupancy of European underground storage facilities after the long cold winter and hot summer of 2021, supply constraints from major suppliers, and high demand for liquefied natural gas in Asia.

Table 21

Average annual world prices

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Brent crude, USD/bbl	110.9	111.97	108.86	98.94	52.37	44.05	54.39	71.07	64.03	42.3	70.44
Natural gas (USA), USD/MBTU	4.00	2.75	3.72	4.37	2.61	2.49	2.96	3.16	2.57	2.01	3.85
Natural gas, European market USD/МБТЕ	10.52	11.47	11.79	10.05	6.82	4.56	5.72	7.68	4.80	3.24	16.12
Natural gas (Japan), USD/MBTU	14.66	16.55	15.96	16.04	10.93	7.37	8.61	10.67	10.56	8.31	10.76
Coal (Australia), USA/t	121.45	96.36	84.56	70.13	58.94	66.12	88.52	107.02	77.86	60.79	138.05
Copper, USD/t	8828	7962	7332.1	6863.4	5510.5	4867.9	6169.9	6529.8	6010.2	6173.8	9317.1
Aluminum, USD/t	2401	2023.3	1846.7	1867.4	1664.7	1604.2	1967.7	2108.5	1794.5	1704	2472.8
Nickel, USD/t	22910	17557	15032	16893	11863	9595.2	10409	13114	13914	13787	18465
Iron ore, USD/t	167.75	128.50	135.36	96.95	55.85	58.42	71.76	69.75	93.85	108.9	161.71

Source: World Bank official website.

According to the International Energy Agency's estimates,[1] the global demand for gas will continue to go up at an average annual rate of 1.7% in 2022—2024,

1 International Energy Agency official website. URL: https://iea.blob.core.windows.net/assets/4fee1942-b380-43f8-bd86-671a742db18e/GasMarketReportQ32021_includingGas2021A

reaching 4.3 trillion m^3, which is 7% above the pre-pandemic level of 2019. It is expected that almost half of the demand growth by 2024 will be in the developing markets of South and South-East Asia (47% of the global growth). In Europe, gas demand will remain stable, with an average annual growth rate of 0.4%.

Prices for thermal coal in Australia rose by 16.1% in May compared to the previous month. In the following months, the spike in prices continued. Prices were supported by warmer than average weather in Northeast Asia, increased industrial activity, as well as some supply constraints, such as restrictions on coal production and the closure of low-efficient coal mines in China. In October 2021, Australian thermal coal rose 20.9% relative to September, to a record monthly average of $224.51 ton. The price of steam coal rose 2.3-fold in 2021 compared to 2019.

Prices for most base metals continued to rise during 2021 on the back of reduced supplies, power shortages and China's policy to reduce energy consumption and pollution from metal processing. In addition, rising transportation costs and port delays made it difficult to transport ores and refined metals around the world.

Aluminum prices in 2021 hit a 13-year high: the average price for the year was $2,472.8/t. The sharp increase was caused by a reduction in supplies from China, where the task is to reorganize production facilities in order to decarbonize. Outside China, production was also reduced — in India, aluminum companies faced energy shortages due to limited coal supplies, in Brazil, production was reduced on the back of weak hydropower generation. Prices for alumina, the raw material for making aluminum compounds, also rose as a result of supply disruptions from Brazil and Jamaica.

In May 2021, the price of copper reached the maximum for the whole period of observations — $1,061.97/t. Despite the fact that by the end of the year copper fell in price by 4.3% compared to the peak value, the average annual price turned out to be a record $9,295.8/t. The decline in copper prices at the end of the year was due to a slowdown in China's real estate market along with a decline in global car production. On the supply side, mine production continued to rise despite a three-week strike in Chile, and China released some of its state stocks.

In 2021, nickel prices rose to the highest levels since 2011. The average annual price stood at $18,324/t, 35.6% higher than in 2020. Prices were supported by strong demand in the stainless steel and battery markets, as well as the impact of supply disruptions from Canada (strikes) and Russia (floods) at the beginning of the year. Power shortages in China and restrictions due to the spread of coronavirus in New Caledonia also contributed to nickel prices. Production in Indonesia continues to grow and is expected to accelerate further, both due to growth in nickel pig iron (NPI) production and processing of low-grade ore.

In Q3 2021, the World Bank Precious Metals Price Index declined by 3% relative to the previous quarter on the back of deteriorating investor sentiment caused by higher real interest rates and a stronger U.S. dollar. Gold prices declined modestly, while silver and platinum prices showed larger declines, but were still above the previous year's level.

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The World Bank Agricultural Price Index reached an eight-year high in Q2 2021. The price jump reflected supply shortages, rising raw material costs (especially coal, natural gas, and fertilizers), and strong demand for animal feed in China. In Q3 2021, the Index stabilized, remaining 25% higher than a year earlier; most components of the Index were well above pre-pandemic levels. Among the staple foods, corn showed the largest increases, with the price of corn up 56.9% in 2021 compared to 2020, and soybeans, up 43.4%. In contrast, rice prices were down 7%. Beverages prices also increased significantly (primarily due to the rise in the price of coffee due to the decline in production in Brazil caused by weather conditions).

4.6.3. Main indicators of Russian foreign trade

In 2021, Russian foreign trade turnover increased to $797.95 bn, exceeding the same period in 2019 by 18.5%, 2020 — by 39.3%. Foreign trade turnover with non-CIS countries moved up by 40.6% to $698.5 bn compared to 2020, with CIS countries — by 30.4% to $99.4 bn. Recovery of the global economy, favorable global market conditions for Russian exporters, and growth of domestic demand contributed to the positive dynamics.

Russian exports in 2021 amounted to $494 bn, 17.7% higher than in 2019 and 2020 — by 48.2%. Russian imports were $303.9 bn, surpassing the 2019 level by 19.7%, 2020 - by 26.8%. Due to a more significant increase in export of goods as a result of favorable pricing environment, with a slight slowdown of import growth rates the trade balance in 2021 as compared to 2020 went up by more than 2-fold - up to $190.1 bn (*Fig. 26*).

The high export growth rate is primarily due to the growth of export prices for almost all commodities delivered abroad, while the quantum of exports of some goods (crude oil, wheat and meslin, vegetable oil, ferrous metals, copper, and nickel) dropped. The rise in imports of goods is owing to the domestic demand recovery (*Table 22*). According to the Federal Customs Service, in 2021, as compared to 2020, the value of all exports gained 45.7%, and the value decreased by 0.3%, while imports increased by 26.5 and 4.8%, respectively.

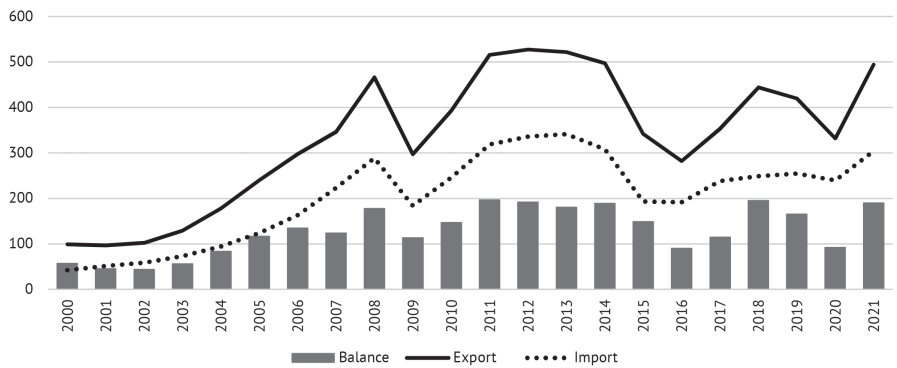

Fig. 26. Main indicators of Russian foreign trade, USD bn

Source: Bank of Russia.

Table 22

Growth rates of value and volume of exports and imports of the Russian Federation in 2021, % to 2020

OKVED code EAEU	Merchandise line	Exports		Imports	
		Value	Quantum	Value	Quantum
01—24	Food products and agricultural primary products (except for textile)	121.4	89.6	114.1	104.4
25—27	Mineral commodities	151.5	96.9	126.4	112.9
27	Fuel and energy products	159.3	100.0	130.8	96.6
28—40	Chemical products, rubber	134.8	100.6	126.7	106.5
41—43	Rawhide, furs and articles made therefrom	131.6	122.1	135.0	142.8
44—49	Timber and pulp and paper articles	137.4	95.9	120.4	111.4
50—67	Textile, textile products and footwear	118.7	113.4	116.2	111.5
72—83	Metals and article made therefrom	150.2	107.9	128.3	105.0
84—90	Machinery, equipment and means of transportation	129.9	109.4	130.8	127.2
68—70, 91—97	Other goods	132.8	110.2	126.1	115.1

Source: FCS data.

Structure and dynamics of exports

The surge in world prices for the main commodities of Russian exports to multi-year highs, as well as the expansion of volumes of deliveries abroad of a number of goods have led to a significant increase in the value of Russian exports of commodities (*Fig. 23*). In 2021, Russian exports totaled $494 bn, an increase of 48.2% (17.7% over the 2019 figure) compared to the same figure in 2020.

Table 23

Russian export dynamics

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Export, USD bn	392.7	515.4	527.4	521.8	496.8	341.4	281.7	352.9	443.9	419.9	332.2	494
Including:												
Far abroad	333.6	436.7	443.8	443.8	428.1	292.1	241.7	302.8	387.2	363.6	281.9	426.5
Growth rates, in % to the previous year												
Quantum index	96.8	97.0	110.0	97.8	99.9	104.9	109.0	103.5	106.5	98.3	97.9	99.7
Price index	137.4	76.4	119.8	132.9	101.6	95.7	58.1	76.9	118.5	96.7	79.1	136.9

Sources: Bank of Russia, Ministry of Economic Development.

Due to Russia's commitments to reduce oil production under the OPEC+ agreement, the volume of oil exported in 2021 was 3.8% lower than a year earlier. Owing to the growth of export prices by an average of 57.8%, the value of oil exports went up by 51.8%. The export of oil products moved up by 1.8% in physical terms and by 54.2% in value terms, while the export of natural gas gained 0.5% and more than twofold, respectively.

The main consumers of Russian crude oil are China, Netherlands, Republic of Korea, Germany, Finland, Turkey, Italy, USA, and Slovakia; the main consumers of Russian gas are Japan, Spain, France, China, Poland, Taiwan (PRC), Netherlands, Ukraine, Belgium, and Republic of Korea.

Non-commodity non-energy exports (NNE) significantly exceeded the level of both last year and the year before, reaching a new all-time high. In 2021, NNE was $191.4 bn, up 118.7% from 2020 and 23.4% from 2019. Growth was seen in almost all commodity segments. As compared to 2020, export of metals and metal products rose by 46.6%, chemicals — by 58.1%, timber and pulp and paper products — by 37.4%, machinery, equipment and transport vehicles — by 29.9%, food products and agricultural raw materials — by 21.3%. It is to be noted that the export of all items of the expanded TNVED nomenclature, except for mineral products, reached the maximum level for the entire period of observations.

The export of high technology goods spiked by 28.7% in 2021 as compared to 2020.

In 2020, amid the collapse of fuel and energy exports, the share of the NNE in Russia's total exports gained more than 10 p.p., amounting to 48% (in 2019 - 36.4%). REC's experts expected that in 2021 the share of oil and energy products in total exports would continue to grow and for the first time in history could exceed the share of FEC products.[1] However, as a result of rising carbohydrate prices, restrictions on grain exports and removal of gold from the list of non-energy commodities, the share of the NNE in Russia's exports in 2021 dropped to 38.7% (*Fig. 27*).

As economic activity recovered in 2021, there was an upswing in supplies to the global market of metallurgical products. Exports of metals and metal products moved up in 2021 by 46.6% year-on-year to $51.1 bn, which is the highest level since 2008. Thus, ferrous metals (except for pig iron, ferroalloys, waste and scrap) were sold abroad at 80.8% higher prices than in 2020, iron — by 62.2%, semi-finished iron and steel — by 64.3%, flat-rolled products — by 80.8%, refined copper — by 38.9%, unprocessed nickel — by 27.5%, unprocessed aluminum —29.8%.

In 2021, exports of chemical products rose 58.1% to $37.8 billion, compared to 2020, which was the maximum for the entire period of observation. The main role in this was also played by the export prices spike: the index of average prices for chemical products in 2021 was 150.1%, the volume index — 100.1%.

In 2021, the export of food products and agricultural raw materials also reached the maximum level for the entire period of observation — $35.9 bn, which

1 URL: //iz.ru/1128794/ekaterina-vinogradova/uglevodorodnaia-dieta-dolia-energoresursov-v-eksporte-upadet-nizhe-50

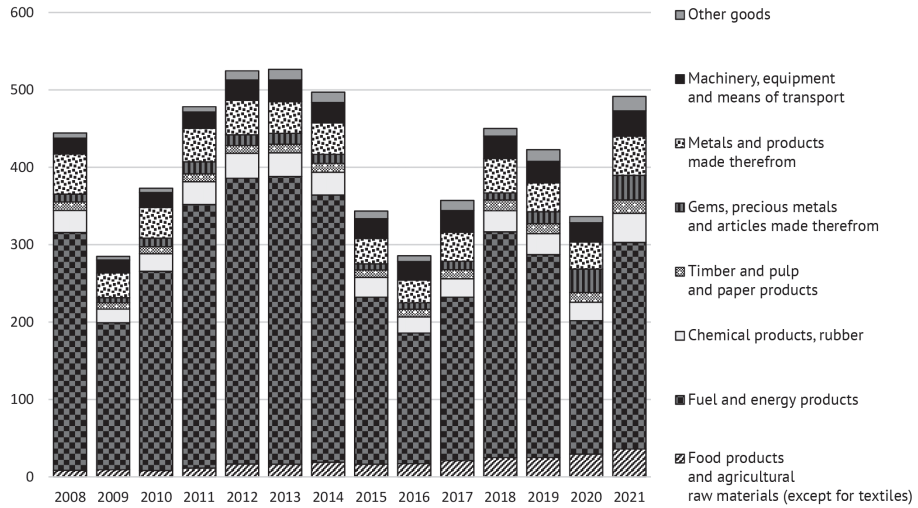

Fig. 27. Goods-wise dynamic of Russian exports, USD bn.

Source: FCS.

is 21.3% more than in 2020. The leading position in this group of commodities still belongs to cereals, whose share in the export of food products in 2021 amounted to 28% (in 2020 — 33%). The decline in the share was on the back of a decrease in the volume of wheat and meslin by 14.6%, which was not offset by a rise in export prices by 26.8%. Nevertheless, at the end of the year 2021, Russia retained its leading position in world wheat exports for the sixth year in a row — 32.9m tons. The oil and fats industry showed a good result. Compared to 2020, foreign sales of vegetable oils went surged by 47.7% in value terms, helped by favorable global market environment — the average growth in export prices came to 60%. In 2021, the export of meat products gained 34.4% as compared to the previous year, exceeding $1.1 bn. Deliveries of dairy products abroad went up by 25.7% to $381.4 mn.

The best export dynamic in 2021 was demonstrated by the subgroup "Vegetables and some edible root and tuber crops" against the backdrop of the 2.6-fold increase in exports of dried vegetables, whole, sliced, but not further processed (TN VED 0712), 2-fold — cucumbers and gherkins (TN VED 0707), by 72.8% — dried legumes (TN VED 0713).

2021 demonstrated the ongoing work aimed at opening new markets for food products. As a result, Russia received the right to export to 19 countries for 53 types of products. The markets of Singapore for milk, China for beef by-products, Egypt for dairy products and others were opened up. This significantly expanded the geography of presence. In 2021, Russia delivered agro-industrial products to 161 countries.

In 2021, exports of timber and pulp and paper products hit an all-time high in value terms — $17 bn, which is 37.4% more than in 2020. This was due to a price hike: processed timber rose by 53.4%, plywood by 59.2%, and wood pulp by 48.1%. The main reasons for the rise in wood prices are the decline in logging in the U.S., Canada and Europe and the widespread withdrawal of companies to remote work amid the pandemic, resulting in many people leaving cities and wanting to live in their own homes, which increased the demand for lumber.

Structure and dynamic of import

In 2018-2019, the average monthly volume of imports stood at $21 bn. Between January 2020 and May 2020, during the acute phase of the pandemic, there was a sharp drop in imports relative to the average level of the two pre-crisis years, after which it began to recover (*Table 24*). As a result, in less than a year and a half, the average figure recovered to its pre-crisis level and then surpassed it. In 2021, the average monthly import volume was $25.3 bn.

Table 24

Russian imports dynamic, USD bn.

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Imports, USD bn.	245.7	318.6	335.8	341.3	307.9	193.0	191.5	238.4	248.9	253.9	239.6	303.9
Including:												
Far abroad countries	213.2	273.8	288.4	295.0	271.9	170.6	170.8	213.0	222.3	226.7	215.0	272
Growth rates, in % to the previous year												
Volume index	130.1	127.1	113.5	63.3	135.4	122.2	105.1	97.8	96.6	99.3	103.6	104.8
Price index	105.5	107.6	117.8	99.1	101.6	109.1	97.3	102.5	99.8	102.1	97.2	107.3

Sources: Bank of Russia, Ministry of Economic Development.

In 2021, imports of goods exceeded the 2020 level by 26.8%, and the 2019 level — by 19.7%. The growth peaked in Q2 (41.6% against Q2 2020), while in Q3 it slowed down (29.5% against Q3 2020) and in Q4 it continued to slow down (22.5% against Q4 2020).

In 2021, machinery and equipment still accounted for the largest share in the commodity structure of imports, accounting for 49.2% (47.6% in 2020). Purchases abroad of machinery and equipment in 2021 gained 30.8% compared to 2020. Imports of ships, boats and floating structures surged almost 3-fold, land vehicles by 45.3%, mechanical equipment by 25.9%, electrical equipment by 21.8%, and optical instruments and apparatus by 6.9%. The volume of import of cars and trucks increased by 1.4-fold.

Chemical products remain the second most important group in the commodity structure of the Russian import (18.3% in 2021). In 2021, the import of these

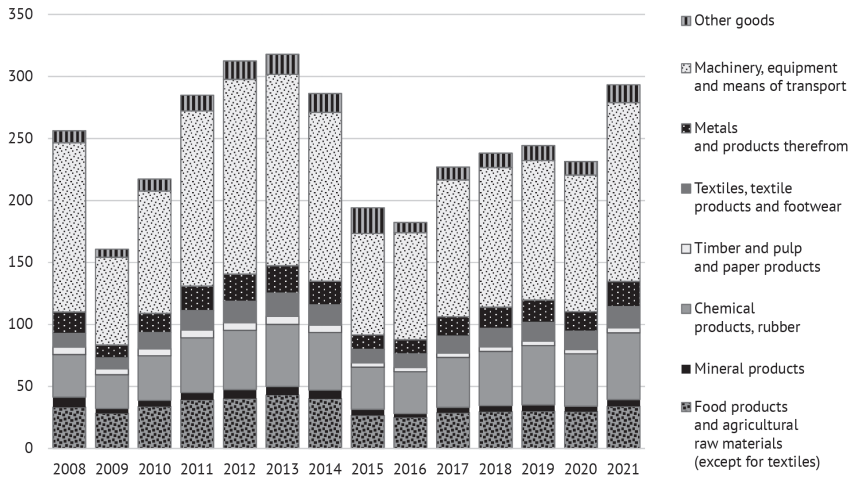

Fig. 28. Goods-wise dynamic of Russian imports, USD bn.

Source: FCS.

products into the territory of the Russian Federation went up in value terms by 26.7% and in volume terms by 6.5%. Volumes of procurement of pharmaceuticals increased by 20.8%, rubber, rubber products and articles thereof — by 14.7%, plastics and articles thereof — by 12.4%, organic chemistry products — by 7.1%, fertilizers — by 5.5%, inorganic chemistry products — by 2.5%, soap and detergents - by 2.1%. Having said that, due to higher import prices, the value of fertilizers imports spiked by 41.3%, pharmaceutical products — by 27.5%, plastics and their products — by 34.9%, rubber, rubber and rubber products — by 33.7%, essential oils and rubber products, perfumes, cosmetics and toiletries — by 25.6%.

The third place in the commodity structure of the imports to Russia is taken by food products and agricultural raw materials (except for textiles). The group of these commodities accounted for 11.6% in 2021 (12.8% in 2020). In January-December 2021, the value of imports of food products and raw materials for their production gained 14.1%, while the volume increased by 4.4% (*Fig. 28*).

4.6.4. Regional pattern of Russian foreign trade

After years-long reduction of the EU's share in the regional pattern of Russian foreign trade, in 2021, it increased to 35.9% against 33.8% in 2020. This happened on the back of the growth of mutual trade turnover in annual terms by 46.6% up to $282 bn. Export of Russian goods to the EU surged by 65.4%, amounting to $188.1 bn. Import of goods from the EU into the Russian Federation rose by 19.4 percent to $93.9 bn.

The growth of Russian foreign trade turnover with APEC countries was more modest — 36%: exports went up by 38.7%, imports — by 33.5%. As a result, the

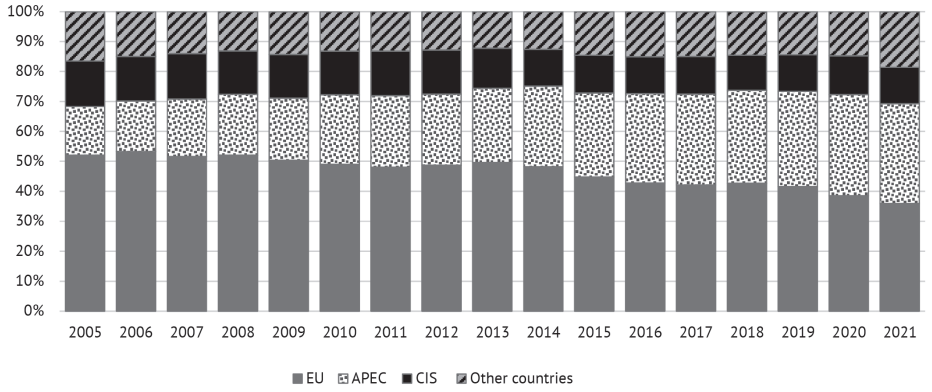

Fig. 29. Regional pattern of Russian foreign trade, %

Source: FCS.

share of APEC in Russian foreign trade turnover in 2021 shrank to 33.3% against 33.8% in 2020.

The share of the CIS countries fell to 12.2% compared to 12.9% in 2020 (*Fig. 29*)

Despite the reduction of Russia's share in foreign trade turnover from 18.4% to 18%, China remains Russia's largest partner. Russian trade with China will remain negative in 2021, amounting to $5.7 bn ($4.6 bn in 2020).

4.6.5. Regulation of Russian foreign trade[1]

Tariff regulation

Export customs duties

In 2021, the rates of export duties on oil and petroleum products were calculated in accordance with the methodology approved by Decree of the Government of the Russian Federation No. 276 of March 29, 2013 "On the calculation of export duty rates on crude oil and certain categories of goods produced from oil" (*Table 25*).

Table 25

Export duty rates on crude oil and petroleum products in 2020–2021, USD/t

	Crude oil	Petroleum products	
		Light oil products	Dark oil products
2020			
January 1			
February 1	78.5	23.5	78.5
March 1	66.9	20.0	66.9
April 1	52.0	15.6	52.0

1 Materials from the information and legal portal were used to prepare this section GARANT.RU

	Crude oil	Petroleum products	
		Light oil products	Dark oil products
May 1	6.8	1.0	6.8
June 1	8.3	2.4	8.3
July 1	37.8	11.3	37.8
August 1	46.9	14.0	46.9
September 1	47.5	14.2	47.5
October 1	45.4	13.6	45.4
November 1	42.2	12.6	42.2
December 1	42.0	12.6	42.0
2021			
January 1	38.7	11.6	38.7
February 1	43.8	13.1	43.8
March 1	49.6	14.8	49.6
April 1	57.6	17.2	57.6
May 1	54.9	16.4	54.9
June 1	58.8	17.6	58.8
July 1	61.5	18.4	61.5
August 1	67.8	20.3	67.8
September 1	64.6	19.3	64.6
October 1	62.8	18.8	62.8
November 1	71.2	21.3	71.2
December 1	77.5	23.2	77.5

Sources: RF Government Decree, information of the RF Ministry of Economic Development.

In order to stabilize prices on the domestic market, the list of goods that are subject to export customs duties, approved by the RF Government Decree No. 754 of 30.08.2013, was supplemented by Decree No. 2397 of 31.12.2020. Thus, from February 1 through June 30, 2021 a rate of export customs duty of 30% of the customs value, but not less than 165 Euro per 1,000 kg was applied to soy beans.

In accordance with the decree of the RF Government No. 117 dated 6.02.2021 the Russian Ministry of Agriculture from April 1, 2021 has started weekly calculation of the export duty within grain damping, which should reorient the market participants from selling agricultural raw materials abroad to export of agricultural products with high added value.

The mechanism of grain damping in the Russian Federation came into force on June 2, 2021. It envisages the introduction of a flexible duty on wheat, corn and barley exports. The proceeds from it should be used to subsidize agricultural producers. The duty is 70% of the difference between the indicative price (the arithmetic average of daily price indexes) and the base price. The base price for wheat will be $200/t, for corn and barley — $185.

The amount of duties is calculated weekly on the basis of price indexes, based on prices of export contracts, which are registered on the Moscow Exchange. Thus, from June 2 to 8, inclusive, the export duty on wheat from Russia amounted to $28.1 ton, for export of barley — $39.6 ton, for export of maize — $52.2 ton.

Before that date the export duty on wheat was €50, corn — €25, barley — €10 per ton.

The government decision to introduce grain damping had a restraining effect on exporters of these crops in 2021. For example, the export of wheat in 2021, in volume terms, decreased by 26.9% as compared to 2020, and barley — by 20.2%. However, due to the growth of export prices the value of wheat exports dropped by 8.2%, and barley went up by 7.5%. As of 17 February, 2022, the export price for Russian wheat (FOB, Black Sea) was $315 per ton (a 12.9% growth for the year), for corn — $289 per ton (an 11.6% increase), for barley — $297 per ton (a 22.2% increase). The increase in domestic prices was 7.7% for grade 3 wheat, a 1% reduction in prices for corn, and barley prices rose by 18.9%. Therefore, the main task, restraining the growth of prices on the domestic market, was solved.

According to the RF Government Decree No.546 from 06.04.2021 regarding sunflower oil there is a floating export duty of 70% from September 1, 2021 to August 31, 2022. It is levied on the difference between the indicative price (arithmetic average of market prices per month minus an adjustment factor of $50/t) and the base price ($1,000/t). In order to establish the indicative price, the Ministry of Agriculture constantly monitors the market. Information about the amount of the duty is promptly posted on the Ministry of Agriculture website. The decree entered into force on August 1, 2021, except for certain provisions, which are introduced on September 1, 2021, and is valid through August 31, 2022 inclusive. This measure was put in place to stabilize retail prices for sunflower oil.

Besides, the export duty on sunflower was raised from 30% to 50%, but not less than $320 per ton for the period from July 1, 2021 through September 1, 2022 (RF Government Decree No. 547 of April 6, 2021). Also, 30% duty on rapeseed was extended till August 31, 2022.

In order to protect the domestic market in the context of a rapid growth of world metal prices, from August 1 through December 31, 2021, export duties on ferrous and nonferrous metals from Russia were put in place. The duties consisted of a prime rate of 15% and a specific component. For nonferrous metals, the specific duty was calculated depending on the type of metal. For copper the duty was not less than $1,226, for nickel — not less than $2,321, and for aluminum — not less than $254 per ton.

For ferrous metallurgy the rate depended on the degree of processing, for pellets the duty was not less than $54, for flat hot-rolled steel and re-bars — not less than $115, for cold-rolled steel and wire — not less than $133, and for stainless steel and ferroalloys — not less than $150 per ton.

By the RF Government Decree No. 737 of May 15, 2021, new duties were put in place from July 1, 2021 on export of timber with a moisture content exceeding 22%. According to the document, the duty rate on softwood and oak was set at 10%, but not less than €13 and €15 per m^3, respectively. Previously no duty was levied on these categories. Export duties on beech and ash were also set at 10%, but no less than €50 m^3 (previously — €10 and €12 m^3, respectively). The duties were in effect until the end of the year. The introduction of these duties made it possible to limit the export of unprocessed and roughly processed wood in

the guise of sawn timber, to curb the price growth for it and to reorient business towards the production of high value-added products. Note that at the end of 2021 the export of unprocessed timber was 13.9 mn m^3, a decrease of 10.2% compared to the same figure in 2020.

In November 2021, the RF Government approved changes in export duty rates in respect of a number of commodities. The RF Government Decree of 27.11.2021 No 2068 "On rates of export duties on goods exported from the Russian Federation outside the customs territory of the Eurasian Economic Union" updated the rates of export duties on scrap ferrous metals and certain types of timber. Thus, from January 1, 2022, the rate of duty on scrap and waste of ferrous metals is equal to 5%, but not less than €100 per ton. It will be valid for the next 180 days. Prior to this date, the temporary rate on the export of scrap was 5%, but not less than €70 per ton. This measure should mitigate the impact of the external environment in this area on the domestic market, adjust prices and provide raw materials to domestic producers.

In addition, the zero duty rate on tungsten ores and concentrates was extended until December 31, 2023. This decision aims to support producers and prevent them from stopping their work due to a shortage of working capital. The document also extends the restrictions on the export of timber. From January 2 through December 31, 2022, increased export rates on certain types of timber with humidity of more than 22% and a thickness of more than 10 centimeters will be in force.

Import customs duties

In order to minimize the negative economic effect of the spread of coronavirus infection COVID-19, to prevent shortages of socially important goods in the EAEU countries the list of critical imported goods was approved by Decision of the EEC Council No. 21 of March 16, 2020. These goods are granted tariff benefits in the form of exemption from import customs duties when imported into the states of the Eurasian Economic Union. Subsequently, the Council of the Eurasian Economic Commission made decisions on extending the period of exemption from import customs duties for a number of goods used to prevent and avert the spread of coronavirus infection. In April 2021, the tariff exemption was extended until June 30, 2022 inclusive. In particular, some components and materials for the production of medicines and disinfectants, medical products, respirators, protective goggles, rubber gloves, medical products and equipment, as well as boxes and stretchers for transporting patients can still be delivered duty-free to the territory of the Eurasian Economic Union.

Tariff quotas

The following tariff quotas were retained for certain agricultural products imported into the customs territory of the Eurasian Economic Union: fresh and chilled beef, frozen beef, fresh, chilled or frozen poultry, certain types of milk whey. Tariff quotas for trimmed pork and fresh, chilled and frozen pork were replaced by an ad valorem rate of 25% from January 1, 2020. Decision No. 102 of

the Board of the EEC dated 18.08.2020, establishing the volume of tariff quotas for 2021, provides that the distribution among exporters from third countries is to be made in accordance with national legislation of the Russian Federation and its obligations before the WTO.

Amendments have been made to the rates of export customs duties approved by the RF Government Decree No. 754 of August 30, 2013, by the RF Government Decree No. 2096 of December 14, 2020. According to the amendments, the list of export customs duty rates on wheat, rye, barley and corn is set out in a new version. As from February 15 through June 30, 2021, an export duty rate of €25 per ton was applied to wheat, exported within tariff quota. For rye, barley and corn exported within the specified period within the tariff quota, the export duty rate was 0% of the customs value.

From February 15 to June 15, 2021 inclusive, exports of the above goods in excess of the tariff quota was subject to a duty of 50% of the customs value of the exported products, but not less than €100 per ton.

In order to stop the diversion of fertilizers from the domestic market to foreign ones, given the emerging deficit there, the RF Government Decree No. 1910 of November 3, 2021 introduced a temporary quantitative restriction on exports of certain types of fertilizers. From December 1, 2021 through May 31, 2022, a quota was imposed on exports of nitrogen fertilizers outside Russia to countries outside the EAEU, not exceeding 5.9 mn tons, and 5.35 mn tons for complex fertilizers. The Ministry of Industry and Trade in conjunction with the Ministry of Agriculture is responsible for distributing the volumes among exporters. Russia is the largest producer and exporter of mineral fertilizers: over 70% of mineral fertilizers produced are exported. It should be noted that the export quotas approved by the government are generally not significantly lower than the average export of such fertilizers: Russia annually exports around 14 mn t of nitrogen fertilizers and up to 11 mn t of complex fertilizers to the global market, i.e. 7 mn t and 5.5 mn t respectively in a half-year.

Non-tariff regulation

According to the data provided in the Register of restrictive measures,[1] as of December 1, 2021, 189 measures restricting access of Russian goods to foreign markets were identified. These are primarily the introduction of antidumping duties that account for 28% of the total number of introduced measures, 13.8% were sanitary and phytosanitary measures (SPS measures), 11.6% were special protective duties, 10.6% — technical barriers to trade (TBT measures) (*Table 26*).

As on January 1, 2022, there were 26 investigations (including 3 countervailing, 11 anti-dumping and 12 special protective measures), 12 reviews of antidumping measures and 2 reviews of special protective measures, as well as 2 agreements on suspension of antidumping investigations in the USA (regarding uranium products and thick plate steel) in respect of Russian goods.

1 URL: http://www.ved.gov.ru/mdb/information/database/

Table 26

Market protection measures taken by third countries for goods from the Russian Federation

Restrictive measure	2014	2015	2016	2017	2018	2019	2020	2021
Anti-dumping duty	40	39	40	43	48	50	51	53
Special protective duty	9	15	17	13	21	26	23	22
Countervailing duty	–	1	1	1	1	1	1	3
TBT measures	9	9	10	15	14	17	17	20
SPS measures	3	7	11	17	31	38	33	26
Quotas (including tariff quotas)	2	3	3	3	6	4	4	6
Discriminatory excise taxes	5	4	5	7	5	4	3	3
Locked in for import	4	3	4	6	8	9	12	10
Threats to put in place measures	5	5	5	8	7	7	8	7
Other non-tariff measures	25	24	29	30	29	36	51	39
TOTAL	102	110	125	143	170	192	203	189

Source: Register of restrictive measures as of December 1, of the corresponding year.

As part of the EU "sanctions" policy, the United States, Japan, Ukraine, Switzerland, Norway, Australia, Iceland, Liechtenstein, Montenegro, and Albania imposed a ban on the import of goods originating from the Republic of Crimea and Sevastopol. In addition, "sanctions" restrictions in connection with the events in Crimea and eastern Ukraine were imposed on a number of Russian organizations and individuals by the European Union, the USA, Canada, Japan, Ukraine, Switzerland, Norway, Australia, New Zealand, Iceland, Liechtenstein, Montenegro, and Albania.

Measures to protect the domestic market

Application of protective measures in the Eurasian Economic Union is regulated by Articles 48—50 of the Treaty on the Eurasian Economic Union of May 29, 2014 and the Protocol on the application of special protective, antidumping and countervailing measures in relation to third countries (Annex No. 8 to the Treaty on the Eurasian Economic Union). As of December 2021, there were 22 measures to protect the domestic market in the EAEU (*Table 27*).

Table 27

Protective measures of domestic market effective in EAEU

№	Commodity	Commodity heading TN VED EAEU	Country exporter	Type of measure
AD-1	Some types of steel pipes	7304, 7305, 7306	Ukraine	Antidumping
AD-8	Polymer coated rolled metal products	7210, 7212 , 7225	PRC	Antidumping
AD-11	Cold-deformed seamless stainless steel pipes	7304	PRC; Malaysia	Antidumping

№	Commodity	Commodity heading TN VED EAEU	Country exporter	Type of measure
AD-7	Forged steel rolls for rolling mills	8455	Ukraine	Antidumping
AD-14	Kitchen appliances and cutlery made from corrosion resistant steel	8211, 8215	PRC	Antidumping
AD-16	Seamless pipes for drilling and operation of oil and gas wells	7304	PRC	Antidumping
AD-17	Tracked bulldozers	8429	PRC	Antidumping
AD-18	Truck tires	4011	PRC	Antidumping
AD-21	Stainless steel pipes	7304	Ukraine	Antidumping
AD-20	Ferrosilicon manganese	7202	Ukraine	Antidumping
AD-22	Angle iron	7216, 7228	Ukraine	Antidumping
AD-3	Rolling bearings (except needle roller bearing)	8482	PRC	Antidumping
AD-9	Graphitized electrodes	8545	India	Antidumping
AD-24	Cast-aluminium wheels	8708	PRC	Antidumping
AD-23	Herbicides	3808	EU	Antidumping
AD-26	Galvanized steel sheet	7210, 7212, 7225	Ukraine; PRC	Antidumping
AD-27	Hot-worked corrosion-resistant seamless pipes	7304	PRC	Antidumping
AD-28	Aluminum strip	7606	Azerbaijan; PRC	Antidumping
AD-30	Welded stainless steel pipes	7306	PRC	Antidumping
AD-29	Spring plate spring	7320	PRC	Antidumping
AD-32	Aluminium ware	7615, 7616	PRC	Antidumping

Source: URL: http://www.eurasiancommission.org/ru/act/trade/podm/investigations/Measures.aspx

Import bans and restrictions

The RF Government Decree No. 684 dated 30.04.2021 introduced a temporary ban on exports of buckwheat, buckwheat groats and crumbled buckwheat grain. The export restriction is put in place "in order to preserve the necessary volumes of buckwheat and buckwheat groats on the domestic market and to avoid sharp price fluctuations." According to the document buckwheat was included in the list of goods vital for the domestic market of the Russian Federation.

The ban was effective from June 5 through August 31, 2021. The exceptions are humanitarian aid to foreign states, export of buckwheat from Russia in the interests of the Russian Defense Ministry, as well as in cases when buckwheat is transported from one region of Russia to another through a foreign country.

According to the Union of Grain Exporters, the largest buyer of Russian buckwheat last year was China – 26,200 tons. The second place went to Latvia with 14,300 tons of buckwheat, and the third place went to Ukraine (13,200 tons). In addition, 9,800 tons were delivered to Lithuania, 8,500 tons to Japan.

In accordance with the RF Government Decree No. 1035 dated 28.06.2021, the list of products that are prohibited to be imported into the Russian Federation from Ukraine was expanded. The list of previously banned products was supplemented

with sugar, pasta, mayonnaise, ketchup, sauce products, flavor additives and mixed seasonings, soups and prepared broths, as well as preparations for their preparation, mineral water and carbonated water containing sweetening and flavoring substances, ice cream and other types of food ice, muesli based on roasted cereal flakes among other.

According to the Forest Complex Development Strategy, by 2030, it is necessary to increase the contribution of the forest industry in the country's economy and Russia's share in the world market of forest products. One of the main tasks was the transfer of the domestic timber industry from the export of round timber to the deep processing of timber. For this purpose, in accordance with the executive order of the President of the Russian Federation from January 1, 2022 a ban on export of unprocessed and roughly processed wood of coniferous and valuable hardwoods was put in place.

In August 2014, Executive Order of the President No. 560 as of 06.08.2014 "On application of certain special economic measures in order to protect the security of the Russian Federation" introduced a ban on import of certain types of agricultural products, raw materials and foodstuffs from the countries that imposed sanctions against Russia. Certain products, agricultural products and raw materials — beef, pork, fish, most vegetables, sausages, cheese, etc. are restricted for import into Russia. (Russian Government Decree No. 778 of September 7, 2014). As the sanctions imposed by foreign countries persisted, the Russian Federation extended its retaliatory measures as well. The Executive Order of the President of the Russian Federation dated 20.09.2021 No. 534 "On prolongation of certain special economic measures adopted to protect the security of the Russian Federation" extended the effectiveness of food embargo through December 31, 2022.

4.7. Russia's participation in WTO trade disputes[1]

4.7.1. Overall situation concerning World Trade Organization (WTO)

The WTO system, in particular the mechanism for resolving trade disputes, has been in crisis for five years now. The main reasons are as follows: growth of protectionism, trade wars, the COVID-19 pandemic, systemic challenges, primarily freezing of the Appellate Body (AB). According to the U.S., AB goes beyond its authority, sometimes making decisions outside of WTO law, posing rights or obligations for member countries that are not provided for by existing WTO agreements, violates the deadlines for appellate review. The U.S. blocked decisions to appoint new AB members. Many WTO member countries agree on the need for reforms.[2] A temporary solution to the protracted issue of the WTO trade

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2 See in detail. URL: https://www.iep.ru/ru/publikatcii/publication/rossiyskaya-ekonomika-v-2020-godu-tendentsii-i-perspektivy-vypusk-42.html

dispute mechanism states that when initiating a dispute, it is necessary to agree with the other party before forming an arbitral group (AG) that:[1]

- either AG decision will be recognized as final;
- or further arbitration will be conducted under an alternative scheme (e.g., according to Multi-Party Interim Appellate Arbitration Arrangement (MPIA), which entered into force in April 2020).[2]

According to experts, despite domestic difficulties, the WTO has no alternative in the regulation of international trade relations. Countries fear what will happen to the multilateral trading system and the WTO, and whether the United States will withdraw from the organization. It is noted that even those countries which have numerous free trade agreements (FTA) think that they won't be able to solve their problems without the WTO.[3]

In 2021, discussions on ten issues to improve the Understanding on Rules and Procedures Governing the Settlement of Disputes (URPGSD) have been completed and negotiations reached a critical juncture. WTO member countries that are more involved in trade disputes as principal parties (plaintiff or defendant) tend to be the most involved in such negotiations. There were 12 issues under negotiations[4]:

1) notices of mutually agreed decisions;

2) rights of third parties;

3) protection of strictly confidential information;

4) consistency of application of Art. 21.5 (Monitoring the Implementation of Recommendations and Decisions) and Art. 22.2 (Compensation and Suspension of Facilities) of the URPGSD;

5) situation after the authorized application of the retaliatory measure;

6) transparency and documents submitted by "friends of the court";

7) procedural timelines;

8) procedure for returning an unresolved issue to AB for reconsideration by the original AG;

9) establishment of AG;

10) effective implementation of decisions and recommendations of the Dispute Settlement Body (DSB);

11) interests of developing countries;

12) flexibility and control by WTO members and additional guidance to the WTO judiciary.

Further to the discussions, questions were divided into two groups[5], on which WTO members have to:

- conduct additional work;
- be more flexible in negotiations.

1 URL: https://www.wto.org/english/news_e/news20_e/ddgaw_30oct20_e.htm
2 URL: https://trade.ec.europa.eu/doclib/press/index.cfm?id=2176
3 URL: https://1prime.ru/world/20211216/835523866.html
4 URL: https://wto.ru/our-blog/peregovory-po-uluchsheniyu-dogovorennosti-o-razreshenii-sporov-dostigli-kriticheskogo-rubezha/
5 URL: https://wto.ru/our-blog/peregovory-po-uluchsheniyu-dogovorennosti-o-razreshenii-sporov-dostigli-kriticheskogo-rubezha/

The WTO highlights two possible trends for further negotiations: aimed at comprehensive agreement to improve the URPGSD covering these 12 issues, or aimed at a less ambitious solution on one or more issues that improve the URPGSD, and this partial result could be an amendment to the URPGSD legally binding enforceable rules) or an DSB decision (rules that are not binding and are not directly enforceable in the WTO dispute settlement mechanism). Given the difficulty of reaching consensus on all elements of the issues under discussion, the need for horizontal negotiations is noted.[1]

4.7.2. Russia and the WTO trade dispute settlement mechanism

Russia joined the World Trade Organization (WTO) on August 22, 2012, including the WTO trade dispute settlement mechanism. Such a mechanism operates in accordance with the Understanding on Rules and Procedures Governing the Settlement of Disputes (URPGSD).[2] Thus, since August 2012 Russia has the right to protect its interests in trade through this instrument. The WTO dispute settlement procedure consists of five main successive stages:[3]

1) *bilateral consultations* (within 60 days from the date of request for consultations);

2) establishment of an Arbitration group (*AG*) at the request of any disputing party and approval of its members to consider the point of argument (45 days from the date of the request to establish an Arbitration group);

3) *operations of Arbitration Group* (6—9 months from the start of the Arbitration Group) and the adoption of the Arbitration Group report by the Dispute Resolution Body (DRB) and DRB recommendations (approximately 60 days from the date the Arbitration Group report is submitted);

4) *hearing of a case by the Appellate Body* (*AB*), if at least one of the parties to the appeal (60-90 days from the date of filing an appeal) submits an appeal, adoption of the report of the Appellate Body of DRB and announcing DRB recommendations to the parties (30 days from the date of receipt of the Appellate Body report);

5) *DRB control* over the implementation of recommendations (no more than 15—18 months from the date of DRB adoption of the report AG or AB).

Russia continues to actively participate in the WTO trade dispute settlement system. As of late 2021, Russia was involved in 114 WTO disputes: in 8 cases as plaintiff, in 10 cases as defendant and in 96 cases as third party. In 2021, Russia did not initiate any disputes, but it had nine new disputes at the WTO — one as defendant and eight as third party.

In the majority of cases, Russia participates as a principal party in WTO disputes with the EU, Ukraine, and the USA. As a plaintiff, Russia is interested in anti-dumping investigations and measures, in particular in the metallurgical and chemical industries. Countries file complaints against Russia on TBT, SPS measures, anti-dumping measures, investment measures affecting trade, tariffs,

1 URL: https://wto.ru/our-blog/peregovory-po-uluchsheniyu-dogovorennosti-o-razreshenii-sporov-dostigli-kriticheskogo-rubezha/
2 URL: https://www.wto.org/english/tratop_e/dispu_e/dispu_e.htm
3 URL: https://www.iep.ru/files/text/trends/2019/04.pdf

transit restrictions, import substitution. *Table A.1* in the Annex presents WTO disputes where Russia acts as a major party.

As a third party, Russia usually participates in disputes on goods of the metallurgical industry, agriculture and foodstuffs, automobile and aircraft industry, as well as RES and timber and wood products. Special attention is paid to disputes over anti-dumping investigations and measures, as well as subsidies and countervailing measures. Russia's participation as a third party is related not only to its substantial trade interest, but also to the practice of participation in specific disputes (in particular in disputes over protective investigations and measures), systemic interest of applying the WTO rules and regulations; sometimes Russia takes a position similar to that of a defendant (to protect life and health of people and animals). Some of the disputes where Russia acts as a third party have already ended and in some cases, Russia has benefited (directly or indirectly) from participation in such disputes.

According to Maxim Medvedkov, former director of the Department of Trade Negotiations of the Ministry of Economic Development of Russia, it is difficult to estimate the material benefit for Russia from joining the WTO because of the impact of Western sanctions on the economy and retaliatory measures, as well as the pandemic of coronavirus. Although the membership in the international organization opened new opportunities for our country, there are still tasks that have not yet been solved. Russia's position in the WTO, defensive during negotiations of our affiliation, is gradually becoming more assertive because the need to get the access to foreign markets requires more active actions within the WTO.[1]

Even despite the current operational challenges WTO remains a multilateral institution having essential functions of monitoring international trade, negotiating new trade rules and protecting the interests of its members through the dispute settlement mechanism. Russia should continue to advocate for the maintenance of WTO as the foundation of the multilateral trading system, in particular, to participate in finding ways out of the trade dispute settlement crisis, especially by making progress in negotiating new commitments under URPGSD, which would improve the WTO trade dispute settlement system.

4.7.3. Russia as plaintiff

DS554: Special protective measures for steel and aluminum products (USA)

On June 29, 2018. Russia has submitted a request to DSB for consultations with the United States on protective measures on steel and aluminum products imposed in the spring of 2018. According to Russia, the U.S. imposed measures on steel and aluminum products in violation of GATT 1994 and the Agreement on Special Protective Measures: they granted certain countries benefits and privileges that did not apply to other countries, imposed import restrictions other than duties, taxes or other charges through quotas, failed to justify the imposition of emergency measures, did not send a prompt written notice, and disallowed

1 URL: https://www.tks.ru/reviews/2021/12/16/04

consultation. In 2017, 13% of Russian steel and aluminum exports (FEACN 72, 73, and 76) went to the U.S., and Russia's share of U.S. imports was 32%.[1] China (DS544), India (DS547), the EU (DS548), Canada (DS550), Mexico (DS551), Norway (DS552), and Switzerland (DS556) initiated similar disputes against the US, most of which Russia joined.

On November 21, 2018, the AG was established. On February 4, 2021, the chair of the group informed the DSB that due to delays caused by the COVID-19 pandemic, the AG plans to release its final report to the parties no earlier than H2 2021.

4.7.4. Russia as a defendant

DS604: Russia – Certain measures with regard to domestic and foreign goods and services (EC) [2]

On July 22, 2021, the EU submitted a request to the WTO for consultations with Russia on a number of measures which lead to discrimination of foreign suppliers by Russian state companies.[3] On November 17, 2021 the EU submitted a request to the DSB to establish an AG, and on December 20 it was established.

Since 2015, Russia has been gradually expanding its import substitution policy, which, among other things, is aimed at reducing the share of foreign goods and services in the procurement of state organizations and investment projects supported by the state. In 2019, (the year before the pandemic), the value of published tenders by state-owned enterprises was Rb 23.5 trillion (about Euro 290 bn) in Russia corresponding to about 21% of Russia's GDP.[4] The main legal acts regulating import substitution in procurement include Federal Law No. 223-FZ "On Procurement of Goods, Works and Services by Certain Legal Entities" of July 18, 2011 and Federal Law No. 488-FZ "On the Industrial Policy of the Russian Federation" of December 31, 2014. The EU challenges Russia's measures that relate to non-governmental procurements made by a wide range of government-related entities that are not government agencies (including state-owned enterprises and state trading enterprises) (*see Table 28*).

Russia is not a member of the WTO Agreement on Government Procurement (GPA), but since 2013 it is an observer and is negotiating about joining the agreement. The GPA does not apply to the procurement of goods and services for the purpose of commercial sale/resale and for use in the production of goods and services for the same purposes (Article 2 of the GPA).

The Ministry of Economic Development of Russia is ready to show compliance with WTO rules of those aspects of Russian procurement regulations, which raise doubts in the EU.[5] Experts of RANEPA note that Russia may refer to the need to

1 Data base UN COMTRADE // URL: http://comtrade.un.org/
2 URL: https://www.vavt-imef.ru/wp-content/uploads/2021/10/Monitoring_74.pdf
3 URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds604_e.htm
4 URL: https://wto.ru/news/es-initsiiroval-spor-v-vto-iz-za-diskriminatsii-goskompaniyami-rf-inostrannykh-postavshchikov/
5 URL: https://wto.ru/news/v-mer-zayavili-o-gotovnosti-rossii-provesti-konsultatsii-s-es-po-sporu-o-goszakupkakh/

ensure national security in the part of vital industries or MIC. Also, according to experts, the consequences of the EU dispute against Russia over discrimination against foreign suppliers by Russian state-owned companies present reputational risks.[1] If the decision on the dispute is not in favor of Russia, additional retaliatory measures are possible.

Table 28

Russia's import substitution measures challenged by the EU (DS604)

Measures	Description	WTO provisions violated, according to the EU
Price preferences	Russia prefers domestic goods and services in the procurement of a wide range of state-related entities, including state-owned enterprises and state trading enterprises. Price preferences of 15% (30% for radio-electronic products) of the offered price for domestic goods and services are applied at the stage of evaluation. These preferences significantly increase the chances of Russian suppliers to win the tender. If the bid containing domestic goods or services selected, then the full price will be paid. Goods and services of foreign companies are evaluated less favorably than those of domestic companies. The EU disputes the measure because it does not apply to state procurement and is related to the support of commercial activities of state-owned enterprises.	• Paragraph 2 of the Protocol of Accession of Russia to the WTO and paragraphs 98, 99, 1450 of the Report of the Working Party on accession of the Russian Federation to WTO; • Art. III (national treatment of domestic taxation and regulation), Art. XI (general withdrawal of quantitative restrictions) and Art. XVII (state trading enterprises) of GATT 1994; • Article XIII (Government procurement) and Article XVII (National Treatment) of GATS.
Obtaining pre-approval	Russian companies wishing to buy certain engineering products abroad need to obtain non-automatic permission from the Russian State Commission for Import Substitution. According to the EU, the procedure lacks clear, transparent, objective criteria, however, goal of replacing imported engineering products by domestic equivalents is clear. Such approval is not required for purchasing domestic engineering products. This measure applies to purchases for specific investment projects supported by the state (including private companies without or with limited state participation).	
Minimum quotas for domestic products	Russia introduced minimum quotas for domestic goods in purchases by state-owned enterprises, state trading organizations and other state-related entities. In particular, this measure requires minimum shares of goods of Russian origin as a percentage of the total volume of goods purchased annually per customer in a given year. The minimum share is from 1 to 90% of purchases depending on goods, while for many products this share will increase from year to year, starting in 2021. Quotas apply to about 250 goods.	

Source: URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds604_e.htm

1 URL: https://rg.ru/2021/07/20/chem-groziat-rossii-pretenzii-evrosoiuza.html

On the whole, the policy of EU and some other countries, including the U.S., is largely aimed at reducing the role of the state in the economy of individual countries, primarily Russia and China. Issues of market economies can be mentioned, including anti-dumping investigations; pricing in different domestic markets, for example in Russia for raw materials; providing subsidies strictly regulated by WTO, etc. The U.S. saw import substitution and preferences for Russian domestically produced goods and services as a violation of WTO norms and rules. The U.S. believes that Russia continues to deviate from fundamental WTO principles such as non-discriminatory practices, more open trade, predictability, transparency and fair competition. This puts U.S. businessmen at a disadvantage economically and deprives them of fair competition. The main U.S. claims about Russia's compliance with its WTO commitments, include among others that Russia:[1]

- practices preferences for domestic goods and services;
- maintains import restrictions in the agricultural sector unrelated to science and refuses to recognize other countries' guarantees for export capacity;
- implements an import substitution program in the IT sector;
- expands government control over economy and tightens restrictions on trade.

4.7.5. Russia as a third party

As of the end of 2021, Russia is or was involved as a third party in 96 WTO trade disputes (*Table A.2* in the Annex). About 41% of these disputes were concluded in one way or another.

In 2021, Russia joined 8 disputes on antidumping and countervailing measures two of them related to sanitary and phytosanitary measures (SPS), one concerned subsidies and export restrictions and one dealt with renewable energy sources (RES). Sometimes formally different several disputes on behalf of different plaintiffs are related to the same measures of the defendant (below we will consider some "unique" cases, which represent 74 out of 96 disputes).

Most often, Russia joins disputes on measures affecting agricultural and food products, metallurgy, automobile and aircraft industry, chemical industry, timber and wood products, and renewable energy sources. As for agreements that cover disputes to which Russia has joined as a third party (one dispute usually covers several agreements), *Fig. 30* shows a respective distribution by subjects according to data as of the end of 2020. Typically, the majority of disputes are related to GATT, as well as the Agreements on Antidumping and Subsidies and Countervailing Measures. Moreover, Russia is also interested in violations of the Agreement on Special Protective Measures and the Agreement Establishing the WTO.

First of all, let's look at the year changes of WTO disputes, to which Russia joined as a third party before 2021 (ref. 13 unique disputes).

1 URL: https://www.rbc.ru/economics/22/12/2021/61c269229a7947b0aadb099b?from=from_main_6

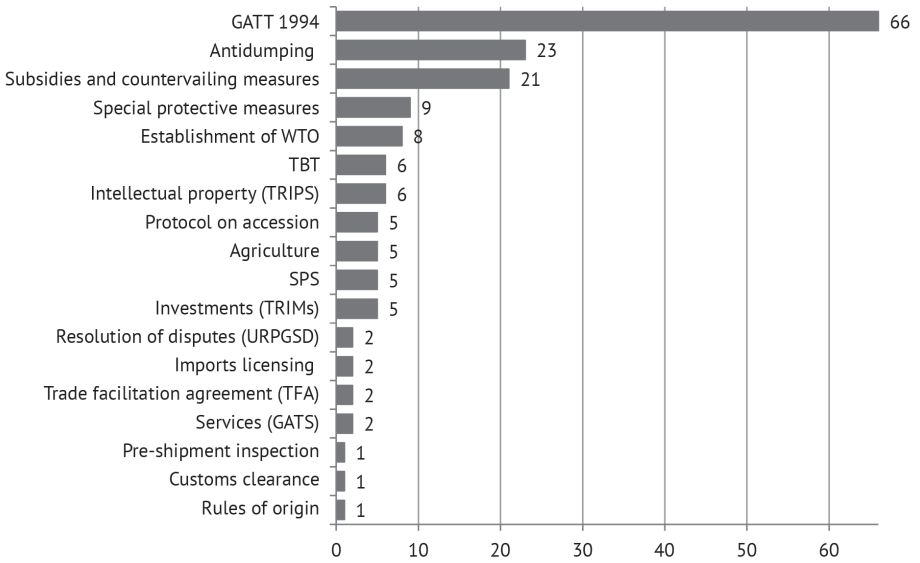


Fig. 30. Topics on WTO dispute agreements, which Russia has joined as a third party, as of the end of 2021.

Source: own estimates according to data of the WTO official website – URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds462_e.htm

DS517: China – tariff quotas for agricultural products (USA)

At the end of 2016, The U.S. filed a request for consultations with China on tariff quotas on wheat, certain types of rice, and corn.[1] The U.S. believes that China violated its obligations under the WTO's Protocol of Accession because tariff quotas on wheat, rice, and corn are not applied in a transparent, predictable, and equitable manner. The U.S. believes China violated GATT 1994 because it imposed import bans or restrictions other than duties, taxes, or other charges and failed to provide public notice of the quantities allowed to be imported under each tariff quota and their changes. On February 12, 2018, AG was established at the request of the United States.

On April 18, 2019, the AG report was circulated to members. The AG ruled that China violated WTO obligations in administering tariff quotas. In particular, basic eligibility criteria, allocation principles, redistribution procedures, and the public consultation process were inconsistent with commitments to administer tariff quotas in a transparent, predictable, and equitable manner and using clearly defined requirements. The AG rejected some U.S. claims, for example that Article XIII:3(b) (National Treatment of Domestic Taxation and Regulation) of GATT 1994 requires public notice of total tariff quotas available for allocation and any respective changes rather than total amount of tariff quotas actually allocated.

1 URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds517_e.htm

On June 24, 2019, China informed the DSB that it intended to implement its recommendations to bring measures into compliance with its WTO commitments within a reasonable period of time, which was prolonged up until June 29, 2021. On July 15, 2021, the U.S. filed a request with the DSB to suspend concessions or other commitments because China had not brought its measures into compliance within a reasonable period of time. On July 23, 2021, China objected to the U.S. proposed level of suspension of concessions and the matter was submitted to arbitration. On July 15, 2021, China submitted a request to DSB to establish a compliance commission, and it was established on August 30, 2021. Russia and other countries joined as third parties.

Russia has a significant trade interest, as the share of disputed goods exported from Russia to China in total Russian exports of these goods fell from 7% in 2012 to 0.2% in 2016, and in dropped in rice from 16 to 0.7%.[1]

DS537: Canada – Measures regulating sale of wine in grocery stores (Australia)

Australia, being a major wine supplier, including to Canada (8% of Canadian wine imports and 7% of Australian wine exports in 2017),[2] filed a request for consultation with Canada on January 12, 2018 regarding the sale of wine in grocery stores, challenging the priority of domestic wine for display.[3] The U.S. has also filed complaints against Canada on this issue (DS520 and DS531 disputes).

On May 29, 2020, Australia and Canada agreed to arbitration procedures under Article 25 of the URPGSD in accordance with MPIA.[4]

In spring 2021, the parties informed the AG that they had reached a mutually agreeable solution. On May 25, 2021, the AG sent out a report. Pursuant to Article 12.7 (Arbitration Panel Procedures) of the URPGSD, the AG report was limited to a brief description of the case and an announcement on reaching a solution.

Since Russia does not export wine to Canada, the interest to participate was not based on a substantial trading interest, rather on the unusual nature of the claim and the practice of participating in such a dispute.[5]

DS538: Pakistan – Anti-dumping measures against BOPP film from the UAE (UAE)

At the end of January 2018, the UAE filed a request for consultations with Pakistan on anti-dumping measures against biaxially oriented polypropylene film (BOPP film).[6]

According to the UAE, the anti-dumping investigation was conducted in violation of the GATT and the Anti-Dumping Agreement. For example, there was not enough precise evidence to launch an anti-dumping investigation and therefore the application for such an investigation by the industry in Pakistan should have been rejected.

1 Data base UN COMTRADE // URL: http://comtrade.un.org/
2 Ibid.
3 URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds537_e.htm
4 URL: https://trade.ec.europa.eu/doclib/press/index.cfm?id=2176
5 URL: https://www.iep.ru/files/text/trends/2018/04.pdf
6 URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds538_e.htm

The AG began its work in May 2019. On January 18, 2021, the AG report was sent out. The UAE challenged the April 9, 2015 imposition of anti-dumping duties as well as the December 1, 2016 decision on law termination, which extended the anti-dumping duties for five years. The AG concluded that the April 9, 2015 final decision was inconsistent with the provisions of the Anti-Dumping Agreement. In particular, the anti-dumping investigation was initiated based on several years old evidence without explaining the rationale behind it or seeking more recent evidence that affected the assessment of damages, dumping imports, dumping margins and anti-dumping duties. Pakistan has not objectively considered whether the volume of dumped imports increased significantly in absolute terms and in relation to domestic production and whether dumped imports had an impact on prices of similar goods. Pakistan did not assess all factors of damage and failed to objectively estimate the impact of dumping imports on the domestic industry. There were other violations as well. The AG rendered that the December 1, 2016 termination decision violated Article 11 (Duration and Review of Antidumping Duties and Price Commitments) of the Antidumping Agreement because Pakistan relied on dumping margins calculated in violation in determining the likelihood of continued or repeated dumping and damage and failed to complete the review before the expiration date within 12 months of initiation in the absence of abnormal circumstances. The AG recommended that Pakistan lift the anti-dumping measures against imports of BOPP film from the UAE. On February 22, 2021, Pakistan appealed to the Appellate Body, whose activities have been frozen.

Pakistan also conducted anti-dumping investigations against Russian companies, however, they did not result in the imposition of relevant measures. They related to hot-rolled coils (the investigation was initiated in early April 2009 and completed in late February 2011) and phthalic anhydride (initiated in mid-February 2016 and completed in mid-December 2017).[1]

DS539: USA – Anti-dumping and countervailing measures on certain goods and use of available facts in related investigations (Republic of Korea)

On February 14, 2018, the Republic of Korea has filed a request with DSB for consultations with the U.S. regarding anti-dumping and countervailing measures on certain products and use of available facts in related investigations.[2] The Republic of Korea disputes the practice of using "adverse available facts" in anti-dumping and countervailing investigations, under which the U.S. believes that Korean producers or exporters cannot cooperate in the best possible way and use not the best available facts in determining dumping and/or subsidization, which has an impact on other aspects of the investigation and the amount of relevant duties.

In mid-April 2018, Korea submitted a request to establish AG and at the end of May 2018 it was set up and began its operations on December 5, 2018. On January 21, 2021, the AG sent out a report. In all but two cases involving U.S. use of "available facts" disputed by Korea, the AG concluded that conditions for

1 URL: http://i-tip.wto.org/goods/
2 URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds539_e.htm

lawful recourse to "available facts" were not met. Specifically, with respect to four investigations, the AG found that the U.S. had resorted to "available facts" inconsistent with Article 6.8 (Evidence) of the Antidumping Agreement because: it failed to specify the detailed information required of the party concerned or it failed to take into account verifiable information that was properly and timely submitted, or it failed to immediately inform the party concerned of the reasons for not accepting certain information submitted by such party and it failed to provide that party the opportunity to provide additional explanation within reasonable period of time. In another investigation, the AG also supported Korea and held that the U.S. had improperly set a ceiling on "all other" bets based on the margin established under the mentioned circumstances. In two cases where the AG rejected Korea's pre-trial claims and found that the U.S. nevertheless acted improperly in choosing the substitution facts because it did not consider all the previous information.

The AG rejected Korea's claims about the "per se" nature of the measure, as the challenged measure should be properly described as a "rule or norm" rather than a form of "persistent conduct. The AG found that Korea failed to prove the existence of the properly described unwritten measure to which it referred. On March 19, 2021, the U.S. appealed to the AG, whose operations have been frozen.

In April 2017, the U.S. initiated an anti-dumping investigation against Russian companies on hot-roll rods.[1] Therefore, Russia is interested in methodologies used by the U.S. in anti-dumping investigations and it has previously joined the disputes against the U.S. with regard to U.S. methodologies used in anti-dumping investigations.

DS542: China – certain intellectual property rights protections (U.S.)

On March 23, 2018, the U.S. asked DSB to consult with China on intellectual property rights protections.[2] The main U.S. claim is that China denies foreign patent holders the ability to protect their patent rights in a joint venture with China after the technology transfer contract has expired. China also imposes mandatory adverse contract terms that are discriminatory and less favorable to the imported foreign technology. Therefore, China denies foreign rights holders the right to protect their IP rights in China and to freely negotiate market terms in licensing and other technology-related contracts.

The AG began its work in mid-January 2019, but early June 2019, the U.S. requested that AG suspend the proceedings until December 31, 2019, a request that China agreed to. The AG informed the DSB of its decision to comply with the U.S. request and suspend its work. Under Article 12.12 (Arbitration Panel Procedures) of the URPGSD, the AG's authority lapses after 12 months of suspension. On December 23, 2019, the U.S. requested that the AG be further suspended until February 29, 2020, which expired on June 9, 2021.

Russia's participation in this dispute is defined not only by its interest to analyze the consequences of the trade war between the United States and China,

1 Data base UN COMTRADE // URL: http://comtrade.un.org/
2 URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds542_e.htm

in which Russia also takes part (steel and aluminum), but also by a high demand in terms of Russia's participation in contracts with China related to technologies and the critical issue of protecting the rights of Russian technology suppliers in this context.

DS548: USA – Certain measures for steel and aluminum products (EU)

In the spring and summer of 2018, several countries, including the EU (June 1, 2018),[1] filed requests to consult with the U.S. on measures on steel and aluminum products. In the fall of 2018, plaintiffs requested the establishment of AG to resolve these disputes, and the AG started working on January 25, 2019. Russia also filed a related complaint against the U.S. in late June 2018 with the DSB regarding these measures (DS554).

On November 8, 2021, the AG informed the DSB that it had granted the EU's request of November 4, 2021, to which the U.S. agreed, to suspend the AG in accordance with Article 12.12 of the URPGSD (Procedure for Arbitration Groups) until December 17, 2021.

The U.S. did the same (ref. DS559).

DS553: Republic of Korea – Reconsideration in connection with the end of anti-dumping measures for stainless steel bar stock (Japan)

The AG was established in October 2018, and on November 30, 2020, AG report was filed on the dispute initiated by Japan in mid-June 2018 against the Republic of Korea regarding the review in connection with the end of anti-dumping measures on stainless steel bar stock.[2] According to Japan, this review was conducted by Korea in violation of the Anti-Dumping Agreement and the GATT because, among other things, Korea failed to properly determine the rationale to continue introducing anti-dumping measures that the expiration of measures would result in continued or repeated damage.[3] The AG found that Korea failed to reconcile the contradictions in its conclusions. On the one hand, AG found that the price level in Japan after duties have expired would weaken Korea's price competitiveness and growth of Japanese imports. On the other hand, it found that Korean market was price sensitive and that the price level in Japan would remain significantly higher than prices in Korea and third countries even if the duties were lifted. This contradiction was reinforced by Korea's conclusion that a large volume of low-priced imports from third countries was already present and exerting price pressure on the Korean market. By failing to explain how significantly more expensive imports from Japan could weaken Korea's price competitiveness, Korea failed to resolve the contradictions in its conclusions and failed to conduct an "impartial and objective" assessment of the facts, violating Article 11.3 (Duration and Revision of Antidumping Duties and Price Commitments) of the Antidumping Agreement.

1 URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds548_e.htm
2 URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds553_e.htm
3 URL: https://www.iep.ru/files/text/trends/2019/04.pdf

Japan also argued that Korea had failed to consider factors that could explain the likely recurrence of harm instead of the termination of duties on Japan: the impact of high volume of low-priced imports from third countries; the cost of raw materials; and weak demand in domestic and export markets. The AG decided not to consider the first factor because it had already been considered in assessing the price and volume impact claims. On the other factors, the AG concluded that Japan had failed to establish non-compliance with Art. 11.3. The AG found that Korea had violated Art. 6.8 (Evidence) and 11.3 by rejecting Japanese exporters' production capacity data on the grounds that they did not comply with new parameters of which they had not been informed. The AG agreed with Japan that Korea failed to ensure that there was "good reason" for treating pieces of information as confidential, while noting that Korea's overall system for protecting information as confidential had merits. On January 22, 2021, Korea decided to appeal against the AG, whose work is suspended.

Korea's anti-dumping measures on kraft paper were in effect against Russian companies from October 27, 2008 through April 9, 2015. Participation in the dispute was due to important for Russia practice of dispute resolution on protective measures.[1]

DS559: EU – Additional duties on certain U.S. goods (USA)

On July 16, 2018, the U.S. submitted requests to DSB to consult with a number of countries, including the EU, on additional duties (increased import tariffs on U.S. goods in retaliation for U.S. imposition of special protective measures in terms of respective duties on steel and aluminum products).[2] On November 5, 2021, the AG informed DSB that it had granted the US request of November 4, 2021, to which the EU agreed, to suspend the AG in accordance with Article 12.12 of the URPGSD (Arbitration Group Procedures) until December 17, 2021. Russia's interest is primarily based on application of these measures also to Russian goods. Besides, Russia is involved in two disputes against the United States over safeguarding measures on steel and aluminum products, participating there as a major party (DS554 and DS566).

DS562: USA – Special protective measures on imports of crystalline silicon photovoltaic products (China)

On August 14, 2018. China submitted a request to DSB for consultation with the U.S. on a special protective measure (a 4-year tariff quota) for imports of crystalline silicon-based photovoltaic cells, whether or not they are partially or fully embedded into other products (including but not limited to modules, boards, panels and structural materials) (silicon photovoltaic products), which the US notified the WTO in late January 2018.[3] Later, on February 18, 2018, the U.S. introduced additional procedures for stakeholders requesting to exempt certain goods from safeguard measure for silicon photovoltaic goods. As of July 8, 2019,

1 URL: https://www.iep.ru/files/text/trends/2019/04.pdf
2 URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds559_e.htm
3 URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds562_e.htm

53 separate exemption requests had been submitted, 11 of which were granted and others denied.

China believes that this special protective measure is inconsistent with GATT 1994 and the Agreement on Special Protective Measures because the U.S failed to:

- prove that the increased imports were the result of "unanticipated development" and "the consequence of commitments" made by the U.S. under GATT 1994;
- prove the required "causal link" between the increased imports and major damage that was found;
- prove that the damage caused by other factors was unrelated to the increased imports;
- provide sufficient opportunity for stakeholders to participate in the investigation.

Since October 24, 2019, the AG has been litigating the case, and submitted a report on September 2, 2021. The AG dismissed all China's claims, siding with defendant, finding that China failed to prove that:

- The U.S. protective measures on silicon photovoltaic products were inconsistent with the requirement of GATT 1994 Article XIX:1(a) (Extraordinary Measures on Imports of Certain Goods) that imports increased "as a "result of unforeseeable events and the effects of commitments made."
- The U.S. acted inconsistently with Articles 2.1 (Conditions), 3.1 (Investigation), and 4.2(b) (Determination of Serious Harm or Threat of Serious Harm) of the Agreement on Special Protective Measures by failing to demonstrate the necessary "causal link" between the increased imports and the serious harm that was found;
- The United States acted inconsistently with Articles 2.1, 3.1, and 4.2(b) of the Agreement on Special Protective Measures by failing to ensure that damage caused by "other" factors was unrelated to the increase in imports;
- The U.S. acted inconsistently with Articles 3.1 and 3.2 of the Agreement on Special Protective Measures as a result of the procedural treatment of confidential information on the merits of the investigation.

On September 16, 2021, China appealed to the Appellate Body, whose work is suspended.

Russia's interest is primarily due to application of these measures to goods from Russia. In addition, Russia participates in two disputes with the United States over protective measures on steel and aluminum products, in which it is a major party (DS554 and DS566).

DS577: USA – Antidumping and countervailing measures against olives from Spain (EU)

Russia has also joined the dispute against the U.S. over antidumping and countervailing measures with regard to freshly picked olives from Spain, initiated

by the EU in late January 2019.[1] The EU's main claims are the following: the U.S. failed to prove the specificity of subsidies, the reason for imposed countervailing measures, the countervailing duty is larger than any subsidy that is imposed on freshly picked olives, no damage to the U.S. industry from the subsidized imports was shown, an appropriate causal link (similar to the anti-dumping measures), the final subsidy for a particular company was calculated incorrectly, accordingly the countervailing duty was calculated incorrectly, stakeholder received no notification on the required information or any sufficient opportunity to submit proof, the U.S. was not properly confident in the accuracy of information.

On May 16, 2019, the EU submitted a request to DSB to establish AG and AG sent out a report on November 19, 2021. The AG agreed with the EU on the definition of specificity in the countervailing investigation, finding that the U.S. acted inconsistently with Art. 2. (Specificity) of the Agreement on Subsidies and Countervailing Measures: the US definition of specificity was not based on a reasoned and adequate explanation of why access to subsidies was clearly limited to olive producers and was not clearly justified taking into account positive evidence. However, the AG found that the EU did not demonstrate that the U.S. acted inconsistently with Articles 2.1 and 2.1(a) of the Agreement on Subsidies and Countervailing Measures simply because the U.S. based its conclusions about the de jure specificity of the ripe olive countervailing duty investigation on the rules of the relevant subsidy programs governing the calculation of the subsidy amounts available to eligible enterprises. The EU did not demonstrate that the U.S. acted inconsistently with Article 2.1(a) of the Agreement on Subsidies and Countervailing Measures because the U.S. determination of de jure specificity depended on how certain alleged aspects of previous subsidy programs, no longer in effect, were incorporated and integrated into the subsidy program under consideration. The EU did not demonstrate that, indeed, the U.S. found that the subsidies under consideration were de jure specific to olive producers because they were linked to olive production. Moreover, the AG sided with the U.S. in showing that the U.S. rejection of the convergence factor arguments in the subsidy program was reasonable and based on clearly substantiated positive evidence. The absence of a formal finding of specificity under U.S. law does not undermine the U.S. definition of de jure specificity with respect to subsidy programs, and the U.S. has made sufficient factual findings to be convinced that these subsidies would be de jure specific under its domestic law if it were required to make such a definition.

The AG held that Section 771B of the Tariff Act of 1930 was per se inconsistent with GATT 1994 Art. VI:3 (Antidumping and Countervailing Duties) and Art. 10 (Application of Article VI of GATT 1994) of the Agreement on Subsidies and Countervailing Measures because it requires the U.S. to assume that the entire benefit of a subsidy granted for raw agricultural inputs flows into an agricultural product processed further according to a technological chain based on of only two factual circumstances, shutting the door for considering any other factors that may be relevant to determining whether there is any carryover. The U.S. acted

1 URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds577_e.htm

inconsistently with the above sections with respect to the application of section 771B of the Tariff Act of 1930 in the investigation of the countervailing duty on ripe olives in Spain because it was unable to prove the existence and extent of the indirect subsidy in light of all the relevant facts and circumstances of the case.

The AG rejected the EU's claims regarding the determination of damages because the EU had not demonstrated that these U.S. actions were inconsistent with the WTO agreements. On the EU's claim regarding the mandatory defendant, the final subsidy margin and the calculation of the countervailing duty rate, the AG concluded that the U.S. had acted inconsistently with the WTO agreements, for example, because the U.S. had not informed the parties concerned before the final determination that the volume of raw olive procurement processed into ripe olives was an "important fact." The AG recommended that the U.S. align its measures with its WTO commitments.

Russia's interest in this dispute can be explained due to its lawsuit against the U.S. for anti-dumping measures described earlier (DS586). Russia often joins the dispute over countervailing measures and subsidies.

DS578: Morocco — certain antidumping measures against school notebooks from Morocco (Tunisia)

On February 21, 2019, Tunisia submitted a request to DSB for consultations with Morocco regarding anti-dumping duties imposed by Morocco since the beginning of January 2019 on imports of school notebooks.[1] This is the second request submitted by Tunisia against Morocco on a similar issue (see DS555, regarding temporary antidumping duties imposed by Morocco on imports of school notebooks from Tunisia). Anti-dumping duties: 15.69% for SITPEC, 27.71% for SOTEFI and other Tunisian exporters. Tunisia's main claims are, first, that the request for the antidumping investigation did not contain sufficient evidence of dumping, damage and causation and, second, that the investigation did not adequately demonstrate dumping, damage and causation and was conducted in error, resulting in an inflated fair value and inflated anti-dumping duties.[2]

The AG filed its report on July 27, 2021. The AG agreed with Tunisia, finding that determination of Moroccan fair value was incompatible with Art. 2.2 (Determination of dumping) and that the amount charged to profits was incompatible with Art. 2.2 and 2.2.2 of the Anti-Dumping Agreement. The AG agreed with Tunisia, finding that the mathematical formula used to calculate the dumping margin did not express it for each of the Tunisian exporters who participated in the investigation. According to AG, this error resulted in an unfair comparison between the fair value and the export price of the notebooks and was contrary to Art. 2.4.

With respect to the Tunisian exporters' request for a discount because certain models were sold under license, the AG found that the exporters did not demonstrate how such a difference affected the comparability between the fair value and the export price of the notebooks. However, the AG found that Morocco failed to explain in its final decision "the reasons for accepting or rejecting the

1 URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds578_e.htm
2 URL: https://www.iep.ru/files/text/trends/2019/04.pdf

relevant arguments or claims made by the exporters" regarding the effect of the licenses on price comparability in violation of Article 12.2.2 (Public Notice and Explanation of Decisions) of the Antidumping Agreement.

The AG considered that Morocco violated Articles 3.1 and 3.2 (Determination of Damages) of the Antidumping Agreement by failing to conduct an "objective study" of price reduction and averting rising prices. Moreover, AG considered that these articles prevented the investigating authority from comparing the price of Tunisian imports with the hypothetical price of the domestic product in order to verify the underpricing. According to AG, the fact that Morocco applied this method was inconsistent with Art. 3.2. The AG also concluded that Morocco did not conduct an "objective study" of the evolution of sales, market share and domestic market productivity and profitability within Articles 3.1 and 3.4.

The AG found that the evidence submitted to the investigating authority did not prove that the competition was the cause of the damage and that Morocco had therefore not violated Articles 3.1 and 3.5. The AG concluded that, although Article 5.2 (Initiation and Follow-up of an Investigation) of the Antidumping Agreement specifies the content of the appeal, it does not impose any direct obligation on the investigating authority. However, it considered that the investigating authority was obliged by Article 5.3 to verify the accuracy and adequacy of the evidence provided in the appeal to determine whether there was sufficient evidence to justify the initiation of an investigation. The AG found that Morocco did not adequately verify the evidence related to export price, fair value and specific adjustments. On July 28, 2021, Morocco filed an appeal with the AG, whose operation was suspended.

Russia's interest is due to most of its disputes in the WTO related to antidumping and countervailing measures, and it is important for Russia to practice such measures in accordance with WTO norms and rules.[1]

DS579: India – Measures for sugar and sugar cane (Brazil), DS580: India – Measures for sugar and sugar cane (Australia), DS581: India – Measures for sugar and sugar cane (Guatemala)

On February 27, 2019, Brazil[2] and Australia,[3] and Guatemala[4] on March 15, 2019, filed their requests to DSB for consultations with India with regard to domestic support, allegedly provided by India to their agricultural sugar cane and sugar producers (measures of domestic support), as well as all export subsidies that India provides according to plaintiffs for sugar and sugar cane (export subsidies). On July 11, 2019, Brazil, Australia, and Guatemala submitted requests to the DSB to set up an AG and it was set up in mid-August 2019 and began operating late October 2019. Australia, as plaintiff in these disputes, cited the greatest number of provisions it believes India violated, so let's look more closely at Australia's complaint.

1 URL: https://www.iep.ru/files/text/trends/2019/04.pdf
2 URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds579_e.htm
3 URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds580_e.htm
4 URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds581_e.htm

On December 14, 2021, the AG report was submitted. The AG found that for five consecutive sugarcane seasons from 2014/2015 to 2018/2019, India provided non-exempt domestic support to sugarcane producers for specific products in excess of 10% of the total value allowed. The AG found that India violated Article 7.2(b) (General Internal Support Regulations) of the Agreement on Agriculture. The AG also found that market price support does not require governments to purchase or procure relevant agricultural products and that the challenged schemes represent export subsidies under Article 9.1(a) (Export Subsidy Obligations) of the Agreement on Agriculture. Since India's schedule does not include obligations to reduce sugar export subsidies, the AG concluded that such export subsidies were inconsistent with Articles 3.3 (Inclusion of Concessions and Obligations) and 8 (Export Competition Obligations) of the Agreement on Agriculture.

For Russia, participation in disputes over subsidies is extremely important, including in terms of applying measures to support its domestic producers in accordance with WTO rules and norms.

DS597: USA — Requirement for origin marking (Hong Kong)

On October 30, 2020, Hong Kong has requested consultations with the U.S. on certain measures relating to origin marking requirements applicable to goods produced in Hong Kong.[1] On August 11, 2020. The U.S. Customs and Border Protection (USCBP) issued a notice that after September 25, 2020 (later postponed to November 10, 2020), goods made in Hong Kong must be labeled as originating in "China". According to Hong Kong, these U.S. measures violate GATT 1994 because the U.S. applies more discriminatory treatment to Hong Kong goods vs similar goods from other countries with respect to import rules and formalities relating to marks of origin; the U.S. does not apply its requirements for origin marking in a uniform, impartial and reasonable manner. According to Hong Kong, these measures also violate Article 2 (Obligations during the Transition Period) of the Agreement on Rules of Origin.

On November 9, 2020, the U.S. announced that it was ready to begin consultations with Hong Kong, but it believes that these measures are imposed on national security issues not subjected to review or resolution through WTO dispute settlement. On January 14, 2021, Hong Kong requested establishing of AG, and it was established on February 22, 2021. Russia, as well as Canada, China, the EU, India, Japan, Korea, Norway, Singapore, Switzerland, Turkey and Ukraine joined the dispute as third parties. On April 19, 2021, Hong Kong asked the Director General to approve AG members, and on April 29, 2021 he joined the AG. On October 26, 2021, the chairman of the commission informed DSB that taking into consideration the complexity of the issues presented in the dispute, the commission plans to issue its final report to the parties in Q2 2022.

On November 13, 2020, Russia requested to join consultations. On November 19, 2020, the U.S. requested Chairman of the DSB to send out a communication rejecting Russia's request to join consultations. Russia's intention to participate in this dispute stems from its practice of participating in disputes over rules of

1 URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds597_e.htm

origin, as well as disputes in which a defendant invokes national security issues not subjected to WTO review. Participation in this dispute may also be relevant to Russia in terms of exports of the Republic of Crimea and the relevant sanctions of countries, including the U.S., with respect to goods originating from this Russian region. This may be the reason why the U.S. rejected Russia's request to join these consultations.

Below, 8 disputes will be considered, which Russia has directly joined as a third party in 2021.

DS589: China – Measures concerning imports of canola seeds from Canada (Canada)

On September 9, 2019, Canada filed a request for consultation with China on two types of measures allegedly affecting imports of canola seed (intended for processing and consumption rather than planting) from Canada.[1]

1) measures suspending imports of canola seed from two Canadian companies;

2) measures involving enhanced inspections of all imports of canola seed from Canada.

China suspended imports of canola seed from two Canadian companies on March 1, 2019 and March 26, 2019, respectively. Other Canadian companies are still allowed to export canola seed to China, but these imports are subject to enhanced inspections, including enhanced testing. China cites the detection of quarantine pests in canola seed shipments as the reason for its measures affecting imports of Canadian canola seed.

Canada has repeatedly sought information from China on the scientific basis of its measures and on the process of re-establishing full market access for Canadian canola seeds. Canada used multiple and varied formal and informal mechanisms at its disposal to obtain this information. For example, as Canada believes that China's measures restrict the export of canola seed from Canada and that these measures do not appear to be based on relevant international standards, guidelines or recommendations, Canada submitted a request under Article 5.8 (Risk Assessment and Determination of Appropriate Level of Sanitary or Phytosanitary Protection) of the SPS Agreement on June 13, 2019, for China to provide "an explanation" of its measures. China's July 12, 2019 response did not answer most of the questions raised by Canada, including, in particular, an explanation of the nature and extent of the enhanced inspections that are being conducted on all imports of Canadian canola seed.

China's measures regarding imports of Canadian rapeseed, according to Canada, are inconsistent with China's WTO commitments, in particular:

- SPS Agreement, as measures are not based on scientific principles or applied only to the extent necessary to protect plant life or health and supported without sufficient scientific evidence; measures are not based on assessment of risks to plant life or health as appropriate to the circumstances, taking into account risk assessment methods developed by relevant international organizations; measures are not taken or supported

1 URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds589_e.htm

where relevant scientific evidence is insufficient, they are not temporarily adopted or based on available appropriate information or considered within reasonable period of time; they are discriminatory, demonstrate veiled restrictions of international trade, etc. China did not publish or notify its measures; in particular, it has not provided sufficient information to enable Canada to know specific principles and methods applicable to the products under consideration;

- GATT 1994, as China failed immediately and unconditionally accord to Canada any advantages, privileges, or immunities granted by China with respect to rules and formalities relating to the imports of canola seeds; failed to accord Canadian canola seeds no less favorable treatment than that accorded to Chinese "like" products; China failed to comply with its laws, regulations, decisions, and rulings with respect to measures under consideration in a uniform, impartial, and reasonable manner; as China failed to publish information about measures in a timely, non-discriminatory and easily accessible manner to allow Canada and traders to become familiar with them;
- The TFA, because the notifications or guidelines issued by China to its stakeholders to improve border controls or inspections of food or fodder subject to notification or guidelines to protect plant life or health in its territory are not risk-based and have not been properly terminated or suspended; China failed to develop and apply risk management in a manner that avoids arbitrary or unjustifiable discrimination or veiled restriction of the international trade; China failed to base risk management on assessing the risks using appropriate selectivity criteria.

Similarly, measures involving enhanced inspections of all Canadian canola seed imports are, according to Canada, incompatible with China's obligations under the SPS Agreement, GATT 1994 and the TFA.

On September 19, 2019, Russia and Chinese Taipei requested joining the consultation. On June 17, 2021, Canada requested to establish AG, and it was established on July 26, 2021. Australia, Brazil, the European Union, India, Japan, Norway, Russia, Singapore, Chinese Taipei, and the United States joined the dispute as third parties.

Russia is one of the largest producers and exporters of rapeseed. In 2018, the volume of Russian exports of this product exceeded 490.000 tons, which determines significant trade interest of Russia's participation in this dispute. In addition, Russia needs practice of participation in SPS disputes.

DS592: Indonesia – Measures on raw materials (EU)

On November 22, 2019, the EU filed a request for consultation with Indonesia on the following raw materials measures needed for stainless steel production, as well as an import duty exemption scheme when domestic goods are used instead of imports:[1]

- nickel export restrictions, including a de facto export ban:

1 URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds592_e.htm

- domestic processing requirements for nickel, iron ore, chromium, and coal;
- domestic marketing obligations for nickel and coal products;
- nickel export licensing requirements;
- system of prohibited subsidies.

The EU stated that:

- measures restricting exports of certain raw materials, including those requiring domestic processing rules, domestic marketing obligations and export licensing requirements, appear to be inconsistent with Article XI:1 (General Elimination of Quantitative Restrictions) of GATT 1994;
- the scheme of prohibited subsidies is inconsistent with Art. 3.1(b) (Prohibition) of the Agreement on Subsidies and Countervailing Measures;
- untimely publication of challenged measures is inconsistent with Article1 X:1 (Publication and Application of Trade Rules) of the GATT 1994.

As part of implementation of the national developing plan of certain processing industry sectors, including stainless steel production, Indonesia imposed a number of restrictions on raw material exports. In particular, exports of nickel ore (HS code 260400) were banned in Indonesia in 2014. In 2017. Indonesia partially relaxed the export ban, temporarily allowing the export of certain minerals, including nickel ore marked by a concentration below 1.7%, subject to certain additional requirements. These requirements were supposed to be temporary and that the full export ban would be reinstated on January 11, 2022. However, in August 2019, the Indian Ministry of Energy and Mineral Resources (MEMR) determined that certain documents required to export low concentration nickel would expire on December 31, 2019. The temporary export authorization for low-concentration nickel ore did not do any harm to the ongoing ban on exports of nickel ore with concentrations above 1.7%, which cannot be exported even during the temporary easing of the export ban. Nickel ore exports are also subject to additional export requirements.

On January 14, 2021, the EU submitted a request to establish the AG, and on February 22, 2021, it was established. Russia, Brazil, Canada, China, India, Japan, the Republic of Korea, Saudi Arabia, Singapore, Chinese Taipei, Turkey, Ukraine, the UAE, the UK and the U.S. joined the dispute. On April 9, 2021, the EU instructed the Director General to approve members of the AG, and on April 29, 2021, the Director General joined it. On November 1, 2021, the Panel Chairman informed the DSB that in accordance with the timetable approved after consultation with the parties, the AG estimated that it would submit its final report to the parties in Q4 2022.

Russia's imports of nickel ore fell from $59.9 mn in 2016 to $0.001 mn in 2020, while exports increased from $27.8 mn in 2016 to $82 mn in 2020, accounting for nearly 2% of this commodity's global exports.[1] Moreover, Russia is interested in participating in disputes over export restrictions and commodities, because it also uses them.

1 URL: https://www.iep.ru/files/text/trends/2019/04.pdf

DS598: China – Anti-dumping and countervailing measures on barley from Australia (Australia)

On December 16, 2020. Australia requested consultations with China on anti-dumping and countervailing measures for barley (HS code 1003) imported from Australia. According to Australia,[1] China imposed these measures in violation of the relevant WTO agreements. On March 15, 2021, Australia submitted a request to establish AG and it was established on May 28 2021. Russia, Brazil, Canada, the EU, India, Japan, Mexico, New Zealand, Norway, Singapore, Ukraine, the UK and the US joined the dispute as third parties.

On July 27, 2021, Australia and China informed the DSB that they had agreed to arbitration procedures under Article 25 (Arbitration) of the URPGSD in this dispute. Such procedures have been introduced by Australia and China to implement the Multilateral Interim Appeal Arbitration Agreement pursuant to Article 25 of the URPGSD (MPIA) and to establish a framework for the arbitrator to decide any appeal of any final AG report issued in this dispute if AG cannot hear the appeal pursuant to Articles 16.4 (Acceptance of Panel Reports) and 17 (Consideration of Appeals) of the URPGSD.

Russia is one of the leading exporters of barley. In 2019, Russian barley exports totaled $763.6 mn, nearly 11% of global barley exports. In light of the various arguments raised by Australia in its request for consultations Russia has a significant trade and systemic legal interest in this dispute.

DS599: Panama – Measures concerning imports of certain products from Costa Rica (Costa Rica)

On January 11, 2021, Costa Rica submitted a request for consultation with Panama on measures restricting or prohibiting imports of a number of food products originating from Costa Rica, including: strawberries, dairy products, beef, pork, poultry and turkey meat, fish, fresh pineapples and bananas.[2] In particular, despite Costa Rica's long history of exporting dairy products; beef; pork; processed poultry; beef, pork and poultry cured products; cooked beef, pork, chicken and turkey and fish products to Panama, Costa Rica's sanitary status has not changed in any way. Panama decided to maintain an unannounced ban on the importation of these Costa Rican products and did not take any steps to permit the resumption of trade in these products.

On August 19, 2021 Costa Rica submitted a request to establish AG and on September 27, 2021 the AG was established. Russia, Australia, Brazil, Canada, China, EU, Guatemala, Honduras, India, Mexico, Nicaragua, Chinese Taipei, UK and US joined the dispute as third parties.

Russia is interested in import ban disputes, while its food exports as a whole continue to grow. The Russian Ministry of Agriculture estimates that it exported 79mn tons of agricultural products and food worth $30.7 bn in 2020, a 20%

1 URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds598_e.htm
2 URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds599_e.htm

increase over 2019, which also accounts for Russia's substantial trade interest in participating in the dispute.[1]

DS600: European Union and some Member States — measures concerning palm oil and oil palm biofuels (Malaysia)

On 15 January 2021, Malaysia submitted a request for consultations with the EU, France and Lithuania on measures imposed by the EU and EU Member States on palm oil and oil palm biofuels from Malaysia.[2]

Malaysia argued that the EU measures (the EU Renewable Energy Target (RE), the criteria for identifying high-risk feedstocks, and the criteria for sustainability and greenhouse gas savings) were incompatible with WTO rules and regulations.

In the context of addressing the environmental risks associated with the extensive use of fossil fuels, the EU and its Member States have since 2009 adopted policies to promote the use of biofuels by setting national targets for the use of RES in various sectors, including transport. This policy resulted in rapid increase in the consumption of biofuels in the EU, produced mainly from food and feed crops.

While measures taken by the EU and some of its member states in the renewable energy policy are aimed in general at reducing greenhouse gas emissions and meeting obligations under international climate agreements, Malaysia considers that some of these measures are incompatible with the WTO obligations of the EU and some of its member states. In particular, the EU argues that palm oil production alone entails a high risk of indirect land use change (ILUC). Hence, the share of oil palm-based biofuels should not exceed the consumption of such fuels in each EU member state in 2019 and should be gradually reduced to 0% by 2030. Malaysia argues that in fact a number of EU countries seem likely to phase out oil palm biofuels in order to meet EU renewables targets much earlier than 2030. If oil palm biofuels are certified as low risk ILUC, they cannot count towards the EU renewable energy targets.

Russia has an overall interest in renewables and in the EU policy in this area in particular and has already joined similar debates.

DS601: China – Anti-dumping measures against stainless steel products from Japan (Japan)

On 11 June 2021, Japan submitted a request for consultations with China on anti-dumping measures on stainless steel billets, hot-rolled coil and hot-rolled sheets from Japan.[3] Japan considers these Chinese protective measures to be inconsistent with the Anti-Dumping Agreement and GATT 1994. On 19 August 2021, Japan submitted a request for establishment of AG, and on 27 September 2021 it was established. Russia, Australia, Brazil, Canada, the EU, India, Korea, Mexico, Saudi Arabia, Chinese Taipei, the US and Vietnam joined the dispute.

1 URL: https://www.alta.ru/external_news/79892/
2 URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds600_e.htm
3 URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds601_e.htm

Russia is interested in disputes over protective measures, particularly in relation to metallurgical goods, as a significant number of anti-dumping measures are in force against Russia, particularly against companies in the metallurgical industry.[1]

DS602: China – Anti-dumping and countervailing measures against Australian wine (Australia)

On 22 June 2021, Australia submitted a request for consultations with China on anti-dumping and countervailing duties in relation to bottled wine in containers of 2 liters or less imported from Australia.[2]

According to plaintiff, China imposed these measures in violation of the Anti-dumping Agreement, the Agreement on Subsidies and Countervailing Measures and the GATT 1994. On 16 September 2021 Australia submitted a request to establish AB and it was established on 26 October 2021. Russia, Brazil, Canada, the EU, India, Japan, Korea, Mexico, New Zealand, Norway, Singapore, Switzerland, Chinese Taipei, Turkey, Ukraine, the UK, the US and Vietnam joined the dispute as third parties.

Russia is actively joining disputes against China in 2021 with regard to introduction of anti-dumping and countervailing measures by the Chinese in violation of WTO rules and regulations.

DS605: Dominican Republic — Anti-dumping measures on corrugated steel bars (Costa Rica)

On 23 July 2021, Costa Rica requested the Dominican Republic to consult on anti-dumping measures imposed on imports of corrugated or deformed steel or concrete reinforcement bars produced in Costa Rica.[3] The anti-dumping investigation was launched on 30 July 2018 in response to a request submitted by a Dominican manufacturer that Costa Rica considered inconsistent with the minimum requirements of the Anti-dumping Agreement. For example, after an investigation containing numerous faults, on 27 December 2019, the Commission on the Regulation of Unfair Trade Practices and Protective Measures of the Dominican Republic took a decision providing for the application of definitive anti-dumping measures, despite the absence of dumping and damages. Costa Rica considers this decision and the application of final duties to be inconsistent with the Dominican Republic's obligations under the Anti-Dumping Agreement and GATT 1994. In particular, as the Dominican Republic Commission did not rely on correct export prices in its determination of dumping and included in the estimates of dumping margin transactions taking place beyond the investigation period, excluded in the determination of dumping the transactions occurring in the ordinary course of trade for similar goods intended for consumption in Costa Rica, excluded sales of similar goods in the domestic market of the exporting country allegedly at below cost, without first having duly established that those

1 URL: https://www.iep.ru/files/text/trends/2019/04.pdf
2 URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds602_e.htm
3 URL: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds605_e.htm

sales took place during a long period in substantial quantities and at prices that do not recover all costs within a reasonable time, incorrectly included financing costs when analyzing below cost sales in order to identify sales that were presumably not made in the normal course of business.

The Commission failed to make a fair comparison between the export price and fair value, including a comparison of sales made at the highest possible price. Furthermore, the Commission's analysis of the volume of dumped imports was not based on an objective examination of positive evidence or study of all relevant evidence. The Commission did not base its determination of the threat of material loss on facts, rather only on assertions, assumptions or slim possibility of damage, and did not adequately establish that a change in circumstances would could create a situation when alleged dumping causing the damage was clearly foreseeable and unavoidable. The Commission did not give due consideration:

- whether there has been a significant increase in dumped imports into the domestic market, indicating the likelihood of a significant increase in imports;
- whether there was sufficient spare capacity indicating the likelihood of an imminent significant increase in dumped exports to the Dominican Republic, given the availability of other export markets to absorb any additional exports;
- whether imports were imported at prices that would have had a significant depressing or suppressive effect on domestic prices and likely to increase demand for further imports;
- whether the combination of abovementioned factors resulted in conclusion that further dumping of exports was inevitable and in material damage unless protective measures were taken.

The Commission did not adequately verify the accuracy and adequacy of the evidence presented in the request to determine whether there was sufficient evidence of dumping, damages and a causal link between the dumping import and alleged injuries to justify the opening of investigation. Costa Rica points to other irregularities in the Dominican Republic Commission's anti-dumping investigations. The Dominican Republic imposed anti-dumping duties, although all requirements for their imposition were not met; did not impose anti-dumping duties in the appropriate amount; imposed anti-dumping duties beyond the dumping margin that should have been imposed under Article 2 of the Anti-dumping Agreement (Determination of Dumping).

On 15 November 2021, Costa Rica requested establishment of AG, and it was established on 20 December 2021.

In 2021, Russia actively joined the dispute over anti-dumping measures in violation of WTO rules and regulations. Furthermore, Russia has a significant trade interest. In 2020 it exported bars of iron or non-alloy steel containing less than 0.25% wt % carbon used for reinforcement of concrete (HS code 721499) for $279.2mn, representing 12.4% of world exports of such goods.

Annex

Table A.1

WTO trade disputes in which Russia is a major party to the dispute (plaintiff or defendant)

Dispute	Substance of the claim	Current stage (as of the end of 2021)
As plaintiff		
DS474: EU – Cost-adjustment methodology and specific anti-dumping measures for Russian imports (23.12.2013)1	Energy adjustments in anti-dumping investigations to calculate dumping margins (EU ignored cost and price information from Russian producers and exporters). The EU conducted end-of-dumping inspections without sufficient data on continued dumping and damage.	Approval of AG members (22.07.2014) The dispute has actually turned into another dispute — see second action (DS494)
DS476: EU – Specific measures influencing energy sector (30.04.2014)	EU Third Energy Package: Gas production companies cannot own the main pipelines located in the EU. Operating companies controlled by foreigners have to undergo a special certification procedure.	AG operations (21.09.2018) De facto, AG operations suspended
DS493: Ukraine – Anti-dumping measures against ammonium nitrate (07.05.2015)	In its anti-dumping investigations into ammonium nitrate, Ukraine did not take into account electricity prices in Russia provided by producers, but rather used prices of the third countries (energy adjustments) when calculating costs.	Defendant implemented the DSB recommendations (reversal of measures) (21.09.2020)
DS494: EU – Cost-adjustment methodology and specific anti-dumping measures for Russian imports (07.05.2015)	In anti-dumping investigations into welded pipes and ammonium nitrate from Russia, the EU did not take into account cost and price information provided by producers and exporters to calculate dumping margins, but used prices of the third countries (energy adjustments).	AG operations (28.08.2020) De facto, AB operations suspended
DS521: EU – Anti-dumping measures on cold-rolled steel from Russia (27.01.2017)	The EC is not taken into account the information provided by Russian producers, rather is replaced by unsubstantiated data and incorrect estimates.	AG operations (16.03.2020)
DS525: Ukraine – Measures restricting trade of goods and services and transit (19.05.2017)	A comprehensive lawsuit over Ukrainian measures restricting trade in goods and services from Russia.	Consultations (19.05.2017)
DS554: USA – Special protective measures for steel and aluminium products (29.06.2018)	According to Russia, the US imposed measures on steel and aluminium products in spring 2018 in violation of GATT 1994 and the Agreement on Special Protective Measures, granting benefits and privileges to some countries that did not apply to others, imposing import restrictions beyond duties, taxes or other charges through quotas, failing to justify the emergency measures, did not send an urgent written notice or allowed consultation.	AG operations (25.01.2019)

1 The date of the consultation request is given in brackets.

Dispute	Substance of the claim	Current stage (as of the end of 2021)
DS586: Russia – Anti-dumping measures against Russian hot-rolled carbon steel flat products (USA, 05.07.2019)	According to Russia, the US failed to correctly estimate the fair value and dumping margins for all known exporters and producers and the costs of producing the goods under consideration; failed to adequately demonstrate the need for further measures, did not terminate these measures, rather expanded them; refused to rely on information from Russian exporters.	Consultations (05.07.2019)
As defendant		
DS462: Russia – Vehicle disposal charge (EU, 09.07.2013)	Additional payments (recycling fee) on imported and domestic vehicles were exempted under certain conditions. In estimating the levy, there is too much difference in the amount of the levy for new and used cars.	Approval of AG members (25.11.2013) Dispute is not active
DS463: Russia – Vehicle disposal charge (Japan, 24.07.2013)	Additional charges (recycling fee) on imported and domestic vehicles are exempt under certain conditions.	Consultations (24.07.2013) Dispute is not active
DS475: Russia – Measures affecting imports of live pigs, pork and other pork products (EU, 08.04.2014)	The ban on imports of live pigs, pork and pork products from the EU is a disproportionate measure, as there have been several minor cases of ASF infestation of wild boar near the borders with Belarus, which have been promptly contained. The EU disputes the way Russia is regionalising the territory.	Dispute suspended (28.01.2020). The AG suspended its work on checking implementation of DSB recommendations at the request of the EU and its mandate has expired on 28.01.2021
DS479: Russia – Anti-dumping duties on light commercial vehicles from Germany and Italy (EU, 21.05.2014)	The way Russia conducts anti-dumping investigations and determines dumping margins on light commercial vehicles contravenes WTO rules in establishing dumping and the existence of damage, evidence, industry determination, public notice and explanation of decisions.	Defendant fulfilled DSB recommendations (reversal of measures) (20.06.2018)
DS485: Russia – Estimates of import duties for certain agricultural and industrial goods (EU, 31.10.2014)	Russia applies a duty of 15 or 10% for paper and cardboard, which exceeds a bound level of 5%. When customs value is below a certain margin, duties are levied above the bound level for a number of other goods.	Defendant fulfilled DSB recommendations (08.06.2017) AG rejected charges of systemic violations of Russia's WTO commitments on import tariffs
DS499: Russia – Measures restricting imports of railway equipment and its parts (Ukraine, 21.10.2015)	Russia suspends certificates of conformity issued to manufacturers of track parts and rolling stock until new technical regulations are introduced, and rejects applications for new certificates.	Compliance with DSB recommendations by defendant (05.03.2020) Ukraine has requested Russia to clarify the requirements that Ukrainian suppliers must comply with in order to obtain a certificate of conformity (23.03.2020)

Dispute	Substance of the claim	Current stage (as of the end of 2021)
DS512: Russia – Measures restricting transit (Ukraine, 14.09.2016)	International transit of goods by road and rail from Ukraine to Kazakhstan or Kyrgyzstan via the Russian Federation should be carried out only from Belarus under certain conditions. Prohibition of transit of goods with tariff rates not amounting 0 and those under embargo.	Reports accepted and no further actions required (26.04.2019)
DS532: Russia – Measures restricting imports and transit of certain Ukrainian goods (Ukraine, 13.10.2017)	Russia introduced measures to restrict imports and transit of juices, beer, confectionery and wallpaper of Ukrainian origin through Russia to third countries. Export of such Ukrainian products to Russia dropped significantly, to 0 for some items.	Consultations (13.10.2017)
DS566: Russia – Increased import tariffs on a number of goods made in the US (USA, 27.08.2017)	As of August 2018, Russia increased import duties on certain types of vehicles for cargo transportation, road construction equipment, oil and gas equipment, tools for metal processing and rock drilling and fiber optics (25, 30 and 40% depending on the product). According to the US, these measures violate GATT 1994, as Russia does not impose such duties on similar goods from other WTO members and gives the US less favorable treatment.	AG operations (25.01.2019)
DS604: Russia – Some measures over domestic and foreign goods and services (EU, 22.02.2021)	The EU challenges Russia's import substitution policy measures applied to improper procurement by state-owned enterprises, citing provisions of GATT, GATS, the Protocol on Russia's Accession to WTO and the Taskforce Report on Russia's Accession to WTO: price preferences; prior clearance; minimum quotas.	Consultations (22.02.2021)

Source: own estimates according to WTO website: URL: https://www.wto.org/english/tratop_e/dispu_e/dispu_by_country_e.htm

Table A.2

WTO disputes joined by Russia as a third party

Subject	Disputes
1) Import bans or restrictions (for environmental or other reasons), including rules of origin	DS400, DS401, DS469, DS484, DS495, DS524, DS531, DS537, DS576, DS597, DS589, DS600
2) Protective investigations and measures (anti-dumping, countervailing and special protective measures)	DS414, DS437, DS449, DS454, DS460; DS468, DS471, DS473, DS480, DS488, DS490, DS496, DS513, DS516, DS518, DS523, DS529, DS533, DS534, DS536, DS538, DS539, DS544, DS545, DS546, DS547, DS548, DS550, DS551, DS552, DS553, DS556, DS562, DS564, DS573, DS577, DS578, DS591, DS598, DS601; DS602; DS605
3) Exports restrictions	DS431, DS432, DS433, DS508, DS509, DS541, DS590. DS592
4) Intellectual property rights	DS441, DS458, DS467, DS542, DS567
5) Subsidies (including tax and other benefits) and requirement of localization	DS502, DS456, DS472, DS487, DS497, DS489, DS510, DS511, DS522, DS579, DS580, DS581, DS583, DS593, DS595, DS592
6) Tariffs and tariff quotas	DS492, DS517, DS557, DS558, DS559, DS560, DS543, DS561, DS585, DS582, DS584, DS588.
7) Trade and economic sanctions	DS526

Source: based on *M.A. Baeva* (2015). WTO trade disputes which involve Russia as well as mechanism of their resolution // Russian Foreign Trade Bulletin, 3. Pp. 75–90.

4.8. Small and medium-sized businesses during coronavirus crisis[1]

4.8.1. Anti-crisis support measures for SMEs

Recently, the Russian government's policy aimed at developing the small and medium-sized enterprise (SME)[2] sector has included: the implementation of a reform of control and oversight activities; simplification of registration procedures for legal entities and individual entrepreneurs; digitalization of tax authorities; introduction of a tax maneuver for IT companies; expansion of support infrastructure facilities, etc. However, the contribution of SMEs to the economy remains modest compared to developed countries,[3] and the sector's performance deteriorated over the past two years.

In 2021, the pandemic-induced harsh conditions for small businesses were: decreasing income, anti-epidemiological measures (lockdown in November, introduction of QR codes, masking regime, etc.). A considerable part of Russian small business belongs to the spheres that were among the most affected ones:[4] retail trade in non-food products, provision of household services, and public catering. The coronavirus-induced crisis is unique in the scale of the imposed restrictions, due to the high contagiousness of the new infection and its duration. The situation is accentuated by the recurrence of morbidity waves, the emergence of new strains of the virus, and, consequently, the uncertainty of the end date and unpredictability of entrepreneurial risks.

Across 2021, the authorities of many European countries (Great Britain, France, the Czech Republic, Austria, etc.)[5] reintroduced full or partial lockdown with various degree of restrictions. In Russia, in the summer of 2021, various lockdowns were put in place in some regions of the country (Moscow, St. Petersburg, Krasnodar Krai, Sevastopol, etc.), and from October 30 to November 7, 2021, presidential decree established "days off with pay for employees" to contain the spread of infection.

The governments of many countries were supporting the most affected segments of the SME sector. Developed economies allocated substantial funds aimed to support technology start-ups and creative industries, i.e. those

1 This section was written by: *Barinova V.*A.*,* Candidate of Economic Sciences, Head of International department of Sustainable development issues studies, IAES RANEPA; Head of Innovation economy department, Gaidar Institute; *Zemtsov S.P.,* Candidate of Technical Sciences, Director of center for Economic geography and regional studies, IAES RANEPA; *Tsareva Yu.V.,* Researcher at the International department of Sustainable development issues, IAES RANEPA.

2 *Zemtsov S.P., Chepurenko* A.*Yu., Barinova V.*A.*, Krasnoselskih* A.*N.* New entrepreneurship policy in Russia after the 2020 crisis // Voprosy Ekonomiki. 2020. No.10, pp. 44–67: *Barinova V., Zemtsov S., Kotsubinskiy V., Krasnoselskih* A.*, Tsareva Yu.* Implementation of the strategy for the development of small and medium entrepreneurship in Russia // Russian Economic Development. 2018. Vol. 25. No. 11, pp. 36–45.

3 *Barinova V.*A.*, Zemtsov S.P.* International comparative analysis of the role of small and medium-sized enterprises in the national economy: a statistical study // Voprosy statistiki, 2019, Vol. 26, No. 6, pp. 55–71.

4 Russian Economy in 2020 году. Trends and Prospects. (Issue. 42) / [Edited by: Dr. of Economic Sciences Kudrin A.L., Dr. of Economic Sciences Mau V.A., Dr. of Economic Sciences Radygin A.D., Dr. of Economic Sciences Sinelnikov-Murylev S.G.]; Gaidar Institute. – Moscow: Gaidar Institute Press, 2021. – 712 p.

5 OECD. SME and entrepreneurship outlook 2021. – Paris: OECD, 2021.

entrepreneurs who create new market niches and adapt the economy to new realities. They placed much emphasis on the formation of inclusive policies: support for social, women's and silver entrepreneurship.[1]

In Russia, federal aid to small businesses increased 20.7-fold in 2020 compared to 2018. As of December 2021, according to the register of the Federal Tax Service (FTS) [2], the government assistance amounted to around Rb 434bn, of which Rb 177.3bn are guarantees and sureties.

By the end of 2021, the following financial measures of anti-crisis support for SMEs were in effect in Russia, as presented on the website of the Government of the Russian Federation:[3]

- preferential credit program "FOT 3.0";
- grants to organizations that suspended operations owing to anti-epidemic measures;
- subsidies to businesses for employment of jobless;
- deferral of rent payments;
- preferential lending, guarantee lending, microcredit;
- additional capitalization of state microfinance organizations that provide soft loans to SMEs in the subjects of the Russian Federation;
- subsidies to exporters for the certification of goods.

In order to avoid a reduction in employment in the SME sector, the Russian government issued payroll loans to employees at 2% under the FOT 2.0 program, which was in effect from June to April 2020, and 3% under the FOT 3.0 program, which was in effect from March 9 to July 1, 2021, for the most affected businesses. Only 40,000 applications (0,7% of the number of SMEs) were received under the preferential program of Welfare Fund 3.0. Entrepreneurs were in no hurry to take payroll loans, as they were not confident in their own solvency. The high indebtedness of businesses in general was an urgent problem of the SME sector induced by the coronavirus crisis in 2020.

The pandemic also hit people's incomes, reduced consumer demand for goods and services provided by the SME sector. The government indirectly helped businesses to maintain demand by expanding small business access to government procurement and indirectly by providing subsidies to the poor.

However, these measures proved to be insufficient, as employment in the SME sector declined by a record amount since 2015.

4.8.2. Dynamics of the number of enterprises

According to the Federal Law on the Development of SMEs[4] in Russia, SMEs include legal entities and individual entrepreneurs (IEs), however in its statistical

1 OECD. The Missing Entrepreneurs 2021. Policies for inclusive entrepreneurship and self-employment. Paris: OECD. 2021

2 Unified register of small and medium-sized businesses - recipients of support. FTS of Russia. 2021.URL: https://rmsp-pp.nalog.ru/

3 Measures of the Russian Government to combat coronavirus infection and support the economy. Russian Government website. URL: http://government.ru/support_measures/category/finance/

4 Federal Law of 24.07.2007No.№ 209-FZ "On the development of small and medium-sized businesses in the Russian Federation".

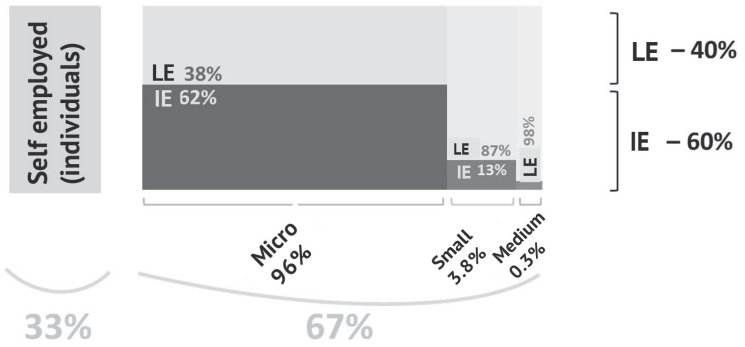


Fig. 31. Structure of the number of SMEs by size and status

Source: compiled by the authors according to the Unified Registry of Small and Medium Entrepreneurship of the Federal Tax Service: URL: https://rmsp.nalog.ru/

reports the Ministry of Economic Development of Russia recently began to include in the SME sector the self-employed citizens – self-employment taxpayers. As of August 2021,[1] there were 5,621,000 enterprises in the SME registry against 5,837,000 in 2019 by 3.84% more. The share of individual entrepreneurs (IE) in the structure of SMEs came up to 60% (40% in 2019) as a result of the closure of companies, the transition to more generous tax regimes for individual entrepreneurs (*Fig. 31*). As demand drops, the share of microenterprises grows — 95.87% (95.78% in 2020). The number of self-employed (individuals) in August 2021 amounted to 2.8 million people, however in December, according to the Federal Tax Service,[2] exceeded 3.64 million people.

In addition to the Federal Tax Service data, Rosstat sample surveys (2008—2018), Federal Tax Service (FTS) accounting reports (2012—2020) and SPARK-Interfax data can be used to analyze the movement of the number of enterprises. Changes in the SMEs' classification criteria and incompleteness of sample survey data distort the real picture. Therefore, to analyze the movement of the number of enterprises we used unified accounting and financial statements (AFS) criteria for the entire period of analysis. On the whole, the negative dynamic of recent years (*Fig. 32*) becomes apparent, although the number of companies without legal entities with zero reporting even slightly increased in 2020 as compared to 2018 according to SPARK and the financial statements of the Federal Tax Service. The availability of state support may have stimulated a rise in the number of reporting firms. This outcome was clearly seen in 2020 employment data, when appropriate subsidies were allocated to job retention.[3]

1 Each year in August, the registry is cleared of "dead" companies that have not submitted reports, so it is advisable to use August data to compare data for different years.
2 Statistics for the national project "Small and medium entrepreneurship and support for individual entrepreneurial initiatives". URL: https://ofd.nalog.ru/statistics2.html?t=1642533761179
3 *Zemtsov S.P., Mikhailov A.A.* Trends and factors of development of small and medium businesses in Russian regions during the coronavirus crisis // Russian Economic Development. 2021. Vol. 28, No. 4, pp. 34–45

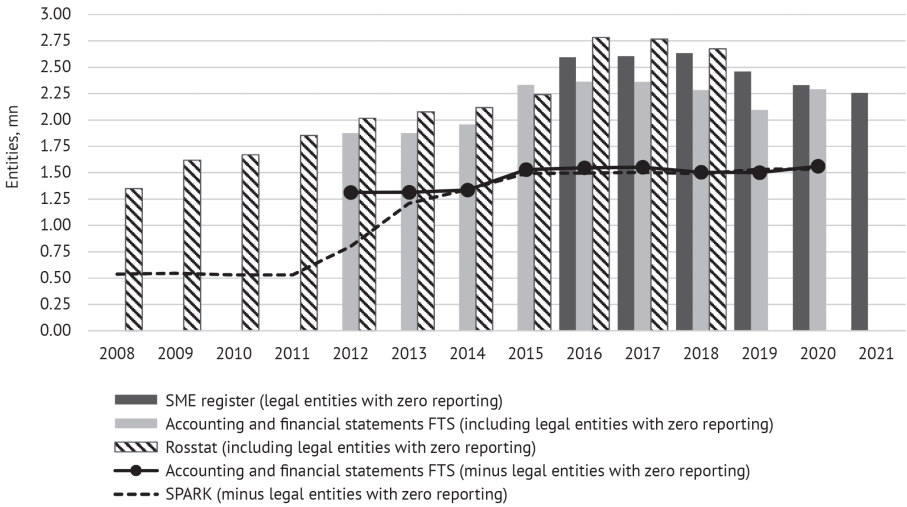


Fig. 32. Dynamics of SMEs number (legal entities) in Russia in 2008–2021

Source: own calculations on Rosstat data, SMEs register, AFS FTS, CPARK-Interfax.

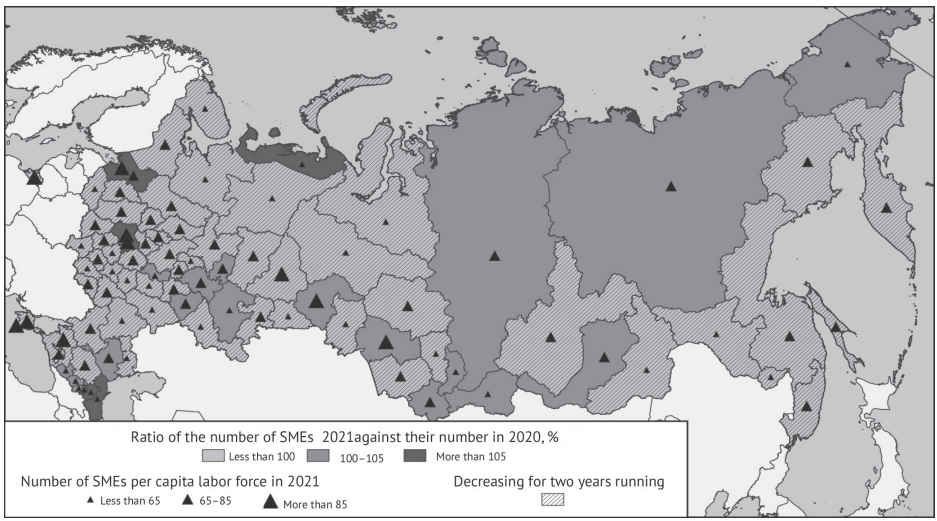


Fig. 33. Change in the number of SMEs in Russia in 2021 compared to 2020.

Source: compiled by the authors according to the Unified Registry of Small and Medium Entrepreneurship of the Federal Tax Service: URL: https://rmsp.nalog.ru/

In 2020, according to the Unified Register of SMEs, the number of SMEs (with individual entrepreneurs) on average in Russia went down by 5% compared to

the previous year, and in 2021 stayed almost unchanged. In most Russian regions the number of SMEs decreased for two consecutive years, except for large urban agglomerations (Moscow and St. Petersburg), the national republics of the Volga region, the North Caucasus and Western Siberia, as well as Krasnoyarsk Krai. On average, the number of SMEs grew faster in the Asian part of Russia, especially in the national republics and territories, where this growth rate is partly given the low base effect (*Fig. 33*).

4.8.3. Employment in the SME sector and self-employment

Presidential Decree No. 474 dated July 21, 2020 "On the national development goals of the Russian Federation for the period up to 2030"[1] states the need to have 25 million people employed in the SME sector by 2030. The Unified Plan for achieving these goals comprises the self-employed, and as of November 2021 their number exceeded 3.6 million people. Employment in the SME sector can be increased in several ways: by qualitative improvement of the business environment through the creation of new jobs, i.e., through the outflow of personnel from other sectors and from the unemployed population, and by bringing low-profit businesses out of the shadows (self-employed and personal subsidiary farms) and the adaptation of workers released from large enterprises and the public sector as productivity goes up.[2] During the period of the coronavirus crisis the sector expanded only at the expense of the self-employed. Given continued negative trends in the economy, 2021 reported a record drop (by 4.1% since 2009) in the number of workers in the SME sector, although taking into account the self-employed there was an increase of 4.8%. Overall, the number of SME employees has declined by 6% since 2018. The number of employees of SME-legal entities has dropped by almost 12% (*Fig. 34*).

In 2021, the growth in the number of employees in the SME sector (excluding the self-employed) was observed only in seven regions, primarily in large urban agglomerations (Moscow, St. Petersburg), which increased employment on the back of the delivery sector (online commerce), as well as in regions with a low base effect (Nenets Autonomous Okrug, Altai Republic, Magadan region, Kamchatka Krai) (*Fig. 35*). The greatest reduction in the number of employees in the SME sector was observed in the regions with a high share of the services sector in the economy (Tatarstan, Bashkortostan, Perm Krai, Volgograd, Omsk, Tomsk regions). In the Moscow and Leningrad regions, the growth of the SME indicator may also have been connected with the transfer of workers from the capital to the suburbs, where salaries are lower, and with the demand growth factor — the relocation of remote workers to the suburbs and country houses. In other regions, the decline in the number of SME workers was owing to a general decline in real incomes in 2020—2021.

1 URL: http://www.kremlin.ru/acts/bank/45726
2 *Zemtsov S.P., Tsareva Yu.V., Salimova D.R., Barinova V.*A. Small and medium-sized enterprises in Russia: In search of the employment growth factors. Voprosy Ekonomiki. 2021;(12):66–93. https://doi.org/10.32609/0042-8736-2021-12-66-93.

Puc. 34. Change in the number of employees in SME sector in Russia in 2021 against 2020

Source: compiled by the authors according to the Unified Registry of Small and Medium Enterprises of the Federal Tax Service: URL: https://rmsp.nalog.ru/

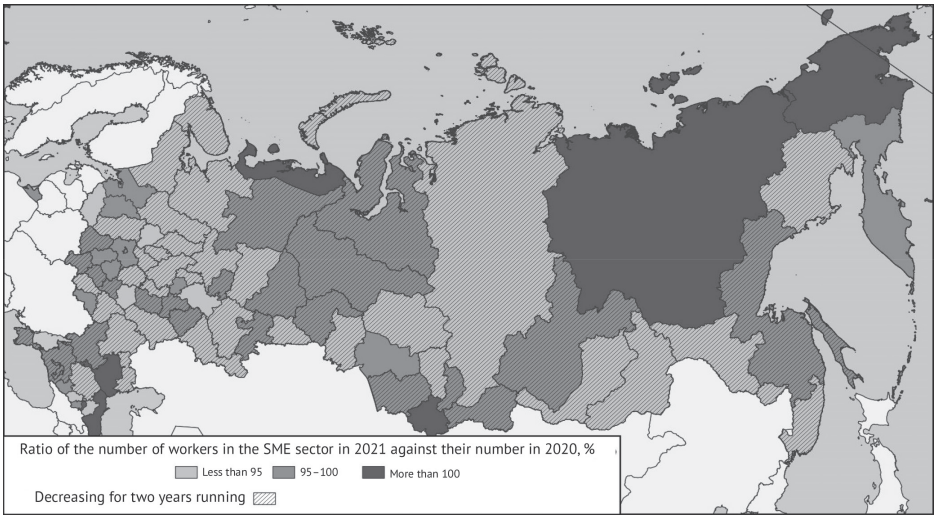


Fig. 35. Change in the number of workers in the SME sector in Russia in 2021 compared to 2020

Source: compiled by the authors according to the Unified Registry of Small and Medium Entrepreneurship of the Federal Tax Service: URL: https://rmsp.nalog.ru/

The share of the self-employed in the total number of employees in the SME sector (including the self-employed) on average in Russia stands at 16%. Over the past year, the relative growth of this index in different regions of Russia

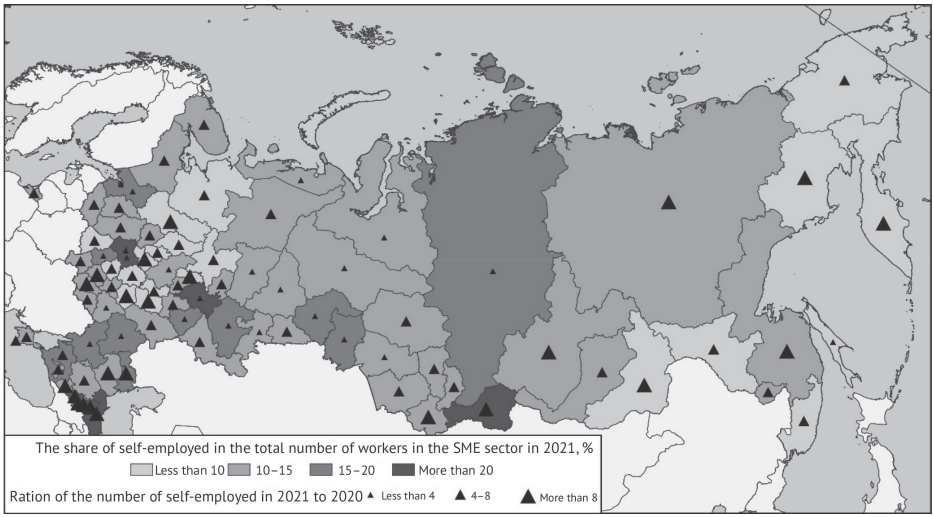


Fig. 36. Change in the number of self-employed in Russia in 2021 compared to 2020

Source: compiled by the authors according to the Unified Registry of Small and Medium Entrepreneurship of the Federal Tax Service. URL: https://rmsp.nalog.ru/

ranged from 2 to 15 times (*Fig. 36*). The largest share of the self-employed in the SME sector is observed in large urban agglomerations (Moscow, St. Petersburg, Tatarstan), where there is great demand for the services of drivers, tutors, tenants, etc., as well as in national republics (the North Caucasus, Tyva), where many are employed in agriculture and construction sector. The smallest share of the employed is in the peripheral regions of European Russia, where seasonal work is very popular (earnings in Moscow and large agglomerations), and the incomes of the remaining residents are so low that they cannot pay even the minimum taxes. The greatest relative increase in the number of the self-employed (8 or more times) is characteristic of a number of regions of Central Russia and the republics of North Caucasus, the smallest — for the northern regions, where employment at large enterprises is high.

4.8.4. Changes in sectoral structure

The sectoral structure of micro- and small enterprises (legal entities) is quite similar (*Table 29*): a large share of trade and significant shares of manufacturing industries, construction, renting and real estate management. The branch structure of medium-sized enterprises is marked by the prevailing share of manufacturing enterprises (25.6% — medium-sized enterprises, 8.0% — microenterprises and 13.3% — small enterprises), agriculture (12.5% vs. 1.9% and 3.4%) and mining (1.6% vs. 0.4% and 0.5%), where the economy of scale is important for competitiveness and the barriers to market entry are higher.

Table 29

OSectoral structure of the number of micro- small and medium-sized enterprises by main sections of OKVED, %

Sector (OKVED codes)	Micro-enterprises	Small enterprises	Medium enterprises
Trade (45, 46, 47)	35	32.5	26.4
Construction (41, 42, 43)	12.8	12.4	11.9
Professional, scientific and technical activities (69—75)	9.4	5.2	3.9
Processing industries (10—33)	8.0	13.3	25.6
Activities on operations with real estate (68)	7.8	7.2	3.0
Transportation and storage (49-53)	6.7	5.4	4.9
Administrative activities and related ancillary services (77—84)	4.7	6.3	3.1
Information and communication activities (58—63)	3.4	2.8	1.8
Activities of hotels and catering companies (55, 56)	2.7	3.9	1.0
Agriculture, forestry, hunting, fishing and fish farming (01, 02, 03)	1.9	3.4	12.5
Other	7.7	7.6	5.9

Note. The category "other" includes: health care; education; culture, sports, leisure; water supply; electricity and gas supply; extraction of minerals, etc.

Source: own calculations based on the Rosstat data.

The publicly available SME registry contains the 10 most common activities in this sector, which comprise around 21% of all SMEs, including individual entrepreneurs. The most popular activities are the following (*Table 30*): activities of road freight transport, construction, retail sales of food products, renting and management of own or leased real estate.

The coronavirus pandemic had a noticeable impact on barber shops and beauty salons — their number went down in 2020—2021, while the number of businesses specializing in real estate rentals, on the contrary, moved up. The number of restaurants increased on the back of the reorientation to the delivery of ready-made food. The number of food retailers remained virtually unchanged in 2020, but went up markedly by 2021 despite a significant drop in industry revenues in 2020. The number of construction firms declined in 2020 due to migrant problems, but the government compensated for this with cheap mortgages in 2021. Non-specialized wholesale trade declined driven by growth in online commerce.

Table 30

Ten most popular activities among all SMEs, including individual entrepreneurs

			2019	2020	2021
Total SME, including IE			**5 836 910**	**5 602 738**	**5 620 997**
OKVED (section, code, decoding)			**Number of SMEs (% of total number of SMEs)**		
Construction	41.20	Construction of residential and non-residential buildings	174 463 (3.0)	171 806 (3.1)	181 111 (3.2)
Trade	46.90	Wholesale non-specialized trade	92 939 (1.6)	87 832 (1.6)	89 045 (1.6)
	47.11	Retail trade predominantly in food products, including beverages and tobacco in non-specialized stores	144 000 (2.5)	144 900 (2.6)	147 300 (2.6)
	47.19	Other retail trade in non-specialized stores	×	×	86 579 (1.5)
	47.71	Retail sale of clothing in specialized stores	×	85 625 (1.5)	×
	47.8	Retail trade in non-stationary trade facilities and markets	106 084 (1.8)	×	×
Transportation and storage	49.4	Activities of road freight transport and transportation services	120 000 (2.1)	104 190 (1.9)	90 055 (1.6)
	49.41	Activities of road freight transport	154 696 (2.7)	171 395 (3.1)	188 832 (3.4)
Hotels and catering	56.10	Restaurant operations and food delivery services	94 116 (1.6)	96 600 (1.7)	101 327 (1.8)
Transactions with real estate	68.20	Lease and management of own or leased real estate	109 505 (1.9)	117 341 (2.1)	132 553 (2.4)
	68.20.2	Lease and management of own or leased non-residential real estate	92 041 (1.6)	94 269 (1.7)	98 200 (1.7)
Other services	96.02	Provision of services by hairdressers and beauty salons	127 572 (2.2)	121 950 (2.2)	93 420 (1.7)

Source: own calculations based on unified register of SME entities for August 2019–2021.

Overall, the number of new organizations in Russia shrank by 23.4% in 2020.[1] But the number of registered private high-tech companies during the same period declined less — by 16.8%, which indicates possible structural changes in the future. In the sectoral structure, the number of startups went up in pharmaceuticals (2-fold), medical devices (1.3-fold), vehicles, veterinary medicine and air and space transport services. Revenues of startups rose in the same industries, as well as in management and R&D. During the pandemic, services related to business process redesign, digitalization and automation, research and medicine were understandably more in demand.

4.8.5. Changes in the availability of credit and access to capital

Since the beginning of 2020, the debt on loans to SMEs, including individual entrepreneurs, was gradually growing (a slight change in the trend was fixed in mid-2021), increasing from Rb4.7 bn to Rb7.2 bn (*Fig. 37*). This is a record high gain since 2012. To a large extent, the debt growth can be explained by the restructuring of SME loans as part of anti-crisis business support measures. Also, an important role was played by the state programs of concessional lending and the reduction of the key rate from 6.25% at the beginning of 2020 by 2 p.p. (to 4.25% per annum) by the end of 2020. It should be noted that from March 2021, the key rate was gradually raised and by January 2022 it peaked 8.5%.

Weighted average interest rates on loans for SMEs are higher than for large businesses, but they were decreasing, reaching their lowest value since 2014 in September 2020 (7.58%), in 2021 (January-August) rose slightly to 8.42%. The Bank of Russia sought to reduce the economy's indebtedness. Although the number of SME borrowers fell sharply by the beginning of 2021 compared to August 2020, the general upward trend in this indicator remains (*Fig. 38*): the number of SME borrowers is significantly higher than in the pre-pandemic period.

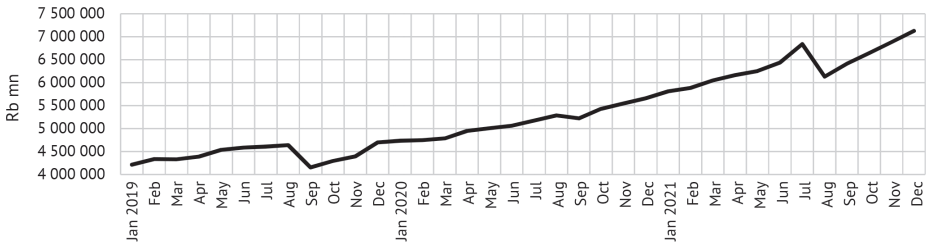


Fig. 37. Indebtedness on loans provided to SMEs, Rb mn

Source: computed by authors based on the Bank of Russia data. Information about allocated and attracted funds. URL: https://cbr.ru/statistics/bank_sector/sors/

1 In detail see: *Zemtsov S., Chepurenko A., Mikhailov A.* Pandemic Challenges for the Technological Startups in the Russian Regions. Foresight and STI Governance, 15(4), 61–77. DOI: 10.17323/2500-2597.2021.4.61.77

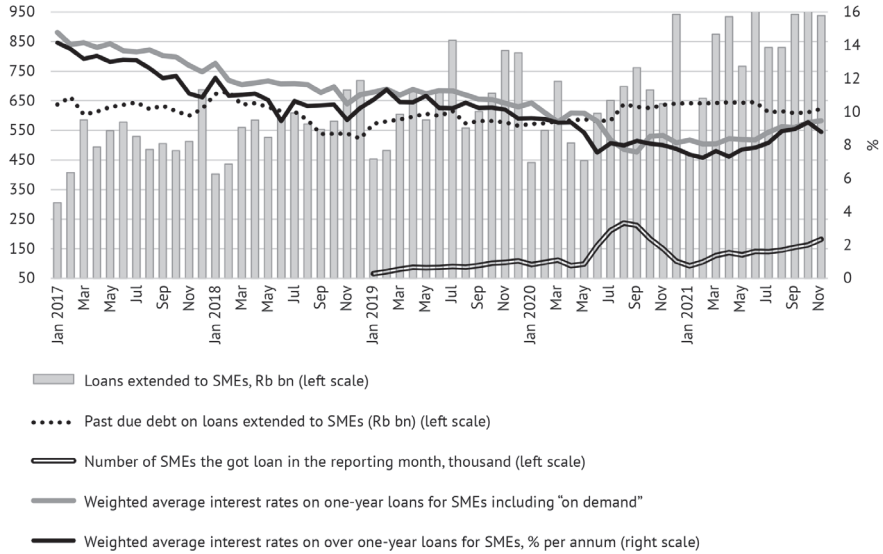


Fig. 38. The main characteristics of lending to the SME sector

Source: Bank of Russia URL: https://cbr.ru/statistics/bank_sector/sors/

The growth in the number of new borrowers is slowing down, as businesses realize that it is becoming more and more difficult to pay back loans in an uncertain economic environment and unstable consumer demand. According to SberIndex,[1] since the end of June 2020, a recovery to the level of the previous year has been observed in the overall movement of consumer spending (*Fig. 39*). The

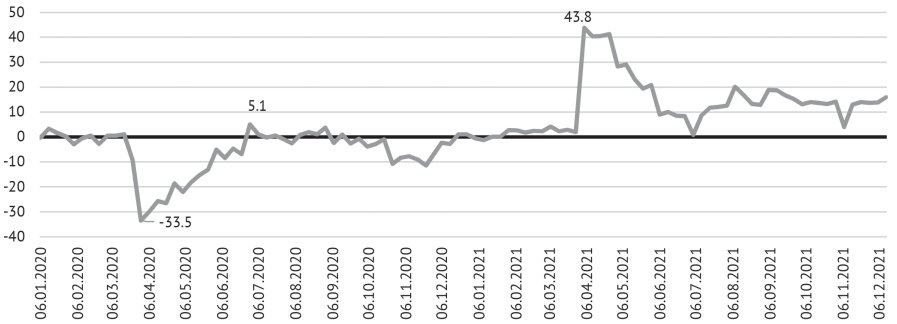


Fig. 39. The volume of consumer spending on goods and services relative to the comparable week of the previous year (% YoY)

Source: Sberindex. Change in consumer spending. https://sberindex.ru/ru/dashboards/ver-izmenenie-trat-po-kategoriyam

1 Sberbank Analitika. URL: https://www.sberbank.ru/ru/about/issledovaniya?fbclid=IwAR07JkTLIMaojuOSDge5H3FeqVGXt0GIZBlGqd9frQcRV1T2n62UR0wN7UU

dynamic of consumer spending in 2021 looks quite positive in contrast to 2020, but *Fig. 39* demonstrates the effects of two "non-business day" periods: in July and in November 2021.

* * *

The pandemic has seriously affected the SME sector. During the lockdown period in April 2020 about half of the companies suspended their activities,[1] more than 75% of SMEs were directly or indirectly affected by the crisis.[2] This led to the start of the record fall in employment in the SME sector since 2009, despite the new support measures. For 2021, the number of enterprises is almost unchanged compared to 2020, however compared to 2019, the number dropped by 3.84%. The sectoral structure of the SME sector has not changed significantly, but the share of online commerce and related delivery services has increased in large agglomerations. In 2021, small businesses continued to "live on borrowed money" as a year before, but overdue debts began to decline.

1 Society and Pandemic. Experience and Lessons Learned from COVID-19 in Russia. Editorial board: *Mau V.A., Idrisov G.I., Kuzminov Ya. I., Radygin A.D., Sadovnichiy V.*A., *Sinelnikov-Murylev S.G.* Moscow, 2020.

2 *Zemtsov S.P., Mikhailov* A.A. Trends and factors in the development of small and medium-sized businesses in the regions of Russia during the coronary crisis // Russian Economic Development. 2021. Vol. 28, No. 4, pp. 34–45

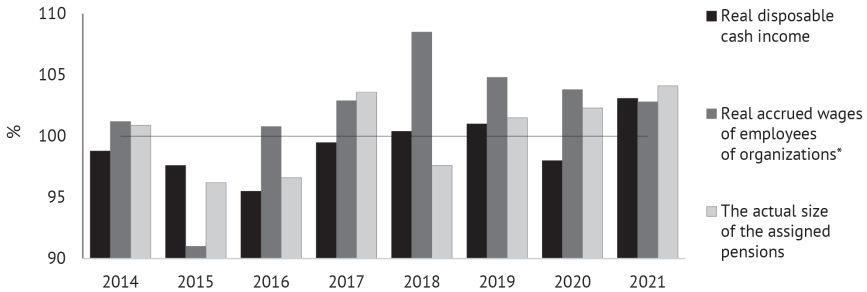
Section 5. Social sphere

5.1. Personal income and the poverty rate[1]

5.1.1. The movement of personal income and its components

In 2021, real disposable personal money income and real allotted pension increased relative to the previous year by 3.1% and 4.1%, respectively (*Fig. 1*).

Over January-November 2021, real charged wages and salaries of employees of organizations amounted to 102.8% of the corresponding index for the same period in 2020.



Note. Data on real wages and salaries in 2021 are for the period from January through November 2021; data on real allotted pensions in 2021 are adjusted for the one-time payment of Rb10,000 in September 2021 in compliance with Executive Order No. 486 dated August 24, 2021 of the President of the Russian Federation.

Fig. 1. The movement patterns of real disposable personal money income, real charged wages and salaries, and real allotted pension over the period 2014–2021, as % relative to the previous year

Source: Rosstat.

1 This section was written by *Grishina E.E.*, Candidate of Economic Sciences, Leading Researcher, Head of the Living Standards and Social Protection Department, INSAP, RANEPA.

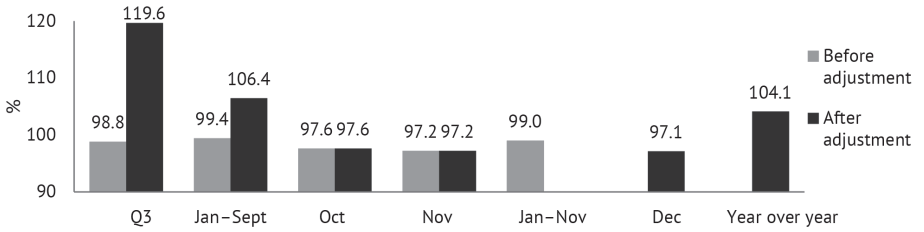


Fig. 2. The monthly movement pattern of real allotted pension throughout 2021, as % relative to the corresponding period in 2020

Source: Rosstat.

It should be noted that, according to data released by Rosstat, the amount of real allotted pension over January-November was 99.0% relative to the same period in 2020 (*Fig. 2*). However, after it was adjusted in Q3 by the one-time cash payment to pensioners of Rb10,000 in September 2021 in compliance with Executive Order No. 486 of the President of the Russian Federation dated August 24, 2021, the total index of real allotted pension for Q3 increased from 98,8% to 119,6%, translating into an annual growth of 4.1% in the real amount of allotted pension relative to 2020.

In 2021, the total index of personal money income in real terms gained 3.4% on 2020, and that of wages and salaries of employees, 3.5% (*Fig. 3*). Due in the main to the low base effect, real income from entrepreneurial activity increased significantly (+17.3%), as did the real money income from all the other sources (+9.6%), including, among other things, the incomes resulting from tax avoidance through illegal cash-out. Property income shrank in real terms by 7.3%. At the

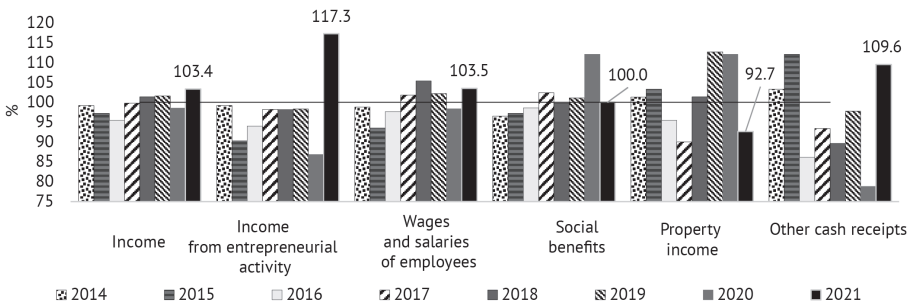


Fig. 3. The movement pattern of total personal money income and its components in real terms, over the period 2014–2021, as % relative to the previous year

Source: Own calculations based on data released by Rosstat.

same time, social benefits in real terms did not change on the previous year, amounting to 112.1% relative to the 2019 level due to the significant lump-sum cash benefits paid in August - September 2021 to families with children aged 6 to 18 years, pensioners, and law enforcement officers, in a total amount of more than Rb600 bn.

It is important to note that in Rosstat's statistics indicators released in December, the data on the total personal money income and its components for 2020 and 2021 were significantly adjusted (*Table 1*). Thus, for example, the adjusted property income data for January-September 2020 increased by Rb580 bn; the wages and salaries of those employed by entities other than organizations declined by Rb632 bn; and the wages and salaries of employees of organizations jumped by Rb484 bn (meanwhile over January-September 2020, the average monthly charged wages and salaries of employees of organizations in nominal terms did not change, amounting to Rb49,426). As a result, over January-September 2021, the volume of wages and salaries of those employed by entities other than organizations gained 10.4% relative to the same period of 2020, while before the adjustment it lost 0.9%.

Table 1

Total personal money income and its components, January-September 2020–2021

	Jan-Sept 2020, Rb bn			Jan-Sept 2021, Rb bn			Jan-Sept 2021 Jan-Sept 2020, %, adjusted by CPI	
	before adjustment	after adjustment	difference	before adjustment	after adjustment	difference	before adjustment	after adjustment
Money income, total	43,948	44,250	+302	48,695	48,992	+297	104.4	104.3
Including:								
- business income	2,240	2,285	+45	2,840	2,893	+53	119.5	119.3
- wages and salaries	26,330	26,182	-148	29,265	28,986	-279	104.7	104.3
- wages and salaries of employees of organizations	18,984	19,468	+484	21,538	21,116	-422	106.9	102.2
- wages and salaries of other employees	7,346	6,714	-632	7,727	7,870	+143	99.1	110.4
- social benefits	9,655	9,743	+88	10 469	10,603	+134	102.2	102.5
- property income	1,804	2,384	+580	1 848	2,268	+420	96.5	89.6
- other cash receipts	3,920	3,656	-264	4,274	4,242	-31	102.7	109.3

Source: Rosstat.

The adjusted annual data demonstrate that in 2021, the wages and salaries of employees of organizations increased in real terms by 2.4% relative to 2020; and the wages and salaries of those employed by entities other than organizations, by 6.7% (*Fig. 4*).

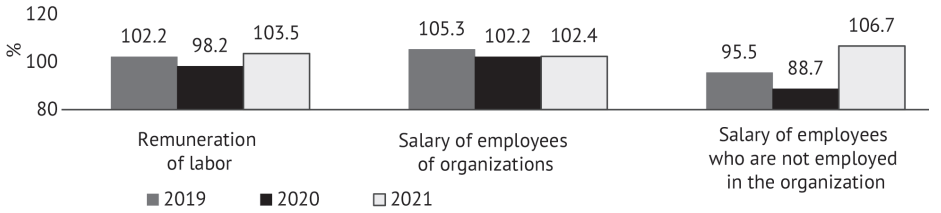


Fig. 4. The movement pattern of wages and salaries of employees in real terms over 2019–2021, as % relative to the previous year

Source: Rosstat.

In 2021, growth of real personal money income occurred alongside an increasing relative share of household income spent on goods and services (from 75.6% in 2020 to 80.3% in 2021) and an increasing growth of savings (from 4.4% to 5.8%) (*Table 2*).

Table 2

The structure of household spending in 2013–2021, %

	Goods and services	Mandatory payments, fees and other expenditures	Personal savings growth (+), decline (-)	Cash-on-hand growth (+), decline (-)
2013	80.8	14.8	3.8	0.6
2014	82.0	15.3	0.3	2.4
2015	77.2	13.7	10.1	-1.0
2016	77.5	13.8	6.6	2.1
2017	79.1	14.1	4.6	2.2
2018	80.8	15.0	1.7	2.5
2019	80.8	15.3	3.4	0.5
2020	75.6	15.3	4.4	4.5
2021	80.3	15.3	5.8	0.9

Source: Rosstat.

5.1.2. The movement patterns of subjective poverty and monetary poverty, and income inequality

In 2021, some significant changes were introduced in the statistics principles defining the monetary poverty line. From January 2021 onwards, the subsistence minimum has been calculated for an entire year, and not based on the consumer basket, but as a share (44.2%) of the median personal income for the year before last.[1] However, as early as November 2021, the President of the Russian Federation noted that in accordance with the new methodology applied in determining the subsistence minimum, in 2022 its level was going to gain only 2.5% in nominal terms, which is significantly below the average annual inflation rate for 2021, and

1 Federal Law No. 134-FZ dated October 24, 1997 "On the subsistence minimum in the Russian Federation", as amended by Federal Law No. 473-FZ dated December 29, 2020.

so he suggested that the subsistence minimum should be raised by 8.6%. As a result, the subsistence minimum for 2022 was set at Rb12,654 instead of Rb11,950 (or 44.2% of the median income for 2020). At the same time, in November 2021, RF Government Decree No. 2049 dated November 26, 2021 introduced the concepts of "poverty line" and "poverty level" and set forth the methodology for calculating the poverty level.

Now, in accordance with RF Government Decree No. 2049, the poverty rate is defined as the proportion of the population whose money incomes are below the poverty line. So, in November 2021, it was decided that from January 2021 onwards, the poverty level would be monitored based on the poverty line, while the subsistence minimum would be applied only in calculating the amount of social benefits.

Since in H1 2021 real personal money income gained only 1.6% on 2020, the monetary poverty level over that period remained practically unchanged relative to 2020 (*Table 3*). However, under the influence of the significant increase, in Q3 2021, of real disposable money income (+8.8% relative to 2020), primarily caused by the lump sum payments to families with children, pensioners and law enforcement officers in August-September 2021, the monetary poverty level declined from 13.3% in January-September 2020 to 12.1% in January-September 2021.

Table 3

The population share with the average per capita money income below the subsistence minimum/poverty line, 2018–2021, %

		H1	Jan-Sept	Year
Subsistence minimum based on consumer basket defined in accordance with Federal Law No. 134-FZ of October 24, 1997 (as amended on April 1, 2019)	2018	13.3	13.0	12.6
	2019	13.5	13.1	12.3
	2020	13.2	13.3	12.1
Subsistence minimum based on median income defined in accordance with Federal Law No. 134-FZ dated October 24, 1997 (as amended on December 29, 2020)	2021	13.1	–	–
Poverty line based on RF Government Decree No. 2049 dated November 26, 2021	2021	13.2	12.1	–

Source: On the personal money income to subsistence minimum ratio and the number of poor people /Rosstat. URL: https://gks.ru/bgd/free/B09_03/Main.htm

In 2021, the subjective personal poverty line defined as the population proportion of those who assess the financial situation of their family to be "poor" or "very poor" dropped by 2.8 p.p. relative to the previous year, thus amounting to 24.5%, which is its record low since 2000 (*Fig. 5*).

The personal income inequality level over January-September 2021 increased after having dropped in 2020, thus returning to that of January-September 2019 (*Fig. 6*).

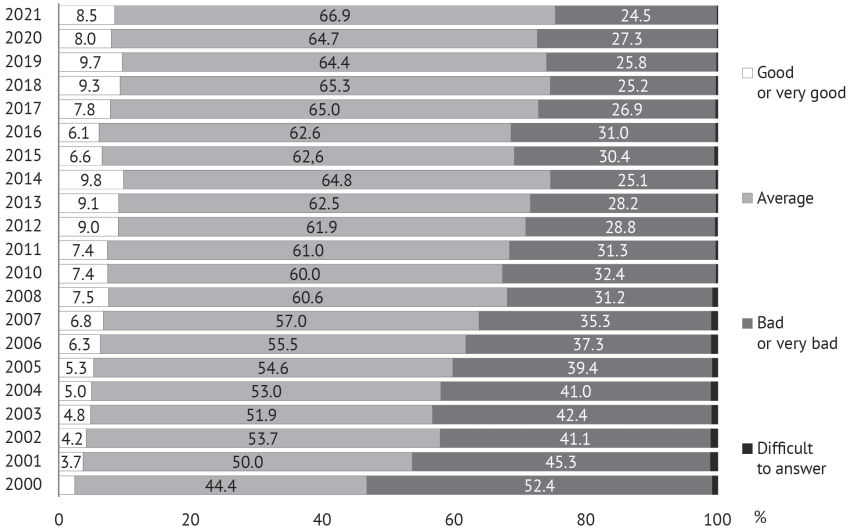


Fig. 5. Public opinion polls on the current financial situation over the period 2000–2021, %

Source: Rosstat.

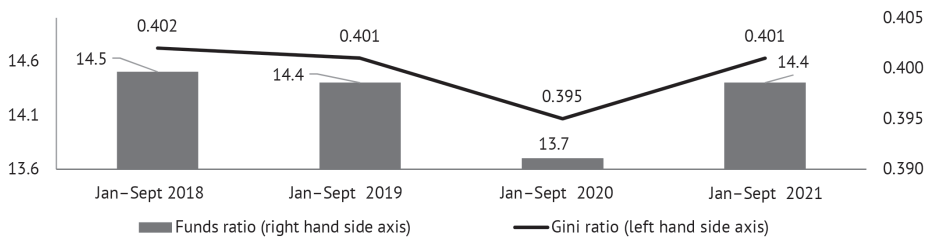


Fig. 6. The Gini and funds ratios, January - September 2018–2021

Source: Report on the socio-economic situation in Russia. Rosstat. URL: https://rosstat.gov.ru/compendium/document/50801.

5.2. Retail trade, services and consumer prices: recovery to the pre-pandemic levels[1]

The volume of retail trade in 2021 exceeded that of the previous year by 7.3% in comparable prices; the volume of paid services consumed by households increased by 17.6% in annual terms.[2] In 2021, growth in household consumption of goods and services was largely of a recovery nature, after as a result of pandemic-related

1 This section was written by *Burdyak A.Ya.*, Senior Researcher, INSAP, RANEPA.
2 Reports on the socio-economic situation in Russia for 2016–2020. Rosstat. URL: https://rosstat.gov.ru/compendium/document/50801

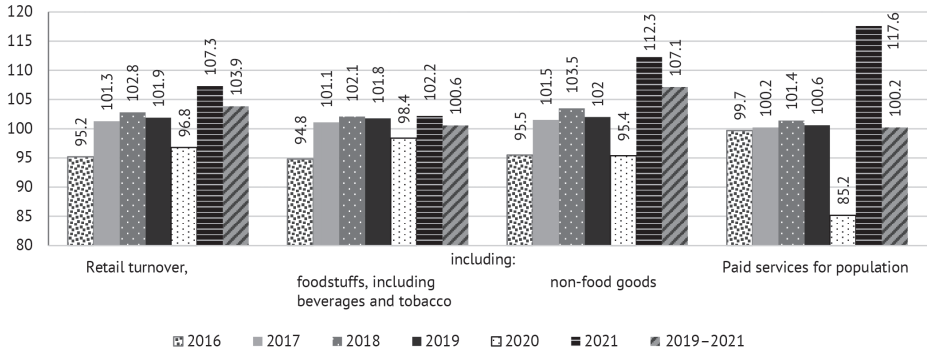


Fig. 7. The annual retail turnover indices and the physical volume of paid services for the population (in comparable prices relative to the previous year and a two-year index for 2019–2021), %

Source: Rosstat.

restrictions their indices had declined in 2020 by 3.2% and 14.8% relative to 2019, respectively (*Fig. 7*). The two-year movement of the volume of paid services (2019–2021) is near zero (+0.2%). The two-year growth in retail sales of foodstuffs, including beverages and tobacco products, amounted to 0.6%. The sales of non-food goods gained 7.1% relative to 2019. The cumulative retail turnover growth over two years amounted to 3.9% in comparable prices.

Changes in the household consumption level are reflected in the relative share of households that have been demonstrating certain types of large expenditures over the last three months prior to the survey date. The corresponding index is based on the results of regular population surveys conducted by FOM.[1] The "spending on repairs" (the most popular item for Russians) in the autumn of 2020 returned to its pre-pandemic level (20–21% of respondents), and then in the summer of 2021 it remained at that level. Over the summer months of the pre-pandemic year, 11–13% of households spent their money on vacation and travel; in the summer of 2021, this type of spending was reported by 8–9% of respondents. As far as spending on medical services is concerned (12–14% of respondents), there were no significant changes either at the onset of the pandemic or in 2021.

In the paid services sector, tourism and cultural services suffered most during the pandemic, shrinking by more than half in 2020. In 2021, these two types of services demonstrated a significant surge on the previous year - by 54% and 63%,[2] respectively; however, their indices are still demonstrating a decline relative to their pre-pandemic level (by 27% and 24% over the period 2019-2021). Their two-year movement pattern confirms the fact that they have been hit hardest and

1 Consumer behavior of Russians during crises. FOM. ФОМ. URL: https://covid19.fom.ru/post/potrebitelskoe-povedenie-rossiyan-v-krizisy

2 Reports on the socio-economic situation in Russia for 2016–2020. Rosstat. URL: https://rosstat.gov.ru/compendium/document/5080

have not yet recovered. In 2022, the transportation services sector experienced a growth of 37% on the previous year; however, its movement pattern is negative relative to 2019 (-17%). Hospitality services in 2021 gained 36% relative to 2020, but their index has not yet reached its 2019 level (12%).

In 2021, the volume of courier and postal services increased significantly: by 15% relative to 2020, and by 19% over the period 2019-2021. Growth is likewise observed in the sector of medical and veterinary services: by 26% and 35% over the past year, respectively, and by 14% and 17% relative to 2019. The consumption of personal and household services increased by 26% over the course of last year, and by 8% over two years.

In 2020, the pandemic produced a slight decline in the consumption of housing and amenities services (minus 4–5%). In 2021, there was an increase by those same 4–5%, as a result of which their consumption volume largely returned to its pre-pandemic level (*Table 4*).

Table 4

The volume of paid services consumed by the population in comparable prices

	2021, % relative to 2020	2020, % relative to 2019	2021, % relative to 2019	Growth over 2 years
Paid services *including:*	**117.6**	**82.7**	**97.3**	**-2.7**
– personal and household	126.1	85.4	107.7	7.7
– housing	103.9	95.2	98.9	-1.1
– amenities	104.7	96	100.5	0.5
– postal, courier	115	103.6	119.1	19.1
– medical	126.1	90.5	114.1	14.1
– veterinary	135.3	86.6	117.2	17.2
– education system	116	87.4	101.4	1.4
– telecommunications	101.4	95	96.3	-3.7
– legal	103.1	91.8	94.6	-5.4
– transportation	136.7	60.9	83.3	-16.7
– culture	162.6	46.7	75.9	-24.1
– tourism	153.9	47.6	73.3	-26.7
– physical culture and sports	146.7	67.4	98.9	-1.1
– hospitality and accommodation	136.1	64.9	88.3	-11.7
– specialized accommodation facilities	149.8	58.9	88.2	-11.8
– of these, sanatoria and health resort facilities	151.8	59.8	90.8	-9.2
– services provided to elderly and disabled individuals	111.1	96.9	107.7	7.7
– other types of paid services	139.4	79.4	110.7	10.7

Source: Rosstat.

In 2021, the structure of consumption demonstrated an increasing share of non-food goods and a shrinking share of paid services, while that of foodstuffs

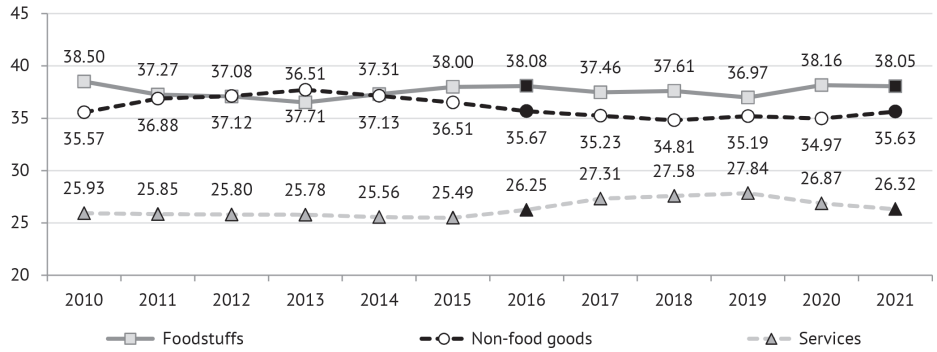


Fig. 8. The structure of consumer spending, %

Source: Rosstat.

remained practically unchanged. The ratios of these three groups of household expenditures in 2021 are close to those observed in 2016 (*Fig. 8*).

The consumer price inflation in 2021 reached 8.4%. Foodstuffs (+11.8%) were the leaders in terms of price growth; prices for non-food products increased by 8.6% (December 2021 relative to December of the previous year); and prices for services gained 5% (*Fig. 9*).

In 2021, the rise in prices for the most popular food items (the so-called "borscht set") was much steeper than that of the average consumer price index for all foodstuffs. Thus, for example, the price of white cabbage jumped 2.4 times on the previous year, so its price gained 141% overall (*Fig. 10*). Potato prices went up by 57%; prices of table beets, by 44%; those of garlic, by 43%; and those of carrots, by 33% (December 2021 relative to December of the previous year). Prices of some

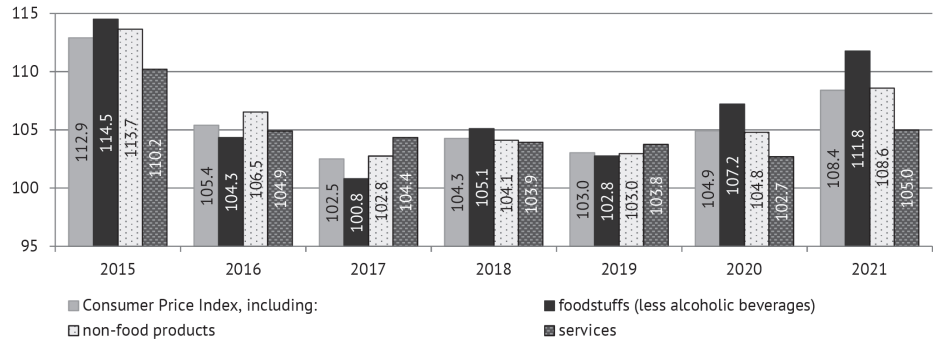


Fig. 9. The Consumer Price Index, December relative to December of the previous year, %

Source: Rosstat, EMISS.

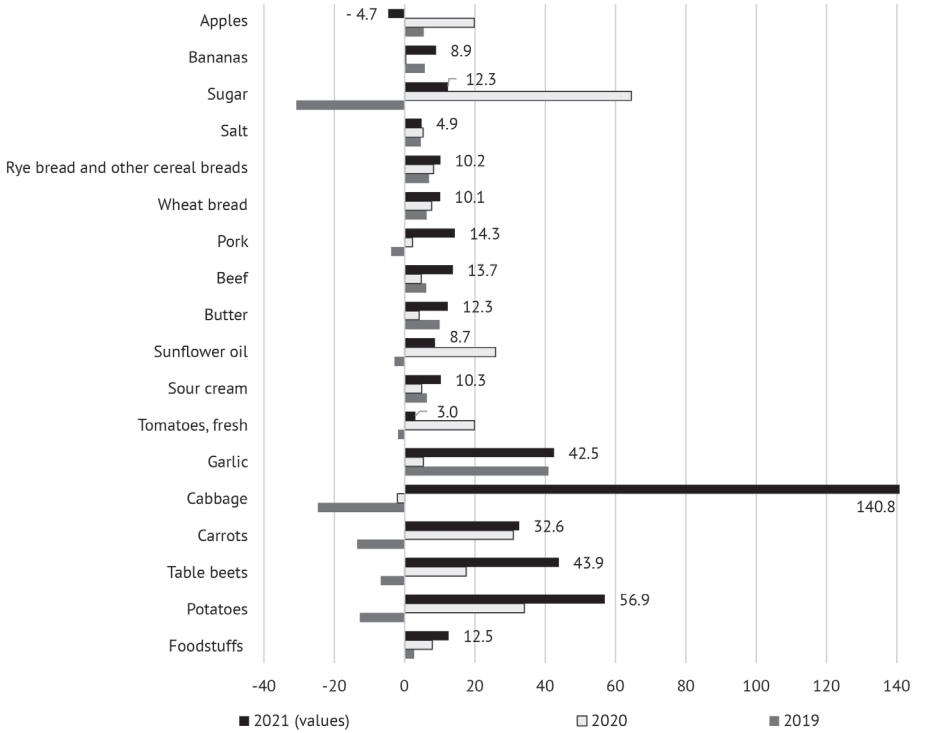


Fig. 10. Consumer price growth for the items in the "borscht set", December relative to December of the previous year, %

Source: Classification of Individual Consumption According to Purpose (COICOP). Rosstat; EMISS.

of the products that displayed moderate increases in 2021 surged significantly upon the previous year. The price of sunflower oil increased by only 9% in 2021 vs. 26% in 2020 (thus moving significantly above the inflation rate). The price of sugar, which surged by 65% in 2020, climbed by another 12% in 2021. The situation with tomato prices was similar: in 2020, it increased significantly (by 20%), and then in 2021 it added another 3%, which was well below the average food inflation rate.

The difference between the personal consumer basket and the average consumption structure that is used as the basis for the movement of official consumer price indices results in a gap between the inflation rate observed by the population and the CPI indices in statistical reports. In December 2021, the population experienced inflation of 17.7%[1] (median value). The average observed inflation rate for 2021 based on the results of surveys amounts to 15.5%.

1 Inflation expectations and consumer sentiment. No. 2 (62). February 2022. Bank of Russia. URL: https://www.cbr.ru/collection/collection/file/40844/infl_exp_22-02.pdf

5.3. Labor market dynamics[1]

The COVID-19 pandemic crisis had a significant impact on the Russian economy. After multiple shocks caused by 2020 coronavirus pandemic and the worsening economic situation in the country, the Russian labor market showed a stable positive trend in 2021.

In 2020, the number of people employed decreased by 1,332,000 or by 1.9% compared to 2019. However, gradual employment growth began in October 2020 and continued through all 12 months of 2021, reaching a pre-crisis value of 7,231,700 by December 2021 (*Fig. 11*).

In 2020, the employment rate decreased by 1.0 p.p. — from 59,4% in 2019 to 58,4% in 2020. A sharp fall happened in April 2020 (by 1.0 p.p. compared to March 2020) and continued until July. This was followed by slow growth, which in summer 2020 was mainly seasonal. Since the start of 2021, employment growth has become steady. Thereby, while the lag from June to December 2020 was 1.3 to 1.5 p.p. behind the 2019 figures, it was reduced to 0.3 to 0.5 p.p. in January to March 2021. From April 2021, the employment rate reached the pre-pandemic values of 2019, continuing at this level until the end of the year with an increase of 0.2 p.p. recorded in December 2021 (*Fig. 12*).

The sectoral employment in Q3 2021 was almost identical to that in Q3 2019: minor changes were recorded in wholesale and retail trade; hotels and catering with a decline of 0.3%; financial and insurance activities — down 0.2%; mining and manufacturing — down 0.1%. Education (+0.2%), construction, professional, scientific and technical activities, administration and related activities (+0.1%) experienced slight growth.

The following changes took place in the professional employment in the main job:

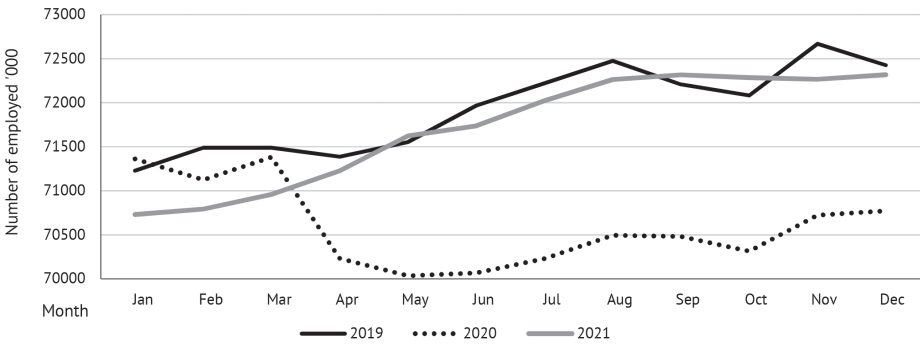


Fig. 11. Number of employed, 2019 – December 2021, '000

Source: OPC data; Rosstat.

1 Author of the section: *Podverbnykh U.S.* Candidate of economic sciences, Researcher, ISAF RANEPA, Associate Professor, Department of Organizational Behavior and Human Resource Management, School of Business, NRU HSE.

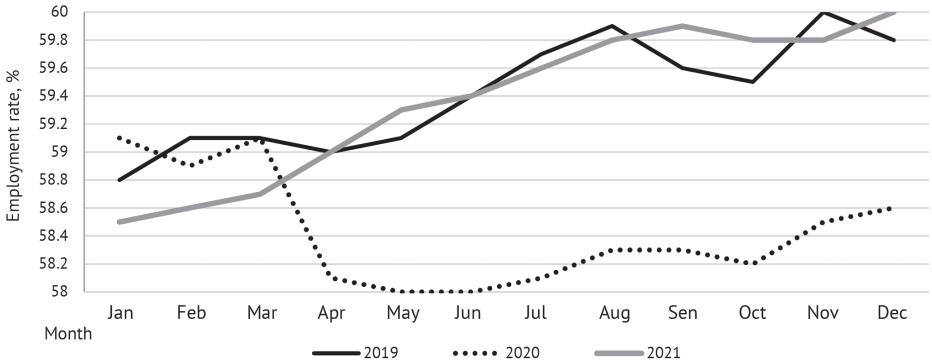


Fig. 12. Dynamics of employment, 2019 – December 2021, %

Source: OPC data; Rosstat.

- As for top-ranked professionals, there was an increase in business and administration specialists by 0.42%, law, humanities and culture by 0.37%, science and technology by 0.28%;
- Ordinary skills specialists and technicians: an increase of 0.4% in science and technology;
- Operators of production units and machinery, assembly workers and drivers: an increase by 0.29%.

There was a 0.68% decrease for the year 2021in the ordinary skills professional staff in economic and administrative activities.

Thus, the coronacrisis resulted in a relatively little change in the occupational and sectoral structure of the labor market. Despite significant changes in the economy, the employed generally continued to do the same jobs as before the crisis.

The overall rate of unemployment at the beginning of 2020 was 4.7%. In the first month of the coronacrisis (April 2020) a significant growth in unemployment up to 5.8% was recorded, which continued until the end of summer, reaching a peak of 6.4% in August. From November 2020 the unemployment rate began to decline gradually and by mid-2021 it had almost reached its pre-pandemic figures, having only slightly exceeding. Thus, in June 2021, the unemployment rate was 4.8% or 0.4 p.p. higher than in June 2019. Since autumn 2021, the general unemployment rate has reached values below the pre-pandemic level of 4.3%, which is 0.3 p.p. below the 2019 figures (*Fig. 13*). By the end of the year, the unemployment rate remained at 4.3% as at December 2021.

As of December 2021, the number of unemployed who have been looking for a job for 12 months or longer has declined by 2.2% compared to December 2019. On average, the share of unemployed who have been looking for work for 12 months or more in 2021 has declined by 1.3% compared to 2019 (*Fig. 14*).

Low rates of registered unemployment are typical for the Russian labor market. From April 2020, this indicator began to grow rapidly *(Fig. 15*). It peaked at 4.9%

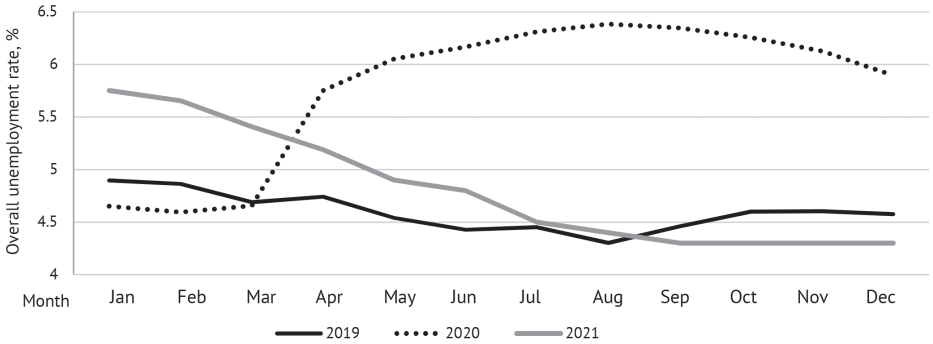


Fig. 13. Overall unemployment by months, 2019–December 2021, %

Source: OPC data; Rosstat.

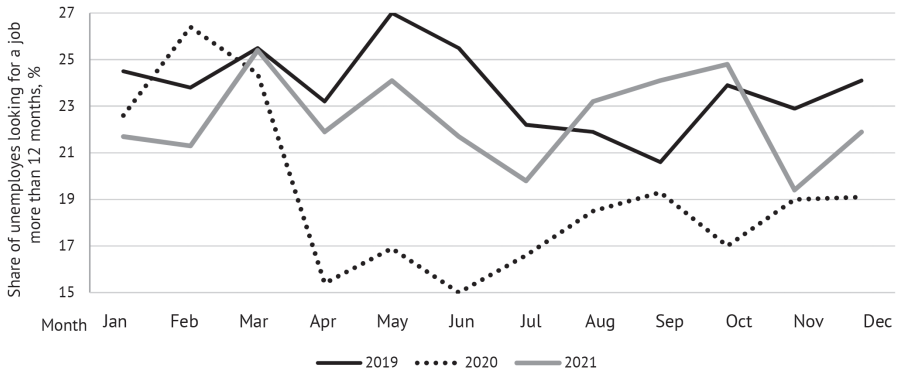


Fig. 14. Share of unemployed looking for a job more than 12 months or longer, 2019–2021, % of the total number of unemployed

Source: OPC data; Rosstat.

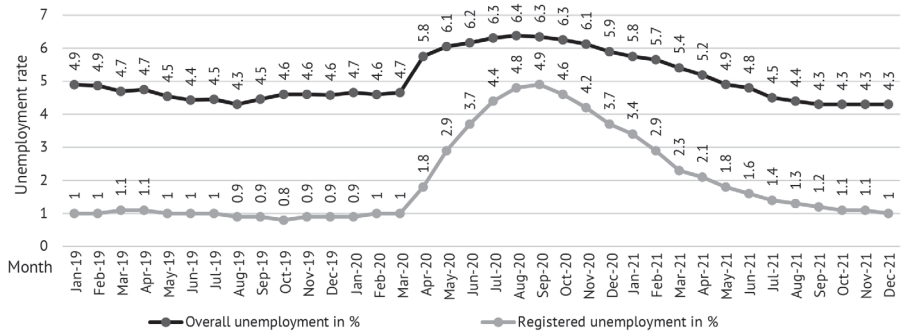


Fig. 15. Overall and registered unemployment rate by months, 2019–2021, %

Source: OPC data; Rosstat and Ministry of labor.

in September 2020 and then began to decline gradually. By September 2021, the registered unemployment rate had fallen to 1.2% (by 3.7 p.p.) and by the end of 2021 it evidenced 1.0%, which corresponds to the pre-pandemic value of 2019.

In 2020, the total number of registered unemployed reached its maximum in August-September (about 3.9 mn people) followed by a gradual decrease and stabilization in the number of registrations (*Fig. 16*). In April-May 2021, the monthly number of individuals receiving unemployment status was 1.5-1.6 times higher than in 2019, however, afterwards it began to decline steadily, and by the end of 2021 the number of registered unemployed was less than 850,000.

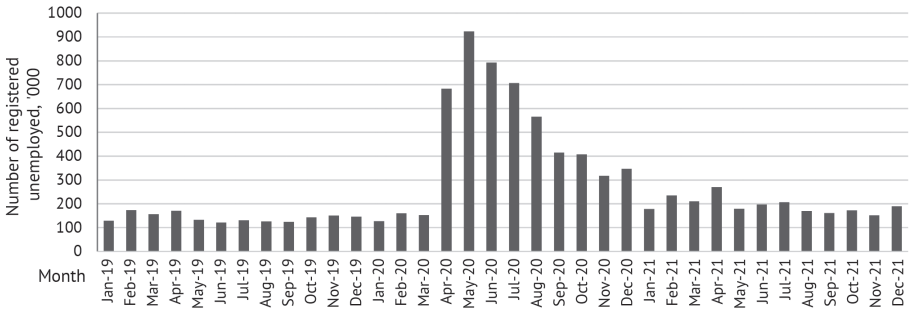


Fig. 16. Number of monthly registered unemployed by employment offices, 2019–2021, '000

Source: Ministry of labor.

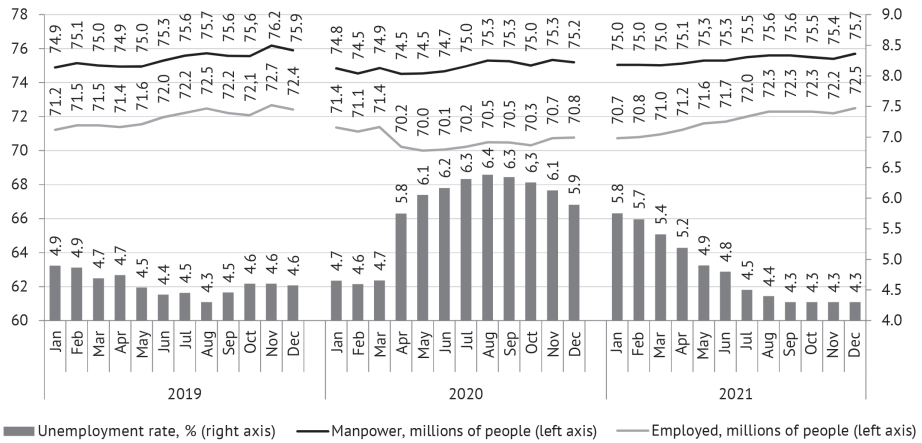


Fig. 17. Number of manpower, employed and rate of unemployment by months in 2019–2021

Source: OPC data; Rosstat.

Thus, the Russian labor market has stabilized since August 2021 and reached its pre-pandemic level of 59.8% (August - November), 60% (December) which corresponds to the rate of employment in 2019. The number of people employed in 2021 rose from 70.7 mn in January to 72.5 in December 2021. The unemployment rate in September - October 2021 fell to its lowest level since August 2019 to 4.3%, maintaining this value until the end of 2021 (*Fig. 17*). One of the factors behind the fall in unemployment is the lifting/mitigation of coronavirus restrictions, which triggered labor demand as well as measures taken to restore employment and support medium and small businesses.

A traditional identity of the Russian labor market is price adjustment to macroeconomic shocks. Unlike developed countries, where stability and even some increase in wages during crises is a standard scenario, the labor market in Russia usually adapts to economic crises mainly through wage cuts of employees.

The labor market faced a severe shortage in 2021. Recruitment activity was higher than in the same period before the coronacrisis. Competition for human resources as well as inflation resulted in growing wages despite difficult economic conditions. In 2021, rate of wage growth returned to pre-crisis levels. On average, wages rose by 2.7% in real terms from January to November 2021 compared to the same period of the previous year (*Fig. 18*). The average wage for the first 11 months of 2021 was Rb 54,547.

The highest increase in wages in 2021 is recorded in transport and storage of water transport (18.4%), wholesale and retail trade in motor vehicles and motorbikes (17.6%), leather and leather products manufacturing (17.2%), hotels and catering (17.1%). The smallest growth was observed in healthcare (1.6%), tobacco production (2.4%), intercity and international passenger railway transportation (2.5%) and administrative activities (4.9%). Negative wage dynamics in 2021 was recorded in pipeline transport (-1.4%).

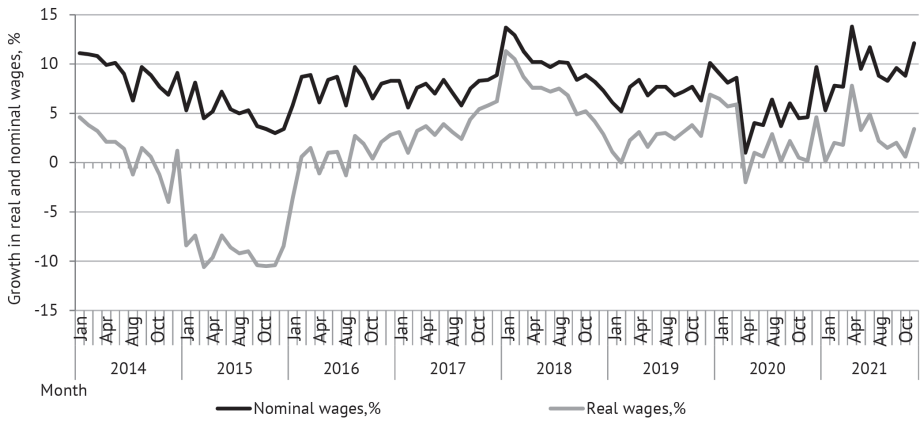


Fig. 18. Growth in nominal and real wages vs relatively corresponding indicator of the previous year by months, 2014 – November 2021, %

Source: OPC data; Rosstat.

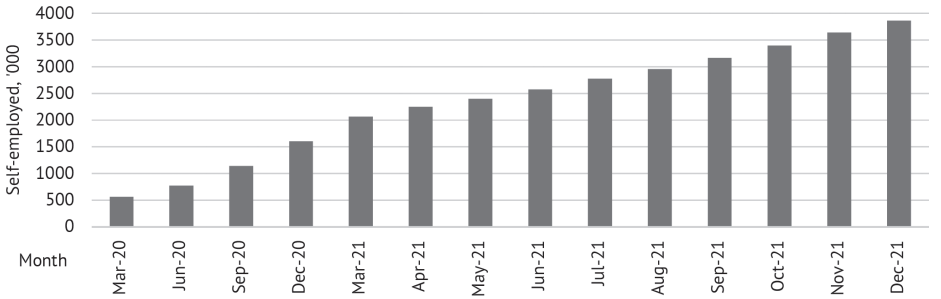


Fig. 19. Number of self-employed by months 2020–2021, '000

Source: FTS.

When considering a broader spectrum of workers, including also wage earners working for private and entrepreneurial entities and individuals apart from those employed, their real wages rose in 2021 at almost the same rate (2.7% in the first 10 months of 2021). This differs from the 2020, when wages of workers in informal sector were declining against growth for those employed in the corporate sector of the economy.

Since the beginning of 2020, Russia has seen a rapid growth in the number of self-employed from 564,000 (March 2020), which has continued throughout 2021 and reached 3,862,000 in December 2021 (*Fig. 19*).

It is worth noting that the self-employed earn more than Rb 1.4bn every day, and from the beginning of 2019 to the end of 2021, the self-employed registered more than Rb 620bn worth of income.

Based on the data presented, it can be concluded that the coronavirus pandemic in 2020 had a significant impact on labor market, but despite the negative forecasts, the Russian labor market was able to stabilize in 2021 and reach the pre-Covid values for most indicators. The measures taken by the government and the gradual lifting of most quarantine restrictions prevented catastrophic consequences.

5.4. Migration[1]

5.4.1. Long-term migration

After a sharp fall in 2020, Russia's net migration in 2021 was the highest in recent years. According to the estimates based on the Rosstat's operative information on the population, which decreased by 692,900 people in 2021, and on the natural population decline (in 2021 — 1,042.7 thousand people), the migration gain was 349,800 people. At the same time, according to the last published data for January-November 2021 the positive migration balance for

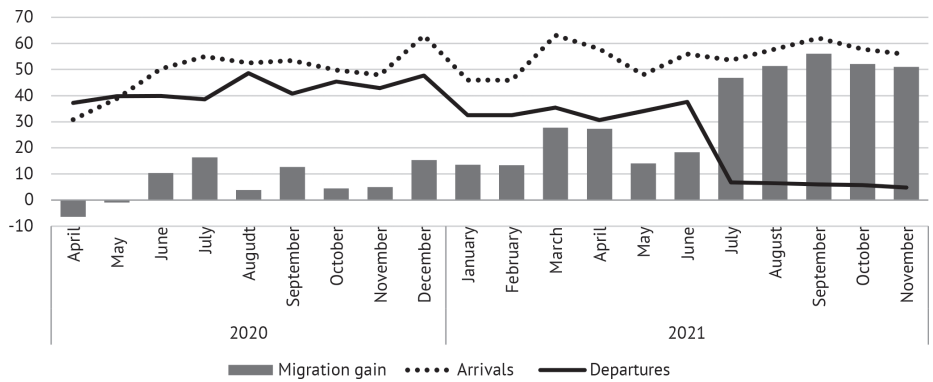
1 This section was written by: *Mkrtchyan N.V.*, Candidate of Geographic Sciences, Leading Researcher, INSAP RANEPA; *Florinskaya Yu.F.*, Candidate of Geographic Sciences, Leading Researcher, INSAP RANEPA.

11 months already made up 371,400 people, and there is no reason to believe that there was a migration loss in December. Monthly dynamic of the index allows us to assume that the net migration will exceed 400,000 people. The reason for the discrepancy in these data is not clear. But no matter how Rosstat estimates the final results of migration gain for the year, it is obvious that its magnitude was extremely high in 2021.

The fact that positive migration balance will increase compared to 2020 was clear beforehand. However, its magnitude can be explained, as it happened before, by a change in statistical accounting procedures. Since July 2021, Russia stopped counting departures from the country at the end of the term of registration at the place of residence, because the terms of registration were extended until the end of the year. In H2 2021, only those who were de-registered at the place of residence (as it was before 2011) were counted as departures. As a result, in July the number of people leaving the country amounted to 17.8% by the relevant period of 2020, and in July — November 2021 — 13.8%. Arrivals for July-November went up by 11%, but their role in the change of the migration growth was secondary.

Since July 2021, Russia's population growth has been 47-56 thousand people a month (*Fig. 20*), and between July and November 2021 — a total of 257,200 people.

Migration gain of Russia's population in January-November compared with a number of previous years increased with all countries (*Table 5*), which is not surprising in a situation when the migrants count system is changing so radically, and the vast majority of departures from the country are not registered. Tajikistan became Russia's main migration donor by a significant margin, followed by Ukraine and Kazakhstan.



Note. Data for January and February 2021 — estimate based on two months of data as a whole.

Fig. 20. Long-term international migration of the Russian population in April 2020 — November 2021, monthly data

Source: Socio-Economic Situation in Russia. Bulletins for 2020 and 2021.

Table 5

Migration gain (loss) in Russia in January through November 2017–2021, thousand persons

	2017	2018	2019	2020	2021
International migration, total	**200.9**	**119.1**	**259.4**	**91.1**	**371.4**
With CIS countries	193.6	123.0	233.8	100.4	344.2
Including:					
Azerbaijan	7.9	8.1	15.8	9.9	20.6
Armenia	13.4	14.1	33.7	-3.1	39.9
Belorussia	10.8	6.8	5.9	-2.1	13.5
Kazakhstan	30.2	24.3	37.5	5.8	42.4
Kirgizia	16.9	9.1	13.7	0.6	36.0
Moldavia	9.2	7.0	5.2	2.2	14.3
Tajikistan	31.7	28.8	43.5	34.4	83.3
Turkmenistan	3.3	2.7	5.3	0.9	6.4
Uzbekistan	20.3	6.6	18.2	3.7	31.3
Ukraine	50.1	15.5	55.1	48.1	56.4
With far abroad countries	7.3	-3.9	25.6	-9.2	27.3

Source: Socio-Economic Situation in Russia. Bulletins for 2018–2021.

In 2021, there were no significant changes in the internal migration count and for a number of previous years. Nevertheless, starting from 2019, the number of recorded relocations is decreasing (*Fig. 21*). Between January and November 2021, the number of in-country relocations stood at 3,319,000, a drop of 671,200, or 16.8%, from the corresponding period in 2018. Compared to the 11 months of 2020, the number of relocations moved up by only 3.2%, not making up for the 14% drop in the year of the most severe coronavirus restrictions.

The sharply increased net migration of Russia's population induced by an improvement in the migration balance of some of its regions. In January-November

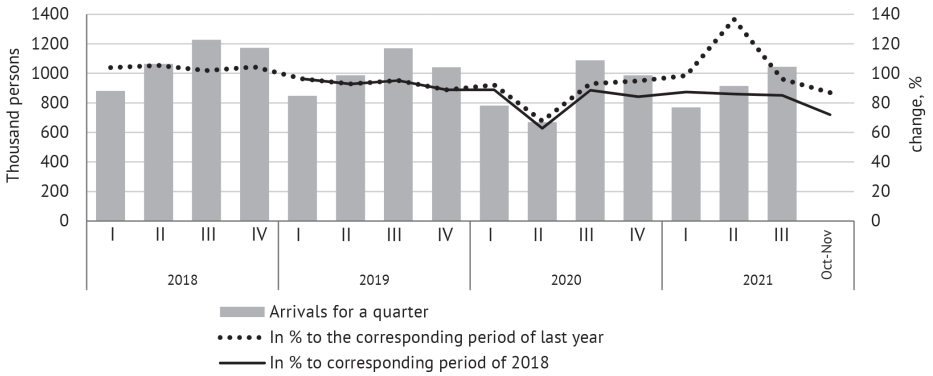


Fig. 21. Internal long-term migration in Russia in 2018–2021, quarterly data

Source: Socio-Economic Situation in Russia. Bulletins for 2018–2021.

2021, the number of regions with a migration loss was 29, compared to 50 in the corresponding period of 2020. Of all the federal districts only the population of the North Caucasus continues to decline as a result of migration. In this case, the migration gain of the population of Moscow continues to remain low (+12,400 people), while the population of St. Petersburg is lower than the average in the 2010s - +21,400 people. Meanwhile, the migration growth of Kaluga, Kaliningrad, Novosibirsk, Tyumen regions, Tatarstan surged.

5.4.2. Temporary migration

Throughout 2021, the number of foreign nationals in Russia remained at its lowest level in a decade (*Fig. 22*). The number of foreigners ranged throughout the year from 5.5 million to 6.9 million, about 40 percent below the pre-pandemic 2019 and one-third lower than in 2020. At the same time, the foreign-born population numbers during 2021 (starting in February) returned to their pre-pandemic levels. The number of foreign nationals (starting in February) returned to its usual pattern: the lowest numbers at the beginning and end of the year, rising in summer and early fall, when additional seasonal labor migrants come to the country. By the end of 2021, there were about 5.93 million foreign nationals in Russia. Compared to the end of 2019, the contingent of tourists decreased the most (by more than 80%), as well as those staying in the country for transit, business and private purposes (by 73, 66 and 58%, respectively); the number of those staying for work and study purposes declined the least (by 21 and 22%, respectively).

Among all those staying in Russia, the absolute majority are citizens of the CIS countries, and their share is higher than in previous years and has reached 89% (79% in 2019, 84% in 2020). At the beginning of winter, there were 5.3 million

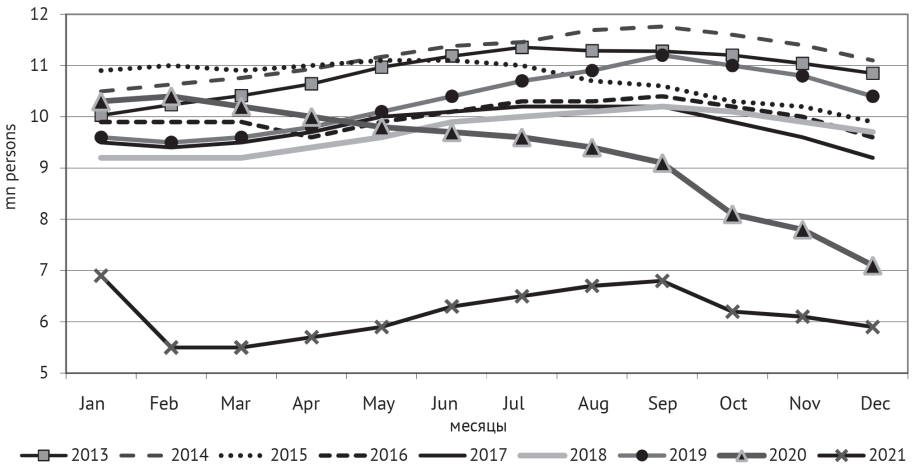


Fig. 22. Stay of foreign citizens in Russia at the end of the month, 2013—2021

citizens from CIS countries (*Table 6*), at the end of the year — 5.2 million (at the end of 2019 — 8.2 million). The leaders are all three Central Asian countries: Uzbekistan, Tajikistan, and Kyrgyzstan. For the first time, Ukraine was missing in the top three.

Table 6

Stay of foreign citizens from the CIS in Russia on the date, persons

	04.12.14	01.12.15	01.12.17	01.12.19	01.12.20	01.12.21
Azerbaijan	598 646	531 080	601 704	758 377	548 389	253 961
Armenia	499 084	490 156	494 848	483 250	339 985	301 035
Belorussia	506 759	644 598	689 534	690 854	628 134	515 694
Kazakhstan	581 516	671 751	531 865	547 398	365 632	270 887
Kirgizia	554 808	541 855	624 756	746 477	599 294	663 683
Moldavia	586 069	512 637	425 269	310 679	205 747	98 510
Tajikistan	1 052 822	898 849	988 771	1 243 080	1 012 186	1 143 290
Uzbekistan	2 275 290	1 884 110	1 719 492	2 007 895	1 460 120	1 514 596
Ukraine	2 476 199	2 598 303	2 129 446	1 708 652	1 037 016	577 225
SIC, total	**9 131 193**	**8 773 339**	**8 205 685**	**8 496 662**	**6 196 503**	**5 338 881**

Sources: RF FMS; GUVD MVD RF; TSBDUIG.

Compared to 2019, the number of CIS citizens staying in Russia has decreased; compared to 2020, — all, except from three Central Asian countries. Compared to pre-pandemic indexes, the number of Moldovan, Azerbaijani and Ukrainian citizens staying in Russia dropped the most (by 68%, 67% and 66%, respectively); the number of citizens of Tajikistan and Kyrgyzstan fell the least (by 8% and 11%).

The pandemic and accompanying travel restrictions between countries have significantly reduced the presence of citizens of developed Western countries in Russia (*Table 7*). On average, at the beginning of winter 2021, their number decreased by 3.7-fold compared to 2019; there were 7 times fewer citizens of France and Spain, 6 times fewer citizens of Italy, and 4 times fewer citizens of Germany and Great Britain. Most of all, the reduction affected those in Russia with business and commercial purposes (by 84%), with tourist purposes (by 80%). The number of people from developed countries who work for hire has dropped twofold, and the number of those who stay for study purposes has decreased by two-thirds.

At the end of 2021, there were 3.07 million migrant workers in Russia — those who indicated in the migration card the purpose of entry "work for hire" (at the end of 2019 — 3.9 million, by the end of 2020 — 2.97 million). Of this number, 3.0 million are CIS citizens (98%), 73,000 are from non-CIS countries. Compared to the end of 2020, there were 3% more migrant workers and 20% fewer migrants than at the end of 2019. The contingent of migrant workers from Ukraine and Moldova went down most of all (by 75 and 71%). At the same time, the number of migrant workers from the three Central Asian countries was only 12% lower than before the pandemic.

Table 7

Stay of foreign citizens from some EU countries and the USA in Russia as of the date, persons

	04.12.14	01.12.15	01.12.17	01.12.19	01.12.20	01.12.21
EU as a whole	843 824	484 981	437 189	700 325	551 964	190 157
Germany	242 978	112 053	105 524	150 914	122 565	34 616
Spain	45 860	14 960	14 109	31 239	22 139	4 421
Italy	54 097	29 004	24 092	43 989	34 787	7 373
Great Britain	111 093	29 225	23 616	30 297	31 853	8 175
Finland	76 091	76 220	73 500	87 635	66 983	36 852
France	53 487	34 161	26 071	54 997	47 510	8 363
USA	142 016	47 355	43 875	59 509	63 296	20 400

Sources: RF FMS; GUVD MVD RF; TSBDUIG.

The measures taken to extend the opportunity for foreign nationals[1] who were already in Russia to "come out of the shadows" played an important positive role in their legalization in the labor market. Of all migrant workers staying in Russia at the end of the year, 1.99 million people had valid documents for work (patents or work permits) (at the end of 2020 — 1.21 million); about 856,000 more, from EAEU member-states, had the right to work without such permits. Thus, at the end of 2021, approximately 2.9 million, or 93% (at the end of 2020 — 69%) foreign migrant workers had the potential to be fully legalized on the Russian labor market (if employers so wished). This is the highest figure in all the years since the changes in migration legislation introduced in 2015 came into force. This result clearly demonstrates that even the temporary easing of conditions for migrants to obtain documents contributes to the desire of most of them to legalize in Russia.

As for employers, the number of notifications sent by them to the RF Ministry of Internal Affairs in 2021 on the conclusion of contracts with all categories of migrant workers (with patents, with work permits, from EAEU countries) spiked by 26% compared to the previous year, but decreased by 12% compared to 2019. In the meantime, the number of EAEU citizens in possession of valid documents at the end of 2019 was almost the same as at the end of 2021 (same 2.9 million people).

The same upward trend in the number of legalized migrants is confirmed by statistics on the issuance of new documents for work (*Table 8*). In addition to migrants who were already in Russia and were able to obtain new documents without leaving Russia, newly arrived migrants also began applying for patents and work permits. In 2021, air flights were resumed to all major countries that are donors of labor migration to Russia, and, although airfares continued to be high, the entry of new foreign workers was gradually mounting. During the 12 months of 2021, 1.9 times more patents and work permits (WP) were issued than during

1 Executive Order of the President of Russia No. 364 of 15.06.2021 "On temporary measures to regulate the legal status of foreign nationals and stateless persons in the Russian Federation during the period of overcoming the consequences of the spread of the new coronavirus infection (COVID-19".

the same period last year. Overall, the number of issued documents was higher than in 2021, only in 2014.

Table 8

Registration of work permits for migrants in Russia, January - December, people

		2014	2015	2017	2019	2020	2021
WP for foreign citizens (FC)*		1 334 899	177 175	139 595	117 452	58 475	87 331
Including:	WP for QS*	158 644	22 099	17 333	16 877	7 286	6 557
	WP for HQS	34 225	41 829	21 363	31 754	18 937	44 295
Patents**		2 379 374	1779 796	1 658 119	1 686 418	1 101 832	2 156 125
Total		**3 714 273**	**1 956 971**	**1 797 714**	**1 803 870**	**1 160 307**	**2 243 456**

* Since January 1, 2015 are issued only to FCs from visa entry countries.
** Since January 1, 2015 issued to FCs from visa-free regime countries to work for both individuals and legal entities.

Sources: data from FMS RF and GUVD MVD RF.

Payments by migrant workers to regional budgets have also moved up: in 2021, the amount came up to Rb67.9 bn (in 2020 — Rb47.5 bn, in 2019 — Rb60.4 bn). The main payers have not changed — these are migrants from Uzbekistan and Tajikistan (they got 94% of all patents in 2021); citizens of Ukraine and Moldova accounted for less than 3% of patents issued.

The gradual recovery of labor migration, which was observed in 2021, occurred almost exclusively owing to migrants from Central Asia.

5.5. Demographic development[1]

According to the Rosstat provisional data, Russia's population on January 1, 2022 was 145.5 million[2] (*Fig. 23*). The decline of the population in Russia has been observed since 2018 according to the pre-pandemic Rosstat median projection predicting that population decline will continue until the end of the projection period (2035). However, the spread of coronavirus infection had a significant impact on the population size in 2020—2021. According to provisional data from Rosstat, the Russian population has reduced by 692.900 compared to 2021.

In 2021, natural population decline in Russia reached 1 million people (3 times higher than in 2019). This is the maximum in the last 20 years (*Fig. 24*). The acceleration of natural decline was due to a significant growth in the number of deaths as a result of the spread of coronavirus infection and a continued decline in the number of births.

1 Author of section: *Khasanova R.R.*, Candidate of economic sciences, Senior researcher, ISAF RANEPA.
2 The All-Russian Population Census (ARP) took place in 2021. Population figures will be updated accounting results of Census.

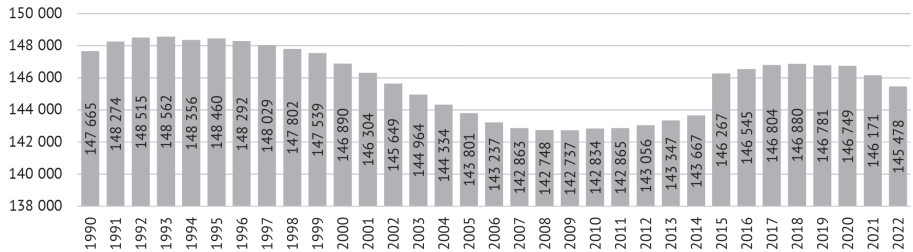


Fig. 23. Russia's resident population, 1990-2022, number of people at the beginning of the year

Source: Rosstat.

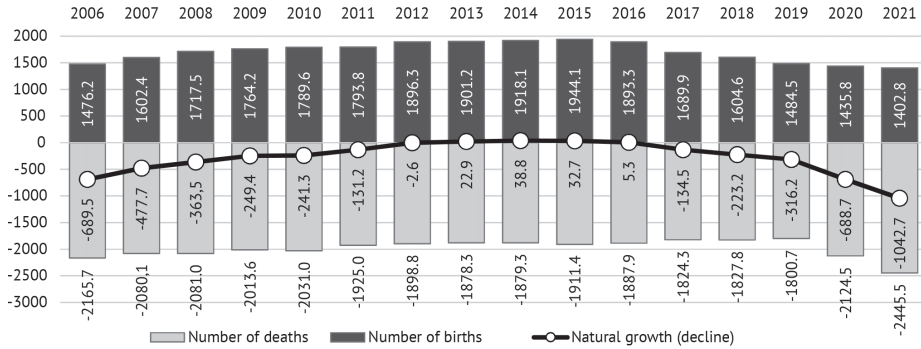


Fig. 24. Natural population growth (decline), 2006-2021, '000 people

Source: UISIS; Rosstat.

From January to December 2021, 1402.800 children were born in Russia, compared to 1435.800 a year earlier (a decline of 2.3%). The total fertility rate (TFR) was 9.6 ppm (9.8 in 2020). In March, June and November 2021, there was a slight increase in the number of births compared to 2020 (*Fig. 25*). At the start of the pandemic many experts predicted a significant drop in the number of births in 2021 due to the effect of coronavirus and its socioeconomic impacts.[1] However, this was not the case. The number of births is declining but does not show a significant drop.

At present, data on fertility rates are only available for the year 2020.[2] The total fertility rate in 2020 remained as in 2019, halting the decline that has lasted since 2016, with first births declining, second births remaining the same, and third births increasing. On the whole, the adverse age structure of the population is

1 Expert group meeting on the impact of the COVID-19 pandemic on fertility. URL: https://www.un.org/development/desa/pd/ru/event/egm-impact-covid-19-fertility

2 Detailed data on the natural population movement in 2021 will be available in summer 2022.

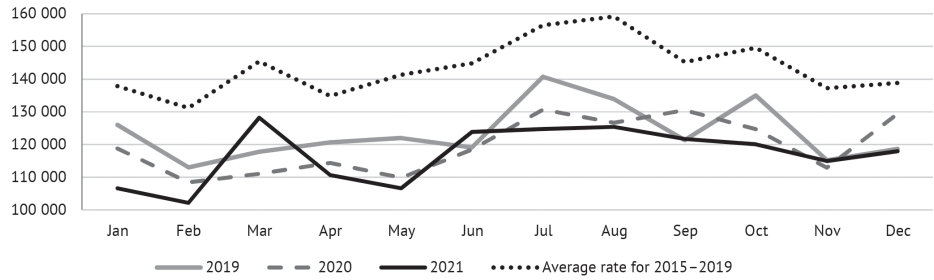


Fig. 25. Number of births by month in 2019-2021 and average for 2015-2019, number of people

Source: UISIS; Rosstat.

the main reason behind the decline in the number of births in Russia. The sparse generation born in the 1990s is at the peak of the reproductive ages. It will determine the birth rate in the next decade and the number of births will be consistently lower compared to the period when it was determined by a large generation of the 1980s. Another reason is the reproductive behavior of young women; in recent years there has been a shift in fertility towards older ages.

A decline in the birth rate in 2021 against 2020 has been observed in most of subjects of the Russian Federation, while eight regions maintain their 2020 levels and only four regions show an increase (Moscow by 6.1%, the Republic of Adygea by 3.1%, Pskov region by 2.5% and Chelyabinsk region by 1%).

The 2020—2021 pandemic of a new coronavirus infection has significantly altered the global demographic landscape. Most of countries have experienced a significant increase in mortality. Between January and December 2021, the global death toll was 2.2445.500 showing an increase of 15% compared to 2020. (2.124.500). The total mortality rate is 16.8 deaths per 1000 people (14.5 ppm in 2020), an increase of 15.9% compared to 2020 and 36.6% vs 2019.

Excess mortality is a key indicator of the direct and indirect impact of COVID-19 spread on population mortality and the effectiveness of countries' efforts to minimize the impacts of COVID-19. The excess mortality rate (population mortality rate for 2021 to the average rate per 1000 people for the same period 2015—2019) was 33%.

The highest absolute mortality rate was observed in November 2021 (257.300), which is 17% higher than in 2020 (*Fig. 26*). However, 28% of all deaths in November are attributed to COVID-19 (major cause).

The mortality rate per 1000 people increased in almost every region except the Chechen Republic and the Tuva Republic, where the rate was 4.8 and 1.1% lower than in the same period in 2020, respectively. Saratov region (+25.6% vs. 2020), Republic of Karelia (+24.8%), Kursk region (+23.7%), Voronezh region (+23.0%), Ryazan region (+22.9%), Novgorod region (+22.5%) and Rostov region (+22.1%) showed the highest increase.

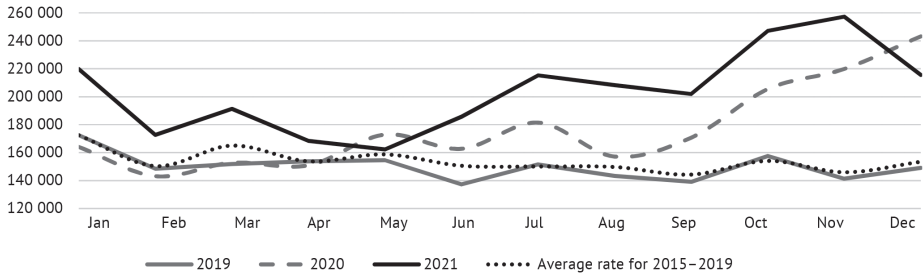


Fig. 26. Number of deaths by month in 2019—2021 and average for 2015—2019, number of people

Source: UISIS; Rosstat.

The infant mortality rate for 2021 was 4.6 per 1000 live births, showing an increase of 2.2% compared to 2020 (*Fig. 27*). Thus, growth was observed in 44 regions of Russia, while in 10 regions the indicator remained at the level of 2020. The maximum growth was demonstrated by the Komi Republic (5.2‰, a twofold increase), Magadan region (5.6‰, an 80.6% increase), Jewish Autonomous Region (10.9‰, a 78.7% increase), the Republic of Adygea (5.1‰, a 70% increase), Kirov region (5.9‰, a 55% increase) and Republic of Mordovia (4.4‰, a 51.7% increase).

A total of 21.2% of all deaths in 2021 were due to coronavirus infection:[1] COVID-19 accounted for 18% and 2.9% of all deaths were due to COVID-19 but it was not the main cause of disease. During this period, 446.400 died from COVID-19 as the main cause of death, showing a 100% increase in 2021 (321.000) compared to the same period in 2020, while 71.400 deaths resulted from a cause of death related to coronavirus infection but attributed to other major health conditions (*Table 9*).

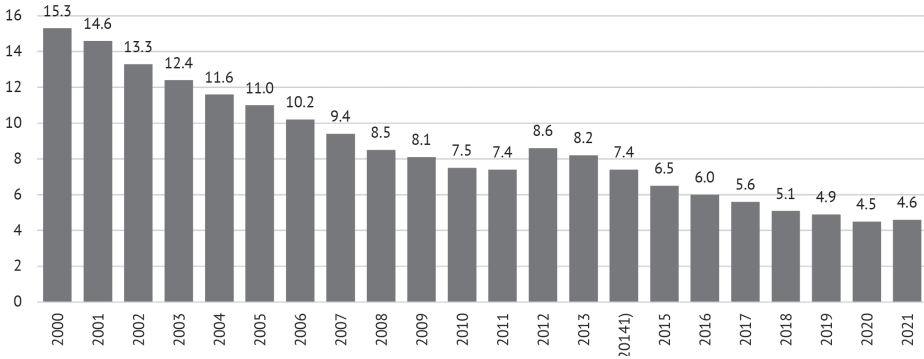


Fig. 27. Number of deaths under 1 year per 1000 live births, 2000—2021

Source: Rosstat.

1 Other classes of death cause have not been published in Rosstat operational statistics since April 2020.

Table 9

Mortality from COVID-19 as the main cause of death and accompanied by COVID-19 (cause of death attributed to other major health conditions), 2020—2021

	COVID-19 is a major cause of death					
	Total		COVID-19, virus identified		Probably COVID-19 but virus not identified	
	2021	2020	2021	2020	2021	2020
January	27 455	–	22 747	–	4 708	–
February	17 120	–	14 791	–	2 329	–
March	17 795	–	15 411	–	2 384	–
April	15 973	1 748	13 839	1 350	2 134	398
May	15 259	7 603	13 077	5 926	2 182	1 677
June	23 775	7 317	20 447	5 825	3 328	1 492
July	44 955	6 084	39 942	5 063	5 013	1 021
August	44 217	4 018	39 332	3 436	4 885	582
September	40 172	5 438	35 174	4 579	4 998	859
October	69 645	15 103	60 357	13 077	9 288	2 026
November	80 888	25 107	72 425	21 262	8 463	3 845
December	49 122	32 408	44 390	27 012	4 732	5 396
Total	446 376	104 826	391 932	87 530	54 444	17 296
Cause of death is referred to other important conditions						
	Total		COVID-19 is not a major cause of death, but had a significant impact on the development of fatal complications of the disease		COVID-19 is not a major cause of death and had no significant impact on the development of fatal complications of the disease	
	2021	2020	2021	2020	2021	2020
January	10 423	–	2 337	–	8 086	–
February	7 664	–	1 956	–	5 708	–
March	6 247	–	1 434	–	4 813	–
April	4 677	1 077	1 106	435	3 571	642
May	3 737	5 066	987	1 609	2 750	3 457
June	3 663	5 018	897	1 484	2 766	3 534
July	6 089	4 287	1 433	1 237	4 656	3 050
August	5 713	3 655	1 258	1 184	4 455	2 471
September	4 549	4 741	979	1 428	3 570	3 313
October	5 899	9 230	1 135	1 794	4 764	7 436
November	7 250	12 502	1 462	2 288	5 788	10 214
December	5 508	12 923	1 000	2 505	4 508	10 418
Total	71 419	58 499	15 984	13 964	55 435	44 535

Source: Rosstat.

Detailed mortality data for 2021 will be available only by summer of 2022. According to author's provisionaly estimates, expected life expectancy at birth for 2021 to be around 70 years, well below the Rosstat projection (74.3 years in 2021 according to the 2020 medium variant).

5.6. Fertility and birth order in Russia by regions: a pandemic impact?[1]

Analysis of fertility trends in the Russian Federation by regions and by children of different birth orders (i.e. first child in the family, second child, etc.) in 2021 is necessary because of the expected impact of the COVID-19 pandemic on birth rate in the previous year. Most births in 2021 reflect reproductive decisions made during the first and second waves of the pandemic, i.e. the period of the "first shock" caused by the spread of the new virus and restrictive measures. Studies show that there was a very strong tendency to postpone childbearing during this period resulted in the decline of birth rate in some countries comparable to the decline after the economic crisis in 2009.[2] However, studies available[3] suggest that the impact of the pandemic on the birth rate may vary significantly across different birth orders: in a number of Western European countries, couples having at least one child were more frequently refusing family expansion plans in the first wave of the pandemic compared to childless couples. This explains the need to consider fertility trends in 2021 separately for children of different birth orders. The need to study interregional differences is associated with a sharp disbalance of Russian regions in the severity of the epidemic process, measured in particular by such an indicator as excess mortality.[4]

On the whole, the 2021 fertility trends in Russia contradicted the assumption that the first waves of the pandemic would result in a significant reduction in the reproductive activity. As shown in *Fig. 28*, the countrywide Total Fertility Rate (TFR) in 2021 remained practically at the level of 2020 (as it was already noted in the previous section).

As for fertility rate of different birth orders, the trends that were observed in the preceding 4-5 years, i.e. a gradual decline in the birth rate of the first and the second child and growth in the birth rate of the third and subsequent children, have continued. As a result, the contribution of third and subsequent children to total fertility continued to grow in 2021 (*Fig. 29*; the contribution is defined as the ratio of the TFR calculated for the third and subsequent children only to the Total Fertility Rate calculated for all children).

Regional fertility trends in 2021 were also broadly in line with those of previous years. This can be demonstrated by the Spearman rank correlation between the regional fertility rates for 2021 and the average regional TFR for the preceding five years. This correlation coefficient is quite high (0.71) at the 99% of significance value (for certain birth orders it is in the range of 0.6-0.7 at the same significance value).

1 This section was written by: *Kazenin K.I.* Candidate of Philological sciences, Director, Center for Regional Studies and Urbanism, IAES RANEPA, Researcher of the Gaidar Institute.

2 See, e.g. *Sobotka T., Jasilioniene A., Galarza A. A., Zeman K., Nemeth L. & Jdanov D.* Baby bust in the wake of the COVID-19 pandemic? First results from the new STFF data series (Preprint). 2021, March 24. URL: https://doi.org/10.31235/osf.io/mvy62

3 *Luppi F., Alpino B.* and *Rosina A.* The impact of COVID-19 on fertility plans in Italy, Germany, France, Spain and UK. Preprint. 2020. DOI: 10.31235/osf.io/wr9jb

4 *Kobak D.* Excess mortality reveals Covid's true toll in Russia. Significance, 18: 16-19. 2021. URL: https://doi.org/10.1111/1740-9713.01486

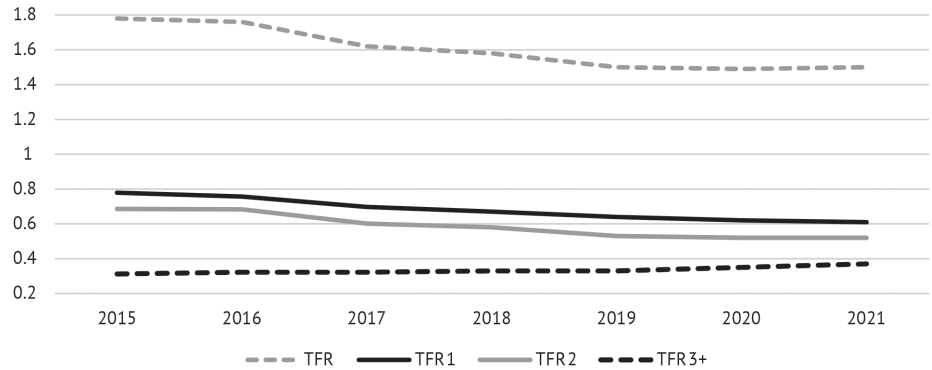


Fig. 28. Total fertility rates for all children and by birth orders (children per one woman)

Source: Rosstat.

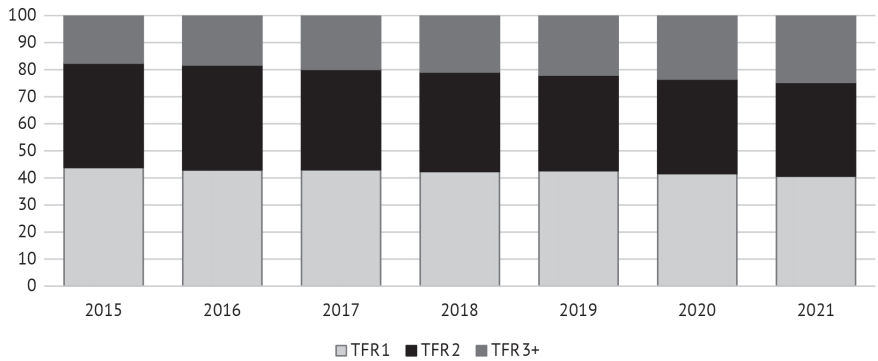


Fig. 29. Contribution of birth orders to Total Fertility Rate, %

Source: Rosstat estimates

The study of the correlation between regional fertility rates for 2020 and the average values for 2015-2019 is also very similar. This suggests to state that there are no significant "failures" recorded in the fertility dynamics across regions in 2021.

The TFR decreased in 2021 compared to the previous year in 51 regions out of 85 subjects of the Russian Federation. A decline in the first child birth rate in 2021 was observed as in 2020 in more than 3/4 of regions (in 2021 it was recorded in 66 regions and in 73 in 2020). As for the rise in the birth rate of third and subsequent children, it was recorded in 61 regions in 2020 and in 70 regions in 2019. Thus, the contribution of third and subsequent children to the total fertility rate in 2021 increased in most regions: in 76 regions the contribution of third and subsequent children to the TFR increased in 2021 compared to 2020 (an average increase of

1.2 p. p.). Moreover, the positive contribution of third and subsequent children to the total fertility rate has also increased by about 5 p.p. compared to the previous year vs 2020.[1] In other words, the relatively high level of multiple births in 2021 has strengthened its importance as supporting factor of the Total fertility rate continuing its decline in first and second births.

In the context of regions (*Table 10*) the TFR dynamics was varied for all birth orders marked by the most significant decline in the Far East and Volga Federal okrugs. The decline in fertility of first children was observed in every Federal okrug (the largest decline in the Far East and the North Caucasus), while growth in the third and subsequent children was recoded also in every Okrug (maximum in the Volga Federal okrug and minimum in the North Caucasus Federal okrug).

Table 10

Changes in Total Fertility rate (for all children and for children of different birth orders) in 2021 vs 2020 by Federal okrugs, on average, %

	TFR	TFR1	TFR2	TFR+
CFO	-1.1	-3.8	-0.1	2.8
SFO	0.0	-3.2	0.7	3.8
FEFO	-2.6	-7.2	-2.6	4.7
NWFO	-1.4	-3.7	-1.7	3.4
SFO	-0.2	-0.5	-2.4	3.7
NCFO	-2.1	-5.1	-2.9	1.2
VFO	0.4	-3.0	0.6	6.5
UFO	0.4	-2.8	0.5	5.2

Source: Rosstat estimates.

An assessment of the impact of pandemic on fertility trends in Russian regions in 2021 can be made by examining the dependence between fertility dynamics in a given year and features of the first two pandemic waves across regions.

A preliminary analysis shows that this dependence was not statistically significant. This is evidenced by the results of a regression analysis that examined the dependence of the change in TFR (for all children and for children of certain birth orders) in the regions in 2021 versus 2020 based on various parameters indirectly indicating the extent of the first two pandemic waves in the region. These parameters include:

(1) excess mortality in the region in Q2-4 2020; (2) change in life expectancy in the region in 2020 compared to 2019 according to Rosstat; (3) frequency of pandemic-related search queries in the region in Q2-4 2020 according to Yandex search statistics. The change in fertility in the region did not show any significant association with any of these parameters. This conclusion suggests that fertility in the Russian Federation was not significantly affected by the pandemic in a given

1 The contribution estimated using the following methodology: *Zaman K., E. Beaujon, Z. Brzozowska*, and *T. Sobotka*. Cohort fertility decline in low fertility countries: Decomposition using parity progression ratios, Demographic Research 38(25): 2018. C. 651–690.

year along with maintenance of fertility trends in 2021 for children of different birth orders observed earlier.

What might explain this situation, especially in respect of declining fertility in a pandemic in several other countries? To answer this question, factors which might influence the fertility of third and subsequent children are of particular interest, since it has shown, as we have seen, an overall growing "supportive" effect on fertility in 2021. Such factors include, first of all, the subsidy of Rb 450 000 for large families aimed to purchase housing, introduced by the Federal Law of 3 July 2019, as well as a number of state support measures provided to large families as part of mortgage lending.

The continued rise in the birth rate of third and subsequent children even amid pandemic suggests that the outcome expected from these measures has been achieved to some extent. Interestingly, the introduction (Amendment No. 256-FZ) of measures for third and subsequent children in 2020 (primarily maternity capital payments at the birth of the first child), was not been able to halt the decline in the birth rate of first children.

The stability of fertility in Russia in 2021 does not mean, however, that the 2022 ongoing pandemic will not have a negative impact on fertility. The fact that fertility reduction from "external shocks" is possible is indicated, in particular, by the results of focus groups conducted by RANEPA in seven Russian regions in May-June 2021. One of the matching points of most focus group participants was the recognition of high risks of parenthood in the unstable socio-economic situation associated with the coronavirus pandemic.

5.7. Public health[1]

In 2021, the Russian public health system continued to operate under extreme overload induced by the spread of the novel coronavirus infection. In many respects, the second year of the pandemic turned out to be harder than the first one. Despite the measures taken to prepare medical institutions and launch of large-scale immunization, Russia failed to achieve a steady decline in losses from COVID-19 and return to pre-pandemic volumes of medical services provision in other public health areas.

The fact that the pandemic turned into a long-term threat has posed new challenges to the public healthcare system. Along with the recovery of regular work of medical institutions, the state faced the need to resume previously postponed sectoral reforms and strategic development programs. After a six-month delay, the program of modernization of primary health care has been launched. New agencies for drug provision – the "Circle of Good" Charity Fund and the Federal Center for Planning and Organization of Drug Provision of Citizens – have started their activities. Work has begun to determine the main parameters of the new industry-specific wage system.

1 This section was written by: *Avksentyev N.A.*, Researcher at the Health care economics department, IAES RANEPA; *Sisigina N.N.*, Researcher at the Health care economics department, IAES RANEPA.

5.7.1. COVID-19 pandemic

The new coronavirus infection is officially recognized as the main cause of excess mortality. In 2021, COVID-19 became the direct cause of death in Russia in 445,600 cases and had a significant impact on the development of fatal complications of other diseases in 16,000 incidents, which together explains 77.6% of excess mortality. Total excess mortality rose to 595,100. By comparison, the number of excess deaths in 2020 amounted to 274,000, of which COVID-19 acted as the primary or indirect cause of death in 41.8% of cases (*Fig. 30*). The elderly (60—65+ years) account for 80-85% of the total number of deaths.[1]

The increase in COVID-19 mortality relative to 2020 is due to a number of reasons. Firstly, the impact of the pandemic was felt across the entire country during the entire year, by contrast with its effects the previous year. Secondly, at least some new strains of the virus were marked by higher rates of contagiousness and lethality. Previously developed methods of treatment and prevention were also less effective for the new strains. Thirdly, the protracted nature of the pandemic made strict lockdown measures impossible, which greatly reduced the population's willingness to comply with personal restrictions, thus creating a favorable environment for the spread of the virus.

A spike in the share of new coronavirus infections in the structure of excess mortality from 41.8% to 77.6% can also be explained by changes in formal approaches to recording cause of death. In July 2021, the Russian Ministry of Health issued updated methodological guidelines for coding and initial cause selection in COVID-19 related mortality statistics, directly establishing the priority of the new coronavirus infection over chronic diseases as the main cause of death.[2] This decision brought the Russian COVID-19-related mortality registration policy

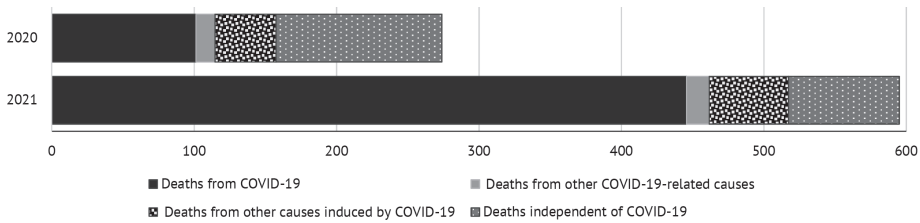


Fig. 30. The share of COVID-19 in excess mortality of the Russian population compared to the average five-year pre-pandemic level, thousand cases

Sources: Rosstat data, own calculations.

1 Anna Popova named the share of the elderly among those who died from COVID-19 in Russia // RBC, 28.08.2020. – URL: https://www.rbc.ru/society/28/08/2020/5f48b3699a79475c8481cdb4 The share of the elderly among those who died from coronavirus in Moscow comes to 86% // RT in Russian, 20.10.2021. – URL: https://russian.rt.com/russia/news/919378-moskva-kovid-mer Over 85% of those who died from coronavirus in the Perm Region since the beginning of the year are residents over 60 years old // Business Class, 11.10.2021. URL: https://www.business-class.su/news/2021/10/11/bolee-85-umershih-s-nachala-goda-ot-koronavirusa-v-permskom-krae-zhiteli-starshe-60-let

2 Methodological recommendations on coding and selection of the underlying condition in morbidity statistics and the initial cause in mortality statistics related to COVID-19. Version 2 of

closer to foreign practice, but made direct year-on-year comparison of mortality rates more difficult.

Mass immunization in Russia commenced in January 2021, but has been slow for a long time due to insufficient roll out of vaccines and low public interest. As of the end of June, only 11.5% of citizens had received both doses of the vaccine.[1] The resolution of roll out issues and the imposition of mandatory immunization for certain categories of Russin Federation citizens accelerated this process. However the target coverage level (60% of the adult population[2]) remained unachieved. At the end of November, the percentage of the population that was fully vaccinated was estimated at 38%, which was in line with the world average (43%) but remained well below the level of developed countries (67%)[3]. A noticeable decline in COVID-19 mortality and excess mortality in general commenced only in December, however it remains unknown whether this was due to increased collective immunity, the spread of a less dangerous omicron type or the end of the next pandemic wave, and how sustainable the reduction will be (*Fig. 31*).

Experts explain the excess of the total number of excess deaths of the recorded COVID-19 mortality by errors in recording the cause of death (deaths from COVID-19 attributed to other causes), the long-term consequences of COVID-19 (deaths from chronic diseases whose progression was provoked by COVID-19) and

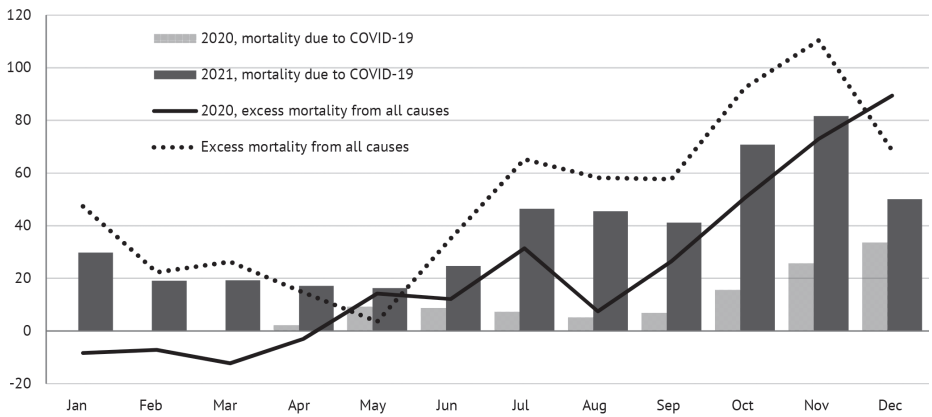


Fig. 31. Mortality rate dynamic in 2020–2021 from COVID-19 and excessive mortality compared to the average five-year pre-pandemic rate, thousand cases

Sources: Rosstat data, own calculations.

02.07.2021 / Public Health Ministry of Russia, 2021. URL: https://static-0.minzdrav.gov.ru/system/attachments/attaches/000/057/366/original/020702021_MR_COD_v2.pdf

1 11.5% of Russians were fully vaccinated against COVID // Interfax, 29.06.2021. URL: https://www.interfax.ru/russia/774408

2 *Tatiana Golikova* gave the required vaccination rate against coronavirus in Russia // RIA Novosti, 18.01.2021. URL: https://ria.ru/20210118/vaktsinatsiya-1593520292.html

3 46 Russia Economic Report. December 2021 // The World bank, 01.12.2021. URL: https://documents1.worldbank.org/curated/en/099050011302118976/pdf/P17756206d40310aa0a5e109d6fa60bc55a.pdf

the indirect impact of the pandemic (deaths owing to reduced access to medical care and/or overall quality of life). Abnormally hot weather in Central Russia in the summer could have been another external factor in excess mortality in 2021, but its contribution is less significant (up to 10,000 deaths according to expert estimates).[1]

Restoring access to medical services will play a key role in reducing excess mortality not directly related to COVID-19. According to the data of the Federal Mandatory Health Insurance Fund (FMHIF) for the first nine months of 2021, the mandatory health insurance (MHI) system did not yet return to the 2019 planned medical assistance volumes, while most subjects recorded an increase in emergency hospitalizations.[2] The exception is oncological assistance, the volumes of which continued to grow in 2020-2021 due to the receipt of additional funding as part of a specialized federal project and the refusal to reassign cancer hospitals to care for coronavirus patients.[3] As a result, oncological diseases became one of the few wide-scale causes of death, for which a steady decrease in the number of deaths was recorded both years.[4] The positive experience with the development of cancer services during the pandemic highlights the need for a thorough analysis of the risks and benefits of applying restrictions to routine care.

The decentralization of decision-making on the introduction of restrictions on the provision of medical care was an important step in comparison with the first year of the pandemic. The federal regime of non-working days was established for short periods (3 days in May[5] and November[6]) and did not play a significant role in reducing the availability of medical care. The Russian government refused to adopt an open-ended resolution regulating the specifics of the implementation of the basic MHI program amid the threat of the spread of diseases caused by the novel coronavirus infection.[7] A similar resolution, adopted in 2020, ceased to be effective on January 1, 2021,[8] which allowed the subjects of the Russian

1 *Sokolov A*. The mortality rate in Russia over the past year has become a record since the war // Vedomosti, 30.11.2021. – URL: https://www.vedomosti.ru/society/articles/2021/11/29/898151-umershih-antirekord

2 *Beskaravainaya T*. FFMHI reported a spike in the rate of emergency hospitalizations in a number of regions // Medvestnik, 08.12.2021. URL: https://medvestnik.ru/content/news/FOMS-soobshil-o-znaMHImom-roste-doli-ekstrennyh-gospitalizacii-v-ryade-regionov.html

3 *Pogontseva E*. FFMHI recorded an increase in the volume of assistance to cancer patients / Medvestnik, 27.11.2020. – URL: https://medvestnik.ru/content/news/FOMS-zafiksiroval-rost-obemov-pomoshi-onkopacientam.html

4 Mortality rate from cancer in Russia has decreased by 3.9% // TASS, 27.10.2021. URL: https://tass.ru/obschestvo/12779731
Mikhail Murashko: mortality rate from oncological diseases has dropped in Russia by 1.5% in 2020 // TACC, 07.04.2021. URL: https://tass.ru/obschestvo/11089111

5 Executive Order of the Russian President of 23.04.2021 No. 242 "On the establishment of non-working days on the territory of the Russian Federation in May 2021."

6 Executive Order of the Russian President of 20.10.2021 No. 595 "On the establishment of non-working days in the territory of the Russian Federation in October - November 2021."

7 RF Government Draft Decree "On the specifics of the implementation of the basic program of mandatory health insurance against the backdrop of the threat of the spread of diseases caused by the new coronavirus infection" // Federal portal of draft regulatory legal acts, 10.02.2021. – URL: https://regulation.gov.ru/projects#

8 RF Government Decree of 03.04.2020 No. 432 "On the specifics of the implementation of the basic program of mandatory health insurance amid the threat of the spread of diseases caused by the new coronavirus infection."

Federation to independently determine the composition and duration of restrictive measures. Depending on the level of epidemiological danger, regions could restrict only preventive examinations and clinical examinations (for example, the Omsk region[1]), hospitalization of patients without confirmed immunity to the new coronavirus infection (for example, Moscow[2]) or the provision of routine medical care in general, except for assistance for certain particularly dangerous diseases (for example, the Bryansk region[3]).

The absence or relative softness of formal restrictions on the provision of planned medical care did not always mean its actual availability. In most subjects of the Russian Federation, the availability of medical services actually remained below the pre-pandemic level due to complete or partial reassignment of hospitals to coronavirus ones (at the peak of the incidence of COVID-19 in October 2021 – up to 30% of the bed stock[4]), as well as self-restrictions of patients who feared going to outpatient clinics due to the threat of infection. The cumulative scale of the reduction in routine medical care and their long-term consequences remain unknown.

5.7.2. The mandatory health insurance system

The new expenditure commitments of the MHI system arising from the COVID-19 pandemic led to a temporary imbalance of territorial MHI programs. In accordance with the approved features of the implementation of the basic MHI program, the expenses of the territorial MHI funds in 2020—2021 went up due to the inclusion in the program of new types of case — laboratory tests aimed at confirming the diagnosis of the new coronavirus infection (from April 2020), and in-depth medical examination for citizens who had had the new coronavirus infection (from July 2021), as well as growth in for acute respiratory diseases provided in accordance with the population needs.[5] It should be noted that the rates for COVID-19 treatment were set at a relatively high level and significantly exceeded the basic financial standard per case of hospitalization.[6] These

1 Order of the Governor of the Omsk region of 29.10.2021 No. 137-p "On the amendments in the order of the Governor of the Omsk region of March 17, 2020 No. 19-p."

2 Order of the Moscow Department of Health No. 541 "On planned hospitalization of the adult population in inpatient medical institutions of the state healthcare system of the city of Moscow during the period of increased incidence of the new coronavirus infection COVID-19."

3 Order of the Briansk region Department of Health of 25.06.2021 No. 587 "On amendments in the order of the department of health of 24.06.2021 No. 581 "On the organization of preventive medical examinations and medical examinations, planned medical care in medical institutions during the rise in the incidence of the new coronavirus infection in the territory of the Bryansk region.".

4 Mikhail Murashko: a medical worker is the most expensive resource in the healthcare system / Ministry of Health of Russia, 16.12.2021. URL: https://minzdrav.gov.ru/news/2021/12/16/18016-mihail-murashko-meditsinskiy-rabotnik-yavlyaetsya-samym-dorogim-resursom-v-sisteme-zdravoohraneniya

5 RF Government Decree of 03.04.2020 No. 432 "On the implementation features of the basic program of mandatory health insurance amid the threat of the spread of diseases caused by the new coronavirus infection." The Decree of the Government of the Russian Federation No. 2299 of December 28, 2020 "On the program of state guarantees of free medical care for citizens for 2021 and for the planning period of 2022 and 2023."

6 Authorities have revealed the average cost of treating a patient with COVID-19// RIA Novosti, 25.08.2021. URL: https://ria.ru/20210825/koronavirus-1747140068.html

expenses could not be compensated by redistribution of funds from other areas, because peculiarities of implementation of the basic MHI program simultaneously guaranteed that medical institutions would receive the full amount of planned financial support, regardless of the actual provision of medical services.

The regular source of financing additional expenses related to COVID-19 treatment is not defined by the law. In 2020-2021, these expenditures were covered by transfers from the Reserve Fund of the Government of the Russian Federation to the budgets of the subjects of the Russian Federation, the total amount of which in 2020 reached Rb378.2 billion,[1] and for the first eleven months of 2021 – Rb195.1 billion.[2] According to the explanatory note to the draft program of state guarantees of free medical care provision for Russian citizens, the mixed model of financing "coronavirus" expenses is planned to be maintained in 2022.[3]

Against the background of the increased burden on the budget of the MHI system, federal regulators continued to fight against unplanned expenses for medical care. Regarding the care provided by medical institutions of a subject of the Federation in excess of the allocated planned volumes, the relevant norm was approved by the Ministry of Health of Russia as part of the updated procedure for monitoring the volume, timing, quality and conditions of medical care under MHI to the insured persons, as well as its financial support. As follows from the name of the new document, the control objectives were supplemented by checking the compliance of the cost of rendered medical care with the amount of financial support of the volume of medical care, allocated to a particular medical institution. Submission for payment of medical care in excess of the allocated volume or financial provision officially became a violation of billing and grounds for refusal to pay for medical care (codes 1.6.2 and 1.6.3).[4] Similar changes were made to the Rules of the mandatory health insurance (MHI).[5]

Despite the formal approval of the ban, judicial practice remains inconsistent due to the ongoing conflict between the newly adopted orders and the inadmissibility of denial of medical assistance established by Article 11 323-FZ and Part 5 of Article 15 326-FZ. In particular, in November-December 2021 alone, the Supreme Court of the Russian Federation issued opposite decisions on two similar complaints. In November 2021, the Supreme Court reconsidered its earlier decision to deny exemption from payment for over-the counter care on the

1 Operational report on the execution of the federal budget and budgets of state extra-budgetary funds for January-December 2020 / Accounting Chamber, 24.02.2021. URL: https://ach.gov.ru/audit/oper-2020

2 *Beskaravainaya T.* Insurers provided data on regions with a high deficit of funds in the mandatory health insurance system // Medvestnik, 29.11.2021. URL: https://medvestnik.ru/content/news/Strahovshiki-predstavili-dannye-o-regionah-s-vysokim-deficitom-sredstv-v-sisteme-OMS.html

3 RF Government Draft Decree "On the program of state guarantees of free medical care to citizens for 2022 and for the planning period of 2023 and 2024" / Federal portal of draft regulatory legal acts, 08.09.2021. URL: https://regulation.gov.ru/projects#npa=120119

4 Order of the Health Ministry of Russia of 19.03.2021 No. 231н "On approval of the Procedure for monitoring the volume, timeline, quality and conditions of medical care provision for mandatory health insurance to insured persons, as well as its financial support."

5 Order of the Health Ministry of Russia of 26.03.2021 No. 254н "On amendments to the rules of mandatory health insurance approved by Order No. 108n of the Ministry of Health of the Russian Federation dated February 28, 2019."

complaint of the Krasnodar Krai MHI Fund, confirming that the inclusion of such case in the bills for payment was a violation in the way the bills had been drawn up.[1] In December 2021, a similar complaint of the Moscow region MHI territorial fund was denied.[2]

The requirements for compliance with the planned volume allocation cannot be applied to medical institutions operating in the territory of other subjects of the Russian Federation. Payment for care provided outside the insurance territory is proposed to be limited to cases where care was provided by referral from a medical institution of permanent attachment. This position is presented in a letter from the Federal MHI Fund, based on earlier court decisions.[3] The proposed norm has not yet been codified by law. An exception is the provision of oncological care, the new procedure for the provision of which, approved in 2021, directly secures the right of a subject of the Russian Federation not to pay for care provided outside the approved routing system.[4]

Most of the other discussed measures aimed at improving the organization of MHI did not reach the stage of normative registration. Among the announced projects, the most interesting is the development by the Federal MHI Fund of criteria for the distribution of volumes of medical care between medical institutions participating in the implementation of the territorial MHI program.[5] For several years, the professional community has being proposing the transition to the distribution of volumes based on objective criteria in order to create real competition between medical institutions, including private institutions. Public ratings of the quality of work of medical institutions[6] and insurance medical organizations,[7] proposals for the introduction of which have also been voiced by the Federal MHI Fund this year, may become an additional factor in increasing competition in the field of mandatory health insurance.

5.7.3. Inventory and logistics support of the public health system

The launch of the primary care modernization program was a mega event in the field of health care logistics. According to the original plan, the program

1 Assessment of the Investigative Committee on Economic Disputes of the Supreme Court of the Russian Federation of 11.11.2021 No. 308-ЭС21-5947 relevant to the case No. A32-20379/2020.
2 Ruling of the High Court of Russia of 26.112021 No. 305-ЭС21-22045 relevant to the case No. A41-51160/2020.
3 Letter of the Federal MHI Fund of September 8, 2021 No. 00-10-30-2-06/5050 "On the reasons for non-payment of bills by the mandatory health insurance territorial funds at the place of registration of mandatory health insurance policies for specialized medical care provided to insured persons in the planned form by medical institutions of the Moscow region."
4 Order of the Health Ministry of Russia of February 19, 2021 No. 116н "On approval of the Procedure for providing medical care to adults with oncological diseases."
5 The time of arrival of the ambulance and the complaints of patients will be the criteria for the distribution of MHI funds // TASS, 08.07.2021. URL: https://tass.ru/obschestvo/11851089
6 Draft order of the Health Ministry of Russia "On approval of the Procedure for informing insured persons about detected violations in the provision of medical care in accordance with the territorial program of mandatory health insurance" / Federal portal of draft regulatory legal acts, 23.03.2021. URL: https://regulation.gov.ru/projects#npa=114356
7 The XIV All-Russian scientific and practical conference with international participation "Medicine and quality – 2021" was held in Moscow // Federal Service for Surveillance in Healthcare, 08.12.2021. URL: https://roszdravnadzor.gov.ru/news/27475

should have started as early as mid-2020, but at that time the burden on the health care system was too high to implement a new large-scale project. The resulting pause was used to update the plan of program activities by taking into account the newly identified requirements for the organization of primary health care.

The ultimate goal of the program is to ensure that the state network of first-level outpatient clinics and hospitals meets modern requirements for the provision of medical care, including requirements for the condition of buildings and premises, accessibility of medical institutions to the population and their equipment. According to the approved program certificate, Rb550 billion were supposed to be allocated for these purposes over 5 years.[1] At the end of the year, it was decided to raise the program budget due to an increase in the cost of construction materials and services, an increase in inflation rates and an acceleration in the pace of implementation of the program. New funding volumes will be determined in early 2022.[2]

The budget of the first year of the program implementation amounted to Rb100 billion, of which Rb90 billion were allocated from the federal budget and Rb10 billion from the budgets of the subjects of the Russian Federation. As of the beginning of December, Rb50.2 billion had been spent from the federal budget and Rb75 billion had been contracted. The reassessment of the regional programs' steps in the middle of the year, the increase in prices for construction materials and equipment and the problems of conducting tendering procedures were the main reasons for the delay.[3] Nevertheless, most of the planned steps have been completed or are underway. As of the first half of December 2021, the construction of 91 new healthcare facilities (of which 16 facilities have been licensed), complete overhaul of 691 facilities, delivery of 219 modular paramedic and obstetric centers and outpatient clinics, purchase of 21.5 thousand pieces of equipment and 7 thousand automobiles were fully completed.[4]

As of the first year-end results of the program's implementation, its priority was expanded. The Government of the Russian Federation was instructed to include the program in the national project "Healthcare" with the corresponding acceleration of the implementation of the main measures. Furthermore, the primary healthcare modernization program will be the first sectoral strategic development program for which a target indicator of public satisfaction with the quality of medical care will be set.[5]

1 Order of the Health Ministry of Russia of December 24, 2020 No. 1365 "On the approval of the departmental target program "Modernization of primary healthcare of the Russian Federation."
2 List of instructions following the meeting of the Council for Strategic Development and National Projects / President of the Russian Federation, 15.01.2022. URL: http://kremlin.ru/acts/assignments/orders/67600
3 Galina Karelova held a meeting of the Council on regional healthcare / The Council of Federation of Federal Assembly of the Russian Federation, 16.12.2021. URL: http://council.gov.ru/events/news/131989/
4 Meeting of the Council for Strategic Development and National Projects / President of the Russian Federation, 15.12.2021. URL: http://kremlin.ru/events/councils/67366
5 List of instructions based on the results of the meeting of the Council for Strategic Development and National Projects / President of the Russian Federation, 15.01.2022. URL: http://kremlin.ru/acts/assignments/orders/67600

5.7.4. Staffing

The loss of medical personnel has been the most severe outcome of the pandemic for the public health system. More than 1,500 doctors died directly from COVID-19 in the first year and a half of the pandemic.[1] Many public health workers have left the industry due to an increased risk of COVID-19 infection or professional burnout from working under difficult conditions. Official data on the dynamics of the number of doctors and nurses are not yet available, however, it is known that the current balance of inflow to the industry in 2021 was negative.[2]

In the long run, the problem of staff shortage in public health care is planned to be resolved by expanding targeted training. In 2021, the number of target places in medical universities was again increased. In the specialties "Medical care" and "Pediatrics" their share was brought to 70–75%, and in the scarcest specialties of medical residency – up to 100%.[3] Nevertheless, even in case of successful training the targeted students will replenish the personnel reserve of public health system only after 6–8 years. In the coming years, the priority task of staffing is to retain the medical personnel working in the public sector and return the specialists who previously moved to work in private medical institutions or related industries. For this purpose, it is planned to provide a satisfactory level of income for employees of public health institutions and offer them other measures of social support. A key role in increasing the attractiveness of public health care is assigned to the new sectoral wage system (SWS).

The idea of federal regulation of health care workers' wages first sounded in 2019 after mass protests by doctors in state hospitals induced by low wages. At that time, the Ministry of Health of Russia proposed that the idea be limited to establishing minimum values for the proportion of salaries in the wage structure and the ratio of wages of certain categories of medical workers to the average for the economy of the region.[4] Later, the requirements for the SWS were expanded. Instead of fixing minimum wage guarantees, it was proposed to establish uniform rules for calculating wages ensuring comparable remuneration for employees performing the same work duties. It was assumed that uniform rules would eliminate the possibility of setting unacceptably low wages and prevent an uncontrolled outflow of medical workers to the wealthier regions.

In October 2021, the main parameters of the sectoral wage system (SWS) were presented for public discussion.[5] The published draft retained the central

1 In Russia, 1,100 doctors died from COVID in H1 2021 // Interfax, 19.10.2021. URL: https://www.interfax.ru/russia/798128

2 Tatiana Golikova fears doctors leaving the profession due to burnout during the pandemic // TASS, 27.10.2021. URL: https://tass.ru/obschestvo/12781091

3 RF Government Edict of November 23, 2021 No. 3303-p "On admission quotas for targeted training in universities for 2022."

4 Meeting on the modernization of primary health care / President of the Russian Federation, 20.08.2019. URL: http://kremlin.ru/events/president/transcripts/61340

5 RF Government Draft Decree "On approval of the size of the calculated value, groups of posts of medical workers of state and municipal healthcare institutions for the establishment of official wages, regional coefficients and methods of their calculation, labor complexity coefficients, a single list of compensatory payments, a single list of incentive payments, the size and conditions of compensatory and incentive payments for the purposes of the pilot project" // Federal portal of draft regulatory legal acts

idea of the SWS: a single formula for calculating wages based on a consensus calculation value approved at the federal level, according to the minimum wage, labor complexity coefficients (job groups) and regional economic development, and lists of compensation and incentive payments. Meanwhile, a number of previously discussed elements that were deemed too complicated or expensive to implement at this stage of the reform were excluded from the draft.

In particular, the project's sponsors abandoned the idea of equalizing basic salaries between the subjects of the Russian Federation by introducing into the formula for calculating the basic salary a coefficient of regional economic development, calculated on the basis of the median salary in the subject of the Russian Federation. Consequently, the SWS retains the regional salary differentiation and the associated risk of internal migration of specialists, but seeks to reduce its magnitude. In the document presented for discussion, the coefficients of regional economic development are given only for 7 subjects of the Russian Federation – participants of the pilot project, among which they range from 1.00 (Kurgan region) to 1.38 (Belgorod region, Sevastopol).[1]

The reform drafters also refused significantly to increase the overall level of wages in order to avoid the emergence of a new inequality between the salaries of public sector employees in various industries. The minimum wage was chosen as the starting point instead of the two-fold minimum wage proposed by the trade union.[2]

The coordination of the details of the SWS is ongoing. The original schedule for the pilot project to implement the new pay system was to begin in November 2021, later in December 2021 and finally in July 2022. Updated pilot project parameters were to be agreed upon by April 30, 2022.[3] Potential reasons for the delay are the inability to conduct a pilot project given high incidence of COVID-19 and the need for additional funding.[4]

Projects for the introduction of federal social guarantees for medical workers, similar to those established for a number of other professional categories of citizens (in particular, priority provision of places in kindergartens and schools, vouchers for sanatorium treatment), did not receive the approval by the Government of the

1 RF Government Draft Decree "On approval of the size of the calculated value, groups of positions of medical workers of state and municipal healthcare institutions for the establishment of official salaries, regional coefficients and methods of their calculation, labor complexity coefficients, a single list of compensatory payments, a single list of incentive payments, the size and conditions of compensatory and incentive payments for the purposes of the pilot project" // Federal portal of draft regulatory legal acts, 09.10.2021. URL: https://regulation.gov.ru/

2 *Mainulova A.* Salaries for health // Kommersant, 09.10.2021. URL: https://www.kommersant.ru/doc/5027750
Beskaravainaya T. The Ministry of Labor explained the refusal of a noticeable increase in salaries of medical workers in the pilot regions // Medvestnik, 20.10.2021. URL: https://medvestnik.ru/content/news/Mintrud-obyasnil-otkaz-ot-zametnogo-rosta-zarplat-medrabotnikov-v-pilotnyh-regionah.html

3 Decree of the Government of the Russian Federation of 30.11.2021 No. 2144 "On amendments to the Decree of the Government of the Russian Federation of June 1, 2021."

4 *Gurianov S.* Delay payment: when doctors will get higher wages // Izvestia, 16.12.2021. URL: https://iz.ru/1265020/sergei-gurianov/prosrochka-platezha-kogda-medikam-povysiat-zarplaty

Russian Federation.[1] Subjects of the Russian Federation were recommended to develop their own programs of additional support for medical workers.[2]

5.7.5. Drug provision of the population

In 2021, there were several significant changes in the field of drug provision for Russian citizens. Firstly, the Federal budget institution "The Federal Center for Planning and Organization of Drug Provision for Citizens" of the Ministry of Health of the Russian Federation (hereinafter referred to as FKU FTSPILO) began full operations. Its main task is to organize and conduct procurement of medicines paid from the federal budget within the framework of various state programs of preferential drug provision.[3] In 2021, the institution procured medicines for the 14 Nosologies Program (NP) to the tune of Rb16 billion, drugs for antiretroviral therapy (ART) for people living with HIV for Rb35.6 billion, anti–tuberculosis drugs for Rb3 billion, immune-prophylactic drugs for Rb19.6 billion, drugs (including unregistered in Russia) for the treatment of patients with the new coronavirus infection for Rb8.9 billion, drugs for the patients of the "Circle of Good" fund for Rb27.4 billion.[4]

In theory, the main advantages of centralized procurement are lower prices due to higher market power of a single buyer, reduced administrative costs, and increased transparency of the procurement process. The arguments for decentralized procurement are better awareness of the needs of the end consumer at the regional level, higher flexibility of procurement, possible reduction of the risk of corruption due to the centralized choice of a single (not the most effective) supplier.[5]

The choice of the optimal method of procurement significantly depends on the characteristics of the purchased goods and services. The drug market is marked by a high degree of standardization, in some cases, due to patent protection, there is only one supplier. Therefore, the centralization of the drug procurement process by the FKU of the Federal Drug Control Service has led to positive effects than to the corresponding risks realization. As of the beginning of 2022, there were 12 long-term contracts (two- and three-year) for the purchase of ART, anti-tuberculosis drugs and drugs from the list of the 14 Nosologies Program[6] concluded by the institution.[7] Within the framework of such agreements, it turned

1 Draft law No. 1173861-7 "On amendments to the Federal law 'On the fundamentals of public health protection in the Russian Federation'" // Legislative support system, 18.10.2021. URL: https://sozd.duma.gov.ru/bill/1173861-7

2 Meeting of the Council for Strategic Development and National Projects //President of the Russian Federation, 15.12.2021. URL: http://www.kremlin.ru/events/president/news/67366

3 About us / Federal Budget Institution "Federal Center for Planning and Organization of Drug Provision of Citizens." URL: https://fcpilo.minzdrav.gov.ru/?page_id=6

4 Information on concluded government contracts for 30.12.2021 / Federal Budget Institution "Federal Center for Planning and Organization of Drug Provision of Citizens." URL: https://fcpilo.minzdrav.gov.ru/?p=315

5 OECD (2000), "Centralised and Decentralised Public Procurement", SIGMA Papers, No. 29, OECD Publishing, Paris, https://doi.org/10.1787/5kml60w5dxr1-en.

6 14 Nosologies Program is a program of preferential provision in outpatient settings for patients suffering from twelve rare and high-cost nosologies. The list of such nosologies is defined by the Federal Law of 21.11.2011 No. 23-FZ "On the foundations of public health protection."

7 The state of procurement for the Circle of Good Fund as of 23.12.2021 / Federal Budget Institution "Federal Center for Planning and Organization of Drug Provision of Citizens." URL: https://

out to be possible significantly to reduce the price (for example, in the case of natalizumab, a 10% reduction in cost has been achieved). Thus, the transition to procurement by the FKU of the Federal Target Program allowed saving federal budget funds. In addition, the institution publishes a large number of reporting and analytical materials on procurement, which improves the openness of data and expands opportunities for their public analysis. In the future, this potential can be used for centralized procurement of medicines financed by the subjects of the Russian Federation, for example, as part of the orphan program.

Secondly, in 2021, the system of preferential drug provision in Russia was markedly expanded by setting up a Fund to support children with severe, life-threatening and chronic diseases, including rare (orphan) diseases the "Circle of Good",[1] which removed responsibility for the procurement of medicines for sick children from the regions. The financial support of the Fund's activities is carried by the federal budget, formed from the application of the personal income tax rate increased by 2 p.p. on the incomes of citizens over Rb5 million per year. As of the end of 2021, the list of nosologies for which drugs are purchased within the framework of the Fund's activities contained 44 items,[2] the list of medicines – 40 medicines.[3] At the same time, it is important to note that one of the advantages of the Fund is the possibility of purchasing unregistered medicines (the so-called "Procurement List No. 2", as of the end of 2021 contained 25 items), which expedites patients' access to new drugs without waiting for the end of a long registration process.

According to the analytical materials of the FKU FTSPILO, Rb27.4 billion worth of medicines were purchased to provide for 1,469 patients, including: 1,039 children with spinal muscular atrophy, 169 children with Duchene muscular dystrophy, 125 children with cystic fibrosis.[4] It is worth noting that the transfer of responsibility for providing for such patients from the regional to the federal level allowed for a significant increase in the availability of the necessary therapy and also opened up opportunities for optimizing budget expenditures due to the centralization of purchases: according to the analytical materials of the FKU FTSPILO, as of July 20, 2021, such savings amounted to about Rb1.5 billion.[5]

fcpilo.minzdrav.gov.ru/wp-content/uploads/2021/12/Состояние-закупок-по-Фонду-Круг-Добра-на-23.12.2021.xlsx

1 Order of the President of the Russian Federation of 05.01.2021 No. 16 "On the creation of a Fund to support children with severe life-threatening and chronic diseases, including rare (orphan) diseases, "Circle of Good."

2 List of diseases / the "Circle of Good." URL: https://фондкругдобра.рф/перечни/перечень-заболеваний/

3 List for procurement / the "Circle of Good." URL: https://фондкругдобра.рф/перечни/перечень-для-закупок/

4 The state of procurement for the "Circle of Good" fund as of 23.12.2021 / Federal budget institution "Federal Center for Planning and Organization of Drug Provision for Citizens." URL: https://fcpilo.minzdrav.gov.ru/wp-content/uploads/2021/12/Состояние-закупок-по-Фонду-Круг-Добра-на-23.12.2021.xlsx

5 Statistics on providing patients for the "Circle of Good" fund as of 20.07.2021 / Federal budget institution "Federal Center for Planning and Organization of Drug Provision for Citizens." URL: https://fcpilo.minzdrav.gov.ru/wp-content/uploads/2021/07/Статистика-по-обеспечению-пациентов-по-фонду-Круг-добра-на-20.07.2021.pptx

Currently, the most significant bottlenecks are the uncertainty of the fate of the Fund's patients reaching the age of 18, as well as the lack of public guarantees of drug provision within the framework of the Fund's activities, guarantees of long-term funding from the federal budget, as well as the lack of a clearly defined role and place of the Fund in the system of preferential drug provision for Russian citizens.

Thirdly, summing up the results of 2021, we can mention the federal program for providing expensive medicinal products – the 14 Nosologies Program. For many years, the program has functioned well: the presence of a federal register of patients, a transparent procedure for including new drugs in the program list, and guarantees of federal funding have significantly increased the availability of necessary medicines. However, the expansion of the program over the past few years due to new nosologies (from the List of 24) and new drugs has led to an imbalance of the program: according to the All-Russian Union of Patients, in 2021 the deficit of financing of the program, taking into account the current need for drugs, amounted to Rb10 billion, according to the expert Council on healthcare of the Federation Council – Rb20 billion.[1] Possible ways out of this situation (in addition to additional financing of the program) may be:

- introduction of the risk-sharing agreements with suppliers of medicines. In such agreements, it is possible to separate both the risks associated with the insufficient effectiveness of medicines (the supplier receives payment for the medicine used by a particular patient only if a certain effect of treatment is achieved) and the risks associated with exceeding the number of recipients (the state guarantees the purchase of a certain number of patients, if there are more of them, the manufacturer supplies an additional volume at its own expense). Currently, we are aware of the proposals of a number of manufacturers to conclude such agreements, but no corresponding contracts have been issued at the federal level yet;
- checking the relevance and compliance of the current list of drugs with the logic of the program – to date, many drugs in the program have significantly fallen in price, and are no longer expensive. Nevertheless, new drugs have become available, characterized by a high price and prescribed for those patients who do not fit the old treatment options. Such drugs are now purchased by the regions – as a result, in some cases, the Federation buys cheap medicines, and the subjects of the Russian Federation purchase expensive ones, which does not correspond to the original idea of creating a Nosologies Program;
- using the possibility of redistributing funds between different programs of preferential drug provision, such as federal programs for supplying expensive medicines and providing necessary medicines, the basic program of mandatory medical insurance, and the program for regional benefits. Often manufacturers are ready to offer a discount when the drug

1 The State Duma will consider the possibility of increasing funding 14 Nosologies Program / Vademecum, 15.04.2021. URL: https://vademec.ru/news/2021/04/15/v-gosdume-rassmotryat-vozmozhnost-uvelicheniya-finansirovaniya-14-vzn/

is included in the Nosologies Program, as a result of which the expenses of the budget system of the Russian Federation can be reduced. However, to do this, it is necessary to finance the program itself, for which it is important to develop a mechanism for "moving" funds between different channels of drug provision.

5.8. Education system in 2021[1]

In 2021, in the Russian education system the following main processes were underway:

- Ongoing adaptability of all levels of education to the coronavirus pandemic which contrary to expectations did not end up in 2020;
- Elaboration by the RF Ministry of Education and the RF Ministry of Education and Science of short-term and long-term measures for the RF Government's Economic Development Strategy (hereinafter, EDS), addressing the challenges which are going to have an impact (or already have an impact) on the evolution of education in the near future;
- Selection of 106 higher educational establishments for the "Priority 2030" program, which pursues its own goals, apart from a set of measures specified in EDS.

5.8.1. The coronavirus pandemic and the development of education in Russia

If in 2020 the Russian education system survived a strong external shock related to the outbreak of the coronavirus pandemic and an expeditious shift to remote work, in 2021 the mixed mode of education, when in-person learning and distance learning were alternating, became quite customary and caused no such stress as in 2020. At the same time, adaptability of the education system at its different levels and segments had both similarities and differences.

In 2020, most school teachers, secondary vocational education instructors, lecturers of higher educational establishments (HEE), as well as learners believed that the pandemic would not last for long and, consequently, the adopted measures, including a shift to distance learning would be over soon. Late in 2020 and early in 2021, it became clear that the pandemic would continue for quite a long time and the existing approaches both to instruction and learning had to be adjusted. On one side, new technologies started to be utilized, while on the other side there was more comprehension of the existing resources being at the disposal of educational establishments, teachers and learners. Accordingly, the process of assessing shortages of technical equipment, skilled teachers and managers, as well as financial resources began.

1 This section was written by *Klyachko T.L.*, Doctor of Economic Sciences, Director of the Center for Economics of Continuous Education (CECE), IAES RANEPA.

5.8.2. General (school) education

The Center for Economics of Continuous Education, IAES RANEPA carried out a survey in which school teachers and parents of school pupils were asked about those difficulties and shortages which they encountered because of the pandemic and measures taken to ensure adaptability to a new situation.

It was found out that on average nearly 15% of teachers had no working place at home, while 38.8% of them had one, but it was not equipped enough for normal remote work and remote education. Specifically, the situation varies considerably across different types of settlements (*Fig. 32*).

As expected, insufficient equipment of a working place at home was observed with rural teachers. Quite unexpectedly, over 16% and 15% of school teachers of regional capitals and cities (not regional capitals), respectively, had no working place at home. This situation can be substantiated by the fact that 15%-16% of teachers have recently moved to towns or regional capitals from rural areas, rent apartments and therefor do not buy expensive equipment. Rural teachers have at their disposal a working place at home, but experience problems with equipment thereof. Also, it may be assumed that a number of teachers in regional capitals and large towns can use personal computers and the Internet at school and, consequently, do not find it necessary to have a well-equipped working place at home, while rural schools have no such equipment at their disposal and have to rely only on themselves.

Also, it is worth mentioning that academic staff did not take full advantage of distance learning technologies before the pandemic. Most teachers lacked experience in applying them and had to adjust to a new reality in haste (*Fig. 33*).

As we can see, two-thirds of teachers have never encountered the need to give remote classes before the pandemic and this was a substantial problem for

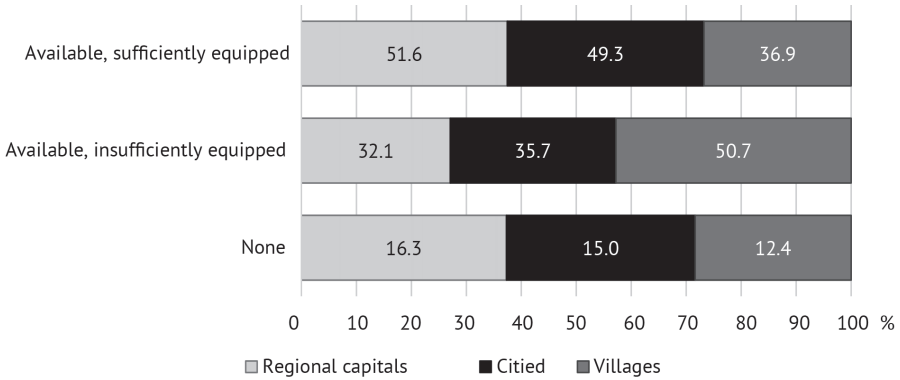


Fig. 32. Availability and adequacy of a working place at a teacher's home (across types of settlements), %

Source: General Education Monitoring by CECE IAES RANEPA.

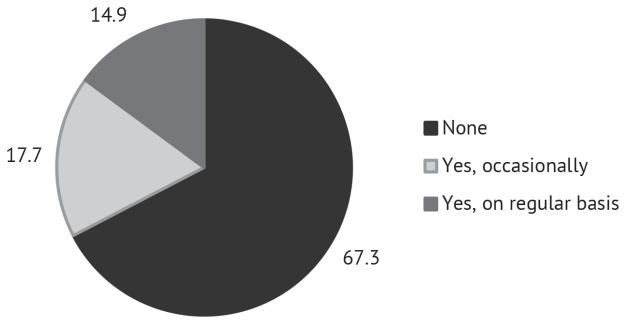


Fig. 33. Breakdown of the responses to the question: "Have you ever had experience in using distance learning technologies?", %

Source: General Education Monitoring by CECE IAES RANEPA.

them in a new reality. It was established that in shifting to remote education in 2021, only 30.2% of surveyed teachers experienced serious difficulties, 54.1% of teachers faced small problems, while 15.7% of teachers encountered no problems at all. In other words, nearly 70% of teachers, as they noted, had no big problems when remote education was introduced to full extent. Specifically, in Russia, as in many countries, there was virtually a lack of digital didactics, remote methods of teaching of different subjects and networking between teachers and pupils in distance learning, as well as school pupils' distributed educational activities. It seems we have got teachers' erroneous assessment of the previous year's situation. The shifting to remote education is not conceptualized and adaptation is largely formal: if required, they give remote classes in the general and senior secondary school, but the main emphasis is still made on in-person learning.

In elementary school, where pupils studied remotely only if someone in the class fell ill, teachers could ease off. However, occasional quarantines required from elementary school teachers to get familiar with distance learning techniques. At the same time, education of children at the age of 6—8 without involvement of their parents or other close relatives in distance learning is infeasible despite the fact that modern children are believed to be familiar pretty well with electronic gadgets. However, familiarity with gadgets and web-surfing for cartoons are not those skills which facilitate junior school pupils' studies. Educational platforms, videoconferences and online learning require absolutely different competences and therefore parents (other relatives) have to be involved invariably in distance learning. It means that in case of shifting junior pupils to remote education, their parents are expected to help them and keep a check on time their children spend before a computer monitor. When a school class is switched over to the quarantine if at least one coronavirus case is found in the class, most parents have to give up their work or work remotely. If it happens, in numerous families parents and children have often to 'compete' with each other for an access to a PC or tablet. At the same time, lots of parents believed that they and their children were prepared well enough for a shift to distance learning (*Fig. 34, 35*).

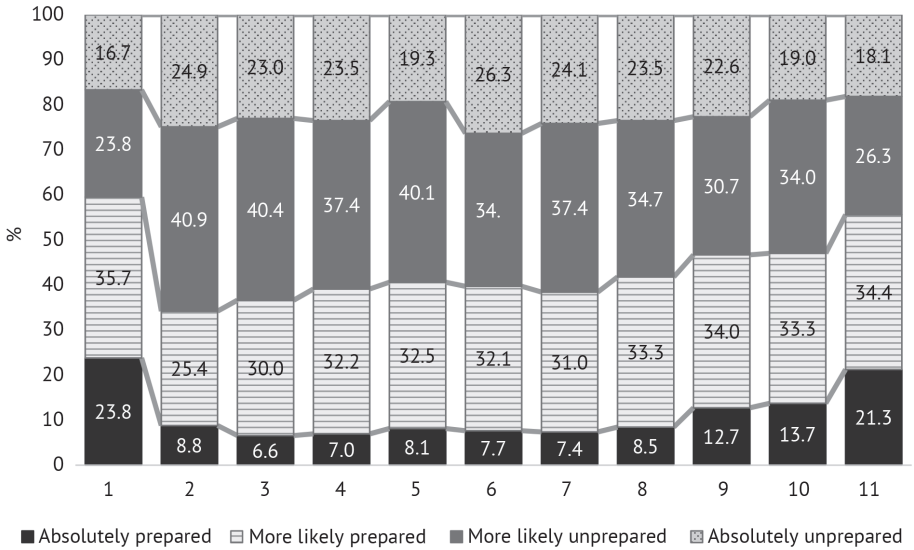


Fig. 34. Parents' preparedness to distance learning of their children across school grades

Source: General Education Monitoring by CECE IAES RANEPA.

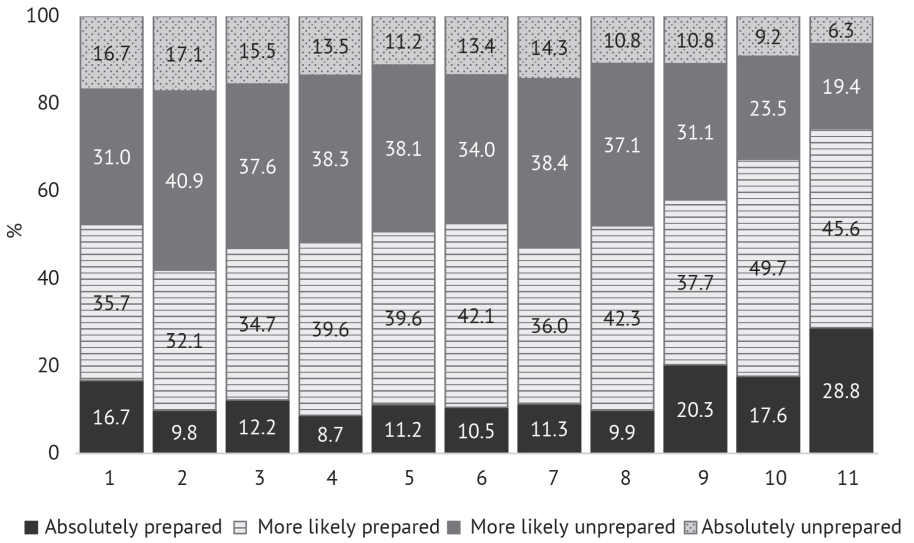


Fig. 35. Pupils' preparedness in their parents' opinion to distance learning across school grades

Source: General Education Monitoring by CECE IAES RANEPA.

As elementary school is concerned, it is noteworthy that parents of the 1st grade pupils believed that they were better prepared for a shift to distance learning than parents of the 2nd and 3rd grade pupils. Probably, an easy mode of training of the 1st grade pupils created illusions with nearly 60% of the parents that they coped without any problems with the emergency situation. The 2nd and 3rd grade pupils and their parents encountered more difficulties: only a third of parents and about 40% of children adjusted themselves without any problems to distance learning.

According to parents, starting from the 5th grade over 50% of children adapted quite easily to the external shock. Specifically, as parents noted, adaptability of the 7th grade pupils was somewhat lower than that of the 5th and 6th grade pupils. Probably, the 5th grade pupils are prepared, in principle, for changes because they leave the elementary school and go to the secondary school where they meet new teachers and acquaint themselves with the new organization of educational process. But this does not explain quite a high adaptability of the 6th grade pupils and the decline thereof with the 7th grade pupils. High preparedness of the 9th grade and 10th grade pupils is more likely substantiated by their good computer and Internet skills. At the same time, in the senior secondary school almost a third of the 10th grade pupils and a quarter of 11th grade pupils were not prepared well enough for distance learning. This can be largely explained by many parents' negative attitude to remote education both in 2020 and 2021. For this reason, distance learning in different subjects of the Russian Federation was introduced in 2021 only in case of a dramatic worsening of the epidemiological situation in a region/city/village. But epidemiological safety requirements introduced in order to curb the spread of the coronavirus infection affected schooling seriously. In particular, in 2021 the number of pupils studying on the second shift increased (*Fig. 36*).

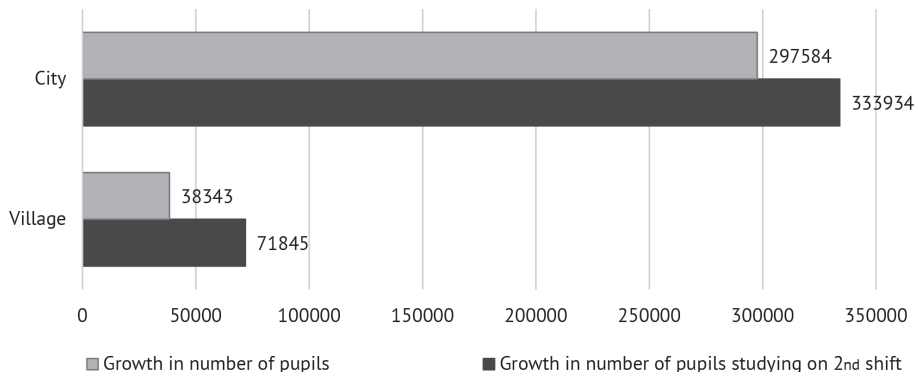
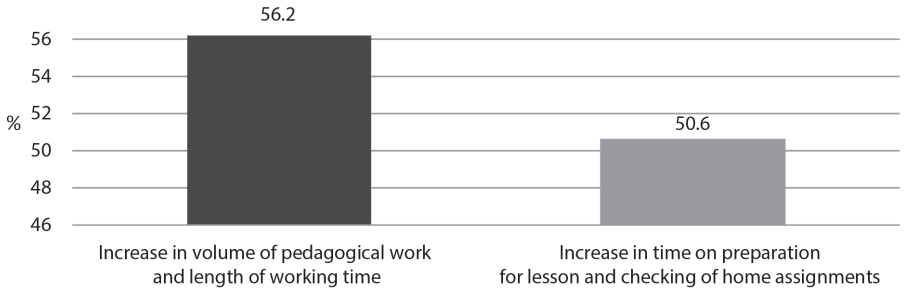


Fig. 36. Growth in the number of school pupils and those studying on the second shift in the 2020/2021 academic year

Source: Calculations based on the data of OO-1 2020.

As seen from *Fig. 36*, an increase in the number of pupils studying on the 2nd shift during the past year was higher than that in the overall number of pupils. Specifically, there was substantial growth in the number of pupils studying on the 2nd shift even in rural schools which are ungraded and few in numbers. By all appearances, this growth was evident primarily in basic schools where children are brought to by bus from several villages. Amid pandemic, this may lead to a rise in cases because of increased fatigability of children. Also, an increase in classes held in several shifts enhances a load on teachers. At the same time, the survey by the CECE IAES RANEPA have established that in 2021, on one side, teachers spoke about an increase in the volume of pedagogic work and length of working time (*Fig. 37*), while, on the other side, their actual workload decreased (*Fig. 38*).



Note. In teachers' opinion they were working on two paid positions if their academic workload amounted to 32 hours or more per week.

Fig. 37. The share of teachers who noted an increase in the volume of pedagogical work, working time and other workload, %

Source: General Education Monitoring by CECE IAES RANEPA.

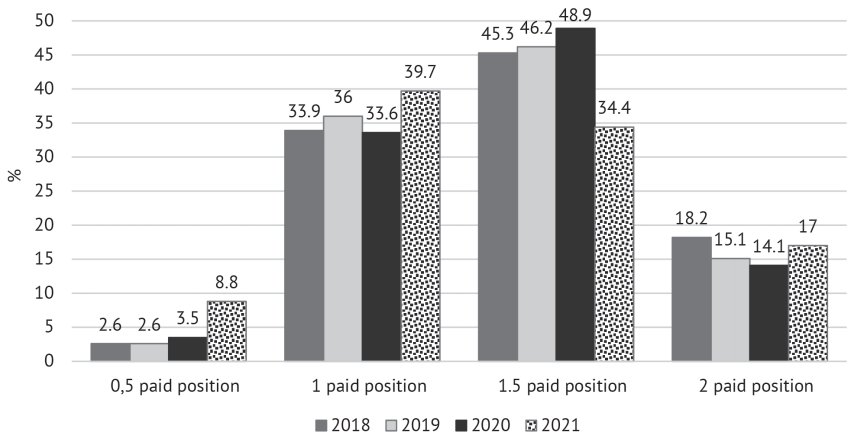


Fig. 38. Distribution of teachers' academic workload in 2018–2021, %

Source: General Education Monitoring by CECE IAES RANEPA.

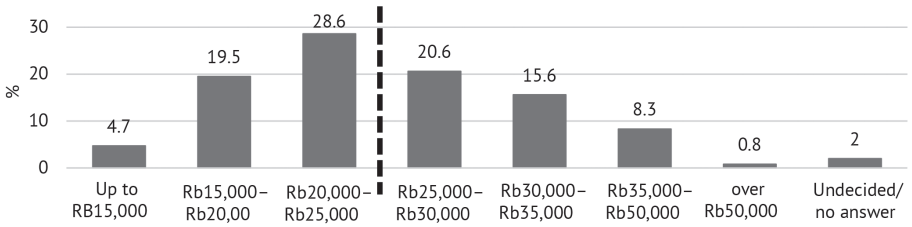


Fig. 39. Distribution of teachers' answers regarding their wage amount in 2021, %

Source: General Education Monitoring by CECE IAES RANEPA.

As seen from *Fig. 38*, the share of teachers who worked on 1.5 paid positions in 2021 decreased by 14.5 p.p. Specifically, the share of those who worked on 0.5 paid position and 2 paid positions increased by 5.5 p.p. and 2.9 p.p., respectively. Probably, the difference between the volume of pedagogical work and academic workload noted by teachers can be explained by the fact that the official workload was decreasing, while the actual one was growing.

It is noteworthy that judging by the survey the wages of nearly 53% of teachers were equal maximum to Rb25,000 in 2021 (*Fig. 39*).

Overall, in 2021 the general education system adapted more or less to a new reality though distance learning remained to a large extent a forced measure and is not expected to play an independent role for quite a long time.

5.8.3. Secondary vocational education

The secondary vocational education (SVE) which is considered to be practice-oriented was believed to be hit hard as a result of a shift to distance learning. However, SVE experienced no particular problems. In 2020 and 2021, the flow of the 9th grade and 11th grade school leavers kept growing (*Fig. 40*). Specifically, the shares of enrollees to private (nongovernment) SVE institutions and self-funded places at public SVE institutions started to grow (*Fig. 41*).

At the same time, the main flow of enrollees to SVE institutions (nearly 84%) are applicants for programs preparing mid-level professions rather than skilled workers and employees. It is to be noted that about 13.9% of them study extramurally and another 2%, full time/extramurally. Further, training programs for mid-level professionals include plenty of theoretical courses. Owing to these two factors, the SVE system managed to pass through the most critical period of the pandemic without any explicit problems, though, certainly, the situation in SVE was rather difficult because digital educational environment in SVE is less evolved by contrast with not only HEE, but also schools. It concerns particularly SVE institutions in rural areas.

As before the pandemic, a pickup in the flow of young people to SVE institutions was mainly driven by families' complicated financial situation, young people's intentions to enter as soon as possible the labor market to make a living

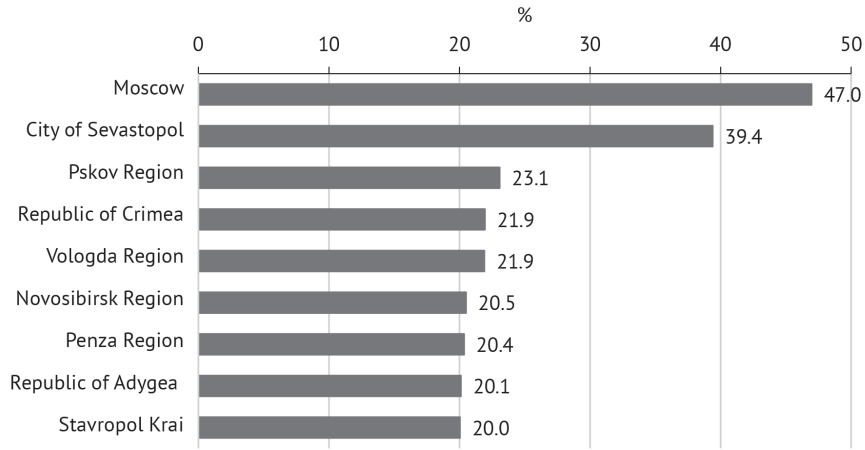


Fig. 40. Regions where enrollment to SVE institutions increased over 20% in 2020 on 2018

Source: Calculations based on SVE-1 data (2018–2020).

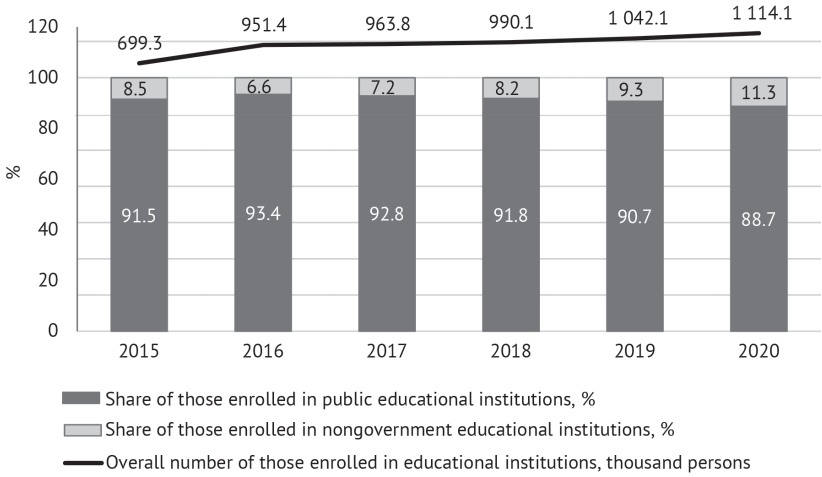


Fig. 41. Distribution of those enrolled in public and private (nongovernment) SVE institutions

Source: Calculations based on SVE-1 data (2015–2020).

and a lack of funds to pay coaches for getting prepared for taking unified state exams (USE) with flying colors in order to enter HEE.[1] Specifically, as most SVE

1 The monitoring of employment of graduates from SVE institutions and HEE carried out by CECE IAES RANEPA (2020). In particular, the Monitoring identified the reasons for pupils' enrollment in SVE institutions, as well as the actual financial standing of respondents' families.

students come from low-income families, it is critically important for them to get enrolled on state-funded places. At the same time, as was stated above, there is growth in the share of SVE students on self-funded places at public and private SVE institutions. This can be substantiated by the fact that, on one side, SVE institutions have a shortage of state-funded places (though under the Constitution of the Russian Federation education at SVE institutions is generally accessible and free of charge) which situation leads to an increase in fee-based services in the public sector of the secondary vocational education, while, on the other side, SVE institutions often lack training courses in new lines of profession by contrast with private SVE institutions. In any case, fee for education at SVE institutions is much lower than at HEE, while at private SVE institutions it is 2-3 times lower than at public SVE institutions.[1]

Top-15 regions with the highest shares of pupils enrolled in private SVE institutions include very different subjects of the Russian Federation in terms of their social and economic situation (*Fig. 42*).

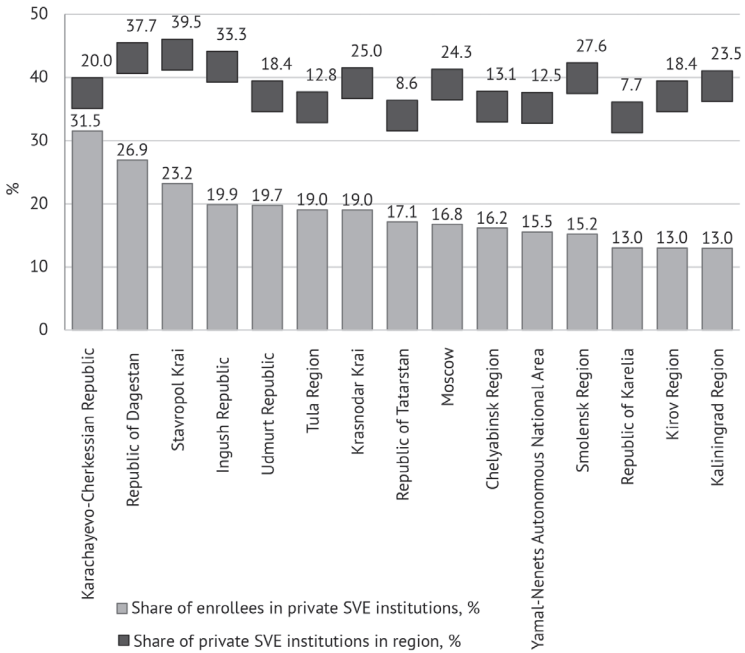


Fig. 42. The share of enrollees in private SVE institutions in some Russian regions and the share of private SVE institutions in these subjects of the Russian Federation, %

Source: Calculations based on SVE-1 data (2018–2020).

1 In 2020, the average fee for education (more recent data are unavailable) amounted to Rb95,200 and Rb38,600 at public and private SVE institutions, respectively.

As seen from *Fig. 42*, the highest rate of enrollment in private SVE institutions was seen in the North-Caucasian federal okrug, the heavily subsidized Udmurt Republic, as well as the Republic of Tatarstan, Moscow and the Yamal-Nenets Autonomous National Area. In Moscow and the Krasnodar Krai, the share of private SVE institutions amounted to a quarter of their overall number, while in the Stavropol Krai, to about 40%.

It is reasonable to assume that in Moscow growth in the number of enrollees in private SVE institutions can be related with a very high influx of young people in this sector of vocational training (growth of 47% within three years, see *Fig. 40*) in a situation where public SVE institutions fail to meet demand. Further, in private SVE institutions school leavers after completing the 11th grade may, by avoiding conscription in the army, get prepared for entering HEE in circumvention of unified state exams. In Moscow, the situation is rather serious: the number of state-funded places in HEE is relatively declining (key figures of enrollment shift more and more to regional higher educational establishments), while the flow of high school straight A applicants and winners of Olympiads from subjects of the Russian Federation to prestigious Moscow-based HEE is growing. Consequently, it is getting more and more difficult for Moscow residents to be admitted to state-funded places, to say nothing of a rather high fee for education at prestigious Moscow HEE. The idea of leaving Moscow to study at a regional HEE (except for St. Petersburg where the situation is almost the same) is regarded a priori by Moscow residents as a failure in competition for getting a prestigious job. For this reason, young people favor private SVE institutions, particularly, because of a lower tuition fee and in a hope to be admitted upon completion of SVE training to state-funded places at prestigious Moscow-based HEE or at least to take an intra-extramural training mode making it feasible for them to work and pay for their education. A reduction in employers' requirements to applicants' level of education (many employers require no longer from applicants to have a higher education diploma) is consolidating this trend. As seen in *Fig. 42*, other regions have different considerations: for example, in the Kaliningrad Region after completing their studies at SVE institutions young people tend to go to the EU where such lines of professions as IT, design and other are in high demand; specifically, young people can major in these professions for a small fee at private SVE institutions at home.

In 2020, a three-month lockdown spurred the flow of young people to SVE institutions because Unified state exams were canceled for those who were not going to enter HEE. This prompted a portion of school leavers to get enrolled in SVE institutions and not to take exams. In 2021, this factor stopped working, but a portion of school leavers thoughtfully refused to take unified state exams and having received a high school diploma entered private SVE institutions.

So, the SVE system is largely following the way of higher educational establishments: on the back of growth in demand for higher education amid state financing shortages and households' low incomes, in the mid-1990s fee-based services at public higher educational establishments picked up and the evolution of the private sector of higher education sped up. At present, increased demand for training programs preparing middle-level professionals leads to a pickup in

fee-based services at public vocational training institutions and rapid evolution of private SVE institutions.

5.8.4. Higher education

Higher educational establishments were those academic institutions which were paid a particular attention to because of an urgent shift to distance learning at the outbreak of the pandemic and evolution thereof in 2021. As stated above, "digital inequality" is applicable to higher educational establishments and not to students.[1] In 2021, this inequality is largely justified by behavior of HEE amid the ongoing pandemic. At the same time, it is necessary to take into account the fact that having more advanced qualifications (at least higher than those of school teachers and SVE instructors) faculty and academic staff (FAS) of higher educational establishments adapted quite quickly to distance learning. The factors which limited their adaptability are well-known: a failure to connect their home personal computers to the high-speed Internet, a lack of other necessary equipment and software programs (apps), unaffordability of fee-based videoconferences unless relevant apps were bought by HEE and a lack of equipment and the high-speed Internet with students. The latter is rarely paid attention to, but effective online classes depend largely on networking with a remote student audience and this is determined by technical specifications of the equipment and software of all participants in distance learning.

At the initial stages of the coronavirus pandemic, the faculty and academic staff had a negative attitude to distance learning. It was largely a reflection of a shock related with a shift to distance learning and therefore adoption thereof was rather complicated in psychological terms. A similar situation was typical of students as well, but with some adjustment to age and better familiarization with gadgets by contrast with academic staff, especially lecturers of pre-pension and pension age. But as faculty and academic staff of higher educational establishments was constantly in touch with modern ICT, its quick adaptability to a new reality was quite expected (and happened), the more so HEE had vast technological capacities at their disposal and a more evolved digital educational environment by contrast with schools and SVE institutions.

In Spring 2021, in cooperation with 12 leading Russian universities, including the Russian Presidential Academy of National Economy and Public Administration (RANEPA), the Tomsk National State Research Institute carried out research by order of the RF Ministry of Education and Science into the effect of distance learning on the quality of students' education, particularly, their educational outputs. Within the framework of this research, RANEPA sociologists surveyed 24,000 lecturers, while NRU HSE sociologists, 36,000 students from various Russian HEE.

According to the outputs of the survey of lecturers, slightly over a quarter (25.3%) of the respondents has a positive attitude to distance learning at higher educational establishments, while 43.4%, 27.0% and 4.3% of the respondents

1 *T.L. Klyachko, S.G. Sinelnikov-Murylev.* The Russian Higher Education and the Impact of the Coronavirus Pandemic // The Universitetskoe Upravlenie: Practice and Analysis. 2020. Vol. 24. Issue No. 4. pp. 9–21.

were of negative and neutral opinion and undecided, respectively.[1] Specifically, the most negative attitude to distance learning was found with lecturers of natural sciences (chemistry, biology, physics and other), math, engineering, industrial science, art and culture, health and medical sciences, physical culture and sports.[2] This result is largely consistent with that received in 2020: where a large volume of laboratory-based work is required, faculty and academic staff regards distance learning as an impediment to a normal educational process. The opinion of professors of math is clear, too, because traditional theorem proving and solving of math problems at practicals is done by lecturers on a blackboard in classrooms. A shift to distance learning makes these math teaching methods rather complicated, and, in lecturers' opinion, affects students' educational outputs and reduces supervising over their behavior.

A neutral attitude to distance learning was observed at pedagogical, humanitarian (philosophy, philology, linguistics, foreign languages, history and other) and agricultural sciences.[3] In the sector of social, economic and computer sciences, lecturers' attitude to distance learning was quite positive because according to sociologists these disciplines do not require a constant classroom contact.[4]

Based on the results of the survey of lecturers, 70.5% of them said that in the 2020/2021 academic year the share of the remote education mode took almost a half of academic hours. Specifically, half of the respondents said that the optimal share of this mode should be equal maximum to 25%.[5]

As regards the assessment of students' academic performance, lecturers believe that it depended largely on the mode of training (*Table 11*).

Table 11

Dependence of students' academic performance, as assessed by the faculty and academic staff, on the mode of training, % by column

In 2020/2021 academic year, has students' academic performance generally improved, got worse or remained the same?	Mode of training			Overall
	Mixed form of training	Only remote	Only in-person	
Improved	14.2	17.3	20.7	15.2
Got worse	47.4	43.6	36.4	45.9
Remained unchanged	31.2	30.3	34.2	31.3
Undecided	7.2	8.8	8.7	7.6
Overall	100.0	100.0	100.0	100.0

Source: M. Vyrskaya, D. Rogozin. The Fourth Wave of a Large-Scale Survey of Faculty and Academic Staff of Higher Educational Establishments of the Russian Federation Regarding the Evolution of Distance Learning Amid the Coronavirus Infection (COVID-19). July 5 – August 14, 2021. Vol. 2: The Survey's Informative Results / Edited by D. Rogozin. Moscow: RANEPA, 2021.

1 *M. Vyrskaya, D. Rogozin*. The Fourth Wave of a Large-Scale Survey of Faculty and Academic Staff of Higher Educational Establishments of the Russian Federation Regarding the Evolution of Distance Learning Amid the Coronavirus Infection (COVID-19). July 5 – August 14, 2021. Vol. 2: The Survey's Informative Results / Edited by D. Rogozin. Moscow: RANEPA, 2021.
2 Ibid.
3 Ibid.
4 Ibid.
5 Ibid.

Most HEE lecturers (45.9%) believe that students' academic performance got worse in 2021; it is noteworthy that the largest decline was registered with those who studied both in-person and remotely (with a mixed mode of training, students' academic performance deterioration was stated by 47.4% of lecturers). In case of students who studied only remotely, 43.6% of lecturers noted a decline in students' academic performance. Specifically, according to lecturers, academic performance of over a third of students who studied only in-person declined, too. In other words, according to the academic staff, students failed to adapt easily to the modified mode of training and even reacted negatively to the situation even if the traditional mode of education (in-person) remained unchanged, but the prospects about the pandemics' development were uncertain. It appears, however, that the faculty and academic staff may project their own perception of the reality on students: professors start assessing more scrupulously students' progress because they are prone to constant stress, too. Further, the academic staff may probably fear being loyal in assessing students' academic performance owing to comprehension of the pandemic-induced problems which students encountered and therefore they try unwittingly to do something about it, believing, in particular, that students' academic progress has deteriorated.

As seen from the survey, lecturers also believe that students' involvement into educational process declined in 2021 (*Table 12*).

Table 12

Correlation of the mode of training with involvement of students into educational process, % by column

In your view, has involvement of students in educational process in current year increased, decreased or remained unchanged?	Mode of training			Overall
	Mixed mode	Only remote	Only in-person	
Increased	10.5	11.3	19.8	11.3
Declined	53.1	53.5	37.3	51.9
Remained unchanged	28.9	26.6	34.1	29.0
Undecided	7.5	8.6	8.9	7.8
Overall	100.0	100.0	100.0	100.0

Source: M. Vyrskaya, D. Rogozin. The Fourth Wave of a Large-Scale Survey of Faculty and Academic Staff of Higher Educational Establishments of the Russian Federation Regarding the Evolution of Distance Learning Amid the Coronavirus Infection (COVID-19). July 5 – August 14, 2021. Vol. 2: The Survey's Informative Results / Edited by D. Rogozin. Moscow: RANEPA, 2021.

As seen from the survey, according to the academic staff, students' involvement in academic process is higher only in case of in-person classes because only this mode facilitates a better contact between a lecturer and students and makes it feasible to hold longer the latter's attention.[1]

1 *M. Vyrskaya, D. Rogozin.* The Fourth Wave of a Large-Scale Survey of Faculty and Academic Staff of Higher Educational Establishments of the Russian Federation Regarding the Evolution of

Most students believe that the advantages of remote education are related with mobility and saving: one can study from anywhere, no need to spend money on traffic fares, it is easier to combine work with other activities, more free time, availability of learning materials in a digital format (nearly 50% of students specified it) and feasibility to do simultaneously other things.[1]

As seen from the survey of students, they prefer the most a mixed mode of learning: if there was a choice, 50% of students would prefer this mode, while one student in five would like to study only remotely.[2] At the same time, about 40% of students preferred an in-person mode in terms of the quality of education, while a third of students found the mixed mode as the most quality one.[3] Specifically, once again 40% of students noted that in distance learning they lacked communication with their groupmates, while 30% of students specified that they need in-person (not remote) interaction with lecturers.[4]

So, in 2021 the higher education system saw an explicit adaptation of the academic staff and students to remote and mixed modes of learning. However, in opinion of the academic staff, as a result of this adaptation students' academic performance and involvement in the academic process declined. At the same time, most lecturers and students believe that after the coronavirus pandemic is over the mixed mode of learning will remain and be evolving because there are groups of students (especially master degree students) and lecturers for whom it is more convenient than a traditional in-person mode.

5.8.5. New strategic initiatives in the education system

In 2021, the RF Government was actively developing plans to achieve national goals formulated in Executive Order No.474 of July 21, 2020 of the President of the Russian Federation. With the implementation of national projects, including the "Education" national project postponed till 2030, various agencies and subjects of the Russian Federation may become less interested in active implementation thereof. In view of this, the RF Government has developed the Economic Development Strategy specifying the projects to be implemented in short-, mid- and long-term.

Higher education and science

In 2021, the higher education and science sector saw a considerable reformatting of the "Education" national project from which all activities related with the development of higher education were withdrawn and assigned to

Distance Learning Amid the Coronavirus Infection (COVID-19). July 5 – August 14, 2021. Vol. 2: The Survey's Informative Results / Edited by D. Rogozin. Moscow: RANEPA, 2021.

1 Quality of Education in Russian Universities: What did We Learn in the Pandemic: Analytical report / scientific editors: E.A. Sukhanova, I.D. Frumin. Tomsk: Publishing House of the Tomsk State University, 2021.

2 Ibid.

3 Ibid.

4 Ibid.

the modified "Science" project which was called "Science and Universities." In addition, with completion of the "5-100" project, a more large-scale and diversified program – "Priority 2030" – was initiated. Apart from the objective of further global positioning of Russian universities, the program pursues the goal of HEE's active engagement in development of economic sectors and regions.

The commission of the RF Ministry of Education and Science selected 106 universities from 49 cities of the Russian Federation for participation in the "Priority 2030" program. All higher educational establishments included in the program will receive a base portion of the grant in the amount of Rb100 mn. It is noteworthy that regional HEE account for over 60% of these 106 HEE-participants; Moscow and St. Petersburg are represented by 28 HEE and 11 HEE, respectively. Until the end of 2022, apart from the base portion of the grant 46 HEE out of 106 HEE will receive a special portion of the grant in the amount of Rb1 bn. The selected HEE will carry out their own strategic projects with the overall number of projects being equal to 409 (approximately 4 projects per 1 HEE). A larger portion of these projects deals with digital transformation, monitoring and control over emission of greenhouse gases. Two trajectories of HEE's participation in the Program were singled out: "research leadership" and "sectoral (territorial) leadership."

Professionalitet and SVE transformation

Due to fast growth in applicants to SVE institutions and a growing lack of resources in this sector, the issue of transformation of the SVE sector has come on the top of agenda. The RF Ministry of Education has come out with a proposal to introduce a new level of education – professionalitet – and reduce considerably the period of training of students within its scope: on average by 50%. According to the RF Ministry of Education, this will facilitate to increase capacities of secondary vocational training institutions to fast-track preparation of young workers and employees for the labor market. Also, on the basis of SVE institutions it is expected to establish with assistance of the business (employers) such production sites where along with instruction students will be able to manufacture products which are in demand on the market and learn how to start their own business or realize their potential as self-employed.

However, it seems infeasible to increase considerably SVE institutions' capacity with professionalitet introduced. Firstly, the RF Ministry of Culture, Ministry of Healthcare of the Russian Federation and RF Ministry of Transportation which have SVE institutions within their jurisdiction have already declared that they are not going to reduce the period of training for numerous lines of profession because it is either undesirable in terms of syllabus (the stance of the RF Ministry of Culture), or incompatible with the qualification and employment requirements (for example, with the training period reduced, the labor market will see paramedical personnel of girls and boys aged 17 who are unable to be employed until they reach adulthood; similar requirements are set to ship drivers and other). Consequently, training within the scope of professionalitet is likely to be limited by a small range of vocational and services professions (waiters, chambermaids, hairdressers and

other). At the same time, professionalitet leavers will encounter the problem of continuing their vocational training because the general education program at SVE professionalitet institutions will be reduced to 1 year for those who get enrolled after the 9th grade. This may lead to a situation where professionalitet leavers return later to SVE intuitions to get a comprehensive secondary vocational education, thus increasing even more the load on the system. We believe that senior secondary school leavers should be the basis for professionalitet.

Under the legislation, professionalitet should be introduced within a framework of an experiment because such innovations may affect various aspects of the educational process, including the substance thereof, so for implementation of the project further experimental verification and regulation are needed.

Vocational training schools, colleges, trainees and pedagogical staff, as well as potential employers will participate in the project. It is noteworthy that about 150,000 SVE trainees have taken part in the experiment since September 1, 2022.

General education: teachers' wages

Another line of the experiment is the introduction of a new system of labor remuneration of teachers. As shown above, wages of nearly 53% of teachers do not exceed Rb25,000. Based on results for January through September 2021, in many subjects of the Russian Federation teachers' average wages were short of the average ones in relevant regions, that is, below the target value. For example, teachers' wages were equal to 90.0% of average wages in the Novgorod Region, 93.0% in the Republic of Tatarstan and 92.8% in the Krasnoyarsk Krai. Overall, in 48 regions out of 85 regions, this indicator was below the norm. Taking into account the fact that tensions related with a low level of wages have been growing among teachers for a few years, a decision was taken to modify labor remuneration at schools. An experiment with a new system of teachers' labor remuneration will be carried out in 5 regions: the Belgorod Region, the Nizhny Novgorod Region, the Sakhalin Region, the Yaroslavl Region and the Republic of Mordovia. The main idea consists in unifying wages accounting approaches and reducing diversification of wages across regions. It is believed that labor remuneration of teachers will depend on qualification level-based wage rates, compensation payments and incentive payments. The procedure, amounts and conditions for such payments will be established by the RF Government. It is believed that a new transparent system of labor remuneration in general education will eventually be formed. However, teachers' wages are not expected to be increased because there is no growth in budget expenditures on education. Most probably, some redistribution of the levels of wages will take place inside regions and municipalities and teachers will get a better idea of the size of wages.

5.9. The housing market in Russian cities and housing construction in 2021[1]

In 2021, the situation on the Russian real estate market was mainly affected by factors that emerged in the initial period of the COVID-19 pandemic (state-subsidized mortgages, increased state support for developers) and trends that commenced to form in previous years (the expansion of the individual housing construction (IHC) segment as an alternative to blocks of flats (BF)).

The growth of real disposable household income by more than 3%, while the government supported the industry and offered preferential mortgages, contributed to high demand for housing, especially in H1 2021. The desire to preserve family capital amid the record inflation rate (8.4%) and rising prices for all types of real estate encouraged Russians to be active on the housing market.

In H2 2021, there was a decline in interest in mortgages. Housing lending commenced to shrink on the back of the gradual increase of the Bank of Russia key rate 8.5% by the end of the year against 4.25% at the beginning of the year. In addition, trends in the primary housing market were shaped by an increase in the cost of building materials and land, labor shortages, as well as the tightening of the program of concessional mortgage lending.

5.9.1. Market price indexes

To characterize the price situation, consider the data of experts of the market evidenced from a number of companies, united by the Russian Guild of Realtors (RGR) (*Table 13, 14*).

Table 13

Prices in apartment buildings in Russian cities and their dynamic in 2021

Federal district/city	Secondary market		Primary market		Price difference between markets, %
	Average asking price, thousand Rb/m2	Change for the year, %	Average asking price, thousand Rb/m2	Change for the year, %	
Central FD					
Moscow	255.0	28.5	333	30.6	30.6% higher in the primary market
Ramenskoe (Moscow region)	135.0	35.0	n/a		
Sergiev Posad (Moscow region)	106.0	35.9	n/a		
Yaroslavl	75.0	26.0	75.0	22.5	Approximately equal

1 This section was written by *Kulakov K.Yu.*, Doctor of Economic Science, Professor of the Moscow State University of Civil Engineering; *Malginov G.N.*, Candidate of Economic Sciences, Head of Ownership and Corporate Governance of the Gaidar Institute, Leading Researcher of the Department of Institutions and Financial Markets Analysis, IAES RANEPA; *Sternik S.G.*, Doctor of Economic Sciences, Professor of the Financial University under the Government of the Russian Federation, Senior Researcher, Ownership and Corporate Governance Department of the Gaidar Institute.

Federal district/city	Secondary market		Primary market		Price difference between markets, %
	Average asking price, thousand Rb/m2	Change for the year, %	Average asking price, thousand Rb/m2	Change for the year, %	
Voronezh	70.9	16.6	75.3	21.7	6.2% higher in the primary market
North-Western FD					
Saint Petersburg	197.0	21	196.0	23	0.5% higher in the secondary market
Kaliningrad	102.5	14.5	100.5	17.5	2.0% higher in the secondary market
Sothern FD					
Krasnodar	100.0–120.0	74.6	120.0–140.0	более чем в 2 раза	16.7–20% higher in the primary market
Volgograd	93.0	65.0	до 150.0	до 90	61.3% higher in the primary market
Volga FD					
Nizhniy Novgorod	110.0	22.2	113.0	15.8	2.7% higher in the primary market
Perm	75.9	24.0	84.6	17.0	11.5% higher in the primary market
Samara	70.0	20.0–25.0	70.0	27.0	Approximately equal
Kirov	59.7	22.0	n/a	n/a	
Urals FD					
Ekaterinburg	93.0	16.0	106.0	20.0	14.0% higher in the primary market
Tyumen	93.5	23.0	91.2	16.0	2.5% higher in the secondary market
Siberian FD					
Novosibirsk	91.0	20.0	98.9	14.0	8.7% higher in the primary market
Krasnoyarsk	87.0	23.0	92.5	27.0	6.3 in favor of newly built
Far-Eastern FD					
Vladivostok	150.0	12.0	126.6	5.0	18.5% higher in the secondary market
Khabarovsk	112.0	12.0	106.0	3.0	5.7% higher in the secondary market

Source: Russian Guild of Realtors.

According to the RGR experts, the highest rate of price growth in 2021 was observed in Krasnodar and Volgograd, and in both segments of the market: more than 60-70% in the secondary market and 1,9—2 times higher in the primary market. They were followed by the Moscow region cities specified in *Table 13* with a price hike in the secondary market by 35—36% and Moscow with a price surge in the primary market by more than 30%. Consequently, in 2021, there was a record demand on the secondary market in the capital: 150,565 transactions were recorded against 148,000 a year earlier, which was the largest absolute index for the entire period of statistical observations.[1]

1 Rusregister. URL: https://rosreestr.gov.ru/press/archive/rosreestr-po-moskve-vtorichka-pobila-vse-rekordy/; RBC. URL: https://realty.rbc.ru/news/61b6ec329a79471eebb70dab

The cities where prices for new construction were higher than on the secondary market turned out to be slightly more than those with the opposite ratio. However, the latter include St. Petersburg, Vladivostok and Khabarovsk, following Moscow in absolute price level (over 100,000 rubles per sq. m).[1] Approximate parity of prices was observed in Samara and Yaroslavl.

The most noticeable advance in prices on the secondary market in comparison with the primary took place in Vladivostok (18.5%), in other cities it did not exceed 5-6%. On the contrary, the greatest excess of prices for new construction against the secondary market was observed in Volgograd (over 60%) and Moscow (over 30%). In Krasnodar, Yekaterinburg and Perm the rise was from 10% to 20%, and in other cities it was less than 10%.

The most significant price growth for apartment blocks was noted in the Southern Federal District (*Table 14*).

Table 14

Prices on apartment block market and their dynamics in Russian cities in 2021

City	Average asking price, Thousand Rb/m2	Annual growth, %
Sochi	250.0	100.0
Novorossiysk	150.0	57.9
Sevastopol	142.0	44.2
Ryazan	71.0	On the secondary market – 40. On the primary market – 36
Saratov	65.0	45.0

Source: Russian Guild of Realtors.

Moscow was followed by Sochi in the absolute price level, and Novorossiysk and Sevastopol competed with Vladivostok.

5.9.2. Construction and commission of new housing

According to Rosstat preliminary data, 92.6 mn sq. m of housing was commissioned in Russia in 2021, which is 12.7% more than in 2020 (*Table 15*). This is a record-breaking figure for the entire post-Soviet period, which allowed not only compensate a slight decline in the first pandemic year, but also surpassed the previous maximum of 2015 by 8.6%. (85.3 mn sq. m). This volume of housing commissioned allowed 4.2 mn families, or nearly 10 mn people, to improve their living conditions. Having said that, the government helped developers with the construction of social, transport and engineering infrastructure, in particular,

1 This value also exceeded the prices in Nizhny Novgorod (higher prices of new construction) and in the cities near Moscow, where there was no primary market.

they were provided with subsidies under the special program "Stimulus".[1] In 2021, 5.5 mn sq. m of housing were commissioned under this program.[2]

Table 15

Commissioning of residential buildings in 1999–2021

Год	Million sq. m of total area	Growth rates, %	
		to the previous year	to 2000
1999	32.0	104.2	105.6
2000	30.3	94.7	100.0
2001	31.7	104.6	104.6
2002	33.8	106.6	111.5
2003	36.4	107.7	120.1
2004	41.0	112.6	135.3
2005	43.6	106.3	143.9
2006	50.6	116.0	167.0
2007	61,2	120,9	202,0
2008	64.1	104.7	211.5
2009	59.9	93.4	197.7
2010	58.4	97.5	192.7
2011	62.3	106.6	205.6
2012	65.7	104.7	216.8
2013	70.5	107.3	232.7
2014	84.2	119.4	277.9
2015	85.3	101.3	281.5
2016	80.2	94.0	264.7
2017	79.2	98.8	261.4
2018	75.7	95.1	248.5
2019	82.0/81.0*	108.3/107.0*	270.6/267.3*
2020	82.2/77.1*	100.2/95.2*	271.3/254.5*
2021	92.6	112.7	305.6

* Excluding commissioning of houses on garden plots, the volume of which is given according to the initial data of Rosstat (2019 — 1.0 million sq. m., 2020 — 5.1 million sq. m, there is no such data for 2021).

Sources: Rosstat; own calculations.

The positive dynamics of housing construction in the regional context was observed practically everywhere,[3] including in all regions with a total volume of housing commissioned more than 1 mn sq. m (*Table 16*).

1 The federal program "Stimulus" has been in effect in Russia since 2016 and is part of the national project (NP) "Housing and Urban Environment". The federal budget remains the main source of funding. Local authorities act as customers for construction works in the building of infrastructure facilities, provided that the developer participates in the integrated territory development project (IDP), which is responsible for preparing the project and obtaining a positive conclusion of the state expert examination.

2 URL:http://government.ru/news/44490/;URL:https://www.minstroyrf.gov.ru/press/za-2021-god-v-rossii-vvedeno-92-6-mln-kv-metrov-zhilya/;URL:https://tass.ru/nedvizhimost/13724343?utm_source=yandex.ru&utm_medium=organic&utm_campaign=yandex.ru&utm_referrer=yandex.ru

3 The drop in commissioning took place only in 10 regions, including Crimea and Sevastopol.

Table 16

Housing commissioning in Russian regions in 2021

Region	Rates of housing commission, in % to 2020
Moscow	156.8
Chechnya	135.5
Samara region*	128.7
Leningrad region*	127.0
Krasnodar krai*	122.6
Sverdlovsk region*	121.7
Stavropol krai	121.0
Bashkortostan*	118.4
Orenburg region	113.9
Tatarstan*	112.4
Chelyabinsk region*	109.8
Kaliningrad region	109.2
Irkutsk region	108.9
Voronezh region	108.1
Nizhniy Novgorod region*	107.7
Dagestan	106.3
Novosibirsk region	103.1
Krasnoyarsk krai	103.0
St. Petersburg	102.8
Saratov region	102.0
Moscow region*	101.9
Rostov region*	101.6
Belgorod region*	101.4
Tyumen region (with autonomous okrugs) *	101.3
Lipetsk region	100.3

* Regions with housing commissioning over 1 million sq. m.

Source: Rosstat.

As follows from *Table 16*, the increase in housing commissioning was more than 20% in Moscow, Chechnya, Samara, Leningrad and Sverdlovsk regions, Krasnodar and Stavropol krai, and slightly less in Bashkortostan (18.4%). In the Orenburg region and Tatarstan, this index was close to the Russian average (12-14%). Another 15 regions (including Moscow region) demonstrated positive dynamics of housing commissioning, but less than the above value.

Moscow, despite the record growth (almost by 57%), was second by the absolute value of housing commissioning (7.8 mn sq. m) after the Moscow region, which retained its leadership among Russian regions (9.2 mn sq. m) with an increase in housing commissioning of less than 2%. The leading five regions are also Krasnodar krai (about 6.3 mn sq. m), St. Petersburg (about 3.5 mn sq. m) and Leningrad region (about 3.4 mn sq. m).[1] The share of the Moscow region in the

1 Also, more than 3 mn sq. m for the year commissioned in Tatarstan, but in contrast to previous years, the republic is not in the top five regions.

total volume of housing construction in the country stood at 18.4% (10.0% in the Moscow region and 8.4% in Moscow), thus exceeding the level of 2020 (17%).

Overall data on commissioning include figures for both apartment blocks construction by developers and individual housing construction (i.e., built by private individuals themselves on their own land).

The most important distinguishing feature of 2021 was the fact that the share of housing built by the households at their own expense or with the help of borrowed funds exceeded half of the total housing commissioning (53%) for the first time. The share of apartment blocks has been steadily declining since 2016 (*Table 17*).

Table 17

Structure of hosing commissioning in 2010–2021

Year	Total, Million sq. m.	Apartment block construction		Individual housing construction from own and borrowed funds	
		Million sq. m.	Share in total commissioning, %	Million sq. m.	Share in total commissioning, %
2010	58.4	32.9	56.3	25.5	43.7
2011	62.3	35.5	57.0	26.8	43.0
2012	65.7	37.3	56.8	28.4	43.2
2013	70.5	39.8	56.5	30.7	43.5
2014	84.2	48.0	57.0	36.2	43.0
2015	85.3	50.1	58.7	35.2	41.3
2016	80.2	48.4	60.3	31.8	39.7
2017	79.2	46.2	58.3	33.0	41.7
2018	75.7	43.3	57.2	32.4	42.8
2019	82.0	43.5	53.0	38.5	47.0
2020	82.2	42.4	51.6	39.8	48.4
2021	92.6	43.5	47.0	49.1	53.0

Sources: Rosstat; own calculations.

According to Rosstat, the area of individual housing construction projects commissioned in Russia at the end of 2021 amounted to 49.1 mn sq. m, which is 23.4% more against the previous year. The five leading regions by the absolute value of commissioned housing are Moscow region (around 5.8 mn sq. m), Krasnodar krai (around 3.3 mn sq. m), Leningrad region (around 2.3 mn sq. m), Tatarstan (around 2.1 mn sq. m), Bashkortostan (around 1.8 mn sq. m)

In a number of regions this index grew by 1.5—2 times (Karelia, Vologda, Ivanovo, Tula regions, Kalmykia, Krasnodar krai, Astrakhan region, Karachaevo-Cherkassia, North Ossetia, Chuvashia, Altai Republic, Khakassia, Amur region and Jewish Autonomous Oblast). As can be seen from the composition of this group, it is mostly represented by small and sparsely populated regions, almost not overlapping with those where the total housing construction exceeded 1 million square meters, with the exception of Kuban.

Individual housing construction accounted for over 80% of commissioning in Sevastopol, Belgorod region and Chechnya; 70 to 80% in Irkutsk, Nizhny Novgorod

and Lipetsk regions; 60 to 70% in Tatarstan, Leningrad region, Stavropol krai, Orenburg and Moscow regions, Bashkortostan; 50 to 60% in Chelyabinsk, Samara, Perm, Rostov, Voronezh, Krasnodar and Saratov regions.

At the other pole, as expected, are Moscow and St. Petersburg where the contribution of the individual housing construction amounted to 9.3% and 7.2%, respectively. The intermediate position was taken by Dagestan, Sverdlovsk and Kaliningrad regions, Krasnoyarsk krai, Tyumen region (with autonomous okrugs), where the individual housing construction accounted for 40 to 50% of the commissioning amount.

The upward trend of physical volumes and of the share of individual housing construction in the total annual housing commissioning in recent years cannot be considered outside the specifics of this construction segment. The very fact of commissioning a detached house often diverges from the actual completion of construction work and the start of living in it. Often owners for a variety of reasons (for example, to avoid the growth of tax burden) did not hurry with this process, despite the constant extension of the process of "dacha amnesty" for more than 15 years.

Recently, however, new factors have emerged that have contributed to the registration of previously constructed housing:

- since 2019, it has been possible to hand over houses built on garden plots with subsequent registration for permanent residence in them, with this practice expanding in 2020–2021 due to the pandemic. Accordingly, as of August 2019, housing commissioning starts to include homes built on garden plots;[1]
- in 2021, there was a new stimulus for registration of houses built long ago, because the presidential initiative led to the adoption of the law "On amendments to the Federal Law on gas supply in the Russian Federation" of 11.06.2021 No. 184-FZ, which allows to connect gas to the borders of plots (in those settlements that already have gas supply) for free. However, this right can be exercised only by those owners whose house has been commissioned and registered.

The latter circumstance resulted in another wave of statistically observed commissioning of way back built houses, which led to a record increase in the delivery of individual housing for 2021 (over 23%). The real construction boom, however, was not observed, just the owners became much more active in obtaining the title to the previously developed sites.

Of course, there are objective reasons for the growth of individual housing construction in many regions.

On the one hand, the coming-of-age population, when some households (e.g., those of pre-retirement and recently retired people) stop being strongly tied to the urban infrastructure and move out of the city.

1 In accordance with the provisions of the Federal Law of 29.07.2017 № 217-FZ "On the conduct by citizens of gardening and horticulture for their own needs and on Amendments to Certain Legislative Acts of the Russian Federation".

On the other hand, the construction of apartment blocks in a number of small and medium-sized cities has been curtailed or seriously curtailed in recent years. Developers are not active enough due to insufficient solvent demand on the part of the residents of such settlements. That is why the population of small and medium-sized cities has no other options to improve their living conditions but to build their own houses. These long-term trends have been accompanied by a "pandemic effect," which has increased the number of city dwellers seeking second homes outside of metropolitan areas. Still, the record-breaking numbers are largely due to the inclusion of previously-built homes. At the end of 2021, the volume of housing commissioned by the population exceeded the level envisaged in the certificate of the national project "Housing and Urban Environment" at the time of its completion in 2029.

Against this background, the implementation of the other part of this national project — apartment block construction — looks much less rosy. The volume of commissioned housing in 2021 went up by 3.8% compared to 2020, returning to the pre-pandemic level of 2018—2019, which was inferior to the indexes of the previous 4 years (2014—2017). More than half (56.7%) of housing commissioned (excluding those built by households)[1] was commissioned in 10 regions (with at least 1 mn sq. m. commissioned in each region), and the share of the top five (Moscow and the Moscow region, St Petersburg, Krasnodar krai and the Tyumen region with autonomous districts) was over 42% of the total apartment blocks commissioned.

A more conclusive indicator — the volume of housing under construction — can be used to assess the real construction activity in the housing sector. This indicator is published by DOM.RF on the data from the Unified Information System of Housing Construction (UISZhS)[2] and reflects the activities of developers, i.e. professional real estate developers. Moreover, these statistics are available not only by region, but also by city.

Under the program of integrated development of territories, 661 territories are being worked on, where 144 mn sq. m of real estate will be built in the next few years, including 117 mn sq. m. of residential housing.

According to the Construction Ministry, a comprehensive approach to the renovation of settlements makes it possible to commission residential housing in volumes comparable to the mark (120 mn sq. m.) scheduled for 2029 in accordance with the targets of 2020.[3]

According to the UISZhS, at the end of 2021, there were 21 cities with a volume of housing under construction more than 1 mn sq. m. These territories form 60% of the Russian housing market: Moscow — 15.86 mn sq. m. These territories form 60% of the Russian housing market: Moscow — 15.86 mn sq. m, St. Petersburg — 9.64 mn, Krasnodar — 5.54 mn, Yekaterinburg — 3.23 mn, Ufa — 2.84 mn, Novosibirsk — 2.37 mn, Tyumen — 2.12 mn, Rostov-on-Don — 2.08 mn, Krasnoyarsk — 1.78 mn,

1 There is no such indicator in the official reports of the Federal State Statistics Service. However, it can be calculated as the difference between the total volume of housing commissioned and housing commissioned by the households at the expense of their own and borrowed funds.
2 URL: https://xn--80az8a.xn--d1aqf.xn--p1ai/
3 Garant. URL: https://www.garant.ru/news/1380714/

Voronezh — 1.47 mn, Lubertsy (Moscow region) — 1.26 mn, Perm — 1.25 mn, Samara — 1.23 mn, Vladivostok — 1.19 mn, Izhevsk — 1.15 mn, Ryazan — 1.14 mn, Kaliningrad — 1.11 mn, Krasnogorsk (Moscow region) — 1.06 mn, Kazan — 1.06 mn, Nizhny Novgorod — 1.05 mn, Murino (Leningrad region) — 1.02 mn sq. m.

Consequently, Moscow, St. Petersburg and Krasnodar are the usual leaders in the absolute volume of current construction. The leading cities that have raised the volume of apartment blocks under construction[1] relative to the end of 2020 are Nizhny Novgorod, Izhevsk, Vladivostok, and the outsiders are Kazan, Krasnoyarsk, and St. Petersburg.

It would seem that the price hike against the backdrop of steadily high demand for apartments should have led to increased investment in new development projects and a growth in market supply. However, so far the mortgage pumping of the market has had little effect on the volume of apartment blocks under construction nationwide. The volume of residential housing under construction - as a more informative indicator for assessing the current state of the market - is not growing noticeably. In 2021, the volume of apartment blocks under construction gained 2.5% to 96.4 mn sq. m., which indicates the absence of any prospects for a breakthrough growth in this segment in the short term.[2] Besides, the above mark was lower than the volume of construction seen in April 2020, that is, at the launch of the program of concessional lending for new construction at an annual interest rate of 6.5% (99.8 mn sq. m).[3]

Among the objective factors limiting the current construction growth most often cite:

- the transition to project-tied financing, the consequence of which was the final loss by the markets of small cities and the already low margins of projects. Banks are not willing to finance construction in risky (in their opinion) areas;
- the increase in the construction costs (a serious rise in the cost of building materials amid a shortage of labor), which leads to the fact that not everywhere increases in costs are offset by rising prices for finished construction;
- lack of a sufficient number of developed land plots, lagging infrastructure development in the cities.

This being said, the new residential housing finance scheme continued to spread. According to the data as of the end of 2021, the share of apartment blocks construction with the use of escrow accounts as a whole hit 76.8%. Chelyabinsk, Ulyanovsk, Chuvashia, Udmurtia, Orenburg, Penza, Nizhny Novgorod regions, Perm, Stavropol and Primorsky krais, Khanty-Mansi Autonomous Okrug, and Tatarstan were among the leading regions by this parameter (over 90%). In Moscow, its mark

1 Total square meters of premises under.
2 Overview of the market for apartment block construction in the Russian Federation. December 2021. P. 2. URL: https://дом.рф.
3 ЕИСЖС. URL: https://xn--80az8a.xn--d1aqf.xn--p1ai/%D0%B0%D0%BD%D0%B0%D0%BB%D0%B8%D1%82%D0%B8%D0%BA%D0%B0/%D0%B4%D0%BE%D0%BB%D0%B5%D0%B2%D0%BE%D0%B5_%D1%81%D1%82%D1%80%D0%BE%D0%B8%D1%82%D0%B5%D0%BB%D1%8C%D1%81%D1%82%D0%B2%D0%BE

was at the national average level (76.1%). Three regions were somewhat behind Moscow in terms of volumes of commissioned housing: Krasnodar krai (72.3%), Moscow region (68.3%), and St. Petersburg (65.9%).[1]

In general, we can talk about a significant slowdown in the pace of apartment blocks construction in recent years. The moderately positive dynamics in 2021 was largely maintained due to growth merely in a few regions.

5.9.3. The construction industry and measures of its state support

In order to overcome the COVID-19 induced difficulties, the government implemented programs to help the construction sector.

First of all, it is worth mentioning the extension of the family and preferential mortgage programs with some modifications.

According to many experts, it is this measure that will optimally stabilize the industry. It stokes the real estate demand, making it possible to maintain the supply of real estate at the proper level. Also, the balance between supply and demand should be facilitated by tightening the terms of the preferential mortgage program while softening the terms of the family mortgage program, which meets the current demographic demand.[2]

In addition, as of September 1, 2021 amendments to the RF Urban Development Code came into force, reducing the approval procedures in construction. Excessive and duplicative norms were not included in the new list of national standards and sets of rules. The novations will remove barriers to innovation, cut the time and cost of construction while maintaining a high level of safety.

On the recommendations of the Bank of Russia and the Ministry of Construction, the approval terms under the scheme of project-tied financing were cut from 45 to 30-40 days, under which more than 3/4 of the apartment blocks projects were under contraction at the end of last year.

Among legal novations we should also mention the changes to the Urban Development Code of 01.07.2021 which approved the "Procedure of Design Documentation Submission for State Expert Review together with the State Environmental Expert Review." All documents are sent electronically through the Glavgosekspertiza AIS portal, from where they are automatically forwarded to the environmental expertise.

They also introduced definitions of "standard design" (instead of the excluded institute of cost-effective design documentation for reuse) and "working documentation".

In order to stimulate renovation of the residential housing stock the opportunities for financial support to the subjects of the Russian Federation for resettlement of citizens from hazardous housing have been extended. Now the Fund for Assistance to the Reform of the Housing and Utilities Sector provides it to the regions in excess of the limit set for the RF subject for the current year, but not in excess of the calculated limit of funds for the resettlement of emergency housing stock for the forthcoming period until 2024 inclusive.

1 URL: https://дом.рф. Overview of the market for apartment block construction in the Russian Federation. December 2021. Pp. 9, 10.

2 The issues of concessional lending are analyzed in more detail in the following section.

Due to rising prices for building materials and in accordance with the RF Government Decree No. 1315 dated 09.08.2021, in order to partially offset their costs under the law on public procurement (№ 44-FZ) by agreement of the parties the developers are allowed to raise the contract price, but not more than by 30%.

Within the Address to the Federal Assembly of the Russian Federation dated 21.04.2021 the President of Russia noted the need to develop the construction industry. Thus, a proposal was made that with the help of subsidies from the federal budget the company DOM.RF will be able to originate loans to developers at a minimum rate (3-4% per annum). Pilot projects to test such a model will be residential construction projects in Tula, Tyumen, Kuzbass and the Sakhalin region.

All of the aforementioned programs and mechanisms were put into practice last year with certain degree of success. They allow to somewhat reduce the developers' transaction costs owing to a better structuring of the regulatory framework and simplification of bureaucratic procedures.

However, it should be noted that these measures did not satisfy all participants of the construction market. For example, the companies SGM-Most, Stroytransgaz, Avtoban found themselves in a difficult situation. In a letter to the president, their managers described the state of the industry as "crisis-related". The article published by RBC discloses problems of the construction industry also pertaining to residential construction. Among them are losses, bankruptcy of a number of companies and reduction of the number of employees in the industry.[1]

In response to this letter, the Ministry of Economic Development proposed a number of measures, among which the following appear to be the most significant:

- to establish a minimum level of profitability of public construction contracts of no less than 20% of their costs, because, according to the National Association of Builders, now the estimated profit in construction projects does not exceed 4-7%;
- obligate state contractors to provide advances on construction contracts in the amount of up to 70%. At present, advances provided for in government contracts usually do not exceed 30%.[2]

The gradual digitalization of developers is a new trend in 2021. More and more developers are using BIM technologies to optimize and speed up the design process. For example, thanks to the creation of a digital model of construction, when adjustments are made to one parameter, the rest are automatically recalculated. This technology also contributes to the growth of the share of online sales, the tools of which are constantly being upgraded.

In general, some liberalization of the industry took place in 2021. It received considerable support from the state. It is possible to speak about the positive impact of the implemented programs and norms, as the housing commissioning turned out to be record-breaking. However, one should take into account the specifics of this indicator, due to the long production cycle and the increasing role of the individual housing construction. Further actions of the government in this

1 RBC. URL: https://www.rbc.ru/business/19/07/2021/60f589349a79479a3bb3abb7
2 RBC. URL: https://www.rbc.ru/business/29/10/2021/617a766c9a7947717b6b9a59

sphere will depend on the development of the pandemic situation, the dynamics of real cash incomes of the population, as well as the impact of macroeconomic factors, i.e. the implementation of some initiatives is postponed until the emergence of new challenges in the industry, affecting a broader segment of real estate developers.

Thus, at a press conference in late December last year, the President of Russia instructed to draft "proposals to expand the contribution of large industrial companies in the construction of residential housing and social infrastructure facilities in areas where they operate."[1] Large companies have taken part in this before in some regions. However, until recently it was of target nature, mostly formal, on a voluntary-compulsory basis. Potentially, such an approach could become more widespread.

5.9.4. Concessional mortgage lending programs

Against the backdrop of record inflation and rising home prices in recent years, mortgage lending terms were very attractive in 2021.

According to the reports of DOM.RF and the Bank of Russia, the total number of mortgage loans originated in 2021 was estimated at 1,908,000 to the tune of Rb5.7 trillion.[2] The growth in volumes compared to 2020 exceeded 28%, while the number of loans went up by merely 7.2%. As a result, mortgage debt for the year surged by more than 26%. At the beginning of 2022, its value amounted to Rb11.7 trillion (taking into account securitized loans and acquisition of the right to demand - Rb12.9 trillion).

Having said that, the level of mortgage interest rates throughout 2021 stimulated the activity of home buyers, especially in the primary market. In this segment, taking into account preferential programs, banks' loan offers were noticeably lower than the inflation rate. At the end of the year, banks commenced to review the terms of loans on the secondary market, however many borrowers managed to buy an apartment under previously approved contracts at lower interest rates. As a result, the weighted average rate on mortgage loans in 2021 (7.49%) was lower than in 2020 (7.67%) (mainly due to the primary market), although it rose to 7.81% by the end of the year.[3]

In 2021, the basic programs of preferential mortgages, which appeared in recent years,[4] continued, although their terms and conditions have undergone some changes.

Regarding the ***Preferential mortgage*** program pertaining to the new construction, which was the most popular one in 2020,[5] commencing from the middle of the year there was an uptick in the interest rate (from 6.5% to 7%) with

1 URL: http://www.kremlin.ru/acts/assignments/orders/67556#sel=6:1:Uhh,7:6:Vye
2 ДОМ.РФ. URL: https://xn--d1aqf.xn--p1ai/upload/iblock/5a5/5a5d4aef263441a366e4fb5296b93270.pdf; ЦБ РФ. URL: https://cbr.ru/statistics/pdko/Mortgage/ML/
3 Overview of the mortgage lending market in 2021. ДОМ.РФ. February 2022. Pp. 2, 6.
4 Some programs (for example, military mortgages, assistance to mortgage borrowers in a difficult life situation, a number of regional programs) are not considered here.
5 Blog DomClickк. URL: https://blog.domclick.ru/post/ipoteka-s-gospodderzhkoj-2020-kak-oformit-i-budet-li-prodlena

a multiple reduction of the maximum amount of loan to Rb3 mn (throughout regions) against Rb6 mn previously (for Moscow and outer Moscow, St. Petersburg and Leningrad region - Rb12 mn) according to the RF Government Decree No. 1060 dated 30.06.2021.

The tightening of terms and conditions from July 1, 2021 markedly narrowed the potential scope of the program. According to experts' estimates, only in one third of the country's regions the average value of real estate was lower than Rb3 mn.[1] Changing the terms and conditions of the program expectedly led to a drop in the volume of credit: the average monthly loans in H2 2021 plunged compared to H1 2021 by 45% in quantity and by 64% in volume. Before the modification of terms, the program covered 83% of apartments in new construction offered for sale, however after the tightening of terms and conditions, its coverage in the regions nosedived to 33%, and in Moscow, St. Petersburg, and Moscow and Leningrad regions the use of the soft mortgage program became virtually impossible.[2]

In general, the results of 2021, especially in the second half of the year, demonstrated that the program of preferential mortgages, the most popular at the time of its launch and the first year of its operation, began to experience a sort of decline. The latter was triggered by the increased demand for new buildings and the rise in the cost of construction materials, which led to an increase in the price of new-built property.[3] However, we can say that preferential mortgages helped to stabilize the pandemic induced situation in the real estate market.

By contrast, the ***Family Mortgage*** program became a kind of driver of the mortgage market in 2021 since its conditions remained practically unchanged. The interest rate (6%) and the maximum loan amount of Rb6 mn remained the same (for Moscow and Moscow region, St. Petersburg and Leningrad region - Rb12 mn). Moreover, it became available to families where the first and subsequent children were born after January 1, 2018, whereas previously the recipient was families with children starting from the second child. According to statistics, there are almost twice as many families with one child as families with two or more children,[4] which confirms the relevance of last year's innovations.

In H2 on average, 2.5-fold as many loans were originated each month under the program as in H1 2021. Under the terms of the Family Mortgage program, about 80% of apartments in new buildings are available to families, which is explained by the higher maximum loan compared to the preferential mortgage program. More than a third of loans under the family mortgage program were issued to refinance earlier loans, which helped reduce the payment burden of families with children.[5]

1 CIAN. URL: https://www.cian.ru/stati-lgotnaya-no-ne-volgotnaya-chto-stalo-s-ipotekoi-s-1-iyulya-319129/
2 Overview of the mortgage lending market in 2021. ДОМ.РФ. February 2022. P. 5.
3 Council of Federation. URL: https://ach.gov.ru/news/vystuplenie-natali-trunovoy-na-pravchase-v-sovete-federatsii-s-uchastiem-ministra-stroitelstva-i-zhi?highlight-search-result=%D0%9B%D0%AC%D0%93%D0%9E%D0%A2%D0%9D&highlight-search-result=%D0%98%D0%9F%D0%9E%D0%A2%D0%95%D0%9A
4 MOS.RU. URL: https://www.mos.ru/news/item/97087073/
5 Overview of the mortgage lending market in 2021. ДОМ.РФ. February 2022. P. 5.

According to Sberbank, the average down payment under the family mortgage program at a reduced rate in December 2021 stood at 27.9% of the property value. Typically, families with children take a mortgage for 20 years, but pay it off in full in 4.5 years on average.[1] Experts from Expert RA, Moody's and the NKR rating agency note that this program may become the most popular with households in the future.[2]

Less popular programs are discussed in more detail below.

The ***Rural mortgage*** program was put in place in January 2020 as part of the "Comprehensive Development of Rural Areas" program.

The provision of the program is the population of the settlement (territory), which is not included in the urban district, which must not exceed 30,000 people.

The program applies to:

- rural settlements and territories;
- small settlements and inter-rural territories that have joint areas within the boundaries of the municipal district;
- workers' and urban type settlements, which are part of urban districts;
- towns with a small population (up to 30,000 people), tied up with neighboring rural areas by close ties: common use of infrastructure facilities, joint economic factors (including labor and social).[3]

Furthermore, Rural Mortgage does not apply to intercity municipalities of Moscow and St. Petersburg, as well as municipalities and urban districts of the Moscow region.

The loan is secured by a pledge of the credited real estate under the following restrictions[4]:

- the borrower and each of the co-borrowers may be granted no more than 3 home loans in the last annual interval;
- the borrower and each of the co-borrowers may be granted no more than one loan under the state program Rural Mortgage;
- the borrower and the co-borrowers may not use as a down payment the funds of the social payment received under the state program Integrated development of rural areas;
- construction period must not exceed 24 months with the bank's right to increase the preferential interest rate (from 0.1 to 3%) on the loan agreement, if the borrower fails to meet this deadline.

The changes for 2021 were as follows:[5]

1 Lenta. URL: https://lenta.ru/news/2022/02/01/domclick/
2 RBC. URL: https://www.rbc.ru/newspaper/2021/10/05/6157296c9a794794fbcf787a
3 RF Government Decree dated 30.11.2019 № 1567. URL: https://base.garant.ru/73186746/
4 DomClick Sber. URL: https://help.domclick.ru/ %D0%B8%D0%BF%D0%BE%D1%82%D0%B5%D0%BA%D0%B0-%D1%83%D1%81%D0%BB%D0%BE%D0%B2%D0%B8%D1%8F-%D0%B8-%D0%B2%D0%BE%D0%BF%D1%80%D0%BE%D1%81%D1%8B/%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D1%8B-%D0%BA%D1%80%D0%B5%D0%B4%D0%B8%D1%82%D0%BE%D0%B2%D0%B0%D0%BD%D0%B8%D1%8F/%D1%81%D0%B5%D0%BB%D1%8C%D1%81%D0%BA%D0%B0%D1%8F-%D0%B8%D0%BF%D0%BE%D1%82%D0%B5%D0%BA%D0%B0/
5 RF Government Decree. URL: http://static.government.ru/media/files/Fh71ilwTV7EdJpVpaEwwZfLxFs1KAAT9.pdf; DomRF Bank. URL: https://domrfbank.ru/mortgage/articles/rural_mortgage/;

- citizens were given the right to build on state or municipally-owned land plots, leased under an agreement for 20 years, whereas previously borrowers could count on a preferential mortgage only if they owned a land plot;
- the possibility of using maternity capital for the first installment was officially embedded (before that there was neither a prohibitive nor permissive provision);
- a special category of territories (rural areas of the Leningrad region and the Far Eastern Federal District) with a maximum loan amount of Rb5 mn also joined Yamal-Nenets Autonomous Okrug (under the general rule - Rb3 mn);
- within six months from the date of ownership registration, the borrower will need to register in the selected housing and notify the bank, which otherwise may increase the interest rate;
- the height of houses built under the program is limited to 5 stories in order to prevent the possibility of misuse.

Accordingly, the program necessary for the development of rural areas of the country (including the stimulation of the agro-industrial complex (AIC)) has been adapted to the realities of the Russian real estate market. However, its rationality and targeting raise questions. According to studies, the main customers of rural mortgages were urban residents, not rural residents, such as agricultural workers, whose share is less than 5%.[1] A possible, but far from obvious positive from this is that the relocation of urban residents can bring a modern lifestyle with a higher level of consumption in the backward areas, contributing to their development.

The Accounts Chamber concluded that for rural residents of 14 regions preferential mortgages are practically inaccessible, as the payments on such a loan will leave rural residents with funds equal to the subsistence minimum or even below that. The Accounts Chamber suggests that the Comprehensive Development of Rural Areas program should be radically revised. With all that said, of course, the strength of the Rural Mortgage program is the opportunity to work with the secondary market, access to which not all concessional lending programs provide.

The ***Far Eastern Mortgage*** program, which is valid from 2019 through the end of 2024 stipulates that the property must be located in a subject of the Russian Federation that is part of the Far Eastern Federal District. It is available only once in a lifetime.

The feature of this program is a low interest rate (2% per annum) with a maximum loan size of Rb6 mn. However, de facto banks do not provide loans at this rate.[2] There is also no possibility of refinancing mortgages taken before December 1, 2019.

РБК. URL: https://realty.rbc.ru/news/5fa3ec849a7947771d9ceacd; Journal Tinkoff. URL: https://journal.tinkoff.ru/news/ipoteka-v-sele-izmenilas/

1 Vedomosti. URL: https://www.vedomosti.ru/economics/articles/2021/03/24/863043-selskoi-ipoteki

2 Sovcombank. URL: https://sovcombank.ru/blog/ipoteka/dalnevostochnaya-ipoteka--chto-eto-usloviya-stavka

A specific condition is the need to register in the housing within 9 months after its purchase for a period of 5 years or more. Nevertheless, this makes the program attractive to those wishing to remain in the Far Eastern region. It is designed to help retain the young population there, since its main recipients are citizens no older than 36 years. There is an opportunity to use maternity capital. The program seems necessary for the development of the Far East.

From 2021, young families living in monocities can acquire housing on favorable terms not only in new buildings, but also on the secondary market (ready-made residential premises or residential premises with a plot of land). This change will make it possible to purchase housing on favorable terms in places where there is no new construction.

Among all the subsidized programs, the Far Eastern mortgage program demonstrates the lowest absolute quantitative indexes due to its limited territorial coverage. Moreover, in terms of the growth rate in 2021, it was second only to the family mortgage program, ahead of the preferential mortgage for new construction and rural mortgages.

In general, the picture of preferential lending in the past year is presented in *Table 18*.

Table 18

Concessional mortgage lending in 2020–2021

Credit category and program	Number of loans				Total amount			
	thousand		share, %		Rb bn		share, %	
	2020*	2021	2020	2021	2020*	2021	2020	2021
Mortgage loans, total	1780.0	1908	100	100	4445	5699	100	100
Concessional mortgage for new building	343.9	335	19.3	17.6	1008.8	1032.0**	22.7	18.1
Family mortgage	85.6	131	4.8	6.9	241.7	449.5**	5.4	7.9
Far Eastern mortgage	13.6	17	0.8	0.9	52.0	68.5	1.2	1.2
Preferential loans (total on 3 programs)	443.1	483	24.9	25.4	1302.5	1550.0	29.3	27.2
Rural mortgage	45.0	51.2	2.5	2.7	87.2	98.0	2.0	1.7
Preferential loans (total on 4 programs including Rural mortgage)	488.1	534.2	27.4	28.0	1389.7	1648	31.3	28.9

* Indexes for 2020 were recalculated on the basis of data from DOM.RF 2022 overview.
** Calculated on the basis of data on the average monthly origination of the program in H1 and H2 2021.

Source: URL: https://дом.рф; Overview of the mortgage lending market in 2021. ДОМ.РФ. February 2022. P. 5; Banks Today. URL: https://bankstoday.net/last-articles/v-rossii-uzhe-dva-goda-rabotaet-selskaya-ipoteka-usloviya-i-osobennosti-oformleniya-v-2022-godu; own calculations.

Concessional loans accounted for about 29% of the total amount of mortgage lending (more than 31% in 2020). Among them, the program of loans for new construction at a rate of 6.5—7% dominated (62.6% of the total amount of concessional lending against 72.6% a year earlier). The Family mortgage program accounted for 27.3% against 17.4% a year earlier. The programs Rural mortgage

and Far Eastern mortgage had a complementary character (about 6 and 4%, respectively).

The volume of lending increased for all programs: to the greatest extent — for family mortgages (by 86%), to the least extent — for preferential mortgages (merely by 2.3%). The growth under Far Eastern mortgage and rural mortgage programs amounted to approximately 32% and more than 12%, respectively. In contrast to the volume of lending, the number of loans did not grow in all programs. They decreased by 2.6% in the concessional mortgage program, while the family mortgage program grew by more than 1.5-fold, and the Far Eastern mortgage and rural mortgage programs grew by 1/4 and almost 14%, respectively.

Consequently, the importance of concessional programs in total lending declined somewhat in terms of amounts, but not in terms of the number of loans. The main shift was the increase in the share of the Family mortgage program.

5.9.5. Dynamics of demand and the price situation in the primary market of Moscow

In 2021, a high demand for primary housing was the main trend in the capital. The number of transactions in the market of new construction was increasing from month to month, as more and more buyers, who were planning to buy residential housing, rushed to buy it before the completion of the program of concessional mortgage lending. If in January and February in the primary housing market of the Old Moscow, according to the company "Best-Novostroy"[1], there were 3,700 and 5,100 transactions, respectively and in June — 6,600 transactions. And sales peak in the first half of the year was in April — 6,900 transactions.

New terms of preferential mortgages reduced the number of transactions related to new construction, but demand remained high. While in July, there were only 3,900 deals in new construction, in November this figure rose to almost 5,500 transactions.

Compared to the national average, in Moscow the number of mortgage transactions in the new construction market has peaked. Prior to the revision of the concessional lending program, their share in the primary market rose to 72%. However, with the introduction of new concessional mortgage terms, the share of transactions on credit fell to 63—64%, dropping to 57% at the end of the year. However, this result is still high for the capital market.

Another trend in the market of new construction was a record increase in prices (*Table 19*).

As follows from CIAN data, the average price per square meter in 2021 gained 19.5%, slightly behind the previous year (21%), but exceeding the value of pre-pandemic 2019 (11%). The highest rate of price growth (more than 2% per month) was observed in Q1, July and November, while their decline occurred only once — in December.

The next trend in the market of new construction in Moscow was the reduction of the average floor area of the exhibited apartment. According to the company

1 URL: https://best-novostroy.ru/

Table 19

Average price dynamic for apartments in new buildings in Moscow in 2021

Date	Price for 1 sq. m, Rb	Chain growth rates, %	Basic growth rates, %
31.12.2020	222 822.00	100.00	100.00
31.01.2021	227 787.00	102.23	102.23
28.02.2021	237 070.00	104.08	106.39
31.03.2021	243 469.00	102.70	109.27
30.04.2021	246 886.00	101.40	110.80
31.05.2021	248 886.00	100.81	111.70
30.06.2021	251 051.00	100.87	112.67
31.07.2021	257 045.00	102.39	115.36
31.08.2021	257 105.00	100.02	115.39
30.09.2021	261 240.00	101.61	117.24
31.10.2021	265 065.00	101.46	118.96
30.11.2021	272 496.00	102.80	122.29
31.12.2021	266 193.00	97.69	119.46

Source: CIAN. URL: https://www.cian.ru/analitika-nedvizhimosti-online/?dealType=sale&region=msk&category=newBuildingFlatSale; расчеты авторов.

"Metrium",[1] from the beginning of the year the average floor area of a lot in the new buildings of the mass segment has decreased by 10,9% (from 54,9 to 48,9 square meters). The reason for this is simple. Amid rising prices, demand has shifted to more affordable compact apartments. In order to maintain demand at an acceptable level, market players began to increase the share of small size residential housing. This trend is especially noticeable in the mass segment of Old Moscow. This step allowed to keep the supply budget at the acceptable level for buyers.

Furthermore, in 2021, the share of apartments with both "white box"[2] finishing and finishing in mass new buildings in Old Moscow reached an all-time high. By the end of the year, they were already more than 80% on sale. The demand for such options is due to the possibility to move in almost immediately after getting the keys. In addition, the cost of renovation can be built into the final price of the apartment and included in the mortgage.

Finally, another important trend was the high share of investment deals in H1 2021. Against the background of significant growth in real estate prices at quite low bank deposits rates, new buildings were a profitable asset for investment. This trend was also stimulated by preferential mortgages. Under the original terms, which were in effect until July 1, 2021, investments in apartments on the primary market were profitable. While before the onset of rush demand in summer 2020, the share of investment deals in new buildings was on average 15%, in H2 2020 and up to the middle of 2021 it reached 30—35%. Since July, the number of investment purchases has been declining.

1 URL: https://www.metrium.ru/
2 "White box" is a pre-finishing in a new building, i.e. an intermediate variant between a concrete box and ready to move in finishing. New buildings in recent years are increasingly being commissioned in this condition.

It should also be noted that in 2021, there was a trend towards ergonomic and functional planning, which was reflected in the apartment plan[1] of modern projects. Euro-format apartments with spacious living-room kitchens that are easily transformed according to the residents' needs comprise more than a half of all planning solutions in new buildings in Moscow.[2] Besides, there is an increased demand for apartments with individual designs: they include variants with private terraces, mezzanine, second entrances, penthouses with wood-burning fireplaces and city villas with patio.

Among other things, the pandemic has strengthened and consolidated the trend for quality amenities in new buildings. If earlier buyers focused on the location of the project, its transport accessibility and social infrastructure, now, in addition to these criteria, buyers are considering projects in terms of quality of landscaping, environmental friendliness of materials, durability of equipment, cost of future operation, use of all kinds of smart technologies both in construction and for the actual operation of residential housing.

1 The apartment plan is the shared structure of the space-planning solutions used in the construction of the house. It takes into account how many types of apartments there will be in the complex, what areas and planning. It also takes into account the class of housing, its location and cost.

2 ДОМ.РФ. URL: https://xn--80az8a.xn--d1aqf.xn--p1ai/%D0%B0%D0%BD%D0%B0%D0%BB%D0%B8%D1%82%D0%B8%D0%BA%D0%B0/%D0%BA%D0%B2%D0%B0%D1%80%D1%82%D0%B8%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D1%84%D0%B8%D1%8F/

Section 6. Institutional changes

6.1. The public sector and privatization [1]

6.1.1. The scope of public ownership

From 2016, statistical data began to be published within the framework of the System of Public Property Management Efficiency Estimates. It was approved by RF Government Decree No. 72 dated January 29, 2015, to replace the public sector monitoring data collected and released by the Federal State Statistics Service (Rosstat) since the early 2000s in compliance with RF Government Decree No. 1 dated January 4, 1999 (as amended on December 30, 2002). The System contains data on the number of federal state unitary enterprises (FSUEs) and joint-stock companies (JSCs) with the participation of the Russian Federation in their capital, which had been previously published, as a rule, in the government privatization programs for the next period (from 2011 – for a 3-year period, and prior to 2011 – for a 1-year period).

The release of an updated version of the Forecast Plan (Program) of Federal Property Privatization and the Main Directions of Federal Property Privatization, where the timelines have been moved from 2020—2022 to 2022—2024, makes it possible to analyze the processes that were taking place over the course of last year (*Table 1*).

As of July 1, 2021, the Russian Federation was shareholder in 678 JSCs, and property owner of 539 federal state unitary enterprises (FSUE), 40 federal treasury enterprises (FTE), and 13,149 federal state institutions (FSI).

1 This section was written by: *Malginov G.N.*, Candidate of Economic Sciences, Head of the Ownership and Corporate Governance Department of the Gaidar Institute, Leading Researcher at the Center for Institutions Analysis and Financial Markets, IAES RANEPA; *Radygin A.D*, Doctor of Economic Sciences, Professor, Head of the Center for Institutional Development, Ownership and Corporate Governance of the Gaidar Institute, Director, IAES RANEPA, Director of the RANEPA Institute of EMI.

Table 1

Societies and organizations in federal ownership entered in the Federal Property Register and the System of Public Property Management Efficiency Estimates in 2010–2021

Date	Economic societies with federal stakes, units		Other holders of ownership rights to registered federal property entities, units		
	stake (share) in capital	special right to participate in company's management (golden share) without holding any stake[a]	FSUEs	FTEs	FSIs
As of January 1, 2010	3,066/2,950[b]		3,517[b]		
As of January 1, 2013	2,356/2,337[b]		1,800/1 795[b]	72	20,458
As of January 1, 2016	1,557/1,704[b]	88/64[c]	1,488/1,247[b]	48	16,194
As of April 7, 2016[c]	1,683/1,620[d]		1 236	48	16,726
As of July 1, 2016	1 571	82	1 378	47	16,990
As of January 1, 2017	1,356/ 1,416[e]	81	1,245/ 1,108[e]	48	16,846
As of July 1, 2017	1,247	78	1 058	53	16,244
As of January 1, 2018	1,189	77	984	50	15,985
As of July 1, 2018	1,060	77	868	50	15,520
As of January 1, 2019	1,084/1 130[b]	76	792/700[b]	48	15,140
As of July 1, 2019	1 059	73	712	48	14,942
As of January 1, 2020	989	67	672	48	14,576
As of July 1, 2020	948	67	640	46	13,915
As of January 1, 2021	756	67	581	44	13,681
As of July 1, 2021	678	29	539	40	13,149
As of November 25, 2021	691[f]		498[f]		

[a] special right is not entered in the Register as a separate registered item, however it is mentioned in various materials published by the RF Federal Agency for State Property Management (Rosimushchestvo) in the context of data on state-owned stakes in joint-stock capital;
[b] the number of JSCs and FSUEs as stated in the privatization programs for 2010–2013, 2014–2016, 2017–2019 (data based on OKVED Codes (All-Russia Classifier of Economic Activities) refer to companies with shares (or stakes) in federal ownership), and 2020–2022 (number of economic societies);
[c] data published in Rosimushchestvo's report for 2015;
[d] the numerator is the total number of legal entities, including CJSCs and LLCs; the denominator is the number of stakes and shares (it can be assumed that the difference between the two figures equals the number of JSCs with a golden share without any stake, but there is no explicit statement of that fact);
[e] based on data published in the 2017 Report on the implementation of the Forecast Plan (Program) of Federal Property Privatization for 2017–2019.
[f] the number of JSCs and FSUEs as stated in the privatization program for 2022–2024.

Source: Forecast Plan (Program) of Federal Property Privatization and the Main Directions of Federal Property Privatization for 2011–2013; Forecast Plan (Program) of Federal Property Privatization and the Main Directions of Federal Property Privatization for 2014–2016; URL: www.economy.gov.ru,); Rosimushchestvo's Annual Report for 2015; Forecast Plan (Program) of Federal Property Privatization and the Main Directions of Federal Property Privatization for 2017–2019; Forecast Plan (Program) of Federal Property Privatization and the Main Directions of Federal Property Privatization for 2020–2022; Forecast Plan (Program) of Federal Property Privatization and the Main Directions of Federal Property Privatization for 2022–2024; statistical data from the System of Public Property Management Efficiency Estimates; URL: http://rosstat.gov.ru/

When these data are compared with the data published a year earlier, it can be noted that the number of FSIs shrank by 766 (5.5%); that of FSUEs, by 101 (15.8%); and that of FTEs, by 6 (13%). The presence of the State was reduced to a much greater extent in the corporate sector. The number of JSCs with state-owned stakes lost 270 units (or 28.5%), while that of JSCs where the State held the special right to participate in a company's management granted by a golden share shrank 2.3 times (by 38 units), and this happened in H1 2021.

As of November 25, 2021, the Russian Federation was property owner of 498 FSUEs, and shareholder (participant) in 691 economic societies. When these figures are set against the information derived from the System of Public Property Management Efficiency Estimates, it becomes obvious that the number of economic societies declined by 8.6%, and that of FSUEs, by 14.3%. A more illustrative example can be obtained by comparing the results of the federal property privatization program for 2022—2024 released as of November 2021 with those released as of January 1, 2019: the number of unitary enterprises was reduced by almost 29%, and that of economic societies, by just under 39%.

Now let us look at the categories of economic societies with various degrees of state participation, which are more important from the point of view of their role in the economy[1] (*Table 2*).

An analysis of Rosstat's data published in the framework of the System of Public Property Management Efficiency Estimates has shown that over the period between mid-2020 and mid-2021, it became possible to reverse the downward trend in the relative share of those JSCs where the State as a shareholder could exercise full corporate control, which had been observed since 2016 for almost 5 years in a row (except for H1 2018).[2]

Their relative share as of July 1, 2021 gained more than 4 p.p., amounting to 42.6% vs. 38.2% a year ago. The share of JSCs with blocking federal stakes increased from 7% to 9%. At the same time, the relative share of all the other companies with federal stakes shrank from nearly 55% to 48.4%.

If we compare the data as of November 2021 provided within the framework of the privatization program for 2022—2024 with the corresponding data as of January 1, 2019, one can see that the relative share of economic societies with state stakes amounting to less than 25% of their charter capital decreased by nearly 8 p.p. Nevertheless, this group remains the most numerous, accounting for more than 48% of all companies with federal stakes. Meanwhile, the share of companies where the State as a shareholder exercised full corporate control increased by the same 8 p.p., which happened in the main thanks to the input of JSCs in full state ownership (100% of charter capital). The share of companies with blocking state stakes (25% to 50% of charter capital) remained practically unchanged.

1 Previously, this group of companies could be described in more detail on the basis of the year-end reports on the management of federal stakes in OJSCs and the use of the Russian Federation's special right to participate in an OJSC's management (golden share), which were published by Rosimushchestvo from 2012 until recently.

2 Summary statement based on the total number of JSCs with 100% and majority stakes held by the State.

Table 2

The number and structure of economic societies (JSCs and LLCs) relative to the size of state stakes in their capital (less JSCs subject to special right (golden share) without a RF stake) in 2016–2021

Date and source	Economic societies (JSCs and LLCs) where RF is shareholder (or participant)									
	total, units	share, %	of these, with RF stake in charter capital amounting to							
			100%		50–100%		25–50%		less than 25%	
			units	%	units	%	units	%	units	%
RF Government (forecast privatization plans (FPP))										
As of January 1, 2016 (FPP for 2017—2019)	1,704[1]	100.0	765	44.9	93	5.4	172	10.1	674	39.6
As of January 1, 2019 (FPP for 2020–2022)	1,130[2]	100.0	368	32.55	30	2.65	95	8.4	637	56.4
As of November 25, 2021 (FPP for 2022–2024)	691[2]	100.0	269	38.9	29	4.2	59	8.5	334	48.3
Rosstat (System of Public Property Management Efficiency Estimates, JSCs only)										
As of January 1, 2016	1,557	100.0	816[3]		52.4[3]		174	11.2	567[4]	36.4[4]
As of July 1, 2016	1,571	100.0	711[3]		45.3[3]		189	12.0	671[4]	42.7[4]
As of January 1, 2017	1,356	100.0	575[3]		42.4[3]		128	9.4	653[4]	48.2[4]
As of July 1, 2017	1,247	100.0	514[3]		41.2[3]		108	8.7	625[4]	50.1[4]
As of January 1, 2018	1,189	100.0	488[3]		41.0[3]		102	8.6	599[4]	50.4[4]
As of July 1, 2018	1,060	100.0	448[3]		42.3[3]		87	8.2	525[4]	49.5[4]
As of January 1, 2019	1,084	100.0	442[3]		40.8[3]		85	7.8	557[4]	51.4[4]
As of July 1, 2019	1,059	100.0	429[3]		40.5[3]		85	8.0	545[4]	51.5[4]
As of January 1, 2020	989	100.0	387[3]		39.1[3]		74	7.5	528[4]	53.4[4]
As of July 1, 2020	948	100.0	362[3]		38.2[3]		66	7.0	520[4]	54.9[4]
As of January 1, 2021	756	100.0	318[3]		42.1[3]		60	7.9	378[4]	50.0[4]
As of July 1, 2021	678	100.0	289[3]		42.6[3]		61	9.0	328[4]	48.4[4]

[1] The number of JSCs as stated in the FPP for 2017–2019 (the data based on OKVED Codes (All-Russia Classifier of Economic Activities) refer to companies with shares (or stakes) in federal ownership).
[2] The number of economic societies.
[3] The total number of JSCs with federal stakes of more than 50% (without counting separately the JSCs with 100% federal stakes), and their relative share.
[4] The estimated total number of JSCs with federal stakes and the number of such JSCs in other categories, based on the federal stakes in their charter capital.

Source: Forecast Plan (Program) of Federal Property Privatization and the Main Directions of Federal Property Privatization for 2017–2019; Forecast Plan (Program) of Federal Property Privatization and the Main Directions of Federal Property Privatization for 2020–2022; Forecast Plan (Program) of Federal Property Privatization and the Main Directions of Federal Property Privatization for 2022–2024; statistical data from the System of Public Property Management Efficiency Estimates. URL: http://rosstat.gov.ru/

An analysis of data in the System of Public Property Management Efficiency Estimates, which are not limited to the federal level alone, has yielded the following patterns (*Table 3*).

Table 3

The number of organizations operating in the public sector of the economy on the records of Rosimushchestvo, its territorial branches, and the bodies responsible for the management of public property held by subjects of the Russian Federation in 2013—2014, and the number of economic subjects in public ownership in 2016–2021 (as entered in State registration records), by their organizational legal form

Date	Total	FSUEs, including treasury enterprises	State institutions	Economic societies with shares (or stakes) amounting to more than 50% of charter capital owned by	
				State	economic societies operating in public sector
As of January 1, 2013	67,003[1]	4,891	56,247	3,501	2,364
As of July 1, 2013	66,131[1]	4,589	56,100	3,201	2,241
As of January 1, 2014	64,616[1]	4,408	54,699	3,097	2,412
As of July 1, 2014	63,635[1]	4,236	54,173	2,988	2,238
As of January 1, 2016	65,587[2]	4,284	56,693/56,649[3]	3,888[4]	…
As of July 1, 2016	65,218[2]	3,982	56,893/56,856[3]	3,718[4]	…
As of January 1, 2017	64,457[2]	3,719	56,548/56,507[3]	3,532[4]	…
As of July 1, 2017	62,655[2]	3,294	55,414/55,361[3]	3,353[4]	…
As of January 1, 2018	61,734[2]	3,053	54,851/54,814[3]	3,239[4]	…
As of July 1, 2018	60,391[2]	2,763	53,933/53,899[3]	3,125[4]	…
As of January 1, 2019	59,608[2]	2,608	53,394/53,360[3]	3,054[4]	…
As of July 1, 2019	58,839[2]	2,366	52,901/52,870[3]	2,972[4]	…
As of January 1, 2020	57,903[2]	2,225	52,207/52,176[3]	2,864[4]	…
As of July 1, 2020	56,909[2]	2,050	51,474/51,445[3]	2,787[4]	…
As of January 1, 2021	56,288[2]	1,917	51,076/51,026[3]	2,713[4]	…
As of July 1, 2021	55,204[2]	1,792	50,138/50,110[3]	2,672[4]	…

[1] Including those organizations whose charter documents, after their State registration, do not specify property types, but less those joint-stock companies where more than of 50% shares (or stake in charter capital) are in joint RF and foreign ownership;
[2] Including economic subjects with an organizational legal form other than unitary enterprise, state institution, or joint-stock company (production and consumer cooperatives, associations (unions), housing cooperatives, foundations, public law companies, etc.);
[3] Total number of institutions created by the Russian Federation and subjects of the Russian Federation (less state academies of sciences and private institutions, which are listed as institutions in the new System, but must not be taken in account here);
[4] Total number of economic societies, the size of their state-owned stake (or shares in charter capital) being irrelevant. Data concerning the number of economic societies with controlling state-owned stakes are available only for JSCs with federal stakes.
Source: On the Development of the Public Sector of the Economy of the Russian Federation in 2012 (pp. 7–11), in H1 2013 (pp. 7–11), in 2013 (pp. 7–11), in H1 2014 (pp. 7–11), M., Rosstat, 2013–2014; Statistical information on public property management efficiency estimates. URL: http://rosstat.gov.ru/

The total number of economic subjects belonging to the public ownership category, according to data collected within the framework of the new system of estimates, by mid-2021 amounted to approximately 55,200 units, which is less by approximately 1,700 units (or by 3%) than a year earlier, and by approximately 8,400 units less than the corresponding index for mid-2014.[1]

For some categories of economic subjects, it can be noted that, relative to mid-2020, the number of unitary enterprises declined by 258 units (or 12.6%), that of economic societies – by 115 units (or 4.1%), and that of state institutions – by approximately 1,300 units (or 2.6%).

As far as the changes that occurred within a shorter period of time are concerned, over H1 2019 the number of unitary enterprises shrank by 6.5%, that of economic societies – by 1.5%, and that of state institutions — by 1.8%.

6.1.2. Privatization policy

Last year, the implementation of the Forecast Plan (Program) of Federal Property Privatization and the Main Directions of Federal Property Privatization for 2020-2022, approved by RF Government Edict No. 3260-r dated December 31, 2019, continued. This is already the fourth 3-year privatization program developed with a view towards a longer planning period established for a forecast plan (or program) of federal property privatization (extended from one to three years) on the basis of the alterations introduced into prevailing legislation on privatization in spring 2010. As was the case with the previous privatization program, numerous adjustments and alterations were later introduced into that document. Over the course of last year, a total of 22 normative legal acts (NLA) pertaining to these issues were adopted (vs. 15 in 2020). The most important of them, which we are going to discuss in more detail later in this section, was approved at the very end of the year.

By the end of 2021, only 3 JSCs remained in the list of biggest companies earmarked for privatization by special presidential and governmental decisions, with due regard for the market situation and recommendations of eminent investment consultants (Section I of the privatization program), although initially there had been 8, including 4 companies where it had been planned that the State should withdraw from their capital. After Novorossiysk Commercial Sea Port OJSC was struck off the list and Adler Trout Breeding Farm JSC was sold, the RF Government, by Edict No. 3138-r dated November 3, 2021, excluded Modern Commercial Fleet PJSC (Sovcomflot), Rosspirtprom JSC, and Kizlyar Brandy Factory JSC from the privatization program. There were to transactions involving the remaining companies in that group (Makhachkala Commercial Sea Port JSC (hereinafter MCSP JSC), FSUE Foreign Economic Association Almazyuvelirexport, and VTB Bank (PJSC)), although the assessment of the market value of shares in MCSP JSC was completed.

As far as privatization following standard procedures is concerned, the year 2021 saw the sale of blocks of shares (or stakes in charter capital) in 55

1 The last bulletin of the developments in the public sector of the economy covers the period January-September 2014; however, for the purpose of our medium-term analysis, the data for H1 2014, released as of 1 July 2014, are quire suitable.

economic societies, and relevant decisions were made concerning the conditions of privatization of 64 FSUEs (*Table 4*).

Table 4

Comparative data on the movement of the number of privatization deals involving federal state unitary enterprises and federal stakes in 2008–2021

Period	Number of privatized enterprises (entities) formerly in federal ownership (data released by Rosimushchestvo)		
	privatized FSUEs,[1] units	sold stakes in JSCs, units	sold treasury property entities, units
2008	213	209[2]	…
2009	316+256[3]	522	…
2010	62	134[2]	…
2008–2010	591+256[3]	395[2]	…[4]
2011	143	3175/359[2]	3
2012	47[6]	265[5]	40
2013	26	148[5]	22
2011–2013	216	730[5]	65
2014	33	107[5]	12
2015	35[7]	103[5]	38
2016	60[7]	179[5]	282
2014–2016	125[7]	389[5]	332
2017	69	47	77
2018	4	46	173
2019	8	51	171
2017–2019	81	144	421
2020	16	23[8]	312[8]
2021	64	55	393

[1] All preparatory work is completed, and the relevant decisions concerning the terms of privatization are issued.
[2] Including those stakes that were put up for sale in the previous year.
[3] The number of FSUEs in respect of which the decisions concerning their reorganization into JSCs were made by the RF Ministry of Defense, in addition to those cases where a similar decision was made by Rosimushchestvo.
[4] Available information concerning sales of other property entities over that period is reduced to that concerning the 4 military immovable property entities sold between October 2008 and January 2009, and the decisions, issued in late 2010, concerning some other property entities to be put up for sale and the terms of their privatization, the deals being actually closed in 2011.
[5] Less sales of shares with the participation of investment consultants.
[6] Estimated value based on data on the total number of FSUEs, in respect of which government edicts concerning the terms of their privatization in the form of reorganization into OJSCs (216 units) were issued, taken from Rosimushchestvo's Report on the Implementation of the Forecast Plan (Program) of Federal Property Privatization in 2011–2013, and the year-end results of 2011 and 2013;
[7] For several enterprises, the decisions concerning the terms of their privatization were abolished in 2015–2016 and then readopted, so the total number of FSUEs with regard to which privatization decisions were made individually over the three-year period is somewhat higher than in the tabulated period-end data for 2014–2016 (125 units).
[8] Including stakes in JSCs and treasury property entities sold within the framework of the previous privatization program.

Source: Rosimushchestvo's annual report for 2008; Report on the Implementation of the Forecast Plan (Program) of Federal Property Privatization in 2009, Moscow, 2010; Report of the RF Ministry

of Economic Development on the Results of Federal Property Privatization in 2010; Report of the RF Ministry of Economic Development on the Results of Federal Property Privatization in 2011; Report on the Implementation of the Forecast Plan (Program) of Federal Property Privatization in 2011–2013; Rosimushchestvo's reports on the implementation of the Forecast Plan (Program) of Federal Property Privatization in 2014–2016 for 2014, 2015, and 2016; Rosimushchestvo's reports on the implementation of the Forecast Plan (Program) of Federal Property Privatization in 2017–2019 for 2017, 2018, and 2019. Rosimushchestvo's report on the implementation of the Forecast Plan (Program) of Federal Property Privatization in 2020–2022 for 2020; Rosimushchestvo's report on the implementation of the Forecast Plan (Program) of Federal Property Privatization in 2020–2022 for 2021; URL: http://rosim.gov.ru

According to the year-end results of 2021, the number of privatized unitary enterprises jumped 4-fold on the previous year; and that of sold shares (stakes in charter capital) in economic societies, 2.5 times. This was not just a rebound from the previous year's level (2020), but a breakthrough to a level above the annual indicators achieved during the implementation period of the previous privatization program for 2017—2019 (by the number of deals involving blocks of shares (stakes)), or to a level close to those indicators (by the number of privatization deals involving FSUEs, relative to 2017). In the latter case it was probably the effect of stricter legal norms regulating the activity of unitary enterprises introduced in early 2020.

This movement pattern also had a favorable effect on the financial results. According to data released by the Federal Treasury as of December 30, 2021, the year-end index of total proceeds of sales of shares and other forms of federal participation in capital received over the course of the past year amounted to Rb 5.27bn, which is nearly 1.5 times above the budget target and the planned revenue target set in the privatization program for 2020—2022. This result significantly exceeds the total proceeds of sales of stakes (or shares in charter capital) in economic societies other than biggest ones received in 2020 (approximately Rb4.1 bn), and roughly corresponds to the year-end result for 2017 (Rb5,396.14 mn).

In 2021, the biggest deal was the sale of 100% of shares in Research Institute of Sports and Technical Products JSC situated in the city of Moscow. In the course of an electronic auction participated by three bidders, the deal value surged from Rb800 mn to Rb1.04 bn (the auction winner's bid), or by 30%. In terms of deal value, the sale of 100% of shares in Magnitogorsk International Airport JSC (in the Chelyabinsk region) was just below the latter (Rb999.9 mn); in an electronic auction participated by 6 bidders, the deal value climbed from Rb113.9 mn, or 8.8 times. The blocks of shares in 5 other JSCs were sold for not less than Rb300 mn each. Nearly all of those deals were handled by the Auction House of the Russian Federation (RAD OJSC).[1] In total, independent sellers handled 142 out of 179 biddings for economic societies (or approximately 80%).

The Federal Agency for State Property Management (Rosimushchestvo), in compliance with instructions issued by the RF Government, selected legal entities (agents) to perform the functions of a seller. The results of the selection procedure were approved by RF Government Edicts No. 1414-p dated May 31, 2021 and

1 The only exception was the sale, by the central office of the Federal Property Management Agency, of 100% of shares in Pravoberezhny JSC (in Krasnodar Krai, its core activity is rice growing). The deal value amounts to Rb677.32 mn. URL: http://rosim.gov.ru

No. 2647-p dated September 22, 2021, whereby the Auction House of the Russian Federation, the Agency for Direct Investments (ADI JSC) and Solid Investment Financial (Solid IFC JSC) were authorized to perform, on behalf of the State, the functions of a seller of shares (or stakes) under the terms of agency agreements.

As the pace of the privatization process involving JSCs (economic societies) intensified, the number of sold treasury-owned property entities increased by more than a quarter: 393 units vs. 312 in 2020. The number of sold treasury-owned property entities exceeded more than 7-fold that of sold blocks of shares (stakes). According to operational data released by the Federal Treasury as of December 30, 2021, the corresponding federal budget receipts amount to approximately Rb1.03 bn vs. Rb0.9 bn a year earlier. The target set in Rosimushchestvo's Order No. 378 dated December 30, 2020 "On measures designed to ensure the implementation by the Federal Agency for State Property Management of its budget assignment for 2021", the planned revenues under that item were to amount to Rb660,899,900. Thus, the resulting year-end index amounted to 157.2% relative to the budget target for the reporting year.[1]

Just as it had happened over the previous years, only some of the federal property entities earmarked for privatization were of interest for potential investors. Quite a few of the low-liquid assets were put up for sale more than once, and this fact is confirmed by the significant number of auctions that were canceled due to the absence of any bids. There were also some cases when the auction results were canceled because the winners were reluctant or downright refused to conclude a sale and purchase agreement (Redkinskiy Experimental Plant JSC in the Tver region and 6 treasury property entities).[2] Nevertheless, the privatization success rate (defined as the ratio of the number of sold assets to that of completed auctions) increased, amounting to 30.7% for blocks of shares (stakes), and to 28.4% for treasury property entities (vs. 21-23% in 2020).

Much more success was achieved with regard to realization of unfinished construction projects (hereinafter - UCP). Out of 56 federal property entities (lots) comprising 134 unfinished buildings and included in the privatization program, 47 (about 84%) were sold (the number of sold UCPs amounting to 121 (more than 90%)).

Over the course of the year 2021, in the framework of the implementation of 24 Executive Orders of the President of the Russian Federation and 25 RF Government Edicts concerning the creation or expansion of vertically integrated structures (VISs), Rosimushchestvo set out to establish 14 VISs. As of the year-end, the relevant decisions concerning the terms of their privatization were taken with regard to 7 FSUEs, 22 JSCs, and 8 treasury property entities. Among the integrated structures that were expanded in 2021, we can note state corporations (SC) Rostec, Roskosmos and Rosatom; Rosgeologiya JSC; Air and Space Defense Corporation Concern; Tactical Missiles Corporation; United Shipbuilding Corporation; Russian

1 Rosimushchestvo's Report on the Implementation of the Forecast Plan (Program) of Federal Property Privatization in 2020–2022 for 2020; Rosimushchestvo's Report on the Implementation of the Forecast Plan (Program) of Federal Property Privatization in 2020–2022 for 2021.

2 These are included in the number of stakes in JSCs and treasury-owned property entities sold in 2021 (*Table 4*), because the results of biddings were canceled in January 2022.

Railways; Shipbuilding & Shiprepair Technology Center JSC; Head Center for Reproduction of Agricultural Animals JSC; Far East Energy Management Company JSC (DVEUK); Marine Instrument Engineering Corporation JSC; Russian Post; and Krymenergo.

In 2021, some alterations were introduced into the current privatization law (adopted in 2001). The norms regulating property sale through a tender or auction were augmented by provisions whereby it should be impossible to challenge the price established in the course of these procedures, no matter what their results might be. Besides, the privatization program involving federal property entities, the ownership powers in respect of which are exercised by the public authorities of the federal territory "Sirius",[1] and the preparation of a relevant decision concerning the conditions of their privatization, should be coordinated with those public authorities.

As far as privatization prospects are concerned, it is necessary to point out the alterations to the Rules for the development of forecast plans (programs) of privatization introduced by RF Government Decree No. 1401 dated August 23, 2021.

The most important of these are as follows.

The federal property privatization program is developed for a three-year planning period, and the start and end dates of the planning period are shifted annually by 1 year in accordance with the period for which the federal budget has been approved.

Not later than April 1, the RF Ministry of Finance issues to Rosimushchestvo an assignment, whereby the latter should develop a draft program for the planned period with due regard for the results of the federal property privatization program implemented over the course of the reporting year, as well as the main directions of federal property privatization for the planned period.

A draft federal property privatization program for the planning period should include proposals for amending the current federal property privatization program as follows:

- a one-year shift in the start and end dates of the program's planning period;
- an update of the main directions and goals of federal property privatization, the forecast effect of privatization on structural changes across the economy, including in some specific sectors of the economy (or areas of management), the forecast volume of generated federal budget revenues, as well as an update of the list of federal property entities to be privatized by special decisions of the RF Government;
- those federal property entities that have been privatized and the relevant procedures completed, should be struck off the privatization program's list;

1 The federal territory "Sirius" is a new type of public legal entity. In accordance with Federal Law No. 437-FZ dated December 22, 2020, it enjoys economic independence and has its own public authorities that are endowed with the powers of local government and some regional-level powers, and may also be delegated certain powers of the Russian Federation.

— the privatization program's list should be augmented by those property entities the privatization of which can be possible over the course of the planned period.

The aforesaid amendments to the current federal property privatization program are to enter into force on January 1 of the year following the current year.

Those federal property entities that are subject to mandatory privatization in accordance with decisions of the RF Government, and the privatization procedures in respect of which have not yet been completed, can be included in the privatization program for the next planning period without an approval thereof by the federal executive bodies authorized to grant such an approval.

Meanwhile, by RF Government Decree No. 1401 dated September 23, 2021, the start and end dates in 2022 for the implementation of the ongoing three-year privatization program for 2020–2022 have been moved 2 years forward, that is, its implementation de facto is postponed until 2022–2024.

The natural consequence of this change was determined by RF Government Decree No. 3993-r dated December 30, 2021, which was an update of RF Government Decree No. 3260-r dated December 31, 2019 whereby the forecast privatization plan for 2020–2022 was approved. In fact, it introduced a new privatization program for the period 2022–2024. Its main parameters are as follows.

The group of companies to be privatized on the basis of special presidential and governmental decisions now includes Makhachkala Commercial Sea Port JSC and Almazyuvelirexport Foreign Trade Association[1] (after the State has withdrawn from their capital), as well as VTB Bank (PJSC), where the stake held by the Russian Federation in its charter capital is planned to be reduced to 50% plus 1 ordinary registered share. It should also be noted that Rosimushchestvo's Report on the Implementation of the Forecast Plan (Program) of Federal Property Privatization in 2020–2022 for 2021 envisages the possibility of privatizing, over the period 2022–2024, of the federal stake in Vnukovo International Airport JSC, after which the State should retain the special right to participate in its management (golden share). By 2024, it is planned to reorganize several federal state unitary enterprises and treasury enterprises into joint-stock companies (Scientific and Technical Center "Khimvest", FSUE "National Fish Resources", FSUE Amur Cartridge Plant "Vympel", and FSUE "Space Communications"), if the President of the Russian Federation adopts special decisions whereby they can be struck off the list of strategic organizations.

Over the period 2022–2024, it is planned to complete the privatization of 83 federal state unitary enterprises and treasury enterprises, and 221 economic societies, including state-owned stakes in 11 LLCs, as well as 1,135 other treasury-owned property entities. These targets differ little from the initial targets set in

1 After the transfer to another empowered organization of its powers to export precious metals and precious stones held by the State Institution on Formation of the State Fund of Precious Metals and Precious Stones of the Russian Federation, Storage, Release and Use of Precious Metals and Precious Stones (Gokhran of Russia), uncut and cut diamonds in the state reserves of precious metals and precious stones held by subjects of the Russian Federation, and the powers to sell representative consignments of uncut natural diamonds.

the forecast plan for 2020–2022, the exception being a slight increase in the number of economic societies earmarked for privatization.

In 2022, the amount of federal budget revenues generated by federal property privatization, less the value of shares in biggest companies dominating their specific sectors of the economy, is expected to be Rb3.9 bn; and in 2023, Rb0.9 bn. The corresponding revenue target for 2024 will be set with due regard for the alterations to be introduced in the forecast plan (program) of federal property privatization in 2022.

The reference to the RF Government Program (GP) "Federal Property Management" has been replaced by a reference to the GP "Public Financial Management and Regulation of Financial Markets" (Subprogram (SP) 6 "Federal Property Management") because SP 6 has been incorporated into that GP, which has been implemented since 2014 under the supervision of the RF Ministry of Finance.

6.1.3. The presence of the state in the economy and the issues of management of economic subjects operating in the public sector

In 2021, some important alterations were also introduced into the list of strategic enterprises and joint-stock companies. Interestingly, in contrast to what had been happening over many previous years, more companies were put on than struck off that list. Thus, 15 FSUEs were struck off, an overwhelming majority of them (12) being reorganized into federal state budget-funded institutions (FSBI), while 30 FSUEs and 5 JSCs were added to the list. The most noteworthy among them are Marine Instrumentation Corporation JSC (St. Petersburg), a recently established integrated structure, and Bashkir Soda Company JSC (BSC).[1] The inclusion of the latter into the group of strategic joint-stock companies, with the consolidation of a 57.43% stake in federal ownership, was followed by the transfer of 38.3% of ordinary shares into regional ownership. The signed shareholder agreement on the disposal of shares in BSC and voting shares set forth the principles and mechanisms of the interaction between the Russian Federation and the Republic of Bashkortostan within the framework of corporate governance of Bashkir Soda Company JSC.[2] Another 11.7% of ordinary shares in BSC are to be transferred to trust management by Regional Fund JSC (Ufa) (without a tender for the right to conclude an agreement on trust management of shares (envisaged in the Executive Order of the President of the Russian Federation issued in 1996)).

In addition to these alterations, 2 strategic JSCs raised their government corporate control threshold. For RusHydro, it increased insignificantly (from 60.5% to 60.73% of the charter capital), while for Roskartography JSC the increase was steep (from 51% to 100%). Another unitary enterprise remained on the list of strategic organizations after having changed its name.

1 In 2020, all shares in BSC were withdrawn to become public property, after the federal center presented claims over the withdrawal of the company's profits and the ongoing conflicts triggered by its failure to comply with environmental legislation.
2 URL: http://rosim.gov.ru

The dividend policy was significantly updated. By RF Government Edict No. 1589-r dated June 11, 2021, the corresponding government decree adopted in 2006 was amended. Now the federal bodies of executive authority, when determining the shareholder standpoint concerning the payment of dividends, should be guided by the necessity to earmark for these purposes not less than 50% of annual profit calculated on the basis of consolidated financial statements prepared in accordance with International Financial Reporting Standards (IFRS), less the following items recognized to be part of that profit:

- incomes and expenditures pertaining to the recognition (or recovery) of losses resulting from depreciation of fixed assets and intangible assets, as well as their write-off (except for write-offs related to their sale);
- incomes and expenditures pertaining to the movement of the fair value of financial assets determined in accordance with the IFRS;
- incomes and expenditures pertaining to the movement of foreign exchange rates;
- profits or losses that during the reporting period were charged to non-controlling stakes held by a subsidiary and determined in accordance with the IFRS.

If a JSC is not required by the law to prepare its financial statements in accordance with the IFRS, then for the purposes of paying dividends the amount of its net profit for the reporting year is to be accepted, calculated on the basis of its accounting (financial) statements, less the following items recognized to be part of that profit:

- incomes and expenditures pertaining to the recognition (or recovery) of losses resulting from depreciation of fixed assets and intangible assets, as well as their write-off (except for write-offs related to their sale);
- the difference between the estimated current market value of financial investments as of the reporting date and their previous estimated value;
- incomes and expenditures pertaining to the movement of foreign exchange rates.

If the calculated amount of profit is higher than the amount of net profit determined on the basis of accounting (financial) statements, then dividends are to be paid from the undistributed profit of a JSC.

An exception from these rules is allowed in case of adoption of special acts by the RF Government. It is directly applied only to JSCs belonging to the military-industrial complex, which may allocate less than half of their profits to the payment of dividends, if it is envisaged that profits can be reduced by the amount of actual documented investment costs pertaining to the technological reequipment of their production capacities, the formation of a scientific technical backlog to ensure that their state defense order is fulfilled, and the manufacture of hi-tech civilian and dual-use products.

Thus, at the level of a normative legal act, the general standard for the payment of dividends in the amount of not less than half of adjusted net profit is determined. Previously (since 2012), the threshold had been set at 25% (less incomes generated by revaluation of financial investments).

Now, when calculating the dividend base, the income and expenditure items that are not confirmed by cash flows (for example, those resulting from property revaluation or exchange rate differences) will no longer be taken into account. The previous practice of using unadjusted profit that included items that were not backed by cash flows ran contrary to foreign experiences and the gradual spread of the IFRS in Russia. The profit adjustment in this case would be greater due to the inclusion therein of the profits or losses attributed to the non-controlling stakes held by a subsidiary.

The new approach to calculating dividends has made it possible to properly balance the investment activity of state-owned companies and their obligations to shareholders, so that their dividend policy could become more transparent, and the treasury revenues more predictable. At the same time, a reduction in the flow of dividends into the federal budget cannot be ruled out, either. In part, this may happen due to the existence of long-term development programs (LDP) of state-owned companies, or to some special circumstances; two examples, cited by the head of the Federal Agency for State Property Management,[1] are the exemption from the payment of dividends granted to Sheremetyevo International Airport where the runways are being reconstructed, and the losses incurred by Aeroflot – Russian Airlines PJSC as a result of reduced air traffic during the pandemic.

While discussing the governance mechanism in joint-stock companies with state stakes, we can also note some other innovations.

The RF Ministry of Finance was granted the powers to exercise, on behalf of the State (upon an agreement with the RF Ministry of Transport), the rights of a holder of ordinary shares in Aeroflot PJSC purchased at the expense of the National Welfare Fund (NWF) within the framework of an additional issue of shares in 2020. It should be reminded that at that time, in order to stabilize the financial satiation of Aeroflot Group Companies in face of the negative impact of the pandemic, the government increased the charter capital of the major domestic air carrier by covering a larger part of its additional issue of shares from the National Welfare Fund (Rb50 bn out of Rb80 bn).

Just as was the case, in 2020, with Sberbank shares transferred from the RF Central Bank to the RF Ministry of Finance on the basis of a special law, the general Provision on the procedure for managing federal stakes in JSCs and the use of the Russian Federation's special right to participate in an OJSC's management (golden share) approved by RF Government Decree No. 738 dated December 3, 2004 does not apply to these shares.

An even more important development is that this basic government document defining the state property management mechanism for the corporate sector is no longer applied to the exercise, by the RF Ministry of Economic Development, of its powers of a shareholder in the development institutions included in the list of JSCs, in respect of which the government standpoint on a number of major issues is to be determined by the Government of the Russian Federation, its Chairman or the Chairman's deputies on the basis of proposals submitted to the government

1 Interview of the head of the Federal Agency for State Property Management Vadim Yakovenko to TASS Russian News Agency. URL: http://rosim.gov.ru .

by State Corporation VEB.RF and coordinated with the RF Ministry of Economic Development.

This norm is an integral part of RF Government Decree No. 358 dated March 12, 2021, which established that VEB.RF Group should act as an agent of the government on issues pertaining to the powers of property owner and the founder of development institutions specified in the list of non-profit organizations (NPO), as well as the functions of a shareholder in one of the development institutions entered on the list of economic societies, without the payment of remuneration for their exercise in 2021. The powers proper are to be exercised by the RF Ministry of Economic Development or the RF Ministry of Industry and Trade.

These are 6 NPOs (FGAU Russian Fund for Technological Development, FGBU "Fund for Assistance to the Development of Small Forms of Enterprises in the Scientific and Technical Sphere", ANO "Agency of the Far East for Attracting Investments and Supporting Exports", ANO "Agency for the Development of Human capital in the Far East and the Arctic", ANO "Agency for Technological Development", and Unitary NPO "Russian Fund for the Development of Information Technologies") and 4 JSCs (Federal Corporation for the Development of Small and Medium Businesses JCS, RUSNANO, Special Economic Zones JSC, and Rosinfokominvest).

Besides, the rules for the implementation of relevant functions by VEB.RF were approved, whereby it is established that the state corporation should operate on the basis of an agency agreement concluded with the RF Ministry of Economic Development or the RF Ministry of Industry and Trade.[1]

When performing its agency functions, VEB.RF does as follows:

- makes decisions concerning the development institution's reorganization (altering its type (this applies to federal budgetary and autonomous institutions) and liquidation;
- appoints a representative for voting at a general meeting of shareholders (GMS) and determines the shareholder standpoint of the Russian Federation on issues entered on the GMS agenda;
- convenes extraordinary general meetings of shareholders;
- adopts measures designed to improve the corporate governance mechanisms of development institutions;
- enters issues to be discussed on the agenda of a GMS (or a general meeting of founders) and prepares proposals for each of those issues;
- nominates the candidates - representatives of the State to the management and control bodies of development institutions, as well as a candidate for the sole executive body of a development institution (concludes and terminates their employment contracts);
- forms the auditing and counting commissions of development institutions registered as JSCs;
- exercises control on behalf of the founder over the activities of a development institution in the procedure and instances determined by RF legislation;

1 It executes the powers of a property owner only in respect of the Federal State Autonomous Institution "Russian Fund for Technological Development".

- in the cases determined by the constituent documents of a development institution, considers the issues within the competence of boards of directors (or supervisory boards).[1]

The agency agreements with government departments should specify the following performance indicators to be applied to VEB.RF in its capacity of an agent of the Government of the Russian Federation:

- the implementation of measures for which VEB.RF has been commissioned to be the core contractor and the action plans (roadmaps) approved by RF Government Edict No. 3710-r dated December 31, 2020. The performance indicator is considered to be achieved in case of proper implementation of those measures by VEB.RF;
- monitoring of the attainment by development institutions of their key performance targets. The performance indicator is considered to have been achieved if VEB.RF monitors the achievement of key performance targets set for development institutions;
- the absence of violations of the agency agreement committed by VEB.RF. The performance indicator is considered to have been achieved if VEB.RF properly performs the functions of an agent, as stipulated in the rules.

A report on the achievement of agent performance indicators is submitted annually by VEB.RF to the RF Ministry of Economic Development, not later than December 15 of each calendar year.

The RF Ministry of Economic Development and the RF Ministry of Industry and Trade monitor the performance by VEB.RF of its agent functions.

For the purpose of carrying on this monitoring, VEB.RF submits to the RF Government information on the execution of its agent functions and the following reports coordinated with relevant government departments: (1) on the management of shares in a development institution (JSC) owned by the Russian Federation; (2) on the implementation of measures arising from the powers of property owner and (or) founder of a development institution (NPO); (3) on the management of a development institution's property owned by the Russian Federation; (4) on the results of general meetings of shareholders and boards of directors (or supervisory boards) of development institutions; (5) on the implementation of measures set in the roadmaps approved by Government Edict No. 3710-r dated December 31, 2020; (6) on the achievement by development institutions of their key performance indicators.

These reports are submitted to the RF Government, the RF Ministry of Economic Development and the RF Ministry of Industry and Trade on a quarterly basis, not later than the 15th day of the month following the reporting quarter; it must contain information on both the performance targets and actually achieved performance indicators for the reporting period, as well as the results of financial and economic activities.

The report on the implementation of measures set in the roadmaps is submitted by VEB.RF to the RF Ministry of Economic Development on a monthly

1 In addition to the functions listed here, VEB.RF also performs a number of special functions in respect of development institutions registered as NPOs.

basis, and the report on the management of federal property held by development institutions is submitted annually to the RF Government.

The year 2021, as has already been noted earlier, saw a sharp reduction in the use of the instrument that the government relies upon to participate in the corporate sector by means of a special right (golden share). This was the result of the activities of the Federal Agency for State Property Management in compliance with Directive of the Deputy Prime Minister of the Russian Federation No. DG-P13-14590 dated November 13, 2020 whereby golden shares were withdrawn from 42 JSCs. At present, the government's special right is retained in 25 JSCs (Novorossiysk Commercial Sea Port PJSC, Moscow Machine-building Plant "Vympel" JSC, etc.).

Rosimushchestvo, while exercising its powers, repeatedly relied upon the special right granted by a golden share and issued relevant directives to government representatives appointed to the board of directors of joint-stock companies to participate in general meetings of shareholders (GMS), requiring them to veto certain decisions voted by a GMS. As existing practices have demonstrated, the golden share continues to function as an additional instrument of state corporate control over privatized enterprises.

At present, the lower house of the Federal Assembly of the Russian Federation is considering a draft law on introducing alterations into Article 38 of Federal Law No. 178-FZ dated December 21, 2001 "On privatization of state and municipal property" in order to expand the grounds for the RF Government to adopt relevant decisions concerning the use of its special right towards joint-stock companies (golden share). In light of this news, the dramatic shrinkage (more than two-fold) in 2021 of the group of companies where the federal center has been applying this particular instrument has given rise to some questions, because a special right cannot be regarded as a vestige of the government property management policy, by analogy with a unitary enterprise.

The amendments to the specialized law adopted in 2002 (No. 161-FZ) whereby the functioning of subjects belonging to this particular organizational legal form has been regulated are by no means fundamental.

In connection with the emergence of a new type of public legal entity (the federal territory "Sirius"), its bodies of public authority have been granted the right to exercise the functions and powers of a founder, on behalf of the Russian Federation or the federal territory, of state-owned and municipal unitary enterprises, with due regard for provisions stipulated in the basic law governing this sphere (No. 437-FZ dated December 22, 2020). The bodies of public authority of the federal territory are setting up unitary enterprises and exercising the powers of owners of their property in compliance with the provisions of the federal law concerning the federal territory. The relevant FSUEs transfer part of their after-taxes profit and other mandatory payments to the budget of the federal territory "Sirius", the relevant procedure, amount of payment, and timelines for such transfers having been established by the regulatory legal acts adopted by the territory's public authorities.

The obligation of a unitary enterprise to submit at the end of each reporting period its annual accounting (financial) statements to the authorized bodies of state authority of the Russian Federation, regional authorities or local governments has been somewhat adjusted. Now this rule applies only to those enterprises that have been made exempt from the obligation to submit such reports in order to create the government information resource of accounting (financial) statements. If a unitary enterprise submits its annual accounting (financial) statements to the government information resource, the aforesaid bodies of state authority can receive those statements from that resource through a unified interdepartmental electronic information system.[1]

Besides, state-owned and municipal enterprises have been granted the right to borrow not only by means of issuing bonds or bills of exchange, but also by relying on other forms of borrowing in the cases established by the RF Government.

6.1.4. The budgetary effect of government property management policy

In 2021, unlike the previous year, the movement of federal budget revenues that had to do, in one or other way, with public property displayed a downward trend, which affected both revenues generated by the use of public property (renewable sources) and those generated by privatization and sale of property (non-renewable sources).

Tables 5 and *6* below demonstrate data taken from the reports on federal budget execution only with regard to the revenues generated by the use of public property and the sale of public property entities that belong only to some specified categories of tangible property.[2]

1 Now, this norm also applies to the financial statements submitted by unitary enterprises, JSCs and LLCs included in privatization programs, which are posted on the special website where privatization data are published (Article 10.1 of Federal Law No. 178-FZ).

2 Outside of the framework of this section, we have left the federal budget revenues generated by payments for the use of natural resources (including biological water resources, revenues from the use of forest fund, and the extraction of mineral resources), compensation for the losses incurred by the agricultural production sector as a result of confiscation of agricultural land, revenues generated by financial operations (revenues from placement of budget funds (revenues from federal budget residuals and their investment: from 2006 onwards, these include the revenues from the management of the RF Stabilization Fund (and from 2009 onwards – the Reserve Fund and the National Welfare Fund)); revenues from investment of monies accumulated in the course of trading RF stocks in the auction market); interest on budget-funded domestic loans, covered by the federal budget; interest on government loans (monies received from the governments of foreign countries and foreign legal entities as interest payments on RF government loans); money transfers from legal entities (enterprises and organizations), subjects of the Russian Federation, and municipal formations received as interest and guarantee payments on loans received by the Russian Federation from foreign governments and international financial organizations; revenues from paid services rendered to the population or monies received by way of compensation of government expenditures; transfers of the RF Central Bank's profits; certain categories of payments from state and municipal enterprises and organizations (patent duties and registration fees for official registration of software, databases, integral microcircuit topologies; and other revenues which until 2004 were part of mandatory payments of state organizations (except revenues generated by the operations of Joint Venture Vietsovpetro (from 2001) and transfers of part of profits generated by FSUEs (from 2002); revenues from the implementation of product share agreements (PSA); revenues from the disposal of confiscated and other property earmarked as government revenue (including property transferred to state ownership in the procedure of inheritance or gift, or treasure trove appropriation); revenues generated by lotteries;

Table 5

Federal budget revenues generated by the use of public property (renewable sources) in 2000–2021, millions of rubles

Year	Total	Dividends on shares (2000–2021) and revenues generated by other forms of participation in capital (2005–2021)	Payment for lease of land in state ownership	Revenues generated by lease of property in state ownership	Revenues from transfer of part of net after-taxes profits of FSUEs and other mandatory payments	Revenues from other sources (in 2000–2007 and 2011 – those generated by Joint Venture Vietsovpetro; and in 2018–2021 – those generated by property transferred as pledge or to trust management)
2000	23,244.5	5,676.5	–	5,880.7	–	11,687.3[a]
2001	29,241.9	6,478.0	3,916.7[b]	5,015.7[c]	209.6[d]	13,621.9
2002	36,362.4	10,402.3	3,588.1	8,073.2	910.0	13,388.8
2003	41,261.1	12,395.8	10,276.8[e]		2,387.6	16,200.9
2004	50,249.9	17,228.2	908.1[f]	12,374.5[g]	2,539.6	17,199.5
2005	56,103.2	19,291.9	1,769.2[h]	14,521.2[i]	2,445.9	18,075.0
2006	69,173.4	25,181.8	3,508.0[h]	16,809.9[i]	2,556.0	21,117.7
2007	80,331.85	43,542.7	4,841.4[h]	18,195.2[i]	3,231.7	10,520.85
2008	76,266.7	53,155.9	6,042.8[h]	14,587.7[i]	2,480.3	–
2009	31,849.6	10,114.2	6,470.5[h]	13,507.6[i]	1,757.3	–
2010	69,728.8	45,163.8	7,451.7[h]	12,349.2[j]	4,764.1	–
2011	104,304.0	79,441.0	8,210.5[h]	11,241.25[j]	4,637.85	773.4
2012	228,964.5	212,571.5	7,660.7[k]	3,730.3[l]	5,002.0	–
2013	153,826.25	134,832.0	7,739.7[k]	4,042.7[l] +1,015.75[m]	6,196.1	–
2014	241,170.6	220,204.8	7,838.7[k]	3,961.6[l] +1,348.5[m]	7,817.0	–
2015	285,371.1	259,772.0	9,032.3[k]	5,593.8[l] +1,687.8[m]	9,285.2	–
2016	946,723.35/ 254,328.3o	918,969.1/ 226,574.1o	9,412.4[k]	5,843.25o +3,026.7[m]	9,471.9	–
2017	275,168.2	251,327.0	9,825.1[k]	5,318.4o +2,857.7[m]	5,840.0	–
2018	333,396.13	312,565.8	9,783.0[k]	1,988.6o +2,922.6[m]	6,136.0	0.13

other revenues from the use of property and rights in federal ownership (revenues from the execution of rights to the results of intellectual activity (R&D and technologies) intended for military, special, or dual use; revenues generated by the execution of rights to the results of scientific and technological research held by the Russian Federation; revenues generated by the exploitation and use of property relating to motor roads, motor road levies imposed on transport vehicles registered in the territory of other states; execution of the Russian Federation's exclusive right to the results of intellectual activity in the field of geodesy and cartography; fees for the use of spatial data and materials that are not subject to copyright, kept in the Federal Fund of Spatial Data; and other revenues from the use of property in the ownership of the Russian Federation); revenues generated by organizations from their permitted types of economic activity and earmarked for transfer to the federal budget; and revenues from realization of government reserves of precious metals and precious stones.

By contrast with the previous years, the laws on federal budget execution for 2015–2020 contain no aggregate data listed under each revenue classification code or sub-code, or listed according to the classification codes of transactions in the public administration sector on revenue side (these are listed only by their classification code for each revenue administrator). Therefore, we used data from the annual reports on federal budget execution as of January 1, 2016; January 1, 2017; January 1, 2018; January 1, 2019; January 1, 2020; and January 1, 2021, and the monthly report on federal budget execution as of January 1, 2022.

Year	Total	Dividends on shares (2000–2021) and revenues generated by other forms of participation in capital (2005–2021)	Payment for lease of land in state ownership	Revenues generated by lease of property in state ownership	Revenues from transfer of part of net after-taxes profits of FSUEs and other mandatory payments	Revenues from other sources (in 2000–2007 and 2011 – those generated by Joint Venture Vietsovpetro; and in 2018–2021 – those generated by property transferred as pledge or to trust management)
2019	465,974.25	441,620.4	12,051.65[k]	1,290.4[o] +3,239.2[m]	7,616.9	155.7
2020	451,653.95	422,667.6	10,417.0[k]	7,655.3[o] +2,509.2[m]	8,404.7	0.145
2021	364,279.9	339,493.2	12,450.0[k]	1,203.4o +3,559.1[m]	7,571.7	2.481

[a] According to data released by the RF Ministry of Property Relations, in the Law on Federal Budget Execution for 2000 this item was not specified separately; instead, the amount of payments received from state-owned enterprises (Rb9,887.1 mn) was entered (without any components being specified).
[b] The amount of lease payments (i) for the use of agricultural land, and (ii) for the use of land plots in the territories of towns and settlements.
[c] The amount of revenues from the lease of property consolidated to (i) scientific research organizations, (ii) educational establishments, (iii) healthcare institutions, (iiii) state museums, and state cultural and arts institutions, (iiiii) archival institutions, (iiiiii) the RF Ministry of Defense, (iiiiiii) organizations subordinated to the RF Ministry of Railways, (iiiiiiii) organizations providing research-related services to the academies of sciences with the status of a state entity, and (iiiiiiiii) other revenues from the lease of property in state ownership.
[d] According to data released by the RF Ministry of Property Relations, in the Law on Federal Budget Execution for 2001 this item was not specified separately; this value turned out to be the same as the amount of other revenues received as part of payments transferred by state and municipal organizations.
[e] The total amount of revenues generated by the lease of property entities in public ownership (without specifying the amount of lease payments for land).
[f] The amount of lease payments (i) for the use of land plots in the territories of towns and settlements, (ii) for the use of land plots in federal ownership after the delineation of titles to land plots between different tiers of government.
[g] The amount of revenues from the lease of property consolidated to (i) scientific research organizations, (ii) educational establishments, (iii) healthcare institutions, (iiii) state cultural and arts institutions, (iiiii) state archival institutions, (iiiiii) institutions of the federal postal service of the RF Ministry of Communications and Informatization, (iiiiiii) organizations providing research-related services to the academies of sciences with the status of a state entity, and (iiiiiiii) other revenues generated by the lease of property in federal ownership.
[h] The amount of lease payments after the delineation of titles to land plots between different tiers of government and revenues generated by the sale of right to conclude lease agreements in respect of land plots in federal ownership (with the exception of land plots held by federal autonomous institutions (2008–2011) and budget-funded institutions (2011)).
[i] The amount of revenues from the lease of property held by right of operative management by federal bodies of state authority and by the state institutions established by them, and property held by right of economic jurisdiction by FSUEs: properties transferred for operative management to organizations with the status of a state entity: (i) scientific research institutions, (ii) organizations providing research-related services to the Russian Academy of Sciences and 'branch' sectoral academies, (iii) educational establishments, (iiii) healthcare institutions, (iiiii) federal postal service institutions of the Federal Communications Agency, (iiiiii) state cultural and arts institutions, (iiiiiii) state archival institutions, and (iiiiiiii) other revenues generated by the lease of property held by right of operative management by federal bodies of state authority and by the state institutions established by them, and property held by right of economic jurisdiction by FSUEs[1] (for the period 2006–2009, less revenues from the permitted types of economic activity and revenues from the use

1 For the period 2008–2009, there is no mention of FSUEs as sources of revenues generated by the lease of property consolidated to them by right of economic jurisdiction, while the revenues from the lease of property held by right of operative management by federal bodies of state authority and by the state institutions established by them do not include revenues generated by property held by autonomous institutions.

of federal properties situated outside of RF territory, which are received abroad, and which were not listed as a separate revenue item in the previous years);[1]

[j] The amount of revenues from the lease of property held by right of operative management by federal bodies of state authority and by the state institutions established by them (with the exception of federal autonomous institutions and budget-funded institutions): properties transferred for operative management to organizations with the status of a state entity: (i) scientific research institutions, (ii) organizations providing research-related services to the Russian Academy of Sciences and to the 'branch' (sectoral) academies, (iii) educational establishments, (iiii) healthcare institutions, (iiiii) state cultural and arts institutions, (iiiiii) state archival institutions, (iiiiiii) properties held by right of operative management by the RF Ministry of Defense and its subordinated institutions (2010), (iiiiiiii) properties in federal ownership disposed of by the Executive Office of the RF President (2010), and (iiiiiiiii) other revenues from the lease of property held by right of operative management by federal bodies of state authority and by the state institutions established by them (less revenues from the permitted types of economic activity and revenues from the use of federal properties situated outside of RF territory, which are received abroad);

[k] The amount of lease payments after the delineation of titles to land plots between different tiers of government and revenues generated by the sale of right to conclude lease agreements in respect of land plots in federal ownership (with the exception of land plots held by federal budget-funded institutions and autonomous institutions), and (i) lease payments received for the lease of land plots in federal ownership, situated in public motor road precincts of federal importance (2012–2021), (ii) payments for the execution of agreements on the establishment of servitude with regard to land plots situated within public motor road precincts of federal importance for the purposes of building construction (or reconstruction), capital repairs and exploitation of road service entities, installation and exploitation of utility networks, installation and exploitation of elevated advertising structures (2012 and 2014-2021), (iii) payments received in the framework of agreements on the establishment of servitude with regard to land plots in federal ownership (2015–2021), and (iiii) public servitude payments received in compliance with decisions issued by the relevant authorized body concerning the establishment of public servitude with regard to land plots in federal ownership (2021).

[l] The amount of revenues from the lease of property held by right of operative management by federal bodies of state authority and by the state institutions established by them (with the exception of budget-funded institutions and autonomous institutions): properties transferred for operative management to organizations with the status of a state entity: (i) scientific research institutions, (ii) educational establishments, (iii) healthcare institutions, (iiii) state cultural and arts institutions, (iiiii) state archival institutions, (iiiiii) other revenues from the lease of property held by right of operative management by federal treasury institutions, (iiiiii) federal bodies of state authority, the Bank of Russia, and the managerial bodies of RF government extrabudgetary funds, (iiiiiii) federal treasury institutions (2015 only) (less revenues from the use of federal properties situated outside of RF territory, which are received abroad).

[m] The amount of revenues from the lease of RF treasury property (with the exception of land plots).

[n] Less the revenues generated by the sale of the stake in Rosneft (Rb692,395 bn) (less interim dividend payments).

[o] For the period 2016–2021, we apply aggregate data without identifying by-sector groups of institutions. The more general classification consists only of 2 revenue categories distinguished depending on the recipient of revenues generated by lease of property (federal bodies of state authority, the Bank of Russia and the managerial bodies of RF government extrabudgetary funds, and federal treasury institutions).

Source: Laws on federal budget execution for the period 2000–2014; reports on federal budget execution as of January 1, 2016; January 1, 2017; January 1, 2018; January 1, 2019; January 1, 2020; and January 1, 2021 (annual data); and the monthly report on federal budget execution as of January 1, 2022. URL: http://roskazna.gov.ru; own calculations.

In 2021, the aggregate revenues generated by renewable sources plunged on the previous year by nearly 19%, amounting to Rb364.3 bn.

This happened in the main due to the transfers of dividends to the federal budget (Rb339.5 bn), which shrank by almost one-fifth relative to 2020

1 According to data released by the RF Ministry of Property Relations, the revenues from the use of federal properties situated abroad (less the revenues received by the Russian partner in Joint Venture Vietsovpetro) amounted to Rb315 mn in 1999 and Rb440 mn in 2000. Thereafter, the major role in organizing the commercial use of federal immovable property situated abroad was assigned to FSUE Goszagransobstvennost.

(Rb422.7 bn), but this figure still exceeds the level of 2018 (Rb312.6 bn). The receipts of part of profits paid by unitary enterprises decreased to a lesser degree, by nearly one-tenth. When taken in absolute terms (Rb7.6 bn), they turned out to be comparable with the level of 2019.

The amount of revenue generated by lease of land plots more than halved (amounting to approximately Rb4.8 bn). This was caused by an unexpected (nearly 6.5 times) drop in the revenues from lease of property held by right of operative management by federal bodies of state authority and by the state institutions established by them (with the exception of budget-funded institutions and autonomous institutions) (Rb1.2 bn), which is comparable with the level of 2018 (a record low since 2013), when the revenues generated by lease of property held by the RF Treasury (with the exception of land plots) for the first time were identified in budget reports as a separate entry within the general structure of proceeds generated by the lease of federal property. The revenues generated by lease of property which is held by the RF Treasury (with the exception of land plots), on the contrary, increased by nearly 42%, amounting to more than Rb3.2 billion. Income from the lease of property constituting the treasury of the Russian Federation (with the exception of land plots), on the contrary, increased by almost 42%, amounting to approximately Rb3.6 bn. This value has become the highest since 2013. After being excluded in 2020 for just one year, they once again began to prevail, amounting to about 3/4 of the total receipts generated by the lease of federal property. The amount of budget revenues from lease of land increased by approximately 1/5 (or Rb12.45 bn).[1]

In the overall structure of federal budget revenues from renewable sources, the vast majority of revenues in 2021, just as in the previous year, were provided by dividends (about 93%, a year earlier — about 94%). The share of lease payments for land amounted to 3.4%; that of rental payments for property, to 1.3%; and that of profits transferred by FSUEs, to 2.1%. The share of these sources changed only slightly relative to 2020: there was an increase in the share of payments for property lease (by about 1 p.p.), while that of rental payments for property shrank by the same amount.[2]

1 The amount of lease payments for land plots, just as a year earlier, includes lease payments received for the lease of land plots in federal ownership situated in public motor road precincts of federal importance, payments for the execution of agreements on the establishment of servitude with regard to land plots situated within the easement areas of general-use motorways of federal importance for the purposes of building construction (or reconstruction), capital repairs and exploitation of road service entities, installation, relocation, restructuring, and exploitation of utility networks, and installation and exploitation of elevated advertising structures, payments for the execution of agreements on the establishment of servitude with regard to land plots in federal ownership, and also, for the first time, public servitude payments received in compliance with decisions issued by the relevant authorized body concerning the establishment of public servitude with regard to land plots in federal ownership.

2 Over several recent years, the classification of federal budget revenues generated by use of property was augmented by a new source – proceeds from the transfer of federal property as collateral or for trust management (with the exception of property owned by federal budget-funded and autonomous institutions, as well as property of federal state unitary enterprises, including treasury enterprises). However, the share of that source in the structure of renewable revenue sources was negligible (Rb2.481 mn).

While proceeding to an analysis of federal budget revenues generated by the privatization and sale of state property (*Table 6*), it should be noted that, from 1999 onwards, the revenues from the sale of the bulk of such assets (state stakes; and over the period 2003–2007, also land plots) [1] have been treated as a source of funding to cover budget deficit.

Table 6

Federal budget revenues generated by the privatization and sale of property (non-renewable sources) in 2000–2021, millions of rubles

Year	Total	Sale of shares in federal ownership (2000–2021) and other forms of state participation in capital (2005–2021)[a]	Sale of land plots	Sale of miscellaneous properties
2000	27,167.8	26,983.5	–	184.3[b]
2001	10,307.9	9,583.9	119.6[c]	217.5+386.5+0.4 (ITA)[d]
2002	10,448.9	8,255.9[e]	1,967.0[f]	226.0[g]
2003	94,077.6	89,758.6	3,992.3[h]	316.2+10.5[i]
2004	70,548.1	65,726.9	3,259.3[j]	197.3+1,364.6+0.04 (ITA)[k]
2005	41,254.2	34,987.6	5,285.7[l]	980.9[m]
2006	24,726.4	17,567.9	5,874.2[l]	1,284.3[n]
2007	25,429.4	19,274.3	959.6[o]	5,195.5[p]
2008	12,395.0	6,665.2+29.6	1,202.0[q]	4,498.2+0.025 (ITA)[r]
2009	4,544.1	1,952.9	1,152.5[q]	1,438.7[r]
2010	18,677.6	14,914.4	1,376.2[q]	2,387.0+0.039 (ITA)[r]
2011	136,660.1	126,207.5	2,425.2[q]	8,027.4[r]
2012	80,978.7	43,862.9	16,443.8[q]	20,671.7+0.338 (ITA)[r]
2013	55,288.6	41,633.3	1,212.75[q]	12,442.2+0.310 (ITA)[r]
2014	41,155.35	29,724.0	1,912.6[q]	9,517.7+1.048 (ITA)[r]
2015	18,604.1	6,304.0	1,634.55[q]	10,665.5+0.062 (ITA)[r]
2016	416,470.5	40,6795.2	2,112.7[q]	7,562.6+0.012 (ITA)[r]
2017	21,906.7	14,284.5	1,199.6[q]	6,421.3+1.3 (ITA)[r]
2018	28,252.0	12,787.5	1,660.6[q]	13,803.0+0.2 (ITA)[r]
2019	20,129.3	11,527.5	1,647.5[q]	6,954.3[r]
2020	27,961.5	12,570.7	3,235.5[q]	11,247.2+1.9 (ITA) r +906.2[s]
2021	20,182.9	5,272.0	2,448.5[q]	11,429.1т +1,033.3[s]

[a] These revenues are treated as an internal source of funding to cover federal budget deficit. The amount of Rb29.6 mn for 2008 (as stated in the Report on Federal Budget Execution as of January 1, 2009) is treated as a federal budget revenue item, but it is absent in the 2008 law on federal budget execution.
[b] The revenues generated by privatization of property entities in public ownership and treated as an internal source of funding to cover federal budget deficit.
[c] The revenues generated by the sale of land plots and the right to lease land plots in public ownership (with a special entry concerning those land plots in which privatized enterprises are situated) are treated as federal budget revenues.
[d] The amount of revenues generated by (1) the sale of property in federal ownership, treated as an internal source of funding to cover federal budget deficit, (2) revenues generated by (i) the sale of apartments, (ii) the sale of state-owned production and non-production assets, transport vehicles,

1 Data for the period 2003–2004, including revenues generated by the sale of leasing right.

other equipment and tangible assets, and (3) revenues generated by the sale of intangible assets (ITA), treated as federal budget revenues.
[e] Including Rb6 mn generated by the sale of shares held by subjects of the Russian Federation.
[f] The revenues generated by the sale of land and intangible assets, their amount is not specified as a separate entry, these are treated as federal budget revenues.
[g] The revenues generated by the sale of property in public ownership (including Rb1.5 mn generated by the sale of properties held by subjects of the Russian Federation), treated as an internal source of funding to cover federal budget deficit.
[h] This figure includes revenues generated by (1) the sale of land plots in which immovable property entities are situated, which prior to their alienation were federal property, the proceeds being transferred to the federal budget, (2) the sale of other land plots, as well as the sale of the right to conclude lease agreements in respect of those land plots, (3) the sale of land plots after delineation of titles to land plots, as well as the sale of the right to conclude lease agreements with respect to those land plots, the proceeds being transferred to the federal budget; these are treated as an internal source of funding to cover federal budget deficit;
[i] The sum of (1) revenues generated by the sale of properties in federal ownership, treated as an internal source of funding to cover federal budget deficit, and (2) revenues generated by the sale of intangible assets, treated as federal budget revenues.
[j] This figure includes the revenues generated by: (1) the sale of land plots prior to delineation of public titles to land plots, in which immovable property entities are situated, which prior to their alienation were federal property, the proceeds being transferred to the federal budget, (2) the sale of other land plots, as well as the sale of the right to conclude lease agreements in respect of those land plots, (3) the sale of land plots after delineation of titles to those land plots, as well as the sale of the right to conclude lease agreements with respect to those land plots, the proceeds being transferred to the federal budget; these are treated as an internal source of funding to cover federal budget deficit.
[k] The sum of (1) revenues generated by the sale of properties in federal ownership, treated as an internal source of funding to cover federal budget deficit, (2) revenues generated by (i) the sale of apartments, (ii) the sale of equipment, transport vehicles and other tangible assets, the proceeds being transferred to the federal budget, (iii) the sale of the products of ships recycling industry, (iiii) the sale of property held by state unitary enterprises and state institutions, as well as the sale of military property, (iiiii) the sale of the products of recycled armaments, military technologies and ammunition, (3) revenues generated by the sale of intangible assets (ITA); these are treated as federal budget revenues.
[l] This figure includes the revenues generated by: (1) the sale of land plots prior to delineation of titles to land plots, in which immovable property entities are situated, which prior to their alienation were federal property, (2) the sale of land plots after delineation of titles to land plots, the proceeds being transferred to the federal budget, (3) the sale of other land plots, which prior to delineation of titles to land plots between different tiers of government were public property, and which are not earmarked for housing construction (this subdivision is true only with regard to data for 2006); these are treated as sources of funding to cover federal budget deficit.
[m] Revenues generated by the sale of tangible and intangible assets (less federal budget revenues generated by the disposal and sale of confiscated property and other property treated as government revenue), this figure includes revenues generated by (i) the sale of apartments, (ii) the sale of property held by FSUEs, (iii) the sale of property held by right of operative management by federal institutions, (iiii) the sale of military property, (iiiii) the sale of the products of recycled armaments, military technologies and ammunition, (iiiiii) the sale of other properties in federal ownership, (iiiiiii) the sale of intangible assets; these are treated as federal budget revenues.
[n] Revenues generated by the sale of tangible and intangible assets (less revenues received as profit share in the framework of product share agreements (PSA) and federal budget revenue generated by the disposal and sale of heirless property, confiscated property, or other property earmarked as government revenue), this figure includes revenues generated by (i) the sale of apartments, (ii) the sale of property held by FSUEs, (iii) the sale of property held by right of operative management by federal institutions, (iiii) the sale of military property, (iiiii) the sale of the products of recycled armaments, military equipment and ammunition, (iiiiii) the sale of other properties in federal ownership; these are treated as federal budget revenues.
[o] Revenues generated by the sale of land plots after delineation of titles to land plots formerly in federal ownership, treated as sources of funding to cover federal budget deficit.
[p] Revenues generated by the sale of tangible and intangible assets (less revenues received as profit share in the framework of product share agreements (PSA) and federal budget revenues generated by the disposal and sale of heirless property, confiscated property, or other property earmarked as government revenue, and revenues from the sale of timber confiscated from timber poachers),

this figure includes revenues generated by (i) the sale of apartments, (ii) the sale of property held by FSUEs, (iii) the sale of property held by right of operative management by federal institutions, (iiii) the sale of redundant movable and immovable military properties and other properties held by federal bodies of executive authority that involve military service, and services that are equated to military service, (iiiii) the sale of military-purpose products from the stores of federal bodies of executive authority within the framework of cooperation in the field of military technologies, (iiiiii) revenues generated by the sale of other properties in federal ownership; these are treated as federal budget revenues;

[q] Revenues generated by the sale of land plots in federal ownership (other than land plots held by federal budget-funded and autonomous institutions (less data for 2019–2021)), treated as federal budget revenues; for the years 2015 and 2021, these also include payments for the enlargement of private land plots resulting from their redistribution, as well the redistribution of land plots in federal ownership.

[r] Revenues generated by the sale of tangible and intangible assets (less revenues received as profit share in the framework of product share agreements (PSA), and federal budget revenue generated by the disposal and sale of heirless property, confiscated property, or other property earmarked as government revenue, and revenues from the sale of timber confiscated from timber poachers) (data for 2008–2011), revenues generated by the release of tangible assets from the state reserve of special raw materials and divisible materials (in the part of revenues generated by the sale, temporary lending, and other uses thereof); and with regard to data for 2012—2021, also less revenues generated by the sale of timber produced as a result of measures designed to safeguard, protect, reproduce forests within the framework of government orders for the implementation of such measures without the sale of forest plantations for timber production, and timber produced as a result of use of forests situated in the lands belonging to the Forest Fund of the Russian Federation, in accordance with Articles 43–46 of the RF Forest Code; revenues generated by commodity intervention from the reserve stocks held in the federal intervention fund of agricultural products, raw materials and foodstuffs, revenues generated by the release of tangible assets from the state reserve, revenues generated by the involvement of convicts in reimbursable labor (in the part of sales of finished products), revenues generated by the sale of products requiring special storage conditions); this figure also includes revenues generated by (i) the sale of apartments, (ii) the sale of property held by right of operative management by federal institutions (with the exception of autonomous institutions and budget-funded institutions (data for 2011–2021), less revenues generated by the activities of institutions situated abroad (2015–2021), (iii) the sale of redundant movable and immovable military properties and other properties held by federal bodies of executive authority that involve military service, and services that are equated to military service, (iiii) the sale of the products of recycled armaments, military equipment and ammunition, (iiiii) the sale of products intended for military use and entered on the list of properties held by federal bodies of executive authority in the framework of cooperation in the field of military technologies (data for 2008 and the period 2010–2021), (iiiiii) the sale of scrapped armaments and other military hardware in the framework of the Federal Target Program of Industrial Recycling of Armaments and Military Equipment (2005–2010) (the period until the year-end of 2017), (iiiiiii) revenues generated by the sale of immovable property held by budget-funded and autonomous institutions (2014—2018 and 2020–2021), (iiiiiiii) revenues generated by the sale of other properties in federal ownership, and revenues generated by the sale of intangible assets (ITA); these are treated as federal budget revenues.

[s] Revenues generated by the sale of properties in federal ownership, in the part of non-financial treasury-owned assets.

Sources: Laws on federal budget execution for the period 2000–2014; reports on federal budget execution as of January 1, 2016; January 1, 2017; January 1, 2018; January 1, 2019; January 1, 2020; and January 1, 2021 (annual data); and the monthly report on federal budget execution as of January 1, 2022, http://roskazna.gov.ru; own calculations.

The amount of property-generated federal budget revenues from non-renewable sources in 2021 shrank by 28% (to approximately Rb20.2 bn), which corresponds to the level of 2019.

The revenues generated by the sale of shares fell by 58% (to Rb5.3 bn), this index relative to the past 20-year period exceeding only that for 2009 (about Rb2.0 bn). The revenues generated by the sale of land plots decreased by almost

1/4, amounting to approximately Rb2.5 bn,[1] which roughly corresponds to their level in 2011. Meanwhile, the amount of revenues from the sale of miscellaneous properties (Rb12.5 bn) slightly increased (by 2.5%), including those generated by privatization of property owned by the Russian Federation, in the form of non-financial treasury assets (Rb1,033.3 mn).

As a result, a greater part of revenues (approximately 62%)[2] was generated by the sale of property (vs. 43.5% in 2020), while the sale of shares accounted for 26% (vs. 45% in 2020), and the sale of land plots – for approximately 12% (vs. 11.6% in 2020)

The aggregate federal budget revenue generated by the privatization (or sale) and use of state property in 2021 (*Table 7*) declined by 1/5 relative to the previous year (to Rb384.5 bn).

Table 7

The structure of property-generated federal budget revenues from miscellaneous sources, 2000–2021

Year	Aggregate revenue generated by privatization (or sale) and use of state property		Revenues generated by privatization (or sale) of state property (non-renewable sources)		Revenues generated by use of state property (renewable sources)	
	millions of rubles	% of total	millions of rubles	% of total	millions of rubles	% of total
2000	50,412.3	100.0	27,167.8	53.9	23,244.5	46.1
2001	39,549.8	100.0	10,307.9	26.1	29,241.9	73.9
2002	46,811.3	100.0	10,448.9	22.3	36,362.4	77.7
2003	135,338.7	100.0	94,077.6	69.5	41,261.1	30.5
2004	120,798.0	100.0	70,548.1	58.4	50,249.9	41.6
2005	97,357.4	100.0	41,254.2	42.4	56,103.2	57.6
2006	93,899.8	100.0	24,726.4	26.3	69,173.4	73.7
2007	105,761.25	100.0	25,429.4	24.0	80,331.85	76.0
2008	88,661.7	100.0	12,395.0	14.0	76,266.7	86.0
2009	36,393.7	100.0	4,544.1	12.5	31,849.6	87.5
2010	88,406.4	100.0	18,677.6	21.1	69,728.8	78.9
2011	240,964.1	100.0	136,660.1	56.7	104,304.0	43.3
2012	309,943.2/ 469,243.2*	100.0	80,978.7/ 240,278.7*	26.1/ 51.2*	228,964.5	73.9/ 48.8*
2013	209,114.85	100.0	55,288.6	26.4	153,826.25	73.6
2014	282,325.95	100.0	41,155.35	14.6	241,170.6	85.4
2015	303,975.2	100.0	18,604.1	6.1	285,371.1	93.9
2016	1,363,193.85/ 670,798.85**	100.0	416,470.5	30.6/ 62.1**	946,723.35/ 254,328.35	69.4/ 37.9**

1 Including the revenues from the sale of the land plots in respect of which state ownership has not been demarcated, and which are used by budget-funded and autonomous institutions (Rb76.4 mn). The corresponding indices for the previous years published on the official website of the Federal Treasury among the indices characterizing the efficiency of government property management are as follows: Rb0.433 mn for 2015; Rb2.381 mn for 2016; Rb4.962 for 2017; Rb0.1835 mn for 2018; Rb40.1 mn for 2019; and Rb298.3 mn for 2020.

2 Including revenues generated by privatization of property owned by the Russian Federation, in the form of non-financial treasury assets (5,1%).

Year	Aggregate revenue generated by privatization (or sale) and use of state property		Revenues generated by privatization (or sale) of state property (non-renewable sources)		Revenues generated by use of state property (renewable sources)	
	millions of rubles	% of total	millions of rubles	% of total	millions of rubles	% of total
2017	297,074.9	100.0	21,906.7	7.4	275,168.2	92.6
2018	361,648.13	100.0	28,252.0	7.8	333,396.13	92.2
2019	486,103.55	100.0	20,129.3	4.1	465,974.25	95.9
2020	479,615.45	100.0	27,961.5	5.8	451,653.95	94.2
2021	384,462.8	100.0	20,182.9	5.2	364,279.9	94.8

* Including the proceeds received by the RF Central Bank as a result of the sale of shares in Sberbank (Rb159.3 bn), which is probably an overestimation of the actual aggregate share of non-renewable sources, because the budget received not the full amount of those proceeds, but their amount less the balance sheet value of that particular asset plus the costs incurred in the deal of sale. Consequently, the share of renewable sources is, on the contrary, somewhat underestimated.
** Less the revenues generated by the sale of shares in Rosneft (Rb692.395 bn) (less interim dividend payments).

Sources: Laws on federal budget execution for the period 2000–2014; reports on federal budget execution as of January 1, 2016; January 1, 2017; January 1, 2018; January 1, 2019; January 1, 2020; January 1, 2021 (annual reports), and monthly report as of January 1, 2022. URL: http://roskazna.gov.ru; own calculations.

The structure of aggregate revenue generated by the privatization (or sale) and use of public property changed only slightly. The revenues generated by the use of public property amounted to approximately 95%, thus ranking third in absolute terms relative to the entire period since the early 2000s, while the revenues generated by the privatization and sale of property amounted to less than a half of their index for 2014, which corresponds to the level of 2019.

6.1.5. A new format of the state's ownership policy

It should be remembered that just before the onset of the pandemic, the Government Program (GP) "Federal Property Management", which since 2013 had existed as a separate document, became a subprogram (SP) of the Government Program "Economic Development and Innovative Economy".[1] It was in this format that it was implemented over the course of the first year of the pandemic. The redistribution of powers between government departments after the changes that took place in the structure of Russia's federal government in early 2020 also affected some issues concerning the State's ownership policy (the privatization process, the management of economic subjects operating in the public sector of the economy, property records, etc.). In view of the transfer of Rosimushchestvo to the jurisdiction of the RF Ministry of Finance, many functions that had previously been performed by the RF Ministry of Economic Development were also handed over to another ministry. Basically, this was just a mechanical replacement of one government department by another, without introducing any changes into the actual set of functions. Thus, the RF Ministry of Finance became responsible for the development of privatization programs.

1 For a detailed analysis of the process of reformatting the Government Program "Federal Property Management", see: Malginov G., Radygin A. State's Ownership Policy in 2017–2020: Some Results and New Outlines // Russian Economic Development. 2020. No. 7. P. 66–85.

A natural upshot of the increasing role of the financial department in matters of the State's ownership policy was the inclusion, by RF Government Decree No. 2386 dated December 30, 2020, of Subprogram 6 "Federal Property Management" into the Government Program "Public Financial Management and Regulation of Financial Markets".

Traditionally, one of the program's goals in its updated version is considered to be that of improving the efficiency of federal property management, while the set of its quantitative performance indicators now includes that of "Share, in the total number of economic societies where the rights of a shareholder (or participant) are exercised by the Federal Agency for State Property Management (Rosimuschestvo), of those economic societies that ensure the payment of dividends (the distribution of profits between their participants) in the amount not less than 50% of their net profit". Earlier, when the SP "Federal Property Management" was an integral part of the Government Program "Economic Development and Innovative Economy", its targets pertaining to the State's ownership policy were revenue growth resulting from federal property management relative to the level of 2018 (up to 22% by 2024); and the share, in the total number of JSCs where more than 50% of voting shares were held by the Russian Federation, of those JSCs that received net profit at the end of financial year (based on the annual reports of JSCs, without considering the results of audits of their activities), of the total number of such companies.

The expected results of the Government Program "Public Financial Management and Regulation of Financial Markets" are as follows:

- to ensure the integration of the procedures of keeping records and disposal of federal property with that of budget accounting;
- to transfer into a digital format the procedures pertaining to keeping records and disposal of federal property, as well as property that is subject to special treatment regimes;
- by 2024, to increase to 95%, in the total number of economic societies where the rights of a shareholder are exercised by Rosimushchestvo, the share of those economic societies that ensure the payment of dividends (the distribution of profits between their participants) in the amount not less than 50% of their net profit.

The Government Program stipulates in its text, among the government policy priorities, that of improving the quality of federal property management and maximizing the revenues generated by the use of federal property.

These priorities are fully consistent with Subprogram 6 "Federal Property Management", whose goals are the same as those set forth in the GP in the context of improving the quality of federal property management, including the digital transformation of federal property records, as well as managing properties subject to special treatment regimes; optimizing the federal property structure; ensuring long-term sustainable growth of asset value and the revenues generated by the management of state-owned companies; and reducing the participation of the State in the activities of companies in competitive markets.

At the same time, the certificate of SP 6 "Federal Property Management" does not have its own text part. The government department assigned the task of its implementation is the RF Ministry of Finance, while Rosimushchestvo is defined as its participant. The Subprogram's implementation period is 4 years (until the end of 2024).

The total amount of federal budget allocations for the entire implementation period is more than Rb16.3 bn. This sum is divided into roughly equal parts, from Rb4,015.7 mn in 2021 to Rb4,282.5 mn in 2024 (Rb3,978.5 mn in 2022; and Rb4,046.5 mn in 2023). Compared to the previous version of the SP, the annual budget financing volume has been reduced by 4.5% for 2021, by 6.9% for 2022, and by 5.5% for 2023 and 2024 each. However, it is necessary to keep in mind that these are planned and not actual amounts of funding, because the latter will be determined by the real state of the federal budget.

The Subprogram's list consisting of 7 targets and indicators points to the obvious continuity between its updated version and the version that was being implemented in 2020, as an integral part of the Government Program "Economic Development and Innovative Economy".

Four of them (the share of treasury property entities involved in economic turnover in the total number of treasury property entities as of the end of a reporting year; the area of land plots in federal ownership, in respect of which the boundaries have been formed and clarified, and information has been entered into the Unified State Register of Real Estate (FGIS EGRN); the share of sold treasury property entities; and the share of blocks of shares in JSC (or stakes in economic societies) to be sold in accordance with the forecast privatization plan) are exactly those that were stipulated in the previous version of the Subprogram.

Another indicator is a modification of the previously set one. Instead of a percentage reduction in the total area of treasury-owned land plots that are not involved in economic turnover (relative to the total area of treasury-owned land plots in 2012), the new indicator is the total leased area of land plots managed by Rosimushchestvo.

Two indicators can be considered to be new ones: "The share of economic societies where the rights of a shareholder are exercised by Rosimushchestvo, and that of federal state unitary enterprises (FSUEs) generating a return on their assets not less than 85% of a given industry's average, in the total number of such economic societies and enterprises" and "Similarity of data entered into the Federal Property Register and other state information systems containing data about federal property entities". The latter indicator, which offers a broad range of possible interpretations, also appears to be the most vague one, although its target for 2024 is set at 100%. This pair of new indicators replaced that of the absolute number of organizations with state participation and the disposal ratio for the movable property entities transferred into state ownership over the course of one year.[1]

1 The ratio of the number of movable property items transferred into state ownership that have been written off based on the results of their disposal (processed, sold or destroyed) over the course of a reporting year to the total number of movable property items transferred into state

As far as the results of the SP are concerned, it should be noted that compared to its previous version, they have become more relevant and more closely related to the set of targets, and their list is longer:

- to integrate, by 2024, the Federal State Information System FGIAS ESUGI (Register of Assets Held by the Russian Federation) with the corresponding systems created by federal bodies of executive authority; it contains up-to-date information on all federal property entities (with the exception of classified data) based on primary data derived from other information systems containing data about such property entities;
- to ensure the integration of the procedures of keeping records and disposal of federal property with that of budget accounting;
- to transfer into a digital format the procedures pertaining to keeping records and disposal of federal property, as well as property that is subject to special treatment regimes;
- to create appropriate conditions for identifying inefficiently used or misused federal property entities and redistributing them among the users in order to optimize the federal property structure;
- to increase, by 2024, the share of treasury property entities involved in economic turnover in the total number of treasury property entities to 35% as of the end of the reporting year
- to ensure the implementation of the forecast plan (program) of federal property privatization;
- to safeguard (ensure the upkeep and maintenance) of treasury-owned property entities;
- by 2024, to form and clarify the boundaries of land plots with an area of not less than 415,000 ha, and to enter the corresponding data into the Unified State Register of Real Estate (FGIS EGRN);
- for Rosimushchestvo over the period 2021—2024, to lease out more than 11,000 land plots;
- by 2024, to increase to 95%, in the total number of economic societies where the rights of a shareholder are exercised by Rosimushchestvo, the share of those economic societies that ensure the payment of dividends (the distribution of profits between their participants) in the amount not less than 50% of their net profit;
- by 2024, to increase to 55% the share of those economic societies where the rights of a shareholder are exercised by Rosimushchestvo, and of those federal state unitary enterprises (FSUEs) that generate a return on their assets not less than 85% of a given industry's average.

The results pertaining to the financial and economic performance of state-owned commercial organizations seem to be overly optimistic with regard to the prospect of transferring at least half of their profits in the form of dividends. In this connection, the alterations introduced from July 1, 2021 into the dividend policy rules appear to be quite logical.

ownership; based on balance-sheet data as of year beginning and the movement of data during the year (%).

* * *

The second year of the implementation of the federal property privatization program for 2020–2022 was characterized by an obvious increase relative to 2020 in the rate of privatizations completed under standard procedures. The number of privatized unitary enterprises increased 4-fold; that of sold blocks of shares (or stakes) in economic societies, more than 2-fold; and that of sold treasury-owned property entities, by about a quarter, which corresponds to the best annual implementation indicators of the previous privatization program for 2017–2019. However, there were no deals that involved biggest assets earmarked for privatization under individual schemes, and some of them were altogether struck off the program's lists. As a result, by the end of the year, out of the 8 property entities initially included in the program, there remained only 3 companies belonging to that group.

Further prospects for the ongoing privatization process will have to do with the 2-year shift in the start and end dates for the current program's implementation, i.e., it has been moved to 2022–2024. The upshot of that shift was the adoption of an updated forecast plan of federal property privatization, which is de facto a new three-year privatization program. Overall, its quantitative parameters differ little from the initial version, although the group of companies earmarked for privatization under individual schemes has been seriously reduced.

The number of economic subjects in federal ownership continued to decline. The year-end indicator for 2021 and the year-beginning indicator for 2019 in the forecast plans of federal property privatization demonstrate that the number of unitary enterprises over that period shrank by nearly 29%, and that of economic societies, by nearly 39%. At the same time, based on an analysis of data from various sources (the System of Public Property Management Efficiency Estimates and forecast plans of federal property privatization), it can be concluded that the negative trend of an increasing relative share of minority stakes alongside a shrinking relative share of companies where the government could exercise full corporate control has been successfully reversed. The latter began to grow, but it is still far from the level of 2016 (more than half of all state-owned companies).

The balance of changes in the list of strategic organizations points to its expansion. The mechanism for State Corporation VEB.RF to perform the functions of a government agent concerning the issues pertaining to the powers of property owner and founder of development institutions that are non-profit organizations, as well as the powers of a shareholder in development institutions that are economic societies, has been formalized in legislative norms. Against the backdrop of the formation of vertically integrated structures by the government and the strengthening of state corporations (the two processes that have already become traditional), one important innovation in the State's ownership policy in 2021 was a dramatic reduction in the number of companies where it had been exercising the special right secured by a golden share. The feasibility of the abruptly narrowed scope of the use of that tool at the federal level is debatable,

and it once again gives rise to the question as to the real degree of transparency of government ownership policy.

Similarly to the situation over the previous year, the revenues generated by renewable sources prevailed in the structure of federal budget revenues generated by privatization (or sale) and use of state-owned property (approximately 95%). The largest part of those revenue, as before, was made up of dividends transferred to the budget, although their amount reduced by about one-fifth. The shrinkage in the amount of revenues was observed across the majority of revenue sources. One important exception was the income generated by lease of land plots and lease of treasury property entities.

Last year, the government's property management policy was implemented within the framework of the Subprogram "Federal Property Management", which at the very end of 2020 was included into the Government Program "Public Financial Management and Regulation of Financial Markets". The Subprogram's implementation period is 5 years (until the end of 2024).

An analysis of the goals, targets and expected results of the new reformatted Subprogram points to a certain continuity with the corresponding document adopted over the previous period, when the Subprogram "Federal Property Management" was an integral part of the Government Program "Economic Development and Innovative Economy". The prevalence, among its indicators, of those that are not explicitly pegged to costs is indicative of its greater resilience against risks in crisis conditions. Much attention is focused on immovable property entities and the integration of various information systems involved in the process of property management. At the same time, the prospects for improving the financial and economic performance of state-owned commercial organizations appear to be overly optimistic - for example, the widespread practice of transferring at least half of profits as dividends.

The tool that is expected to ensure that this target is met is the updated normative legal act that sets the general standard for the payment of dividends at this particular threshold value (1/2) vs 25% in its previous version (adopted in 2012). In the calculations of the dividend base, the revenue and expenditure items not secured by cash flows (for example, those pertaining to property revaluation of forex fluctuations) will no longer be taken into account, which is consistent with foreign experiences and the gradual spread of the IFRS across Russia.

The impact of such a decision on the replenishment of the federal budget is not entirely clear, especially in view of the new economic and political situation that has been taking shape in the late winter and early spring of 2022. In a broader sense, it can be assumed that in the new economic conditions, the role of the State as the owner, regulator and subject of ownership relations will be increasingly prominent in all its various aspects.

6.2. Company bankruptcies: current trends[1]

6.2.1. The dynamics of bankruptcies in Russia: compensatory growth in the number of bankruptcies and tougher responsibilities of owners

The statistics for 2021 on company bankruptcies in Russia indicate a low growth in the number of bankruptcies, by 3.9% relative to 2020 (*Fig. 1*).[2]

As one can see, in 2020 there was (for the first time since 2013) a significant decrease, by nearly 20% (471 legal entities), in the number of bankrupt legal entities relative to the previous year (2019), which resulted from the introduction of a moratorium on bankruptcies. Over the period 2014–2019, the number of bankruptcies of legal entities was in the range of 12,500–13,500. Thus, the growth in the number of bankruptcies observed in 2021 was compensatory in nature.

A declining number of bankruptcies in response to the support measures launched in 2020 could be observed not only in Russia, but also, for example, in the USA where, in 2020, the total number of bankruptcy petitions amounted to 544,463, which is approximately by 230,000 less than in 2018 or 2019.[3]

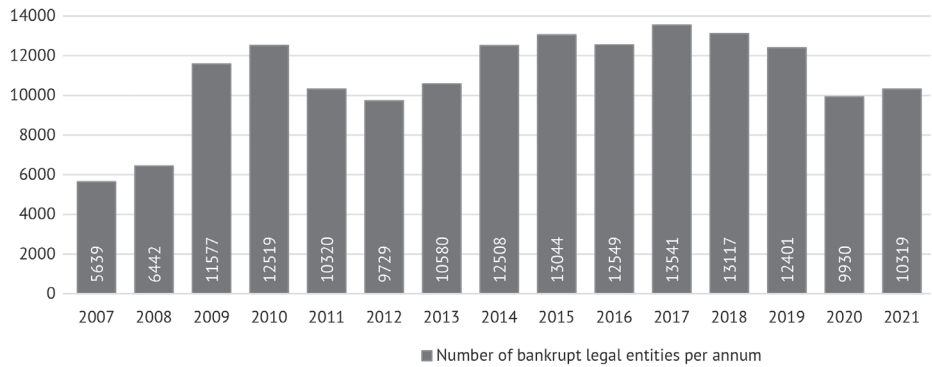


Fig. 1. The movement of the number of bankruptcies of legal entities in the Russian economy

Sources: Center for Macroeconomic Analysis and Short-term Forecasting (CMASF). Bankruptcies of legal entities in Russia: main trends over Q4 2016 (year-end results) and early 2017, URL: http://www.forecast.ru/_ARCHIVE/Analitics/PROM/2017/Bnkrpc-4-16_v3.pdf, March 15, 2017, p. 3. Fedresurs.ru. Bankruptcies in Russia: Statistical Bulletin for Q2 2017, released by the Unified Federal Register of Bankruptcy Information (the Bankruptcy Register), URL: http://bankrot.fedresurs.ru/help/ЕФРСБ%20Бюллетень%202%20кв.%202017.pdf. Bankruptcies in Russia: results for 2021. Statistics released by Fedresurs.ru. URL: https://download.fedresurs.ru/news/Банкротство%20статрелиз%202021.pdf.

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2 Hereinafter: Bankruptcies in Russia: results for 2021. Statistics released by Fedresurs.ru. URL: https://download.fedresurs.ru/news/Банкротство%20статрелиз%202021.pdf (cited as of January 18, 2022).

3 In 2020, the number of filings under Chapter 11 (on small business bankruptcy) alone increased to 8,113. This is nearly 1,300 cases more than in 2019. – *Alan C. Hochheiser.* Consumer Bankruptcy

Such a reduction in the total number of bankruptcy petitions filed during the pandemic was primarily the upshot of the bankruptcy moratorium, including the impossibility to obtain and enforce court orders or claims orders, and the limitations imposed on the types of debt that could be recovered by debt collection agencies.[1]

In general, the measures and methods of support to companies introduced in Russia during the pandemic appear to be quite effective, *but the overall figures by no means fully reflect the specific situation in each particular region across the country*. Thus, if we take a look at the statistics for 2021, broken up by subject of the Russian Federation, on the number of reports on the opening of bankruptcy proceedings in respect of legal entities and peasant farms, in some regions that index will demonstrate a significant increase on 2020. Those regions, just to number a few, include the Rostov region (149.7%), the Republic of Bashkortostan (161.2%), the Tyumen region (143.8%), the Ulyanovsk region (132.8%), the Ivanovo region (167.4%), the Republic of Chuvashia (144.2%), the Sakhalin region (190%), the city of Sevastopol (276.9%), and the Republic of Khakassia (187.5%). It is required, at least, that some special attention be paid to the situation with bankruptcies of companies there, and to the measures designed to support those companies.

More than half of all bankruptcies are observed in just three sectors: trade (2,585 new bankruptcies in 2021, +0.1% relative to 2020); building construction (2,317; +9.8%); and real estate deals (1,199; +1.4%).

In 2022, unless the epidemic situation should significantly deteriorate, or any sudden significant changes occur with regard to support measures or prevailing legislation, this trend is going to persist.

As far as US statistics on bankruptcies of companies are concerned, over the course of January-October 2021, a total of 364 bankruptcy cases were initiated there, which is less than the corresponding indicators for each of the previous 11 years, and represents a sharp drop compared to the Great Recession era, when thousands of companies were annually applying for protection in court.[2] No doubt that this is the result of the large-scale relief measures. However, one cannot rule out an increase in the number of company bankruptcies in 2022-2023 in response to the implementation of riskier investments, carry-forward of debts, increased collateral, and debt maturity dates being reached.[3]

Among the EU member states, if we set data for Q3 2021 against those for Q2 2021 (adjusted for seasonal fluctuations), the highest growth in the number of petitions in bankruptcy will be observed in Romania (+25.2%), Lithuania (+16.4%),

in the Age of COVID-19, URL: https://www.americanbar.org/groups/business_law/publications/blt/2021/07/consumer-bankruptcy/, June 25, 2021.

1 Ibid.

2 *Michael O'Connor, Chris Hudgins*. US corporate bankruptcies reach new low in 2021. URL: https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/us-corporate-bankruptcies-reach-new-low-in-2021-67459322, November 8, 2021 (cited as of January 18, 2022).

3 *Chutchian Maria*. Bankruptcy filings are down, but lousy deals and operational woes will change that. URL: https://www.reuters.com/legal/transactional/bankruptcy-filings-are-down-lousy-deals-operational-woes-will-change-that-2021-09-14/,14.09.21 (cited as of January 18, 2022).

and Slovakia (+12.3%); and the deepest plunge, in Estonia (-31.6%), Portugal (-12.9%), and The Netherlands (-12.7%).[1]

Further developments in the field of company bankruptcies will largely depend on the future course of the pandemic, on anti-pandemic measures, changes in government regulation in the sphere of bankruptcy, and the pace of reduction in the amount of government financial support allocated to companies.

In recent years, an important trend in the evolvement of Russia's legislation has been *the increasing level of responsibility of companies' CEOs and controlling entities* as a result of the introduction, in 2017, of a new chapter in the Law "On Insolvency (Bankruptcy)", titled "Responsibility of the debtor's CEO and other individuals and entities in a bankruptcy case", and the subsequent rapid increase in the number of cases where the latter were brought to subsidiary liability. Within the framework of that chapter, additional (subsidiary) liability of a company's CEO and the individuals and entities controlling the company is envisaged; the latter can be recognized to be the those who (both individuals and legal entities) for not more than 3 years prior to the emergence of signs of bankruptcy (as well as after their emergence and prior to the receipt, by an arbitration court, of the petition concerning the recognition of the debtor to be bankrupt), had enjoyed the right to issue to the debtor instructions that the latter was obliged to implement, or had had "the ability to otherwise determine the actions of the debtor, including the execution of transactions and the determination of their terms".

Liability is envisaged to be as follows:

- if full redemption of creditors' claims is impossible due to the actions and (or) lack of action on the part of the individual or entity controlling the debtor;
- for a failure to comply with the obligation to submit the debtor's petition to the arbitration court (or to convene a meeting in order to adopt the decision on the debtor's petition to the arbitration court, or to adopt such a decision).

Controlling individuals or entities, unless proved otherwise, are assumed to be as follows:

- the CEO or managing organization of the debtor;
- a member of the debtor's executive body;
- a liquidator or member of the liquidation commission of the debtor;
- a party with the right to dispose of 50% or more of voting shares (or a stake amounting to more than half of the authorized capital), independently or jointly with related parties;
- a party with the right to more than half of votes in a general shareholder meeting of a legal entity (independently or jointly with related parties);
- a party with the right to appoint (or elect) the debtor's CEO (independently or jointly with related parties);

1 Eurostat Statistics Explained. Quarterly registrations of new businesses and declarations of bankruptcies – statistics. URL: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Quarterly_registrations_of_new_businesses_and_declarations_of_bankruptcies_-_statistics&oldid=549179#Quarterly_comparison_by_Member_State (cited as of January 18, 2022).

— a party who has benefited from the unlawful and unscrupulous conduct of the individual authorized by law, etc., to act on behalf of the legal entity.

The mechanism of recognizing individuals or legal entities to be in control of the company and bringing them to subsidiary liability has many nuances that require special attention but cannot be properly discussed here.

In actual practice, subsidiary liability is mainly held by the CEOs and nominee owners of bankrupt companies. Courts of justice bring the beneficiaries to responsibility by establishing the fact of their ownership, including by means of indirect indicia of ownership: e.g., if somebody has declared themselves to be the owner of a given business entity in the media or within the framework of their relations with a tax agency. Moreover, courts of justice have begun to extend liability beyond those individuals who personally control debtors, to their wives and children.[1] According to the Economic Collegium of the Supreme Court of the Russian Federation, this is permissible in respect of those individuals for the benefit of whom property has been alienated, or those who have participated in managing the debtor or in its tax avoidance scheme.[2]

As far as statistics are concerned, in 2015 a total of 444 petitions were filed against companies' CEOs in order to make them liable for insolvency of their companies, and 18 acts for holding them liable (4% of cases); in 2020, there was an almost 15-fold increase in the number of liability-seeking petitions against CEOs; when taken in absolute terms, the figure exceeds 6,500. In this connection, nearly 40% of all petitions are satisfied (*Fig. 2*).

In H2 2021, the number of petitions for subsidiary liability continued to climb, rising about 10% on the same period of 2020, while the percentage of petitions filed with a positive outcome reached nearly 50%.

According to available data, in view of the prospects of companies' CEOs being found liable, the number of cases where claims were satisfied voluntarily and amicable agreements were concluded increased by 1.5 times. With regard to the period 2017–2020, it can be noted as follows:

— there was a 2.5-fold increase in the number of those found to be liable (from 969 in 2017 to 3191 in 2020);
— there was a 3.8-fold increase in the total subsidiary liability imposed on CEOs and controlling entities of companies (from Rb103.2 bn in 2017 to Rb395.3 bn in 2020);
— there was an increase of 16.3% in the average amount of subsidiary liability imposed on CEOs and controlling entities of companies (from Rb106.5 mn in 2017 to Rb123.9 mn in 2020).

In actual practice, there have also been some cases of multibillion-dollar subsidiary liability being imposed. Thus, in 2018, the co-owner and former Director General of Nastyusha Grain Company LLC was found liable in the amount of Rb39.4 bn. In 2019, the Director General of BTK CJSC, a wholesale seller of

1 For more details, see *Zanina A., Volkova E*. Defendants by direct descent. – Kommersant. No. 200, October 30, 2020, p. 1.
2 *Zanina A*. Caught in the crosshairs of subsidiary liability. – Juridical Business. Supplement to the Kommersant newspaper No. 225 December 8, 2020, p. 7.

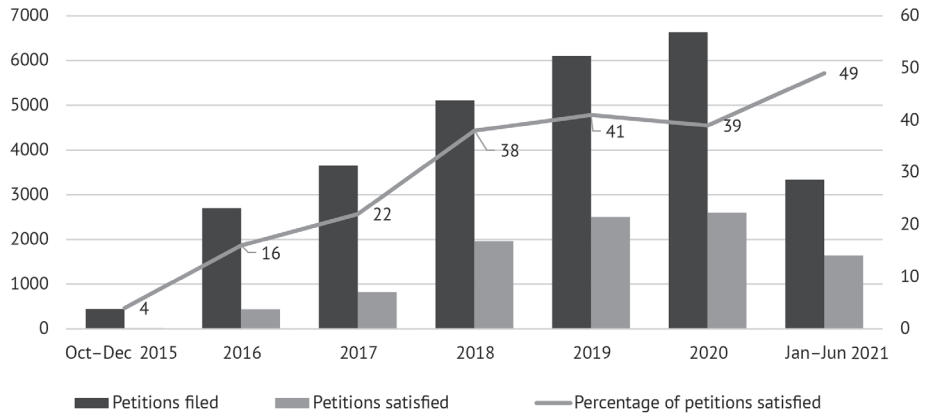

Fig. 2. The movement of the number of subsidiary liability petitions

Source: Fedresurs.ru. Statistical Bulletin as of June 30, 2021, released by the Unified Federal Register of Bankruptcy Information (the Bankruptcy Register) URL: https://download.fedresurs.ru/news/Статистический%20бюллетень%20ЕФРСБ%2030%20июня%202021.pdf, P. 23.

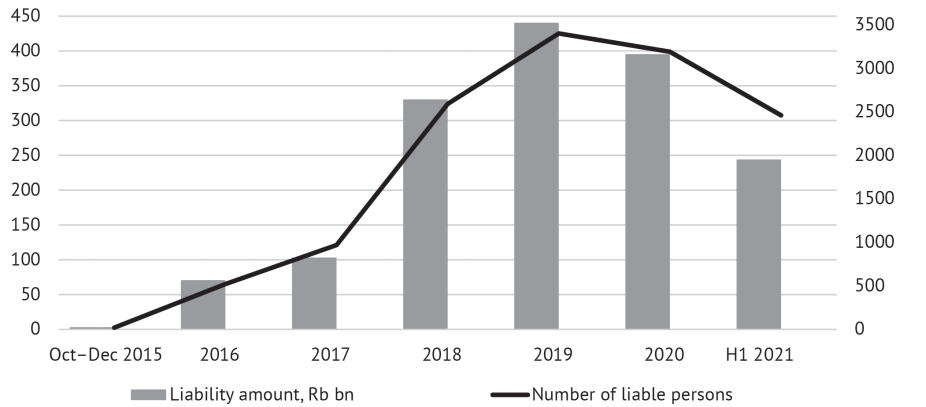

Fig. 3. The movement of the amount of subsidiary liability and the number of those deemed to be liable

Source: Fedresurs.ru. Statistical Bulletin as of June 30, 2021, released by the Unified Federal Register of Bankruptcy Information (the Bankruptcy Register). URL: https://download.fedresurs.ru/news/Статистический%20бюллетень%20ЕФРСБ%2030%20июня%202021.pdf, 23.

household electrical goods, was brought to subsidiary liability for the company's obligations in the amount of Rb41.5 bn for his failure to submit its accounting statements to the arbitration manager. In November 2021, it became known that the decision of the court of first instance concerning the subsidiary liability the founder of the bankrupt agricultural holding Eurodon (a major Russian producer of

turkey and duck meat) for the liabilities of Ursdon LLC (Eurodon's branch) was left unchanged by a court of appeal. As follows from data available from the Unified Federal Register of Bankruptcy Information, its liability for the debts of Ursdon amounts to Rb40.457 bn.[1]

Apparently, over the course of the years 2021 and 2022, we should expect a further increase in the number of cases where the CEOs and controlling individuals and entities of bankrupt companies will be found liable, because this is one of the few available mechanisms of protecting creditor rights that actually work, and, as has been shown in actual practice, it is also quite popular.

In 2021, *the number of legal entities across the economy continued to decline*. As of September 19, 2021, the number of legal entities was 3,316,168.[2] Its shrinkage had begun back in 2016 (*Fig. 4*), when the Federal Tax Service initiated a campaign designed to strike fictitious and inactive companies off the Unified State Register of Legal Entities.[3]

Over the period from 2016 through September 2021, the number of legal entities shrank by 32%, or by approximately 1.5 mn (from 4,816,707 in 2016 to 3,316,168 by September 2021). The key factors that have determined this trend are as follows:

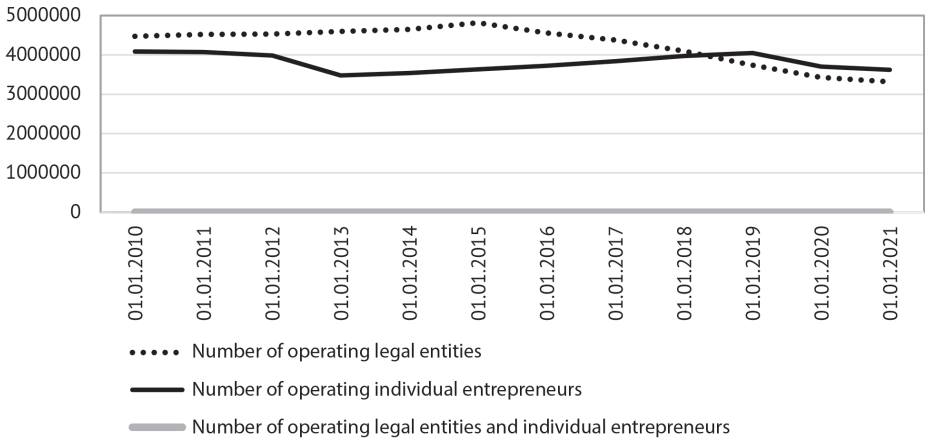

Fig. 4. The movement of the number of legal entities and individual entrepreneurs (2010–2021)

Source: The movement of the number of operating legal entities, individual entrepreneurs, and their total index from 2002 through 2021. URL: https://фси.рф/Main/StatisticalInformation

1 The Court of Appeal confirmed Vaneev's subsidiary liability for the debts of Ursdon in the amount of Rb40 bn. URL: https://fedresurs.ru/news/b9e6fb9f-ff52-4f81-b9dc-523a2230c037, November 9, 2021.

2 Hereinafter: The movement of the number of operating legal entities, individual entrepreneurs, and their total index from 2002 through 2021 (as of September 19, 2021). URL: https://фси.рф/Main/StatisticalInformation

3 Center for Macroeconomic Analysis and Short-term Forecasting (CMASF). Bankruptcies of legal entities in Russia: main trends. – 2021, p. 4.

- *unfavorable economic conditions* (such as sanctions, inflation, difficulties in doing business in Russia[1] that include, among other things, the absence of competitive markets in many sectors, bureaucracy, etc.);
- *intensified activities of the tax service aimed at eliminating fictitious and inactive legal entities*. From 2016 onwards, some new grounds for refusing an entry in the Unified State Register of Legal Entities were introduced in legislation, and the tax agencies were granted the authority to verify the accuracy of information entered into the register, thus empowering them to reduce the number of fictitious companies. The downward trend in the number of operating legal entities has been indeed the result of the efforts to strike off the Unified State Register of Legal Entities those companies and organizations that have actually been abandoned by their owners and organizations, for which inaccurate information has been submitted. The tax service has clarified that over the 3 years starting from 2016, 2.02 mn legal entities were struck off the Unified State Register of Legal Entities;[2]
- *an outflow of entrepreneurs — founders of companies (societies) into the individual entrepreneurship sector*. Among the reasons behind this phenomenon are the difficulties in obtaining loans for companies, the lower tax rate for individual entrepreneurs and the lower risks for the latter to have problems with tax agencies and other state bodies. Starting from mid-2019, the number of individual entrepreneurs for the first time exceeded that of legal entities, and this trend continues.

As far as the movement pattern displayed by the number of new legal entities is concerned, over the period from 2013 through July 2016 it never fell below 40,000 (when cleared of seasonality); then, towards the end of 2019, it plunged still further to less than 25,000; and by August 2021 it reached the level of 20,000.[3] Thus, over the course of 5 years, we can see at least a twofold shrinkage in the number of newly created legal entities. The reasons behind that situation have been explained earlier.

If we look at *global trends*, in 2020, according to available estimates, a total of more than 213 mn companies were operating around the world, of which 132.28 mn were situated in the Asia-Pacific region; 57.24 mn, in Europe, Africa, and the Middle East; and 24 mn, in the Americas. From 2000 onwards, all these regions have been demonstrating a steady increase in the number of companies.[4]

The situation, naturally, can be expected to vary from country to country. Thus, for example, over the period 2010—2014, Germany experienced a decline in the

1 For example, according to a survey conducted by PwC and the NAFI Analytical Center titled "The river moves, unmoving", 87% of companies' top managers believed that doing business in Russia was "rather difficult or very difficult". – *Kokoreva M.* High taxes and state pressure: businesses in Russia named their main problems. – Forbes, November 25, 2021.

2 Hereinafter: *Rozhkova E.* Bad company: the number of legal entities in Russia decreased by 800,000. URL: https://iz.ru/892313/elena-rozhkova/plokhaia-kompaniia-kolichestvo-iurlitc-v-rossii-sokratilos-na-800-tys, June 27, 2019.

3 For more details, see Center for Macroeconomic Analysis and Short-term Forecasting (CMASF). Bankruptcies of legal entities in Russia: main trends over Q3 2021. URL: https://arb.ru/upload/iblock/6c8/Bnkrpc-3-21.pdf, c. 7.

4 *Clark D.* Number of companies worldwide 2000–2020, by region. URL: https://www.statista.com/statistics/1260719/global-companies-by-region/#statisticContainer, September 3, 2021.

number of newly created limited liability companies — from 74,000 to 67,5000, or by 6,500. However, later on, from 2015 through 2019, the number of new companies resumed growth, increasing from 69,400 in 2015 to 74,000 in 2019, or by 4,600. As far as their total number is concerned, over the period from 2006 to 2019 it was continuously on the rise, increasing from 467,600 to 643,100,[1] or by 37.5%. Overall across the EU, one can point out an upward trend in the number of registered companies that was observed from early 2015 through Q4 2019, with subsequent fluctuations caused by containment measures and the coronavirus crisis as a whole.[2]

6.2.2. Reforming the institution of bankruptcy: EU and Russian practices

The debtor bailouts and bankruptcy moratoriums launched in many countries[3] have actually worked reasonably well, preventing an avalanche of company bankruptcies; however, legislations of many European countries provide for lengthy bankruptcy procedures that are not intended to restore companies' solvency/liquidity of their assets. The natural upshot of the intention to further prevent mass bankruptcies were changes introduced in bankruptcy legislations with the purpose of creating new opportunities and mechanisms for keeping businesses going.

In 2021, new insolvency laws came into force in Germany, The Netherlands,[4] Italy (in part), France, Austria, and Brazil. In 2022, it is planned to adopt new bankruptcy laws in Spain and Italy.[5]

Some of them were based on the mechanisms set forth in the EU Directive on preventive restructuring frameworks adopted in 2019 (Directive (EU) 2019/1023).[6] The reform outlined in that Directive (dated June 20, 2019) represents the first attempt at harmonizing national insolvency laws across the European Union; in this connection, it introduces into European law some concepts from Anglo-Saxon law, such as, e.g., cramdown whereby a debtor may change the terms of a contract with a creditor in a court proceeding. This provision allows a reduction in the amount owed to the creditor to reflect the fair market value of the collateral that was used to secure the original debt.

1 For more details, see Entrepreneurship Database. URL: https://www.worldbank.org/en/programs/entrepreneurship. (cited as of January 13, 2022).
2 For more details, see Eurostat statistics explained. URL: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=File:New_businesses_bankruptcies_Q32021data.jpg (cited as of January 13, 2022).
3 For more details, see *Apevalova, E.A., Polezhaeva, N.A*. Coronavirus crisis and company bankruptcies (2020). // Russian Economy in 2020. Trends and Outlooks (Issue 42). – M., IEP, 2021.
4 *Lehmann Alexander*. New EU insolvency rules could underpin business rescue in the COVID-19 aftermath. URL: https://www.bruegel.org/2021/03/new-eu-insolvency-rules-could-underpin-business-rescue-in-the-covid-19-aftermath, March 24, 2021.
5 New restructuring tools in Europe: Keeping up with the competition. URL: https://www.ashurst.com/en/news-and-insights/insights/new-restructuring-tools-in-europe-keeping-up-with-the-competition, October 29, 2021 (cited as of January 21, 2022).
6 Hereinafter: EUR Lex. Directive (EU) 2019/1023 of the European Parliament and of the Council. URL: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32019L1023 (cited as of November 17, 2021).

The coronavirus pandemic and the resulting containment measures enforced over 2020-2021 exacerbated the situation with company bankruptcies and sped up the insolvency legislation reform aimed at creating new opportunities and mechanisms for preserving businesses. Now let us discuss the key mechanisms introduced in the EU Directive in more detail.

First, there are transparent *early warning tools for preventing a possible bankruptcy*, the access to which should be provided by the member states. These include warning the debtor of outstanding payments, the provision of consulting services, and a system of incentives on the part of public authorities (tax and social security agencies) designed to ensure a timely notification of the threat of bankruptcy.[1] The EU member states must ensure universal accessibility and proper conditions for debtors and representatives of employees to all relevant information on these issues, as well as on the procedures and measures relating to debt restructuring and repayment.

Secondly, there are *preventive restructuring frameworks* that allow restructuring to be carried out in order to prevent a company's insolvency and ensure its viability, without any discrimination towards other available insolvency preventing solutions, thereby protecting jobs and maintaining business activity:

1) restricted access to a preventive restructuring framework for debtors – individuals who have been sentenced for serious breaches of accounting or bookkeeping obligations, until the implementation of adequate measures designed to eliminate the violations for which they were sentenced, and the notification of the creditors thereof, so that they could make a restructuring decision;

2) the implementation of a viability test in accordance with the national law, provided that such a test is intended to exclude those debtors that have no prospect of restoring their viability, and that it can be implemented without any detriment to the debtors' assets;

3) the enactment of *a provision whereby the participation of a judicial or administrative body in preventive restructuring is restricted* whenever this would be necessary and proportionate, while ensuring the protection of the rights of any affected parties and relevant stakeholders.

Under a general rule, the preventive restructuring framework should be available at the request of debtors. However, the member states may also provide that *the preventive restructuring framework should be available at the request of creditors and employee representatives*, on condition that the debtor agrees thereto. The member states may limit the requirement for debtor consent only to those cases where the debtors are small and medium-sized enterprises (SMEs).

Third, *the negotiations on preventive reorganization plans should be facilitated,* which may include as follows:

1) granting to those debtors who have access to preventive restructuring procedures also a full or at least partial control over their assets and day-to-day operation of their businesses;

1 Hereinafter: EUR Lex. Directive (EU) 2019/1023 of the European Parliament and of the Council. URL: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32019L1023 (cited as of November 17, 2021).

2) the decision concerning the appointment of a practitioner in the field of restructuring by a judicial or administrative body should be made on a case-by-case basis, unless there exist some special circumstances;

3) the appointment of a practitioner in the field of restructuring in the following cases:

- individual enforcement actions are suspended by a judicial or administrative body, and there is a necessity to protect the rights of creditors;
- when a restructuring plan must be confirmed by a judicial or administrative authority through classification in accordance with Article 11 of the EU Directive on preventive restructuring frameworks;
- if this has been requested by the debtor or a majority of creditors, provided that the costs of the practitioner serviced are borne by the creditors.

Fourth, a *stay of enforcement actions*. It may be general and limited. The purpose of a stay of enforcement actions is to ensure that debtors may benefit from it in order to carry on negotiations on a restructuring plan as part of a preventive restructuring framework.

Initially, the suspension of individual enforcement actions should apply for a maximum period of up to 4 months. However, it can also be possible to extend this period at the initiative of the debtor, the creditor and, wherever possible, the practitioner in the field of restructuring, in the following cases:

1) if progress in restructuring plans has been achieved;

2) if the continued suspension of some of enforcement actions does not unfairly prejudice the rights or interests of any of the affected parties;

3) if insolvency proceedings that could result in a liquidation of the debtor under national law have not yet been initiated against the debtor.

The total period of stay of individual enforcement actions, including extension periods, should not exceed 12 months.

Fifth, *a restructuring plan*. The Directive lays down minimum standards for the content of a restructuring plan, which, among other things, should include:

- the estimated financial flows of the debtor, if provided for by national law;
- any new financing anticipated as part of the restructuring plan, and the reasons why the new financing is necessary for the implementation of that plan;
- a statement of reasons which explains why the restructuring plan has a reasonable prospect of preventing the insolvency of the debtor and ensuring the viability of the business, including the necessary pre-conditions for the success of the plan. The member states may require that the statement of reasons be made or validated either by an external expert or by a practitioner in the field of restructuring, if such a practitioner is appointed.

As a minimum, creditors of secured and unsecured claims should be treated in their own separate classes for the purposes of adopting a restructuring plan, and workers' claims should be put in their own separate class. The member states may provide that debtors that are SMEs can opt not to treat affected parties in separate classes.

The member states should lay down the majorities required for the adoption of a restructuring plan. Those majorities are not to be higher than 75% of the amount of claims or interests in each class or, where applicable, of the number of affected parties in each class.

The member states must ensure that the restructuring plans confirmed by a judicial or administrative authority should be binding on all the related parties.

Sixth, the *protection for new financing and interim financing*. The member states should ensure that new financing and interim financing are adequately protected. As a minimum, in the case of any subsequent insolvency of the debtor:

1) new financing and interim financing should not be declared void, voidable or unenforceable; and

2) the grantors of such financing should not incur civil, administrative or criminal liability, on the ground that such financing is detrimental to the general body of creditors, unless other additional grounds laid down by national law are present.

The member states may provide that these provisions only apply to new financing if the restructuring plan has been confirmed by a judicial or administrative authority, and to interim financing which has been subject to *ex ante* control.

Seventh, the *protection for other restructuring related transactions*. These include the payment of fees for and costs of restructuring; the payment of fees for and costs of seeking professional advice; the payment of workers' wages for work already carried out; any payments and disbursements made in the ordinary course of business.

Eighth*, discharge of debt*. The EU member states must do as follows:

1) ensure that insolvent entrepreneurs have access to at least one procedure that can lead to a full discharge of debt in accordance with this Directive;

2) may require that the trade, business, craft or profession to which an insolvent entrepreneur's debts are related has ceased;

3) must ensure that the related repayment obligation be based on the individual situation of the entrepreneur and, in particular, be proportionate to the entrepreneur's seizable or disposable income and assets during the discharge period, and takes into account the equitable interest of creditors. This is the case when a full discharge of debt is conditional on a partial repayment of debt by the entrepreneur.

As a general rule, the period after which insolvent entrepreneurs are able to be fully discharged from their debts is no longer than 3 years.

If professional debts incurred in the course of trade, business, craft or profession cannot be reasonably separated from personal debts, such debts are treated in a single procedure. If it is possible to differentiate, they are separated.

As far as the appointment of practitioners in procedures concerning restructuring is concerned, the most significant provision is that in order to avoid any conflict of interest, debtors and creditors should have the opportunity to either object to the selection or appointment of a practitioner, or request the replacement of the practitioner.

The EU member states should put in place appropriate oversight and regulatory mechanisms to ensure that the work of practitioners is effectively supervised,

with a view to ensuring that their services are provided in an effective and competent way, and, in relation to the parties involved, are provided impartially and independently. Those mechanisms should also include measures for the individual accountability of practitioners who have failed in their duties.

The reform of the institution of bankruptcy in Italy was launched in 2021.

In August 2021, by Law Decree No. 118/2021, the entry into force of the Italian Crisis Code was postponed until May 18, 2022, and part of the measures, namely procedures related to the prevention of a business crisis, were postponed until December 31, 2023. In November 2021, the norms stipulated in the law regulating the voluntary settlement of a business crisis through negotiations came into force.[1] The purpose of the negotiated settlement procedure is to restore the company's solvency, and it can be initiated by the debtor. The procedure is absolutely confidential. The application is submitted through an information platform.

The entrepreneur will be assisted by an independent third-party expert with specific crisis management skills, who could facilitate negotiations with the creditors, in order to lead the company to its recovery. The expert is appointed by a commission, which should consist of three professionals in the relevant field appointed by the Chamber of Commerce for a period of 2 years.

Further, *a simplified procedure for the assignment of the assets of the distressed company to the creditors (a type of liquidation)* is introduced. This phase starts 60 days after a negative outcome of the negotiated settlement procedure was achieved. The entrepreneur must submit to a court of justice a proposal concerning the composition of assets alongside their sale plan, and request its approval (after a feasibility decision has been received), in absence of arguments in favor of alternative bankruptcy. The main "simplification" of this procedure is that a meeting and voting of creditors is no longer necessary.

Besides, some other changes to the bankruptcy law were introduced, the most important ones appearing to be as follows:

- a moratorium convention that allows, by an agreement between the entrepreneur and his creditors, an extension of the maturities of claims, the waiver of acts or the suspension of enforcing and conservative actions;
- the provisions for financing and business continuity within the framework of arrangements with creditors and debt restructuring agreements;
- an approval of an agreement with creditors, which may take place even in the absence of a public creditor;
- extended validity of restructuring agreements.

The EU Directive will be transposed into national law by the new Italian Bankruptcy Code, which will take effect on May 16, 2022, to replace the existing Italian bankruptcy law.[2]

1 Hereinafter: *Mauro Battistella*. The recent reform to the Italian Bankruptcy Law to support the restructuring of the crisis of the companies. URL: https://www.lexology.com/library/detail.aspx?g=43311989-7c7e-41f7-aaf6-a4d6f6a13cc7, (cited as of December 4, 2021).

2 New restructuring tools in Europe: Keeping up with the competition. URL: https://www.ashurst.com/en/news-and-insights/insights/new-restructuring-tools-in-europe-keeping-up-with-the-competition (cited as of December 2, 2021).

The reform of the bankruptcy system in France introduces classes of creditors and encourages the recapitalization of bankrupt companies. The crisis of 2020—2021, which began as the COVID-19 pandemic crisis and evolved into an economic one, revealed not only the limitations of France's insolvency legislation in the field of business bankruptcies, but also the strategic importance of bankruptcy legislation in mitigating the effects of the economic downturn.[1]

It also accelerated the incorporation of the EU Directive on preventive restructuring frameworks (2019/1023) into French law, which was formalized as of October 1, 2021 by Ordinance No. 2021-1193 dated September 15, 2021 and implemented by Order dated September 23, 2021. The legislator also augmented French legislation by a number of measures adopted under Ordinance No. 2020-596 dated May 20, 2020 (known as Covid-Ordonnance).

Ordinance No. 2021-1193 dated September 15 introduced significant changes into the French Commercial Code Book VI, aiming to improve the efficiency of restructuring procedures. Nevertheless, this does not translate into major changes in insolvency legislation. As the Report to the President of the Republic on Ordinance No. 2021-1193 makes clear, this happens because the legislator has not found it necessary "to question the general architecture (of restructuring), but rather to clarify/specify the law".

The main innovation is the *introduction of classes of creditors*, which will replace the traditional committees of creditors. Creditors will be divided into classes as soon as the company exceeds 250 employees and a turnover of €20 mn, or simply exceeds a turnover of €40 mn. Regardless of these thresholds, classes will be mandatory in an accelerated safeguard proceeding. The allocation of creditors to these classes is the debtor's responsibility. The criterion for grouping creditors in the same class is primarily the quality of the claim, for example privileged or only unsecured.

To preserve the interest of the creditors, the reorganization or safeguard plan proposed by the debtor will be adopted if most of the classes vote in favor.

However, this solution is subject to several mechanisms. First, the Court must verify that forced implementation of the plan does not further deteriorate the situation of the creditor who refused it compared to the situation that would be his in a compulsory liquidation. In addition, at least one class of privileged creditors must have accepted the plan. A so-called "absolute priority rule" is also imposed, whereby a senior class of creditors who voted against the plan must be fully satisfied by the same or equivalent means for a junior class to be entitled to a payment or retain an interest. Considering the necessary staff and turnover thresholds, the introduction of affected party classes will affect only a minority of proceedings.

In order to make the conciliation proceedings more attractive, the legislator has also maintained the possibility for the President of the Court, at the request

1 Hereinafter: *Arnaud Pédron, Numa Rengot*. French insolvency law reform of 15 September 2021: beyond a simple transposition of the EU Directive of 20 June 2019. URL: https://www.franklin-paris.com/en/news-en/french-insolvency-law-reform-of-15-september-2021-beyond-a-simple-transposition-of-the-eu-directive-of-20-june-2019 (cited as of December 11, 2021).

of the debtor, to suspend the enforceability of the claim as well as the individual proceedings that the creditor would initiate.

Furthermore, to promote the celerity of proceedings, the legislator reduced the observation period of safeguard proceedings. The latter can no longer exceed 12 months (as opposed to 18 months previously).

The observation period starts at 6 months by court decision, which can now be extended only once for 6 months by a specially motivated decision.

The judgment opens an observation period of 6 months, which can now be renewed only once for 6 months on a specially motivated decision.

With the same objective, the order introduces the possibility to accelerate the observation period and the examination of the plan, when commitments for the settlement of liabilities are established based on a certificate from the accountant or the auditor.

In addition to the legislator's desire to improve the attractiveness and efficiency of French pre-insolvency and insolvency proceedings, he also wishes to encourage the recapitalization of distressed companies to promote their recovery.

The order confirms the creditor's privilege originally introduced by the Covid measures of May 2020. It will be granted to those creditors who have made a new cash flow injection during the observation period of a court driven restructuring proceedings (receivership or safeguard proceedings) to ensure the maintenance of the debtor's activity. These "post-money" claims will thus be settled just after the wage claims in the order established by Article L. 622-17 of the Commercial Code.

At the same time, the order modifies the provisions relating to the accelerated safeguard proceedings. Accelerated safeguard proceedings will now have a duration of 2 months, extendable up to a maximum total duration of 4 months. The legislator also perpetuates the measure resulting from the Ordinance of 20 May 2020 whereby the thresholds for opening accelerated safeguard proceedings are abolished.

This reform aims to protect distressed companies by making French restructuring proceedings more attractive and efficient, while reorganizing the balance of power between the debtor, its shareholders and its creditors and encouraging recovery and second chances for companies in crisis.

As far as Russia is concerned, the draft law on restructuring of companies submitted to the State Duma and scheduled to be considered in the autumn of 2021 is quite in line with the global trends, but has given rise to a lot of objections. We already discussed its key provisions in the previous issue of the Gaidar Institute's annual review.[1] By way of compromise, in the latest version of the draft law the introduction of a 2-year transition period was proposed, during which both the old and new procedures for the bankruptcy of companies will be applicable, but so far this proposal has not accelerated its adoption.

As for the current bankruptcy legislation, the most *important innovations* introduced in 2021 are as follows.

1 For more details, see *Apevalova, E.A., Polezhaeva, N.A.* The coronavirus crisis and company bankruptcies (2020). // Russian Economy in 2020. Trends and Outlooks (Issue 42). – M., IEP, 2021.

1. From July 12, 2021, *criminal liability for premeditated bankruptcy and bankruptcy misconduct was strengthened*.[1] Increased liability now applies to:

— individuals who have used their official position to commit this criminal offence;
— individuals and entities controlling the debtor, and their CEOs;
— arbitration administrators;
— chairpersons of liquidation commissions (liquidators);
— individuals who have committed a crime by prior conspiracy or by an organized group.[2]

However, an individual who has committed illegal actions in bankruptcy may be exempted from criminal liability (in the absence of another *corpus delicti* in their actions):

— if this is their first breach of law;
— if they actively contributed to the disclosure and (or) investigation of the crime, voluntarily reported the individuals who had benefited from the illegal or dishonest behavior of the debtor, or disclosed information on the property (income) of those individuals, the amount of which could really compensate for the damage caused by the crime.

2. From October 18, 2021, *a number of innovations were introduced with regard to bankruptcy of banks* which handle individual deposits, among which there is the transfer of bank management functions to the Deposit Insurance Agency after the revocation of their licenses.

Creditors will be affected by the following innovations:

— in order to be able to participate in the first meeting of creditors, they must present claims against the bank within 30 workdays from the date of publication in the Kommersant newspaper of the information on the start of the receipt of such claims;
— objections to the result of the consideration by the provisional administration of the creditor's claim may be filed with the arbitration court within 10 workdays from the date of receipt of that result.

3. *The regulator will now maintain a list of supervisors* of each credit institution, insurance organization and private pension fund. The data necessary for keeping that list will be submitted by the supervised organizations. In addition, the RF Central Bank will be able to independently put new individuals or entities on the list. Those included in the list may challenge this decision by applying to the special commission under the RF Central Bank.
4. From January 2, 2021, the specific features of bankruptcy in case of *syndicated lending* are established. Under a general rule, any member of a syndicate of lenders can apply to the other members with the proposal that a bankruptcy petition of the borrower or collateral provider should be filed. The proposal is submitted through the credit manager, who

1 Review: Key changes in bankruptcy law in 2021 (Consultant Plus, 2021).
2 For more details, see Federal Law No. 241-FZ dated July 1, 2021 "On introducing alterations to some legislative acts of the Russian Federation".

notifies the other members. The credit manager himself can also initiate a discussion on the issue.

5. Digital currency is now included in the debtor's assets.
6. *From April 28, 2021, the conditions for the foreclosure of an only home are applied with due regard for the instructions of the Constitutional Court, which stipulates that* "housing foreclosure cannot be denied simply because this is the only home" (this measure is relevant to our discussion here, e.g., the enforcement of subsidiary liability of a company's director and controlling individuals). When making decisions concerning such foreclosures, courts of justice must give consideration to:[1]

— the estimated market value, set against the amount of debt;
— whether there has been a violation of the law committed by the debtor. This may be indicated, for example, by the date on which the home was purchased (before or after the acknowledgement of debt).

In any case, this measure should not:

— be a punishment or a means of intimidation;
— force an individual to change their place of residence;
— to leave them without a suitable dwelling with an area not less than that stipulated in the social rent agreement norms and situated in the same settlement.

In actual practice, this means that, for example, the only expensive home may be sold in order to satisfy creditors' claims, and the debtor will be given the opportunity to buy a home of lower value/less area, but in the same place of residence and in the amount of 33 square meters of total living space per individual.

* * *

Thus, we can sum up the following most notable *trends* as follows:

1) compensatory growth in the number of company bankruptcies in the EU member states and Russia, due to the end of bankruptcy moratorium and the curtailing, in a number of countries, of relief measures targeting businesses;

2) bankruptcy reforms and plans for adopting systemic legislative measures designed to transform existing bankruptcy models in favor of the debtor, and expanding opportunities for companies to retain their business. Russia is also taking steps to draft and negotiate a law on restructuring frameworks, but the interests of companies that have been damaged during the pandemic need to be considered more comprehensively. It seems appropriate to introduce a baseline law on business restructuring frameworks (delineating separate blocks, e.g., that on bankruptcy trustees, which will require some additional discussion with due regard for the interests of all stakeholders), perhaps with the introduction of the

1 Resolution of the RF Constitutional Court No. 15-P dated April 26, 2021 "On the case of checking the constitutionality of the provisions in the second paragraph of Part 1 of Article 446 of the Civil Procedure Code of the Russian Federation, and Item 3 of Article 213.25 of the Federal Law "On Insolvency (Bankruptcy)" in connection with the complaint filed by citizen I.I. Revkov." – Consultant+.

proposed transition period, during which it will be possible to take advantage of both the old and new procedures provided by legislation;

3) since 2016 in Russia, there has been a steady decline in the number of legal entities, primarily companies, including as a result of a shift of company owners to the individual entrepreneurship sector, which is an indirect evidence of the existence of general barriers to medium-sized and small businesses. These also include difficulties in getting loans, the specifics of taxation and pension fund fees, and the general economic conditions aggravated by the pandemic.

6.3. Corporate governance during the coronavirus crisis: a course towards diversification of interests and its slowdown in implementation of its principles[1]

6.3.1. The role of the COVID-19 pandemic in the evolution of corporate governance. Recognition of stakeholder interests

In April 2020, more than half of the world population lived in countries where strict restrictions on movement were being imposed, disrupting peoples lives, business activity and international mobility. These containment measures resulted in a sharp decline in total consumption and in a shrinking of trade. The global economy lost 4.3%, which is 6 times the scale of the global recession of 2008–2009.[2] Global foreign direct investment (FDI), which is considered to be a catalyst for economic development and corporate governance improvement, fell by 42% in 2020[3] relative to 2019. The decline was experienced in the main by developed countries, where these particular investment flows plummeted by 69% (in Europe, the decline amounted to 101%; in the USA, to 49%). In transition economies, FDI declined by 77%. In the developing countries, FDI lost about 12% on average.[4]

Unlike previously experienced financial shocks and economic crises, the consequences of the current crisis are not economically based: they were caused by an external shock. The unprecedented inequality in starting conditions determined the outcomes of the crisis, which divided economies, industries and individuals into those who became either winners or losers as a result of the crisis. Thus, certain industries suffered because their goods and services could not be effectively sold during lockdowns (tourism, retail trade, etc.). Others, on the contrary, gained great advantages in the new circumstances (such as suppliers of hygiene products and online stores). The pandemic continues to increase this inequality.

1 This section was written by: *Apevalova Ye.A.*, Senior Researcher at the Center for Institutions Analysis and Financial Markets, IAES, RANEPA; *Polezhaeva N.A.*, Candidate of Legal Sciences, Senior Researcher at the Center for Institutions Analysis and Financial Markets, IAES, RANEPA.

2 Global economic prospects. Chapter 1. Global outlook. URL: https://openknowledge.worldbank.org/bitstream/handle/10986/34710/9781464816123-Ch01.pdf

3 Overview. Foreign Direct Investment for Development: Maximising Benefits, Minimising Costs. URL: https://www.oecd-ilibrary.org/docserver/9789264199286-sum-ru.pdf?expires=1640524248&id=id&accname=guest&checksum=BAEF3298F2923502BD36D51B651469D0

4 Global Investment Trend Monitor, No. 38. URL: https://unctad.org/webflyer/global-investment-trend-monitor-no-38

Over the course of the 20th century, two types of changes were identified in corporate governance.

First, the crisis that followed the Great Depression and World War II laid down the deep structural framework of corporate governance. The need to address the arising political problems, among other things, translated into the formation of several different corporate governance systems:[1]

- the Anglo-US model, which places a greater emphasis on shareholder values;
- the German and Japanese models, which share some basic features, namely the focus on the interests of key stakeholders, reliance on internal control methods, and a high concentration of ownership;
- the family governance (Latin) model, which is also characterized by concentrated ownership, but as far as the interests of stakeholders are concerned, it is characterized by conflicting relations between employers and employees.

It should be noted that the Russian corporate governance model was evolving during the privatization phase in 1989—1994, so it combines the features of several governance systems (highly concentrated ownership, special control mechanisms, the prevalence of insider ownership where ownership and management rights are combined).[2]

Secondly, the period of relative political calm at the end of the 20th century made it possible to focus directly on the effectiveness of corporate governance. In the 1990s, against the backdrop of protracted recessions in Germany and Japan, the US economy, with its more dynamic approach, was leading the way. This factor, as well as the growing influence of major regional stock exchanges and institutional investors from the UK and the USA, the increasing incomes and market capitalization of multinational corporations (mainly based in the UK and the USA), and massive international financial flows, created the motivation for convergence with the Anglo-US corporate governance model focused on the interests of external investors, which seemed then to be an integral part of the globalization and financialization processes going on across the world economy.

However, in the 21st century, the 2008—2009 financial and economic crisis clearly revealed the imperfections of the shareholder model of corporate governance (for example, the lack of proper attention to long-term goals and the interests of related parties other than shareholders and the strong relationships with key stakeholders coupled with insufficient flexibility in the German model).[3]

While no major changes in corporate governance can be expected to occur in the nearest future, the COVID-19 pandemic once again highlighted the weaknesses of the shareholder model and emphasized some of the already existing trends:

1. The striving for sustainability, which can be expressed as follows:

1 *Dementieva, A.G.* Corporate Governance Models in the Context of Globalization. M.: MGIMO University, 2011. 180 p. (In Russian).
2 *Orekhova S.V., Kudin L.Sh.* Russian Model of Corporate Governance: Evolution, Specifics, Efficiency Problems. Bulletin of Chelyabinsk State University. 2019. No. 3 (425). Pp. 140–152.
3 *Clarke T.* The continuing diversity of corporate governance: Theories of convergence and variety. Ephemera: Theory & Politics in Organization. 2016. Vol. 16(1). Pp. 19–52.

- abandoning the practices that could be risky during a crisis, for example just-in-time cross-border deliveries that are effective during normal periods;
- merging companies into networks (corporate, financial, or government-related) in order to increase the chances of survival;
- developing the practices designed to prevent the spread of disease among companies' staff. However, this is fraught with the possibility of discrimination, because companies will try to avoid hiring people belonging to risk groups (such as individuals with chronic illnesses or those older than a certain age).[1]

2. The resurgence of corporate nationalism (state-owned companies, "golden share"), which may occur due to the desire to avoid becoming dependent on foreign investors with political motives.

3. The expansion of corporate goals towards related parties (stakeholders),[2] which may accelerate due to increasing inequality, mass layoffs resulting from galloping digitalization (which makes investment in human capital unnecessary), and climate change.

The proponents of the shareholder model of corporate governance believe that stakeholderism,[3] which has been spurred in its development by the coronavirus crisis, will eventually fail to withstand competition due to its inefficiency.[4] Meanwhile, the Business Roundtable (BRT), a nonprofit lobbyist association whose members are chief executive officers of major US companies, views companies as complex, dynamic ecosystems that include diverse interacting elements, and not as static hierarchies focused on shareholder primacy. In this connection, the Business Roundtable affirms in its Statement the essential role that corporations can play in improving society when CEOs are truly committed to meeting the needs of all stakeholders.[5]

However, a company's commitment to a particular corporate governance model by no means implies its better preparedness for dealing with crises. Thus, US hi-tech companies (including Meta? Facebook, Amazon, Apple, Microsoft and Alphabet (Google)) have been among the most successful in the world since the onset of the COVID-19 pandemic due to their ability to rapidly generate innovations. It can be assumed that the shareholder model of corporate governance makes it possible for companies operating in the traditional industries successfully to

1 *Gelter M., Puaschunder J.M.* COVID-19 and Comparative Corporate Governance (January 25, 2021). European Corporate Governance Institute - Law Working Paper No. 563/2021. URL: https://ssrn.com/abstract=3772965

2 Creditors, suppliers, employees, society as a whole, etc.

3 *Mayer C.* Shareholderism Versus Stakeholderism – a Misconceived Contradiction. A Comment on 'The Illusory Promise of Stakeholder Governance' by Lucian Bebchuk and Roberto Tallarita (June 3, 2020). European Corporate Governance Institute - Law Working Paper No. 522/2020. URL: https://ssrn.com/abstract=3617847

4 *Gindis D., Veldman J., Willmott H.* Convergent and divergent trajectories of corporate governance. Competition & Change. 2020. Vol. 24 (5). Pp. 399-407; *Pargendler M.* Controlling Shareholders in the Twenty-First Century: Complicating Corporate Governance Beyond Agency Costs (November 12, 2019). European Corporate Governance Institute — Law Working Paper No. 483/2019. URL: https://ssrn.com/abstract=3474555

5 Our Commitment. https://opportunity.businessroundtable.org/ourcommitment/

survive in times of crisis, while other corporations may benefit, for example, from generating innovations.

4. Digitalization, which has long penetrated corporate governance. By now, corporate governance has come to grips with some new technologies like blockchain, electronic registries, electronic document management, and electronic voting. Companies are trying to include in their boards of directors, experts with experience and competencies in the field of innovation and digital technologies, and to treat cyber risks as part of their risk management systems.[1] Another area of particular interest is experimenting with the use of artificial intelligence in management.[2]

However, digitalization not only provides the possibility of remote exercise of corporate rights and management, which is important for preventing the spread of the virus. It has given rise to platform-based companies that rely in their functioning on new technologies. In the context of the COVID-19 pandemic, digital platform businesses (including Apple, Alibaba, Sber, and Yandex) were able not only to go on performing, but to expand their activities to meet the "digital" needs of their clients, thus taking over the empty niches vacated by traditional companies that had failed promptly to adapt to the new conditions. The traditional shareholder model of corporate governance no longer suits platform-based companies, which unite and promote cooperation between several related parties, seeking to increase their involvement.[3] Thus, the governance of digital platform businesses largely has to do with the expansion of corporate goals towards the interests of stakeholders.

6.3.2. The impact of the coronavirus crisis on corporate governance practices in Russian companies

One of the possible methods to assess the impact of the COVID-19 pandemic on corporate governance (CG) practices is to determine the level of companies' compliance with corporate governance principles.

The Russian Code of Corporate Governance (hereinafter the CCG) was adopted in 2014, that is, after the global economic crisis of 2008—2009, and so the coronavirus crisis became its first serious test. The compliance of companies with the CCG has been monitored by the Bank of Russia through the comply or explain approach, where both the implementation of a rule and a reasonable explanation for its non-implementation can be two appropriate ways to comply with it. The regulator reviews the CG compliance reports submitted by all public joint-stock

1 Corporate Governance in the Covid Era: Cybersecurity and High Tech Considerations. URL: https://gaap.ru/articles/Corporativnoe-upravlenie-v-epohu-covida/

2 *Apevalova, E.A., Polezhaeva, N.A., Radygin, A.D.* The standards and practices of corporate governance: relevant current trends. Russian Economy in 2019. Trends and Outlooks (Issue 41). [V. Mau et al.; eds. Kudrin, A.L., Doctor of Economic Sciences; Radygin, A.D., Doctor of Economic Sciences; Sinelnikov-Murylev, S.G., Doctor of Economic Sciences]; Gaidar Institute, Moscow. 2020. P. 486–498.

3 *Polezhaeva, N.A.* Platform companies: features of the business model and corporate governance. Russian Economy in 2020. Trends and Outlooks (Issue 42). [Eds. Kudrin, A.L., Doctor of Economic Sciences; Mau, V.A., Doctor of Economic Sciences; Radygin, A.D., Doctor of Economic Sciences; Sinelnikov-Murylev, S.G., Doctor of Economic Sciences]; Gaidar Institute, Moscow. 2021. P. 533–556.

companies (PJSC) put on Level 1 and Level 2 lists of the Moscow Exchange (QL1 and QL2), as well as by Level 3 (QL3) companies. However, in its Reviews of Corporate Governance Practices at Russian Public Companies released at the end of each year, the regulator has been taking into account only the reports drawn up in accordance with the established specific Form[1] (*Table 8*).

It should be noted that the Bank of Russia, as well as other institutions that analyze the compliance of Russian companies with the corporate governance principles, mainly use in their research open-source information provided in disclosed corporate documents (such as annual reports and statements of material facts), and do not always properly verify its credibility. In its 2017 annual Review, the Bank of Russia referred to the discrepancies revealed during its random inspections of some of the companies that had submitted their corporate governance compliance self-assessment reports as "an alarming signal".

Table 8

The number of PJSCs put on Level 1, Level 2, and Level 3 lists of the Moscow Exchange that used the Corporate Governance Compliance Report Form

Year	Level 1 and 2 PJSCs, total (Moscow Exchange's list)	Level 1 and 2 PJSCs using Corporate Governance Compliance Report Form			Level 3 PJSCs, total	Level 3 PJSCs using Corporate Governance Compliance Report Form
		Total	Level 1	Level 2		
2015	99	84 (85%*)	56	28	—***	—
2016	84	78 (93%)	49	29	—	—
2017	75	72 (96%)	44	28	—	—
2018	65	63 (97%)	41	22	155	132 (85%**)
2019	64	61 (95%)	40	21	151	135 (89%)
2020	66	64 (97%)	41	23	149	133 (89%)

* % of all Level 1 and 2 PJSCs.
**% of all Level 3 PJSCs.
****prior* to 2018, Level 3 PJSCs were not included in annual Reviews.

Source: based on annual Reviews of Corporate Governance Practices at Russian Public Companies for 2015, 2016, 2017, 2018, 2019, and 2020. URL: https://www.cbr.ru/issuers_corporate/analitics/

The results of the Bank of Russia's monitoring were released for the first time in its Review of Corporate Governance Practices at Russian Public Companies for 2015. As of the end of February, the latest available annual review is for 2020.[2]

Over the six years after the introduction of the CCG (period 2014—2019), by the onset of the pandemic, some noticeable positive changes in the implementation of CG principles and the quality of explanations for non-compliance (including partial non-compliance) in the group of Level 1 and 2 PJSCs (*Fig 5, 6* and *7*) were observed:

— in terms of the implementation level, a stable positive trend persisted;

1 Letter of the Bank of Russia No. IN-06-52/8 dated February 17, 2016 "On disclosure, in the annual report of a public joint-stock company, of the report on its compliance with the principles and recommendations of the Corporate Governance Code". URL: http://www.cbr.ru/

2 Review of Corporate Governance Practices at Russian Public Companies for 2020. URL: https://www.cbr.ru/Collection/Collection/File/39590/Review_corp_3011021.pdf

- the average number of principles that were fully complied with rose by 20 p.p. (from 58% to 78%);
- the relative share of principles that were in non-compliance decreased by 2.5 times (from 15% to 6%);
- a positive dynamic was also observed with regard to chapters and principles in compliance (Chapters II, I, VII, IV);
- in terms of the quality of explanations for non-compliance with CG principles, a moderately positive trend was maintained;
- the average quality level of the explanations increased almost 2 times (from 33% to 63%);
- the number of PJSCs with high-quality explanations increased by 20 p.p. (from 6% to 26%);
- the number of PJSCs offering explanations that needed to be significantly improved shrank by 55 p.p. (from 80% to 25%).

In 2020, the average level of implementation of CG principles by Level 1 and Level 2 PJSCs decreased for the first time (by 1 p.p. on the pre-pandemic year 2019), to 77%. As before, the average quality level of explanations for non-compliance with CG principles stood at 63% (*Fig. 5* and *6*).

Chapter II (on the board of directors) continues to be the one in least compliance. Only one company (2% of all PJSCs) reported its full compliance with its principles (*Fig. 7*).

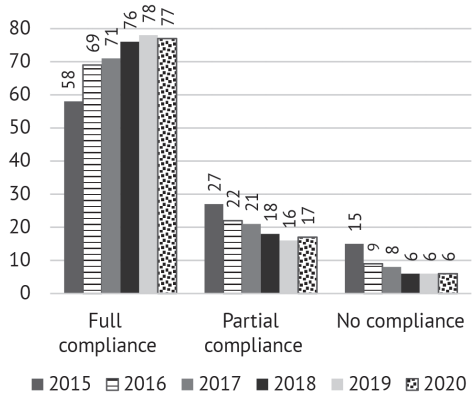

Fig. 5. The average level of compliance with CG principles by Level 1 and Level 2 PJSCs, %

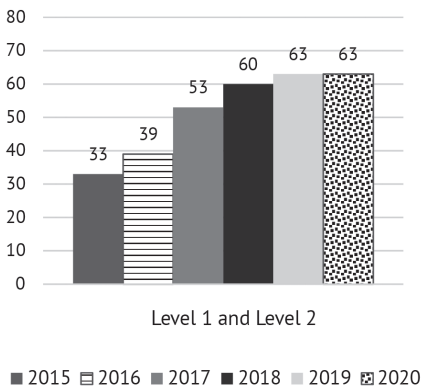

Fig. 6. The average quality level of explanations for non-compliance with CG principles by Level 1 and Level 2 PJSCs, %

Source: based on the annual Review of Corporate Governance Practices at Russian Public Companies for 2020. URL: https://www.cbr.ru/Collection/Collection/File/39590/Review_corp_3011021.pdf

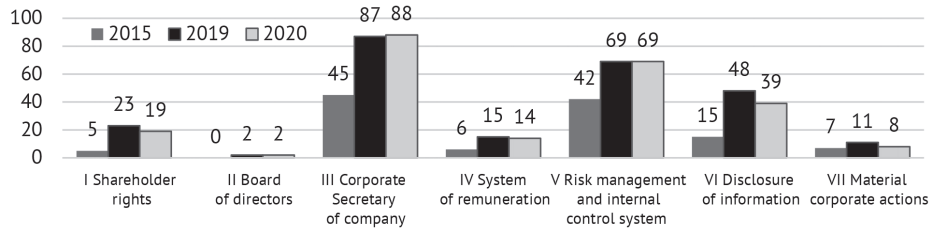

Fig. 7. The relative shares of Level 1 and Level 2 PJSCs reporting their full compliance with the principles set forth in specific chapters of the CCG, %

Source: based on the annual Review of Corporate Governance Practices at Russian Public Companies for 2020. URL: https://www.cbr.ru/Collection/Collection/File/39590/Review_corp_3011021.pdf

The principle in least compliance among those set forth in Chapter II is principle 2.7.4, which concerns the adoption of decisions by a qualified majority vote or by a majority vote of all elected board members. Only 33% of all PJSCs comply with it.

Negative dynamics is noted with regard to the introduction of the following principles:

a) 2.8.5, that committees should be chaired by independent directors and meetings attended by an invited third party; in 2020, the number of companies reporting their full compliance with this principle was 6% less than in 2019 (44% in 2019, and 38% in 2020);

b) 2.9.1, on evaluation of quality of the board of directors' work and its results during its intramural meeting (54% in 2019, and 48% in 2020). This happened because of the impossibility of holding an intramural board meeting during the COVID-19 pandemic.

Nevertheless, in 2020, the dynamics of the implementation of the majority of principles set forth in Chapter II was positive. As before, the best compliance was reported with regard to principle 2.2.2, that the chairman of the board of directors must be available to communicate with the company's shareholders; principle 2.6.2, that the rights and duties of board members should be clearly stated and documented in the company's internal documents; and principle 2.7.1, that meetings of the board of directors must be held as needed, with due account of the company's scope of activities and its then current goals. These principles are complied with by 98% of companies.

Chapter I, on shareholder rights, is likewise one that is least in compliance. Moreover, the number of PJSCs that reported their full compliance in 2020 shrank in 2019, from 23% to 19%. This can largely be explained by the necessity, in the context of the COVID-19 pandemic, to hold general meetings of shareholders in absentia, thus making it difficult to implement a number of principles, e.g., 1.1.6, that the procedures for holding a general meeting should provide equal opportunity to all individuals present to express their opinions and ask questions that might be of interest to them.

The number of companies reporting their full compliance with all the principles of Chapter VI, on disclosure of information about the company, also decreased markedly on 2019, from 48% to 39%, which happened because of the negative dynamics in their implementation of principle 6.2.1, whereby a company should disclose information in accordance with the principles of regularity, consistency and timeliness (decline from 79% to 67%), and principle 6.3.1, concerning the exercise by shareholders of their right to access relevant documents and information (decline from 87% to 72%).

Level 3 companies were included by the Bank of Russia in its annual review for the first time in 2018. According to the results of three years' reviews, there has been an rise in the number of companies reporting their compliance with an increasing number of CG principles; in 2020, the average compliance level was 51%, which is 1 p.p. above the index of the pre-pandemic year 2019. The data on compliance of Level 3 companies with certain chapters of the CCG are presented in *Fig. 8*. The relative share of companies that need to significantly improve the explanations for their non-compliance is 73%, just as in 2019.

The large-scope TopCompetence national study, which addressed the specific features of corporate governance at Russia's 100+ large companies listed on the Moscow Exchange (RUCGI),[1] also demonstrated that, in 2020, the average level of compliance with the key corporate governance principles altered only slightly relative the pre-pandemic year 2019 (52.06% in 2020; 52.18% in 2019). As before, there was an obvious dependence of the compliance level on the listing and capitalization levels. The Level 2 and Level 3 companies, whose capitalization was below Rb200 bn, were less active in their compliance with CG principles (*Fig. 9, 10*).

The least compliance has been observed with regard to those key principles that have to do with the work of a company's board of directors:

— providing the company with a feasible method of informing its board of directors or its audit committee about the facts of violation of the law, internal procedures and the company's code of ethics (complied with by only 8% of companies);

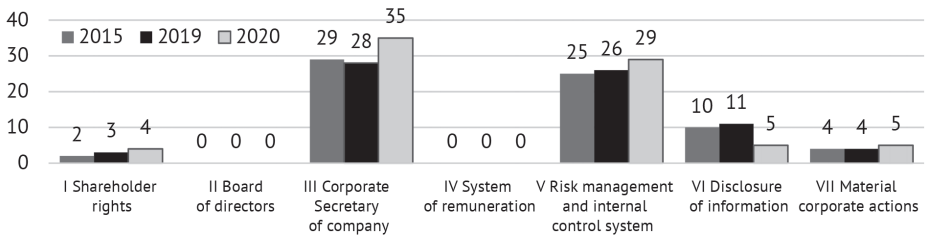

Fig. 8. The relative share of Level 3 PJSCs reporting their full compliance with the principles set forth in specific chapters of the CCG, %

Source: based on the annual Review of Corporate Governance Practices at Russian Public Companies for 2020. URL: https://www.cbr.ru/Collection/Collection/File/39590/Review_corp_3011021.pdf

1 National Corporate Governance Index 2020. URL: http://cgindex.ru/2020/12/03/нику-2020/

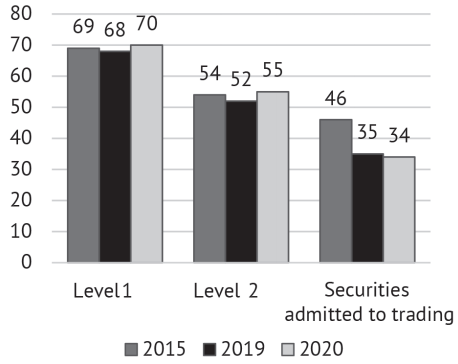

Fig. 9. The dynamics of the level of compliance with key CG principles depending on listing level, %

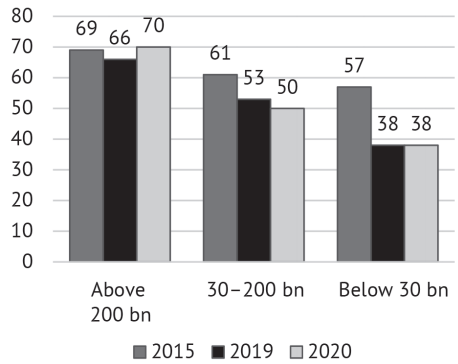

Fig. 10. The dynamics of the level of compliance with key CG principles depending on capitalization level, %

Source: National Corporate Governance Index 2020. URL: http://cgindex.ru/2020/12/03/нику-2020/

- implementing, over the course of a reporting year, educational, training and retraining programs for board members (complied with by only 9% of companies);
- presenting on the company's website and in its annual report biographical information concerning the corporate secretary, similar to the biographical details of members of the board of directors and executive officers of the company (12%);
- developing and implementing the company's policy on remuneration and reimbursement of costs incurred by its board members (12%);
- disclosing the company's policy on remuneration due to members of its executive bodies and other key managers (12%).

Because of the low level of compliance with the last two principles, some questions may arise as to the reasonable size of the remuneration due to board members. In 2020, the average annual remuneration of a board member doubled on 2019 and amounted to Rb161.3 mn, while the average annual remuneration of an executive increased 1.14 times and amounted to Rb10.62 mn (*Fig. 11*). At the same time, 3% of companies do not disclose any information on remuneration, and only 13.5% of them provide details concerning remuneration components. It should be noted that in 2020, 21% of companies paid no remuneration to members of their boards of directors. This can be explained in part by the fact that the coronavirus situation turned out to be beneficial for some businesses. Meanwhile, some companies preferred to allocate available funds to measures designed to ensure their sustainability and to social goals.

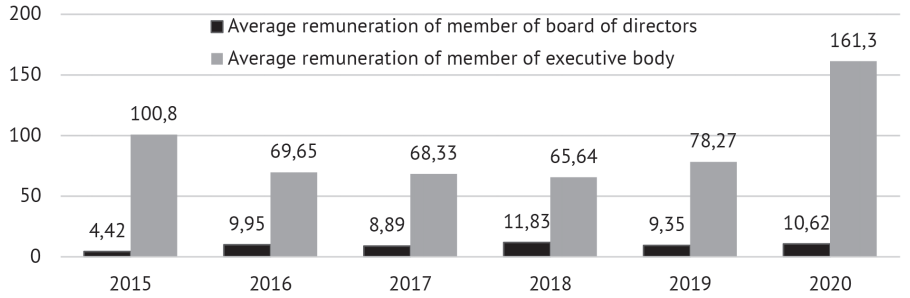

Fig. 11. Average remuneration of members of boards of directors and executive bodies, millions of rubles

Source: National Corporate Governance Index 2020. URL: http://cgindex.ru/2020/12/03/нику-2020/

The joint study on the impact of the COVID-19 pandemic on the activities of boards of directors of 30 Russian companies,[1][2] released in 2020 by EY[3] and the Skolkovo Club of Independent Directors, also revealed shortcomings of boards' composition and practices (*Fig. 12*), the most common of which are as follows:

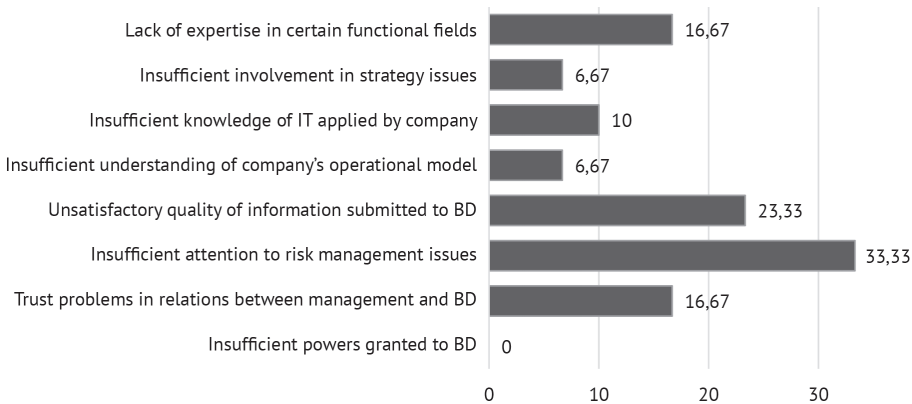

Fig. 12. Shortcomings in the composition and practices of boards of directors (BD) revealed by the crisis situation, %

Source: Impact of COVID-19 Pandemic on Board of Directors. Presentation of survey results. URL: https://assets.ey.com/content/dam/ey-sites/ey-com/ru_ru/news/2020/08/ey-and-skolkovo-board-of-directors-survey-2020.pdf

1 30% are public companies; 63.33% are not state-owned ones.
2 Impact of COVID-19 Pandemic on Board of Directors. Presentation of survey results. URL: https:// assets. ey. com/content/dam/ey-sites/ey-com/ru_ru/news/2020/08/ey-and-skolkovo-board -of-directors-survey-2020. pdf
3 EY is the name of a global organization and may refer to one or more of the companies that make up Ernst & Young Global Limited. EY is an international leader in audit, tax, strategy, transactions and consulting.

- insufficient attention of the board of directors to business risks (noted by 33.33% of directors)
- low quality of information provided for consideration to the board of directors (noted by 23.33% of directors).

At the same time, none of the interviewed directors mentioned that the board was granted insufficient powers.

In addition to these shortcomings in the boards'operations, the Bank of Russia also points out the following problems:[1]

- a company can distribute profits in favor of controlling individuals by methods other than dividends and liquidation value;[2]
- there is insufficient information on the recommendations concerning distribution of profits submitted by the board of directors to the general meeting of shareholders;
- shareholders have no understanding of the reasons behind the decisions that no dividends should be paid on shares of a particular category, including in the presence of a dividend policy, where the key role in development and implementation was played by the board of directors.

Nevertheless, although the pandemic has had an evident effect on the practices of boards of directors, both the directors and researchers believe that this will not translate into any significant changes in corporate governance, but will significantly affect the companies in the strategic and technological aspects of their business activities (*Fig. 13*). Thus, on average, 89% of directors expect

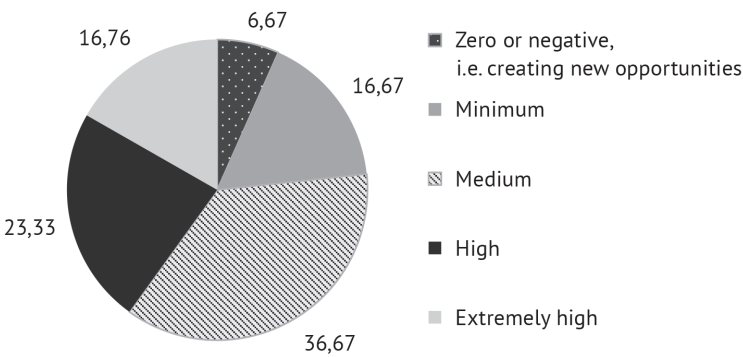

Fig. 13. Assessment of the degree of threats created by the COVID-19 pandemic and related economic shocks for the business activity of companies, %

Source: Impact of COVID-19 Pandemic on Board of Directors. Presentation of survey results. URL: https://assets.ey.com/content/dam/ey-sites/ey-com/ru_ru/news/2020/08/ey-and-skolkovo-board-of-directors-survey-2020.pdf

1 Review of Corporate Governance Practices at Russian Public Companies for 2019 года. URL: https://www. cbr. ru/Collection/Collection/File/31741/Review_corp_14122020. pdf

2 For example, through transfer pricing; by making intra-group interest-free loans; unjustified provision by the controlling body of the company's services at inflated prices; sponsorship by a charitable organization that is supervised by the company's controlling shareholder, etc.

no changes in the practices of forming the board and determining its powers or the role of key shareholders in company management. At the same time, 25% of directors on average spoke, for example, of the increased involvement of the board and key shareholders in decision-making on strategic issues, and 83% of respondents believe that the board of directors will now analyze business risks and the activities of the company as a whole more carefully.

By way of summing up, we should note that, because we do not know when the COVID-19 pandemic will actually end, we cannot at this point reliably determine the scale of its consequences. However, they have already exceeded the indicators of the global economic crisis of 2008-2009. Among the main causes of the crisis of 2008-2009 were the violations in the field of corporate governance that gave rise to excessive risk-taking: the information on risks was not reported to companies' boards of directors and executive bodies, the boards did not establish proper indicators for monitoring the implementation of business strategy, the information on expected risk factors and the system of control and risk management was not properly disclosed, etc. As a result, that crisis revealed the need for reforms in the field of corporate governance, and so existing regulatory acts were revised, and new ones were adopted, including corporate governance codes, and structural changes were made. In contrast to the collapse of 2008-2009, the current economic crisis was triggered by an external cause, and therefore no significant changes in corporate governance can be expected to take place in the near future.

However, the COVID-19 pandemic is not going to pass without leaving its mark on corporate governance. It has sped up reform in some of its areas, including revival of corporate nationalism, expansion of corporate goals towards stakeholders and digitalization. A common feature of all these trends is the recognition of the interests of a wider range of stakeholders. This direction of development is by no means new, it is one of the basic principles of corporate governance set forth by the OECD.

In Russia, it is necessary to stimulate the expansion of corporate goals towards the interests of stakeholders. Internal corporate social responsibility (social partnership in labor relations), which is expressed in the inclusion of employee representatives in the management bodies of a company or endowing them with shares in its authorized capital, at present is less widespread in Russia than in more developed countries, but it is considered to be a promising prospect because experience has shown that the joint efforts of employers and employees can help in dealing more efficiently with crisis situations in the economy, including those triggered by the COVID-19 pandemic. In order to develop corporate social responsibility, it is necessary to promote the practical implementation of the provisions stipulated in Chapter 8 of the Labor Code of the Russian Federation, which addresses the participation of employees in the management of an organization and stipulates an open list of forms of participation, especially the participation of employee representatives in the distribution of an organization's profits and in meetings of the collegial executive body with the right of advisory vote.[1]

1 *Gutnikov O.V.* Corporate law development trends at the present time // Journal of Russian Law. 2020. No. 8. P. 59–73.

External corporate social responsibility aimed at external stakeholders (such as preparedness to help in crisis situations, responsibility to consumers, charity activities, and environmental protection) is just in the early phase of its development. The coronavirus crisis has demonstrated the readiness of some Russian companies to provide active help in the interests of society at large. Thus, Norilsk Nickel allocated Rb10.5 bn to measures designed to combat COVID-19; Sberbank also launched various measures, including the SberUnity anti-crisis support platform for small and medium-sized businesses. However, when compared with the USA, where the financial assistance provided by the top five tech companies totaled $1,252.5 mn, the input Russian companies to the fight against the pandemic looks modest.[1]

A comparative analysis of the level of compliance of Russian companies with the Corporate Governance Code in 2019 and 2020, i.e. before and after the onset of the pandemic, also confirms that so far, COVID-19 has not had a significant impact on corporate governance.

In 2020, compared to the pre-pandemic year 2019, the average level of compliance with the principles stipulated in the CCG by 64 public joint-stock companies, put on Level 1 and Level 2 lists of the Moscow Exchange and reviewed by the Bank of Russia, decreased by 1 p.p. to 77%. According to data released by TopCompetence on Russia's 100+ large companies listed on the Moscow Exchange (by capitalization), the average level of their compliance with key CG principles indeed increased but only slightly, from 52.06% to 52.18%. Considering that in recent years the level of compliance with corporate governance principles by Level 1 and Level 2 PJSCs has been rising at a slow pace (69% in 2016; 71% in 2017; 76% in 2018; 78% in 2019), the dynamics of changes occurring in 2019—2020 is by no means significant. The negative dynamics of compliance with a number of principles (for example, 1.1.6, 2.8.5, and 2.9.1) can largely be explained by the impossibility of holding meetings in person in the context of the COVID-19 pandemic.

6.4. The state of science and innovation[2]

In 2021, the sphere of science underwent institutional changes connected with completion of the system of state management of science. Collegiate bodies were created, which contribute to the strengthening of centralization and unification of accountability for budget financing. The state program of scientific and technological development was formed, which now combines all budget expenditures for civil research and development. Priority support for university science continued with a stronger focus on practical applications. The influence

1 *Polezhaeva N.A., Apevalova E.A.* Contribution of large corporations to the fight against COVID-19: digest monitoring for April 9–23, 2020 // Monitoring of Russia's economic outlook: trends and challenges of socio-economic development. 2020. No 11 (113). May. Ed. Gurevich V.S., Drobyshevsky S.M., Kolesnikov A.V., Mau V.A., Sinelnikov-Murylev S.G.; Gaidar Institute for Economic Policy, Russian Academy of National Economy and Public Administration under the President of the Russian Federation. P. 44–58.

2 This section was written by: *Dezhina I.G.*, Doctor of Economic Sciences, Leading Researcher, Gaidar Institute, Head of the Analytical Department on Science and Technology Development, Skolkovo Institute of Science and Technology.

of the pandemic was clearly noticeable in the field of technological innovations. There was a reduction of internal expenses of companies on research and development with a simultaneous decrease in the intensity of partnerships with academic institutions and universities.

6.4.1. Changing the science management system

2021 saw changes in the system of regulation of academic activity. In addition to the existing structures, two collegial bodies were established — an advisory group under the Council on Science and Education under the President of the Russian Federation, where the strategy of scientific and technological development will be elaborated, and the Commission on scientific and technological development under the Government of the Russian Federation, which coordinates the implementation of the strategy. Two decrees were issued simultaneously — on March, 15 No. 143 "About measures on increase of efficiency of the state scientific and technical policy"[1] (hereinafter — the first decree) and 144 "About some questions of Council at the President of the Russian Federation on a science and formation"[2] (hereinafter — the second decree)

The first decree provides for the establishment, as a permanent body under the RF government, of the Commission for Scientific and Technological Development, which, according to its mandate, will plan and coordinate state scientific and technical policy. The Commission is authorized to coordinate the work of federal bodies of authority, Russian Academy of Sciences, state corporations and development institutes with the aim to provide the coherence of the processes from academic research to the use of their results for the socio-economic development of the country. The powers of the Commission include participation in budget planning for research and development of civil purposes. By its tasks and functions the new body reminds the USSR State Committee on Science and Technology (SCST),[3] though it does not cancel either strategic development carried out by the RF Ministry of Science and Higher Education or the expert function of RAS. Every year by September 1st the Commission would have to provide information to the Presidential Council on the fulfillment of main directions of state scientific and technical policy, state program of scientific and technical development, the most important innovation projects of state importance. The Commission consists of ministers, the president of the Russian Academy of Sciences, the director of the Russian Science Foundation, and a number of governors.[4]

The second decree envisages creation of a consultative group at the Council under the President of the Russian Federation, which consists of scientists and

1 Executive Order pf the President of the Russian Federation of 15.03.2021 No. 143 "On measures to improve the effectiveness of state science and technology policy". URL: http://www.kremlin.ru/acts/bank/46506

2 Executive Order of the President of the Russian Federation of 15.03.2021 No. 144 "On Some Issues of the Presidential Council on Science and Education". URL: http://publication.pravo.gov.ru/Document/View/0001202103150024?index=0&rangeSize=1

3 *Alexander Mekhanik*: Science and technology policy has been revisited. 17.05.2021. URL: https://stimul.online/articles/sreda/nauchno-tekhnicheskuyu-politiku-podvergli-revizii/

4 *Dmitry Chernyshenko*: The Presidium of the Commission for Scientific and Technological Development of Russia was approved. 07.02.2022. URL: http://government.ru/news/44508/

specialists, who are not members of the Council. The group will develop and approve innovative projects of state importance, federal scientific and technical programs on the issues, which require separate decision of the president of the country. It is headed by the secretary of the Council, who is the president's aide ex officio.

Due to the institutional changes that took place, adjustments were made to the state program "Scientific and Technological Development of the Russian Federation" (hereinafter referred to as SP STD).[1] Now all financial resources for civilian research and development are consolidated in the STDP. In addition, the accounting of the results of scientific and technological activity is changing: it is planned that it will be carried out by stages of research and development using the scale of the level of readiness of technologies.[2] Consequently, a unified system of management of scientific and technological activity is introduced.

One of the key indicators of the State Program of Science and Technologies, concerning the volume of financing of research and development, has also been adjusted. Earlier in the ranking of countries by the volume of research and development Russia was to be in the top ten by 2030. Now a more difficult task is set — to take the 7th place. It is possible only on the condition of increasing the volume of extrabudgetary funding and this goal is also set in the Program. By 2030, the share of extrabudgetary expenditures for research and development should amount to 75% of total expenditures, i.e., to increase 2,5 times. However, this index concerns not all SP STD, but only the sub-program on formation and realization of complex scientific and technical programs.[3] The possibility of such a radical change in the ratio between the sources of funding is not obvious, but this goal itself can be considered in a positive way, because so far, the share of the state in funding research and development is excessive.

The NTD GP identifies thematic priorities, some of which the President outlined in his Address to the Federal Assembly.[4] These are pharmaceuticals, energy, climatic aspects and the agro-industrial complex. The GP STD in general follows the priority directions, which were defined in 2016. The Strategy for Scientific and Technological Development of the Russian Federation. Therefore, it is possible to state continuity in the state documents of different levels of the lists of thematic areas, which should receive priority state support.

Complex scientific and technical programs and projects (CSTP) were named as the main tool for implementation of the Strategy of scientific and technological development of the Russian Federation, however by the end of 2021 only one such

1 The RF Government Decree of 22.10.2021 No. 1814 "On Amendments to the State Program of the Russian Federation 'Scientific and Technological Development of the Russian Federation'". URL: http://www.consultant.ru/document/cons_doc_LAW_399365/#:~:text=Постановление%20Правительства%20РФ%20от%2022.10,с%2028%20октября%202021%20года

2 Scale of technology readiness levels is a list of stages of manufacturing and verification of the object of development from an idea to a serial sample, manufactured sequentially by laboratory, pilot, industrial full-scale technology. *Source*: Ministry of Science and Higher Education of the Russian Federation. URL: https://fcpir.ru/upload/medialibrary/955/gt_57_14vn_metodika-ugt-_002_.pdf

3 URL: https:// нтр.рф/indicators-and-ratings/indicator/cube34/

4 Presidential address to the Federal Assembly. 21.04.2021. URL: http://kremlin.ru/events/president/news/65418

program was launched.[1] At the same time, the Coordination Council on the priority directions of scientific and technological development of the Russian Federation considered 14 proposals on the development of CSTP and approved 11 of them.[2] The reason for such slow deployment of CSTPs lies in the extremely complicated system of their approval and reporting. The stimulus for the emergence of new CSTPs could be an established system of management and decision-making in science, which should lead to the development of the selected priority areas. And meanwhile in the Report of RAS "About realization of the state scientific and technical policy in the Russian Federation" it was stated that Russia continues to be a leader only in the field of defense technologies (*Table 9*).[3]

Table 9

Global leaders in key technology areas

Technology areas	Rating of leading countries				
	1	2	3	4	5
Agriculture, foodstuffs	USA	China	India	Brazil	Japan
Medicine, biotechnologies	USA	Great Britain	Germany	Japan	China
Nanotechnology, new materials	USA	Japan	Germany	China	Great Britain
Energy	USA	Germany	Japan	China	Great Britain
Defense, security	USA	**Russia**	China	Israel	Great Britain
Electronics, computer memory	USA	Japan	China	South Korea	Germany
Software, information management	USA	India	China	Japan	Germany
Car industry	Japan	USA	Germany	China	South Korea
Aviation, rail transportation	USA	Japan	China	Germany	Франция

Source: RAS's report "On the implementation of state scientific and technical policy in the Russian Federation". 2021. P. 35.

Another tool to stimulate large-scale development appeared in October: The Government Edict dated 06.10.2021, No. 2816-p defined a list of 42 major projects (strategic initiatives) of socio-economic development of the Russian Federation until 2030. As for technological projects, those were priority areas related to agro-industrial

1 The name of the program is "Creation of Pilot Production of Domestic Protein Components - the Basis of Dry Dairy Products for the Nutrition of Newborns and Children up to 6 Months of Age". It was approved by the Government Edict of 20.07.2021 No. 2010-p. *Source*: The government approved an innovative project for the production of components for dry milk mixes. 22.07.2021. URL: http://government.ru/news/42846/

2 RAS's report "On the implementation of state scientific and technical policy in the Russian Federation" (approved by the RAS's general meeting held on April 20-21, 2021).

3 Clarivate Analytics' 2021 analysis of research fronts based on the publication activity of countries (according to the Scopus database) generally confirms this conclusion. According to Clarivate, Russia ranks 18th in the world in the degree of influence on the development of various scientific fields, with a relatively better position in physics (14th place in the world) and mathematics (15th place in the world). *Source*: Research Fronts: Active Fields, Leading Countries // Clarivate. 2021. P. 10.

complex (AIC), energy sector as well as new means of transportation. The idea is to link "national programs, national projects and national goals" through strategic initiatives into a single whole.[1]

In general, the idea of centralized regulation, planning and budgeting, as well as end-to-end assessment by stages of the innovation cycle is implemented. In this case, the stages of the innovation cycle will be determined on the basis of the scale of technology readiness, which is more applicable to the assessment of applied and experimental developments, but not for fundamental research.

6.4.2. Sources and scale of science funding

Financing of science in 2021 declined with a simultaneous decrease in the share of extrabudgetary sources of funding. According to preliminary estimates, last year the level of domestic spending on research and development fell to 0.9% of GDP.

The share of extrabudgetary funding in many academic institutions dropped as the pandemic led to a reduction in the number of domestic industrial partners.[2] At the same time, due to sanctions, revenues from foreign customers went down and international cooperation itself became more complicated. In this context, amendments to the law "On Education" concerning educational activities and affecting the organization of international academic cooperation were discouraging.[3] The law gives the government the authority to determine the procedures and forms of educational activity. These amendments are in line with the regulation introduced in 2012 by the Federal Law "On Foreign Agents"[4] and, as a follow-up to it, the law on undesirable foreign organizations in May 2015.[5]

Educational activities are defined broadly — as "carried out outside of educational programs..., aimed at dissemination of knowledge, experience, formation of abilities, skills, values and competence for the purpose of intellectual, spiritual, moral, creative, physical and (or) professional development of a person, satisfaction of his educational needs and interests". In terms of international academic cooperation the innovations are as follows:

- International cooperation of educational institutions will be coordinated by federal agencies to prevent negative foreign interference in the educational process;

1 Meeting of the Council for Strategic Development and National Projects. 19.07.2021. URL: http://kremlin.ru/events/president/news/66217

2 *Volchkova N.* With a "minus" sign. Union activists assessed the interim results of the academic year // Poisk. 10.09.2021. No. 37. P. 3.

3 The amendments came into force on June 1, 2021. Source: Federal Law "On Amendments to the Federal Law 'On Education in the Russian Federation'" No. 85-ФЗ of 05.04.2021. *Source*: Official Internet Portal of Legal Information. URL: http://publication.pravo.gov.ru/Document/View/0001202104050036?index=5&rangeSize=1

4 Federal Law "On Amendments to Certain Legislative Acts of the Russian Federation Regarding Regulation of Activities of Nonprofit Organizations Performing the Functions of a Foreign Agent" of 20.07.2012 No. 121-FZ. URL: http://www.consultant.ru/document/cons_doc_LAW_132900/

5 Federal Law "On Amendments to Certain Legislative Acts of the Russian Federation" of 23.05.2015 No. 129-ФЗ. URL: http://publication.pravo.gov.ru/Document/View/0001201505230001?index=0&rangeSize=1

- Educational organizations will be able to conclude contracts with foreigners and foreign organizations only after receiving a conclusion from the Ministry of Science and Higher Education of the Russian Federation or the Ministry of Education.

To develop the provisions of the Law, the Ministry of Education developed a draft order containing strict regulatory norms, but the draft was withdrawn owing to a significant number of negative comments on the regulation.gov.ru portal. In September, there appeared a draft order of the Ministry of Science and Higher Education of the Russian Federation, which contained milder normative regulation, but it still dramatically raised the level of control over international cooperation and its forms. Despite the fact that the Ministry refused the idea to conduct expert examination of agreements on international academic cooperation before their conclusion, and only twice a year consider already concluded agreements,[1] the suggested form of accounting presupposes collection of rather detailed information on international cooperation.

The regulation applies only to those research institutes and universities that receive budgetary funds for research and development, and this is the majority of institutions in the science sector of the country. Accounting of contracts will be carried out by the federal budget institution — Scientific and Technical Institute of Inter-Branch Information.[2] At the same time, the organization participating in the international project should send to this institute a form (record card), in which a rather extensive amount of information is requested:

- the name of the contract and the field of science to which it relates;
- date of signing the contract, implementation timeline;
- participating institutions on the Russian and foreign side;
- a summary of the work and expected results;
- planned rights sharing to the results of intellectual activity;
- a list of persons who have access to state secrets and participate in the implementation of the contract;
- planned trips abroad for specific project participants.

This list indicates that international cooperation is being placed under close scrutiny. The question remains open as to how information, including personal and sensitive data, will be compiled and used. This regulation proposed by the Ministry of Science and Higher Education of the Russian Federation is still a draft order, but in all likelihood it will be adopted.

In view of this, the new legislation restricts the international activity of educational institutions, including complicating the invitation of foreign specialists. Meanwhile, international cooperation is gradually decreasing, if we evaluate it by the dynamics of the number of scientific articles in foreign co-authorship. This trend is the opposite of what is happening in world science. In 2014, there were around 27% of Russian publications in international co-authorship (of the total

1 The Ministry of Education and Science will require research institutes and universities to register agreements on international cooperation // TASS. 22.09.2021. URL: https://tass.ru/obschestvo/12476563

2 URL: http://www.consultant.ru/cons/cgi/online.cgi?req=doc&base=PNPA&n=78137#6me1vqSz3ot1d4c

decline over 5 years was 5 p.p.[1] At the same time, Russia is not a major partner for any of the 25 countries with the largest number of publications.[2] Recent examples are characteristic of the pattern of cooperation between researchers on COVID-19. Judging by the international publications in co-authorship, Russia was outside the collective efforts of researchers from different countries.[3]

Finally, the number of private domestic foundations allocating funds for academic research is not growing (there are very few such foundations, and those that exist have very modest budgets). In foreign countries it is one of the important sources of funding of science, especially socio-humanitarian and biomedical.

Thus, the state budget remained the main source of funding of science, and against the backdrop of reduction of other sources its importance increased. The main peculiarity of budgeting of state expenditures on civil research and development was their concentration within the framework of the state program of scientific and technical progress. Changes also took place in connection with reformation of scientific funds — the Russian Foundation for Basic Research (RFBR) and the Russian Science Foundation (RSF), which entailed essential redistribution of funds for basic research between them. Due to the fact that the main grant competitions were transferred to the competence of the Russian Foundation for Basic Research, its budget grew, and it is planned to increase annually, although unevenly. It is worth noting that in the beginning of the reform of scientific funds the government emphasized that the total budget of the Russian Foundation for Basic Research and the Russian Foundation for Basic Research will not change. However, the budget for 2022—2024 testifies to the contrary. There is a clear reduction of budget appropriations for competitive grant research (*Table 10*). According to the budget for 2021—2023, the sum of financing of the two funds was to amount to Rb47 bn in 2022 and Rb47.3 bn in 2023. However, in the new budget the total financing of RFBR and RFF will amount to only Rb37.9 bn in 2022 and Rb41.7 bn in 2023.

Table 10

Public allocations for fundamental research

Type of expenses	2022	2023	2024
Fundamental research (subdivision of the FCD), Rb bn	227.4	254.2	256.9
Share in total expenditures on civilian R&D, %	*49.2*	*53.3*	*53.8*
Russian Foundation for Basic Research	12.1	6.0	18.3
Russian Science Foundation	25.8	34.7	28.0

Sources: Appendix 10 to the explanatory note, Appendices 11 and 14 of Federal Law No. 390-FZ of 06.12.2021 "On the Federal Budget for 2022 and for the Planning Period of 2023 and 2024"; own

1 Indicators of science: 2016. Statistical compendium. M.: NRU HSE, 2016. P. 286; Indicators of science: 2021. Statistical compendium. M., 2021. S. 331.

2 According to the Scopus database, for the period 2015–2020. *Kwiek M.* The Globalization of Science: The Increasing Power of Individual Scientists // The Oxford Handbook of Education and Globalization / ed. P. Mattei, X. Dumay, E. Mangez, J. Behrend. Oxford: Oxford University Press. 2021.

3 American Academy of Arts and Sciences. America and the International Future of Science. Cambridge, Mass.: American Academy of Arts and Sciences, 2020. P. 10.

calculations.

On the whole, the growth of budget allocations for civilian research is planned only for 2023, and only by 3%. It means stagnation of financing of civilian science, while even now the expenses for it are at the level of 1% of GDP. At the same time the expenses on fundamental research[1] will be growing at a rate of 8—10% per year, and by 2024 their share should reach 53,8%.[2] Meanwhile, in absolute terms they became a little less than it was planned in the last budget cycle.

The item of expenses on fundamental research is also notable for the level of financing of separate organizations. The allocations for fundamental research carried out at the Kurchatov Institute R&D Center will be growing at a fast pace. By 2024, they should grow 2.2-fold in comparison with 2022 and make Rb13,6 bn. For comparison, the growth of allocations to fundamental research carried out at Lomonosov Moscow State University over the same period of time is planned to be equal to 9%, so that by 2024 they will reach Rb4.8 bn. In the meantime, the Kurchatov Institute continues to expand by adding new institutions to its ranks. In 2021, such affiliated institution became the All-Russian Research Institute of Aviation Materials which joined SIC on the basis of the decree of the RF Government Edict of 21.04.2021 1032-r. [3]

The national project "Science and Universities" is the main beneficiary of budget redistribution. Appropriations for it will increase by 5—8% compared to Law No. 380-FZ. Nevertheless, the increase in funding applies only to two of the four federal projects included in the National Project. It is worth noting an 11—15% increase in funding in 2022—2023 for the federal project "Development of Integration Processes in Science, Higher Education and Industry", which is important in view of the weak links between science and higher education institutions and the private commercial sector. Positive changes also include an 18-20% increase in R&D infrastructure spending during 2023—2024 under the federal project "Development of Research and Training Infrastructure", as the low research equipment renewal rate is becoming a growing problem. Meanwhile, a significant reduction (by 2024 — nearly by half) is provided for the least resource-intensive Federal Project "Human Capital Development for Regions, Industries and the Research and Development Sector". The Federal Project "Development of Large-Scale Scientific and Scientific-Technological Projects in Priority Research Areas" is also expected to see a slight reduction in allocations. In particular, competence centers of the National Technological Initiative are financed within its framework. On the whole, the proposed redistribution of funds between federal projects of the National Project "Science and Universities" should be recognized as reasonable.

1 Defined in the budget classification line "fundamental research" (0110) of the section "National issues".

2 This tendency corresponds to the trends of European countries, but is opposite to what is happening, for example, in the USA, where state financing of fundamental research is gradually decreasing in favor of applied and experimental works. There the share of budget appropriations for fundamental research fell to 42%. *Source*: The State of U.S. Science and Engineering 2020. URL: https://ncses.nsf.gov/pubs/nsb20201/u-s-r-d-performance-and-funding#federal-r-d

3 URL: http://publication.pravo.gov.ru/Document/View/0001202104220013

The Fund for Assistance to Small Innovative Enterprises in Science and Technology is again in a negative trend. Budget allocations for its activity will remain practically unchanged in the course of three years (in the range of Rb14.3—14.6 bn), while in the budget for 2021—2023 it was planned to increase the allocations to Rb17.4 bn in 2023. Taking into account that for small innovative business it is one of the main sources of financing of research and development, stagnation of the budget of the Fund may negatively affect the small science-intensive enterprises sector.

Thus, the volumes of the planned budgetary allocations for civilian science are decreasing in comparison with the indicators of the previous planning period. Simultaneously the imbalance between the directions of expenses grows, which is especially evident from parameters of financing of separate organizations of the sphere of science and higher education and the chosen projects.

6.4.3. Human resources and science outcomes

The Global Innovation Index, released in 2021, again showed that the weakest components of the Russian innovation system are the quality of public administration and the degree of compliance with laws.[1] The country invariably takes higher positions by the resources invested than by the results obtained. At the same time the quality of human capital in the Russian innovation system is rated the highest.[2]

That said, the staffing situation in science is not developing according to the optimal scenario. The number of researchers for the year declined by 0.5%, which, although a little, is a stable trend. Since 2015, the number of researchers has fallen by nearly 9%.[3] At the same time, the share of researchers aged 30—39 continued to drop as the youngest cohort — up to 29 years old — continued to grow. This means that the field of science is not becoming more attractive for graduates of universities and graduate schools.

The "brain drain" in Russian science has decreased, but has not stopped. The inflow of personnel to the country was modest: according to a survey conducted by the Higher School of Economics, in 2021 678 foreign researchers came to the country (in 2019—815), and most of them do not have a degree, which means they are not specialists of the highest qualification. The main influx of personnel came from countries such as Kazakhstan, Belarus, Ukraine, China, and Germany.[4] At the same time, they mainly go to countries with developed science, which means that they are quite competitive specialists.[5] The spread of emigration among scientists,

1 Global innovation Index 2021. URL: https://www.wipo.int/global_innovation_index/en/2021/?gclid=EAIaIQobChMIxeXFqYjh9AIV8xJ7Ch3WvglqEAAYASAAEgJkYfD_BwE

2 Through general quantitative indicators-such as the number of graduates in science and engineering-the proportion of women among those with candidate of sciences and doctoral degrees.

3 *Ratai T., Tarasenko I.* The Scale of Employment in Russian Science // Science. Technologies. Innovations. Express information. Moscow, NRU HSE. 13.10.2021.

4 *Vasilieva A.* The Russian Field of Scientific Experimentation // Kommersant. 04.02.2022. No. 20. C. 3. URL: https://www.kommersant.ru/doc/5195522

5 *Guskov A.E., Selivanova I.V., Kosyakov D.V.* Migration of Russian Researchers: Analysis Based on the Naukometric Approach // Biosphere. 2021. No. 1. P. 14.

despite the pandemic, has also become significant. Every third researcher would prefer to continue their research career abroad, and of the scientific youth up to 39 years old — almost every second.[1] So, in the circulation of academic personnel, the quality of the inflow gives way to the outflow of.

The source of replenishment of higher qualification personnel - postgraduate education — has been in crisis in recent years. The proportion of graduates who have defended a dissertation by the time they graduate stands at about 9%, whereas in 2010 it was 28.5%.[2] Since 2012, graduate school has become the third level of higher education, so it does not have to end with the defense of a thesis, which, among other things, led to such a drop in the level of defenses. Characteristically, this trend is the opposite of global trends.[3] A positive change may occur next year, as the legislative regulation of graduate school is changing as of March 1, 2022. It will now become mandatory to submit your thesis for defense by the time you graduate from graduate school. In addition, the institution will have the right to hire a graduate student in a full-time position, including a researcher or teacher, as well as to pay for the work from grants. So far, with low graduate student stipends, only 60% of graduate students have been included in any research projects at their institutions.[4] However, it is not only regulatory problems that have caused such a drop in the number of defenses. On the one hand, the conditions that are given to scientists for work, and on the other hand, the pressurizing system of formal requirements for scientific results play a role. This view is supported by the fact that young researchers tend to view adequate funding, minimal bureaucracy and freedom of scientific creativity as key factors in their decision to pursue science.[5] While in science the opposite condition to desires of young scientists is fixed: financing is modest, and bureaucracy grows.[6]

Despite human and financial constraints, performance indicators, measured by the number of publications indexed in international databases, continued to grow. Russia's share reached 3.06% of the global publication flow[7] and entered the world's top 10 countries by this indicator. At the same time, the citation rate of Russian articles was lower than the world average, amounting to 0.74 in 2021, while the world average was 1.0. In 2019, this index was 0.75, i.e. the level of interest in Russian publications is not growing.[8] In terms of the number of highly

1 According to a survey conducted in 2021 on a sample of 7200 people representing various scientific fields, universities and academic institutions from 80 regions of the Russian Federation. See: *Gusev A.B., Yurevich M.A.* Russia's Science Policy – 2021. Moscow. Buki Vedi, 2021. P. 67.

2 *Nefedova A.* The Russian postgraduate school is becoming internationalized // Science. Technologies. Innovations. Express information. Moscow. NRU HSE. 21.05.2021.

3 *Terentiev E.A., Kuzminov Ya.I., Frumin I.D.* Science without youth? The Crisis of Graduate Studies and Possibilities of Overcoming It. Moscow. NRU HSE, 2021.PC. 11.

4 Ibid. P. 20.

5 *Gusev A.B., Yurevich M.A.* Russia's Science Policy – 2021. Moscow. Buki Vedi, 2021.

6 This is particularly evident in resource-intensive initiatives, such as Project 5-100. Its research participants constantly complained about the growing bureaucracy, and this is reflected in numerous studies.

7 Scopus data base. *Source*: National Science Foundation, URL: https://ncses.nsf.gov/pubs/nsb20214/publication-output-by-country-region-or-economy-and-scientific-field

8 Overview of Research Activity in Russia: Productivity, Quality, Use of Resources // Elsevier. 2018–2021; Elsevier. Февраль 2022 г. С. 6.

cited scientists, the country is in 33rd place with a share of 0.09% of the global indicator. In absolute terms it looks tragic: there are only 6 such scientists in Russia, whereas in the USA there are 2,650, in China — 770, in Germany — 345.[1] Thereafter, the policy of increasing the visibility of Russian science through the growth of its productivity has demonstrated obvious quantitative successes, but has not yet affected the quality of academic research.

The rapid growth in the number of publications is now occurring worldwide, and this is cause for some concern, since it is leading to a decline in the number of original ideas. A recent study based on 90 million articles in 241 subject areas and almost 2 billion citations shows that the growth of new ideas is minimal.[2] On top of that, increasingly formalized requirements for the structure of scientific articles lead to the canonization of widely cited authors, which ultimately becomes a brake on development. Thus, in terms of "scientific performance problems," Russian science has fit into the global context, giving an example of contrasting achievements — high growth rates of quantity with relatively low quality.

6.4.4. Initiatives to support and promote science

Last year, several large-scale programs were completed, first of all Project 5-100 and the Program of Basic Academic Research, and new programs — "Priority-2030" and the program of basic academic research to 2030 were initiated. In addition, the selection of world-class research and education centers (RECs) continued, and the creation of carbon polygons commenced — a tribute to the rapidly expanding global environmental and climate agenda.

Project 5-100 and "Priority-2030"

In 2021, Project 5-100 ended, and it was replaced by the federal Program "Priority 2030". All the universities participating in Project 5-100 (these are 21 universities) continued to receive additional budget funding under the new initiative. However, the programs have only partial continuity. The number of participating universities in Priority 2030 has grown significantly (to 106, of which 5 are creative universities), and two tracks of development have emerged: (1) to achieve research leadership and (2) to promote territorial development.

Last year the results of Project 5-100, for the implementation of which around Rb80 bn were allocated, were summed up. At the beginning of the year, the Accounting Chamber issued a report summarizing the project's achievements and problems. The key conclusion is that Project 5-100, which is aimed at bringing five Russian universities into the first hundred in the world rankings by 2020 (ARWU, THE and QS) did not reach this goal. At the same time, according to bibliometric indicators the high schools participating in Project 5-100 have achieved great

1 *Weiss A.* New Tools, Old Tricks: Emerging Technologies and Russia's Global Tool Kit. Carnegie Endowment for International Peace, 2021. P. 17. URL: https://carnegieendowment.org/files/202104-Weiss_Russia_Global_Tool_kit.pdf

2 *Chu J.S.G., Evans J.A.* Slowed canonical progress in large fields of science // PNAS. 2021. Vol. 118. No. 41. URL: https://www.pnas.org/content/pnas/118/41/e2021636118.full.pdf

success, including in comparison with the sphere of Russian science in general (*Table 11*).

Table 11

Publications of Project 5-100 universities, % of the total number of Russian publications

Year	Share of publications in Web of Science, %	Share of publications in Web of Science, in first quartile magazines, %
2012	17.4	19.7
2019	33.3	47.7

Source: Report on the results of the expert-analytical event "Analysis of the effectiveness of measures of state support of Russian universities, aimed at improving their competitiveness among the world's leading research and educational centers". // Accounting Chamber. 02.02.2021. P. 3, 20.

Nevertheless, some data indicate that the increase in the number of articles was obtained at the expense of their quality.[1] In particular, it was this project's universities that actively used strategies to rapidly raise the number of publications — from hiring highly cited authors to publishing in "predatory" journals. The loss of quality in the pursuit of quantity is evidenced by the fact that the citation of the papers of the universities participating in Project 5-100 is several times lower than the average for the referring universities, i.e., foreign universities of comparable size and profile.[2]

However, the more serious problem of the Project was the growing gap between the participating universities and the rest of the universities.[3] The hope that Project 5-100 would create centers of growth, which would pull up all the others, has not been realized. Moreover, in a number of cases the stratification was exacerbated by monopolization, as the strongest professors and researchers from other universities began to move to Project 5-100 universities to work.[4]

The opinion of the academic community on the results of Project 5-100 is also of interest: like the Accounts Chamber, the majority of researchers considered the project to have failed to achieve its goals. Characteristically, there were more pessimists among university employees than the average for the sample (*Table 12*).

The long-term state support of a small number of selected universities has not had a serious effect on the state of university science, and, moreover, signs of stratification have increased, including in the group of "selected" universities themselves. This is confirmed by the opinion of the Minister of Science, according

1 *Trubnikova E.I.* The 5-100 Project: A View Through the Prism of Institutional Corruption Theory // Mir Rossii. 2020. Vol. 29. No. 2. P. 72–91.

2 *Dezhina I.G.* Winner's Choice" in Contemporary Russian Science Policy // Public Administration Issues. 2021. No. 3. P. 59.

3 *Lovakov F., Panova F., Sterligov I., Yudkevich M.* Does government support of a few leading universities have a broader impact on the higher education system? Evaluation of the Russian University Excellence Initiative // Research Evaluation. 2021. URL: https://doi.org/10.1093/reseval/rvab006

4 *Vasilieva A.* Russian universities have picked up their rankings. Educational institutions are in the top 100, but not those // Kommersant, 09.04.2021. URL: https://www.kommersant.ru/doc/4763225

Table 12

Opinion of representatives of the academic community on the results of Project 5-100

Answer option	Percentage who chose this answer, all respondents, %	Percentage of university employees who chose this answer, %
Success	14.7	17.6
I have no information	39.2	34.9
Hard to answer	9.3	8.6
Total	100	100

Source: Compiled on data from: *Gusev A. B., Yurevich M.A.* Russia's Scientific Policy – 2021. Moscow: Buki Vedi, 2021. P. 42.

to which the level of academic research is "the Achilles' heel of most Russian universities; there is no real science in some of them. Such a result may be related to the way in which Project 5-100 formulated its goals: the emphasis was placed on parameters related to national prestige (getting into the ratings), rather than on the development of science as such.

At the end of June 2021, the Russian Ministry of Science and Higher Education announced the launch of the 10-year "Priority-2030" program aimed at improving competitiveness of Russia in the sphere of education, science and technology. Consortiums of higher educational institutions (not necessarily legally registered) with each other and/or with academic institutes became an important element of the program.[1] Immediately after the announcement of the new program such consortia began to be created, mainly on a regional basis.[2] To all appearances, this activity is stimulated by the desire to receive funds from the program, as nothing prevented the consortiums from joining together to resolve various tasks in the past as well.

"Priority" winners were selected in October 2021.[3] In fact, there are three directions in the program. The first is made up of 17 universities, which receive basic funds and additional funding for achieving "research leadership". The second is made up of 28 higher educational institutions, which are also granted extra funds for achieving "territorial and/or sectoral leadership". The third direction is the remaining 61 universities, which receive only the basic part of financing to the tune of Rb100 mn. The total financing of Priority-2030 program through the end of 2022 will make more than Rb47 bn. As it was in Project 5-100, the winners of the first and second directions are divided into three groups, which differ in the volume of additional funding. The proportions remain practically the same as they were in Project 5-100: in addition to the base part by the end of 2022 the universities of the first group will receive Rb994 mn, the second — Rb426 mn, the third — Rb142 mn.

1 *Falkov V.N.* Priority 2030 program will help to reduce the gap between universities // TASS. 02.04.2021. URL: https://tass.ru/obschestvo/11056067

2 Russian Ministry of Science and Higher Education. Twelve consortiums were created to participate in the Priority 2030 program. 12.07.2021. URL: https://minobrnauki.gov.ru/press-center/news/?ELEMENT_ID=36637

3 URL: https://minobrnauki.gov.ru/documents/?ELEMENT_ID=40845

The novelty of Priority-2030 is that it has a rotation mechanism. That is why next year the universities that did not receive funds under the program or did not apply for the competition will be able to take part in the new selection. In particular, there will be a rotation among the first and second choice universities, which will be granted extra funding. In addition, the state's expectations from Priority 2030 universities are clearly formulated, including their scientific work. The minimum requirements are imposed on the universities, which will receive only the basic part of the grant. The efficiency of their scientific activity will be estimated by the traditional indicators: the volume of research and development per one scientifically-pedagogical employee (SPE) and the volume of expenses on research and development from own funds per one SPE.

Additional evaluation parameters for those striving to become leaders in research: the number of publications, which will be counted according to stricter criteria than it was in Project 5-100 (only articles in the first and second quartiles of Web of Science and Scopus will be taken into account), the amount of income from the results of intellectual activity per one scientific employee, which is also difficult to fulfill. It is worth noting that the tightening of the parameters of scientometric evaluation is in opposition to global trends, where the influence of scientometrics is fading. In particular, European countries are beginning to prohibit by law the use of research chops (such as impact factors of journals) when addressing any personnel issues.[1]

The universities in the track of territorial or sectoral leadership will be additionally assessed according to the following parameters: the number of publications in Web of Science and Scopus for the last 3 years per one employee; the volume of funds from research and development and scientific and technical services under contracts with organizations of the real sector of economy and at the expense of the subject's budget and local budgets per one employee; the volume of income from intellectual activity results per employee. Thus, the requirements for the quality of publications were relaxed for them, but the reporting on attraction of extra-budgetary funds was augmented. At the same time, when selecting universities for this track, the contribution made by applicant universities to their regional economy was not assessed. There is an experience of such evaluation abroad, but in Russia, except for single cases, the evaluations are limited to a set of traditional indicators for science that do not reflect the contribution of universities to the economic development.

Fundamental research program

In 2021, the Program of fundamental research of the state academies of sciences was completed. The main part of the program is a summary of research topics in the context of disciplines. In it, the formulations are given as research descriptions (names), but not what should be studied and why. Only specialists in

1 *Woolston C.* Impact factor abandoned by Dutch university in hiring and promotion decisions // Nature. 25 June 2021. URL: https://www.nature.com/articles/d41586-021-01759-5?fbclid=IwAR1Jly3bHpFIUW6sDTlGvS3Pvv7lT9fd8M2dz9u89VZVe2ehr8yPcDMj31c

the relevant (often quite narrow) fields of knowledge can evaluate whether these works have been performed and how effectively they have been done.

The indexes of achievement of the program's goals were similar to those established for the National Project "Science and Universities. These include the number of articles indexed in the Web of Science database, the proportion of researchers younger than 39 years old, patents, and other formal indicators. Such estimates give little indication of the program's real contribution. Even estimates of citations or changes in the number of highly cited scientists representing the RAS would be more accurate in terms of measuring the impact of the program on the development of Russian basic science and increasing its visibility in the world.

In addition to formal indexes of performance evaluation, the text of the program identified the areas on which its implementation will affect: (1) there will be conditions and prerequisites for intensification of innovation activity, support of the scientific priority of Russia in the global fundamental research, as well as for return of the advanced positions of Russian fundamental science; (2) effective participation of Russia in the international division of labor in the scientific and technical sphere will be ensured.

Indirectly, the level of realization of these intentions can be assessed by Russia's position in the global research fronts. According to Clarivate estimates, in 2021, Russia ranked 18th in the degree of influence of its scientific achievements on the world science. Thus, the best positions the country has in the areas related to physics (14th place) and mathematics (15th place). This indicates that there were no significant disciplinary shifts from what has traditionally been the case. If the program has contributed to a change in the scientific agenda, it is indistinguishable at the level of country generalizations.

The new program of development of fundamental research until 2030 became a sub-program within the State Program Scientific and Technical Research (SP STR). It sets three indexes of achievement of their targets. The first one is the number of scientists who have articles in scientific publications of the first and second quartiles, indexed in international databases (with their number equal to 47,300 by the end of 2020, the objective by 2030 is to have 30,800 such scientists).[1] The other two are spending on fundamental research (currently — 0.19% of GDP, the target is 0.14% of GDP) and the number of areas of scientific specialization, in which Russia ranks among the top ten (currently, leadership is recorded in 14 areas, the target is to remain leaders in 14 areas as well). Thus, for the basic academic research programs, it is planned to raise resources (from an assumption that GDP will grow essentially by 2030) at decrease in requirements to results, and results themselves are not pegged to the purpose of reception of wider return from a science.

World-class scientific and educational centers

Within the framework of the Program for the creation of world-class scientific and educational centers (SEC) five centers were identified, and thus, their total number reached 15 — the limit established in the documents of the program.

1 URL: https://нтф.рф/indicators-and-ratings/indicator/cube6/

The new winning centers turned out to be interregional (*Table 13*), since the experience of the 2020 competition has shown that such applications have a better chance to be supported. At the same time, the number of participants per SEC has settled at 30—40 institutions, regardless of the number of regions participating in a particular SEC. However, the models of SECs are diverse. Among them, it is possible to distinguish those focused on partnership with industry (Perm Krai, Ural SEC) and those relying on academic institutions and universities (Northwestern (Tyumen and others) and Belgorod).

Table 13

Typology of organizations participating in world-class SECs

Region where SEC is located	Number of universities	Number of research institutes	Number of companies	Total
Year of Establishment — 2019				
Belgorod	21	31	22	74
Kuzbass	6	4	14	24
Nizhniy Novgorod region	6	6	16	28
Perm Krai	2	1	27	30
Tyumen region, Yugra, Yamal-Nenets AO	10	13	7	30
Year of Establishment – 2020				
Samara, Penza, Tambov, Ulianovsk regions and Republic of Mordovia	20	6	18	44
Sverdlovsk, Kurgan, Chelyabinsk regions	9	10	48	67
Arkhangelsk, Murmansk regions, Nenets AO	14	8	20	42
Tula region	8	0	16	24
Republic of Bashkortostan	7	3	21	31
Year of Establishment – 2021				
Sakhalin region, Yakutia, Kamchatka Krai, Magadan region, Chukotka AO	8	19	17	44
Krasnoyarsk Krai, Republic of Khakassia, Tyva	9	5	14	28
Irkutsk region, Republic of Buryatia	8	12	15	35
Sebastopol, Crimea	9	9	16	34
Volgograd region, Krasnodar Krai, Postov region	13	8	19	40

Source: Own compilation on data URL: https:// ноц.рф/centers

The peculiarity of the initiative to create SECs is that with a large number of participants and large-scale plans to promote regional development, funding from the federal budget is modest. With a view to SEC, it is from 1 to 13% of the total funding of the center, and in absolute amount it varies at Rb100-200 mn. Regional budget and extra-budgetary funds account for the main share in SECs funding. Nevertheless, the federal budget plays an important symbolic role, reflecting the state support of a particular region and governor. In general, SECs are “governor’s” projects, because federal funding was received by those centers, in which the governor personally participated in the creation of the program. Achievement of performance indexes, thus, is the area of the governor’s responsibility. Amidst

growing centralization of management, it is likely to help mobilize the work of SECs. Meanwhile, it reduces the flexibility of management of centers, sets them primarily to work on indicators. In this case, the indicators of goal achievement are mainly economic, such as gross regional product (GRP) growth, the amount of taxes paid to the regional budget, the change in export volumes, the amount of attracted extra-budgetary funding, etc. It is obvious that research activities in SECs should be applied, practice-oriented. The ability of SECs to meet such indicators is not obvious, and the development of the first five SECs created by an administrative decision in 2019 is still inertial. Apparently, the uncertainty in the development of SECs has been noted at the highest level of management, since last year a plan was announced to rotate SECs. Namely, every year one center in each top five will be replaced by the regional SEC that was among the candidates for competition support. The idea is that this should create competition and thus incentives for development.[1] So far, the principles of rotation have not been worked out; in particular, there are no criteria for evaluation of mono-regional and inter-regional SEC. Besides, following the results of the joint session of the State Council and the Council on Science and Education, past on December 24, 2021, the President instructed to analyze the centers and submit proposals on the revision of programs, including the system of SEC management. The idea of SECs evaluation is justified, in particular, a number of large companies, which have started to cooperate with SECs, do not understand the advantages of this format, as compared to the traditional bilateral partnership "Research Institute (University) — Company".[2]

Carbon polygons

The Russian science policy has not remained aloof from the world trends related to the climate agenda and the need to reduce the carbon footprint. Presented in July 2021 by the European Commission Environmental Green Deal plan assumes a reduction of carbon dioxide emissions by 2030 by 55% compared with 1990 levels.[3] Accordingly, the topic of methods for measuring the "carbon footprint" has become more relevant in the scientific sphere. Moreover, in 2021 there were new calculations of the carbon footprint of scientific activity itself. It has been calculated that if, for example, a scientist sends 30 emails a day, he causes CO2 emissions of around 600 kg per year, and building a communications and information system worth 5,000 euros is equivalent to CO2 emissions of around 2.8 tons per year (without taking into account the carbon impact of its exploitation).[4]

1 From the transcript of the 503rd plenary session of the Federation Council. 14.04.2021. URL: https://leo-mosk.livejournal.com/8727219.html; https://leo-mosk.livejournal.com/8727493.html
2 Science and education centers: hope or a headache for the region. Discussion. Gaidar Forum. 13.01.2021.
3 *Pazi M., Leibin V.* The Science of Green Hype // Expert. November 1, 2021. No. 45. URL: https://expert.ru/expert/2021/45/nauka-zelenogo-khaypa/
4 *Egerev S., Dezhina I.* Science Communication in the Age of the Pandemic: Lessons for Russia // Science Management: Theory and Practice. 2022. No. 1 (accepted for publication).

In Russia, in July, a Federal Law No.296-FZ "On limiting greenhouse gas emissions" (of 02.07.2021) [1] was passed, and the Ministry of Science and Higher Education came up with the idea of building a network of carbon polygons.[2] In July, programs for the development of 7 carbon polygons[3] were approved, by September it was decided to create 14 polygons,[4] and by December — 16.[5] Therefore, last year it was one of the most dynamically developing initiatives. A carbon polygon is an area where greenhouse gases will be monitored and methods will be developed to calculate the ability of the environment to absorb carbon from the atmosphere. To carry out this work, it is planned to allocate federal funding in the amount of several tens of millions of rubles per polygon per year with the presence of parity support from non-budgetary sources.

According to experts,[6] the quality of polygon programs is very different: there are projects of experimental teams, which will produce breakthrough scientific results, and there are projects aimed primarily at the creation of infrastructure, including the construction of campuses. The idea of the Ministry, however, is not only in the development of science, but also in the performance of educational and outreach functions, including raising the level of culture in the field of climate agenda among students and schoolchildren.[7] Therefore, it is planned to link the activities of the carbon polygons with the work of the world-class SECs.[8]

6.4.5. The impact of the pandemic: developing open science

In 2021, attention to the problems of "open science" as a clear consequence of the pandemic intensified. For Russia, moving in this direction can raise the importance of domestic science even while maintaining the current level of productivity.

Last year, UNESCO issued recommendations for open science, stating the forms of open science:[9] open access to scientific knowledge, including scientific publications, open research data, software, code and hardware; open scientific infrastructure; open involvement of public actors; and open dialogue with other

1 URL: https://rg.ru/2021/07/07/fz-ob-ograni4enii-vybrosov-parnikovyh-gazov-dok.html#:~:text=N%20296-ФЗ%20"Об%20ограничении%20выбросов%20парниковых%20газов",-Принят%20Государственной%20Думой&text=1.,-Настоящий%20Федеральный%20закон&text=Целью%20настоящего%20Федерального%20закона%20является,снижении%20уровня%20выбросов%20парниковых%20газов.

2 In 2020, the first carbon polygon was created in Kaluga region.

3 They will be located in the Kaliningrad, Sakhalin, Sverdlovsk, Novosibirsk, Tyumen regions, Chechnya and Krasnodar Krai.

4 URL: https://tass.ru/v-strane/12490843

5 The carbon polygon program was expanded to 16 regions // TACC. 09.12.2021. URL: https://tass.ru/ekonomika/13153387

6 *Romanovskaya A.* The hype surrounding forest-climate projects threatens to falsely prioritize the fight against climate change // Kommersant. 10.08.2021. URL: https://www.kommersant.ru/doc/4928811

7 *Suchkova S.* How Russia creates a network of carbon landfills, and why they are needed // Recycle. 03.11.2021. URL: https://recyclemag.ru/article/rossiya-sozdaet-karbonovih-poligonov-zachem-nuzhni

8 *Astakhov K.* How carbon landfills will help «repair» the planet // Nezavisimaya gazeta.23.11.2021. URL: https://www.ng.ru/science/2021-11-23/12_8308_planet.html

9 UNESCO Recommendation on Open Science. UNESCO, 2021. URL: https://en.unesco.org/science-sustainable-future/open-science/recommendation

knowledge systems. National plans for open science have begun to appear in individual countries. In France, the government released the Second National Plan for Open Science 2021—2024.[1] It plans, among other things, to create a national platform for scientific data, promote open source software policies, and develop open science skills. At the same time, the budget for open science in the country will be tripled.

Regionally, Europe and Asia are moving most vigorously toward open access (accounting for 40 and 33% of open access articles in 2021, respectively). This is where the number of public research foundations demanding open access publication of their funded papers is surging. Consequently, more and more journals are moving towards open access policies. In this case, the authors themselves pay for the publication of articles, as a rule, covered by grants or academic institutions where they work.

The scale of the transition to open access varies greatly across disciplines. The Springer Nature study found that today, of the roughly 1 million open access articles,[2] 44% are in medicine and 17% in the life sciences. At the same time, the number of articles in the social sciences and humanities is escalating: their share of open access articles doubled between 2015 and 2020, although it is more difficult for them than for the natural and technical sciences due to a lack of funding to pay for publishing articles. This study also confirmed that when an article is published in open access, the number of its readers expands dramatically — on average, each such article is cited 1.63 times more often[3] than articles in closed access, and they have a markedly higher number of downloads. In Russia, the transition to open access publications will require, first of all, revision of the budgets of both foundations, scientific institutions and higher educational institutions.

The next direction, moving to open data, is even more controversial. In theory, it could lead to the collapse of international collaboration if access to such data no longer requires personal relationships. Open data, on the other hand, can facilitate connections for sharing by researchers from different countries. So far, measurements of COVID-19 research collaborations demonstrate that scientists are reluctant to share their data with other researchers. In particular, only 9% of articles on coronavirus topics contained appendices of raw data.[4] In the meantime, there were even fewer articles on other topics with open data — only about 1% of the total number.

1 Second French Plan for Open Science. Generalising open science in France. 2021–2024. URL: https://www.ouvrirlascience.fr/second-national-plan-for-open-science/

2 *Inchcoombe S.* Guest Post: What Can We Learn from One Million Open Access Articles? Scholarly Kitchen. 07.12.2021. URL: https://scholarlykitchen.sspnet.org/2021/12/07/guest-post-what-can-we-learn-from-one-million-open-access-articles/?utm_medium=email&utm_source=FYI&dm_i=1ZJN,7NTVH,E29D5V,V7QHC,1

3 Going for Gold: Exploring the Reach and Impact of Gold Open Access Articles in Hybrid Journals. While Paper. Springer Nature. 2021, P. 3. URL: file:///D:/Library/Downloads/Going%20for%20gold%20white%20paper%20(Springer%20Nature).pdf

4 *Grove J.* Data sharing on Covid research 'disappointing', says EU chief // Times Higher Education. 26 May 2021. URL: https://www.timeshighereducation.com/news/data-sharing-covid-research-disappointing-says-eu-chief?utm_source=newsletter&utm_medium=email&utm_campaign=editorial-daily

The politics of data discovery are directly related to the formation of different platforms. The pandemic pushed the creation of open platforms even further, showing the importance not only of rapid and open publication of research, but also of real-time collaboration among academics to achieve a common goal quickly.

Therefore, there are both more accessible tools of scientific inquiry and new financial models, which, in turn, affect the work of institutions and research teams.

In Russia, participation in the development of open science is manifested mainly at the level of individual journals, rather than scientific policy as a whole. In the academic community, pirate libraries of scientific literature (for example, Sci-Hub, a platform for circumventing paid access to publications) have become the most popular tool for open science, due to the fact that not all academic institutions are able to pay for full access to library resources. A recent blitz survey of more than a thousand Russian researchers showed that at least half of them would see their scientific work suffer noticeably or severely if they lost access to pirate libraries, and for 15% it could lead to the termination of their work.[1]

Most likely, the issues of funding during the transition to open science can become the main ones in Russia. In this case, the integration into the practice of open science will take place, first of all, through the development of academic cooperation and under the pressure of different state programs and initiatives establishing requirements to publish in foreign journals of the first and second quartiles. In this context, at a minimum, Russian academic foundations will have to search for ways of budgetary support of grant holders' publications in open access journals. It is worth noting that the redistribution of funding may be significant: according to estimates, Russian authors paid about $10 mn (Rb760 mn) for open access publications in 2020, and not always in quality publications, and this is 5-fold the budgetary costs for maintaining all scientific journals of the Russian Academy of Sciences.[2] Accordingly, a discussion arose on how to redirect such large-scale financial flows to the development of the domestic information base.

In addition to funding, the principles of open science also affect the ethics of research. With the openness of platforms, data and peer review, compliance with ethical norms of data use becomes a necessity. For Russia this will mean a restructuring of institutions, forcing them to refocus their work from formal fulfillment of reporting indicators to ensuring growth in the quality of scientific research.

6.4.6. Status and initiatives in technological innovation

There was no revival in the innovation sphere last year, because investment in new technological projects slowed down due to the pandemic. First of all, it

1 Telegram channel Russia Research. 14.12.2021. URL: https://t.me/trueresearch/1274

2 *Belyaeva S.* And a little embarrassing. Is it worth paying from the budget for publications in dubious journals? // Poisk. 11.02.2022. № 7. C. 14. URL: https://poisknews.ru/magazine/i-nemnozhko-stydno/

can be traced through the parameters of partnership of academic institutions and universities with companies. In the field of state policy, we can note the beginning of the construction of scientific and technological valleys, as well as the continuation of the reform of institutes for development, which has not yet brought obvious changes.

Dynamics of scientific and technological development

The systemic problem of low business spending on research and development and weak cooperation between companies and scientific institutions and universities was exacerbated by the pandemic. Intensity of funding of research and development decreased for almost one third (30.1%) of high-tech industrial enterprises. In the meantime, 19.5% of companies, on the contrary, expanded their research programs,[1] however the total balance remained negative.

At the same time, two-thirds of the companies investing in research and development did not cooperate with scientific organizations and universities,[2] and the dynamics of the share of companies that order research or scientific and technical services to scientific organizations and universities is decreasing. According to recent estimates the share of such companies was less than 30%.[3] Last year almost half of high-tech companies ceased cooperation with research institutes and universities.[4] At the same time earlier (according to the data for 2020) 76.8% of organizations attracted partners for research and development only on an ad hoc basis, i.e. cooperation was irregular. [5]

The reduction in interactions cannot be entirely attributed to the effects of the pandemic. Regardless of it, there are barriers to the development of cooperation on the part of both companies and universities. Companies complain about overpricing and insufficient quality of research, which are carried out by academic institutions and universities. Especially high price is set by the universities for their work.[6] Besides, it is admitted insufficiency and weak effects of measures of state stimulation of cooperation (including such as development of cooperation of Russian universities, academic institutions and industrial enterprises, programs of innovative development of companies with state participation, cooperation within innovative clusters), as well as measures aimed at stimulation of corporate investments into research and development independently from the factor of partnership with academic institutions and universities (tax benefits, assistance in protection of rights for results. In turn, universities point out that companies'

1 *Vlasova V.,Rud V.* Effects of the COVID-19 pandemic on innovation in Russian high-tech // Science. Technologies. Innovations. Express information. Moscow. NRU HSE. 27.05.2021.
2 *Vlasova V.* Industry-science cooperation and public policy instruments utilization in the private sector // Journal of Business Research. 2021. Vol. 124. P. 519–528. URL: https://doi.org/10.1016/j.jbusres.2020.10.072.
3 *Simachev Yu.V., Kuzyk M.G.* Interaction between Russian business and science: points of contact and stumbling blocks // Voprosy Ekonomiki. 2021. No. 6. P. 103–138. URL: https://doi.org/10.32609/0042-8736-2021-6-103-138
4 *Vlasova V.,Rud V.* Effects of the COVID-19 pandemic on innovation in Russian high-tech // Science. Technologies. Innovations. Express information. Moscow. NRU HSE. 27.05.2021.
5 *Vlasova V.* Who does business cooperate with when developing innovations? // Science. Technologies. Innovations. Express information. Moscow. NRU HSE. 08.12.2021.
6 Ibid, p. 126.

orders for research and development are too applied and highly specialized, and such projects have very short implementation schedules.

In the area of venture financing of technological projects, there was some revival of activity compared to 2020, but the main investors were single "ecosystem" companies — Sber, VK (formerly Mail.ru Group), Yandex, MTS and VTB, which accounted for 22% of all deals. This is twice as much as a year before.[1] At the same time, state companies (with the exception of Sber) became buyers of startups in only 2% of cases. Thus, state companies prefer to deal with their own developments rather than buy external companies. The absolute leader in the number of start-ups is Moscow, although few companies successfully develop here as well. The reasons are underdevelopment of infrastructure, low availability of investments, staffing problems and state of science.[2] The list of factors shows that it is the science-intensive companies which experience the most problems of development.

Science and technology valleys

Last year the construction of scientific and technological valleys commenced, where close cooperation between science and industry is expected. Since January 2021, the technological valley "Vorobiovy Gory" (on the basis of the Moscow State University) and "Composite valley" in the Tula region began to be built.

Valleys are ideologically similar to collective centers for developers and consumers of technology. They should house testing grounds for new products, so that it is possible not only to do research and development, but also to test their results at pilot industrial facilities. Certification centers and engineering centers are also important, that is, a complex of organizations that create and test new technology. The task of personnel training is also built into the design of the valleys, as it is supposed to establish their partnership with the key university (respectively, in the valleys under construction it is Moscow State University and Tula State University).

Projects of the valleys can be seen as a development of the ideas behind the construction of the Skolkovo Innovation Center, where an interface was created for interaction between scientists and technology developers, including small companies. However, the scale of initiatives is different. In the Tula valley among the participants-residents around 40 technological companies are expected.[3] In "Skolkovo", thanks to the fact that now the residents do not have to physically locate on the territory of the innovation center, there are almost 3,000 start-ups, 10% of which have revenues over Rb100 mn per year.[4] The

1 According to a study of more than 300 Russian-speaking representatives of the venture capital market, "FinTech and EdTech have become the most attractive niches for investors in 2021" // Inc. 09.12.2021. URL: https://incrussia.ru/news/fintech-i-edtech/

2 *Boos V.O., Gokhberg L.M., Ivanova E.A.*, et. al. Innovative Moscow: Strategic Challenges and Tactical Responses / Edited by L.M. Gokhberg, E.S. Kutsenko. Moscow. NRU HSE. 2021. P. 11.

3 *Leibin V.* Material for victory // Expert. 22.02.2021. № 9. URL: https://expert.ru/expert/2021/09/material-dlya-pobedy/

4 *Balashova A.* Head of Skolkovo Ventures – RBC: "Startups started to be wary of taking government money." // RBC. 04.03. 2021. URL: https://www.rbc.ru/interview/technology_and_media/04/03/2021/602a80da9a7947cabe097bc7

valleys being created are similar to "Skolkovo" in that the valleys will have similar tax benefits.[1]

Continuing the reform of technological development institutes

Institutional changes associated with the reform of development institutes, launched in 2020, passed without excesses and serious transformations. Development institutes of technological profile, which were transferred to VEB. RF, practically did not change their profile and principles of work. There was a formal change in the form of binding areas of work of institutes to the national development goals of Russia until 2030,[2] these were formulated so broadly that it was not too difficult to adjust the agenda to them.

Development institutes, as before, will report on the results of their work by the number of new jobs created thanks to their investments and the growth of revenues of the financed companies. As a rule, such data, especially in generalized form, tell little about the effectiveness of investments made.[3] That is why, there was a lot of expert advice on how to change the system of evaluation indexes. Among others, it is recommended to "count" technologies and new products in kind, which should more clearly show the result. Proposals also concern complex accounting as the state goals, and the interests of business. However, despite the discussions, the reporting has not changed significantly.

It is planned that in the future VEB.RF will determine the priorities of development institute's activity, control the elaboration of their strategies and the achievement of efficiency indicators. Finally, its functions will include reorganization or liquidation of institutes for development with the possibility of transferring property to its authorized capital and performing their functions.[4]

Among the development institutions, the most noteworthy last year was the activity of Rusnano JSC in connection with the losses found in the organization.[5] In November, there was a threat of default of Rusnano during redemption of its bonds issue. On November 19, the Moscow Stock Exchange on instructions of the Bank of Russia suspended trading in company's bonds. Rusnano acknowledged the debt accumulation and commenced to discuss restructuring options. Meanwhile, the Ministry of Finance intends to prevent the situation when the company fails to fulfill its obligations.[6]

1 *Mekhanik A.* Valley of technology and science related to commerce and factories // Stimul online. 22.02.2021. URL: https://stimul.online/articles/sreda/dolina-tekhnologiy-i-nauk-otnosyashchikhsya-k-torgovle-i-fabrikam/?fbclid=IwAR1Q_PgPV9d4SHAk0d7kGW7kb_6twQAP_tZRk1AEKwD4hECnDtoyx-TK0c8

2 There are five national goals: to preserve the population and its health; to create opportunities for self-realization and talent development; to provide a comfortable and safe living environment; to provide decent, efficient labor and successful entrepreneurship; to transform digitally.

3 *Sokolov A.* Institute for development have failed to innovate // Vedomosti. 01.03.2021. URL: https://www.vedomosti.ru/economics/articles/2021/03/01/859742-instituti-razvitiya

4 *Kruchkova E.* Institutes for development will be taken into a holding company // Kommersant. 23.04.2021. C. 2. URL: https://www.kommersant.ru/doc/4783664

5 Rusnano's net loss according to IFRS for 2020 increased 3.2-fold // TASS. 02.04.2021. URL: https://tass.ru/ekonomika/11061621

6 *Tepliakov S.* Siluanov named the causes of Rusnano's problems with debts // Forbes. 31.12.2021. URL: https://www.forbes.ru/finansy/451635-siluanov-nazval-priciny-problem-rosnano-s-dolgami

Since the creation of Rusnano in 2007, the total amount of state support came to Rb590 bn[1] (Rb130 bn was allocated in the form of the initial direct contribution, the rest — in the form of state guarantees against obligations). Since then, the development institute has supported 109 projects,[2] in fact, engaged in venture capital financing. The crisis could be caused by the fact that most of the projects are long-term and with a long payback period, and investment in them was carried out on borrowed funds. The percentage of successful projects is unknown, there are only estimated experts' assessments, ranging from "complete failure" to "zero status" and even "small plus", if we consider not only individual projects of Rusnano, but the portfolio as a whole.[3] The latest available data on the aggregate efficiency of Rusnano's projects ends in 2019.

* * *

Last year saw changes in the system for managing scientific and technological development. In addition to the Ministry of Science and Higher Education of the Russian Federation and the Russian Academy of Sciences, new collegiate bodies received the functions of expertise and goal-setting. The new management structure strengthens centralization, which is connected with the idea of end-to-end planning and reporting. A part of the new management system is the state program of scientific and technological development, which unites all expenses on the civil research and development, and it also allows to build the end-to-end reporting on the stages of the innovation cycle. On the one hand, it should increase transparency and synergy, but on the other hand, the single hierarchical system is difficult to manage.

The problem of raising the practical impact of science has become more frequently discussed at the state level. As the President of the country noted, "unique discoveries should not remain only a scientific breakthrough - they should certainly serve the people".[4] Among new tools of state policy the world class SEC and the Priority-2030 program resolve the task of increasing contribution of scientific research in economic development, first of all regional. In particular, they aim at the growth of cooperation of universities and academic institutions with companies. However, the last year the level of business activity in support of research and development somewhat decreased, including under the influence of the pandemic.

Growing publication activity is a positive trend in science, however this trend may be unsustainable when the staffing situation remains problematic. The

1 Meeting with Sergei Kulikov. 02.12.2020. URL: http://kremlin.ru/events/president/news/64536
2 *Boiko A.* Siluanov spoke about Rusnano's reboot // Ведомости. 30.11.2021. URL: https://www.vedomosti.ru/economics/articles/2021/11/30/898246-perezagruzka-rosnano
3 *Starostina Yu.* Chubais as a statesman did not protest. How Rusnano found itself on the verge of default // The Bell. 03.12.2021. URL: https://thebell.io/chubajs-kak-gosudarstvennyj-chelovek-protestovat-ne-stal-kak-rosnano-okazalas-na-grani-defolta
4 Meeting on the development of genetic technologies. 17.11.2021. URL: http://kremlin.ru/events/president/news/67119

outflow of researchers from science continues, and the share of the youngest generation, researchers under 29 years old, is decreasing. Postgraduate studies are still a weak source of higher qualification manpower, as the number of defended dissertations drops. It is connected not only with peculiarities of postgraduate studies regulation, but also with conditions that are given to scientists for work, including both mobilizing and pressurizing system of formal requirements to scientific results.

The visibility of Russian science can be enhanced if there is more active involvement, including at the level of public policy, in the movement toward open science. For this purpose, it is important to pay more attention to creation of open science platforms and participation in joint research with partners from other countries. The government science foundations can help boost international cooperation, including through greater use of science diplomacy tools. However, the issue of financing open access will be a complicated one within the framework of this agenda.

6.5. Customs administration[1]

The year 2021 saw the accomplishment of reforms within the scope of the Comprehensive Program for Development of the RF Federal Customs Service till 2020 and the Strategy of the Development of the RF Customs Service till 2020. The main transformations are related primarily with the introduction of modern information technologies in customs procedures making it feasible to switch over to automatic registration of customs declarations and automatic (with no involvement of customs officials) release of goods. Vladimir Bulavin, Head of the RF Federal Customs Service declared that in 2021 25% of customs declaration were issued in an automatic mode when importing goods and nearly 43% when exporting. "After carrying out customs reforms, the customs authorities have achieved an optimal operating mode: at present 68%, 80% and 98% of customs declarations are released within an hour, 4 hours and a day, respectively, while only 2% of declarations are sent for checking. From January through November 2021, customs authorities registered in an automatic mode over 4.1 mn declarations and released automatically over 1.34 mn declarations."[2] Notably, an increase in the share of consignments with an automatic release of goods takes place amid a 37% pickup in foreign trade as compared with 2020.

A tax maneuver in the oil industry[3] changed the pattern of customs payments: imports account for nearly two-thirds of customs duties and taxes administered by the customs authorities (import customs duties, VAT, excises and single customs payments from individuals).

In 2021, the RF Government paid a particular attention to support Russian exports. By RF Government Resolution No.2393-r of August 28, 2021, a new version of the plan (road map) of implementation of the mechanism of management of

1 This section was written by *Balandina G.V.,* Senior Researcher, IKND RANEPA.
2 Official website of the Federal Customs Service. – URL: https://customs.gov.ru/press/federal/document/319904
3 Tax maneuver suggests a stepwise reduction in export duties on oil to zero with a simultaneous increase in the barrelage tax (severance tax) for the equivalent amount.

system-based changes in regulation of entrepreneurial activities – "Transformation of the Business Environment" in the line of "Exports of Goods and Services" – was approved. This Plan includes initiatives aimed at specifying legal regulation of various requirements set to exporters in order to remove or reduce administrative barriers.[1]

According to the research into regulatory base and the survey of exporters, it was established that in customs administration the most sensitive regulatory measures for exporters included difficulties in application of customs procedures for processing on the customs territory. Customs procedures envisage the option of importing materials, raw products and components meant for production of export products without payment of customs duties and VAT. Administration of customs control over each consignment of foreign goods in the unit or consignment of manufactured goods (identification of foreign goods in derived products) blocks up the application of customs procedures in respect of manufacturing – based on continuous utilization of foreign components – allowing for the mixture of products supplied by individual consignments in the process of storage or production.

Though the effect of each individual administrative procedure regulating exports is insignificant, their multiplicity, which is now and then associated with duplication of functions of individual agencies (for example, securing of a permit for the exports of products from the relevant agency requires a conversion of a permit into the license of the RF Ministry of Industry and Trade), differences in requirements set to exporters as regards provision of documents and information, including a hard copy thereof for securing the required permit, as well as repeated provision of the same information, overburdens the overall mechanism of exports and frightens off SME from engaging in export operations. A new approach to administrative supervision based on a single provision and multiple utilization of one and the same information in an electronic format for all types of state control is needed.

Also, restrictions in the field of foreign exchange and exports control are sensitive to exporters. As regards the foreign exchange control, exporters incur expenses because of the requirement to repatriate foreign currency proceeds, the need to comply with procedural requirements in terms of provision of reports to authorized banks, as well as risks of high penalties and criminal prosecution for the violation of the existing requirements. Despite the measures taken in this

1 To identify administrative barriers in exports, the RF Ministry of Economic Development together with the Russian Academy for Foreign Trade developed a special instrument in terms of a matrix of the exporter's customized path specifying the exporter's all moves of networking with state authorities from production of goods and entering into an export contract to settlement payments on the export deal with assessment of the effect of regulatory measures on the exporter's time inputs and financial costs. Based on the outputs of this work together with exporters, proposals are elaborated to specify the regulatory base. The first outputs and proposals were discussed by representatives of the RF Ministry of Economic Development, the RAFT, the REC, think-tank on exports of goods and services and some exporting companies within the framework of the "Exporter's New Customized Path: First Steps" session of the "Made in Russia" Forum on December 10, 2021. The Forum was sponsored by the Russian Export Center. The official website of the RF Ministry of Economic Development. – URL: https://economy.gov.ru/material/news/minekonomrazvitiya_rossii_sozdali_matricu_klientskogo_puti_eksportera.html).

field to liberalize the legislation, exporters stand for a complete cancelation of foreign exchange control, which initiative could narrow the gap between the export-regulation regime of Russian companies with that of companies from the OECD member-countries. In the field of export control, the goods "identification" procedure, that is, a confirmation proving that goods are not subject to export control restrictions is still sensitive to exporters.

The year 2021 saw further elaboration of control measures to be taken after the release of goods. After the release of goods, customs control is carried out by the customs authorities in terms of verification of documents and information, desktop customs audit and on-site customs inspection within 3 years from the date of release of goods. A shift of customs control from the "declaration" stage to the "after release" stage will reduce considerably the time-limits for the release of goods. According to Vladimir Bulavin, Head of the Federal Customs Service, in 2021 additional customs payments for the overall sum of over Rb23 bn were charged thanks to such supervising measures."[1]

The RF Federal Customs Service has been carrying out an experiment on introduction of customs audits – a mechanism of verification of compliance by corporate entities, foreign trade operators having relevant guidelines and competences for doing it, with the customs legislation – since the end of 2021. By Order No.960 of October 29, 2021 of the RF Federal Customs Service "On Carrying Out an Experiment with Introduction of Customs Audit",[2] envisaging the imposition of the audit-related initiative on the business within the scope of the experiment to be held from November 8, 2021 till March 31, 2022, it is established that based on the outputs of work to be done within the specified period it is necessary to determine the requirements (terms and criteria) to auditor-companies and auditees, issues to be specified in the findings prepared by the auditor-company and feasibility of utilization of such findings for relevant decision-making by customs authorities.

The list of goods, which circulation in the Russian territory is allowed provided that they are marked with relevant means of identification, has been extended. The mandatory marking of cheese, ice cream and edible ice was introduced from June 1, of dairy products, whose storage life is over 40 days, from September 1 and of dairy products with storage life of less than 40 days and bottled mineral natural water from December 1. The RF Government is planning to expand application of mandatory marking requirements to beer, bicycles, wheeled chairs and carbonated and low-alcohol beverages.[3] In light of the expansion of the range of products which are subject to mandatory marking, the business community comes out with a proposal to create additional conditions for marking imported goods in the Russian territory, for example, to do it at temporary storage facilities. Due to a limited number of customs warehouses where it is allowed to do marking,

1 The official website of the RF Federal Customs Service. – URL: https://customs.gov.ru/press/federal/document/320107.
2 The official website of the RF Federal Customs Service. – URL: https://customs.gov.ru/uchastnikam-ved/tamozhennyj-audit/obshhaya-informacziya.
3 Resolution No.792-r of April 28, 2018, of the Government of the Russian Federation (as amended on January 17, 2022).

importers incur additional marking-related expenses. With a flat rate of one code in the amount of 50 kopeks without VAT, by our estimates, the cost of marking-related services at the customs warehouse may amount to Rb7-Rb35 per one code depending on the type of goods.

In 2021, the first free warehouse owned by the OOO Arctic SPG 2 was established.[1] Free warehouse customs regime envisages the importation of foreign goods (equipment and spare parts, primary products, materials and components) without payment of import customs duties and charges provided that these goods are used only in the territory of the free warehouse. The Arctic SPG 2 is a plant specializing in production, storage and shipment of liquefied natural gas and stable gas condensate. The project envisages the building of three lines of production of liquefied natural gas and stable gas condensate. The overall capacity of three production lines amounts to 19.8 mn tons of liquified natural gas per year. The Arctic SPG 2 mineral resource potential is the Utreneye deposit situated on the Gydan peninsula in the Yamal-Nenets Autonomous National Area. The project operator and assets owner is the OOO Arctic SPG 2, a joint-venture which incorporates TotalEnergies (10%), the PAO NOVATEK (60%), Chinese-based corporations CNPC (10%) and CNOOC (10%) and Japan Arctic LNG (a consortium of Japanese-based companies Mitsui and JOGMEC) (10%). The first, second and third production lines are expected to be put into operation in 2023, 2024 and 2025, respectively.[2]

The free warehouse customs regime is an option of importing technological equipment, primary goods, as well materials and components needed for production without payment of import duties and taxes. A precondition for the establishment of a free warehouse is the compliance with administrative requirements set by the EEU's Customs Code and the Russian legislation as regards customs regulation of the development and outfitting of territories meant for production activities, as well as accounting of goods and operations with them for customs purposes.

As regards the development of the institution of authorized economic operators, no considerable positive changes have taken place. In 2021, the Register of Authorized Economic Operators (AEO) included 25 companies, while their overall number in the register of Russian AEO is equal to 167. The AEO status means greater credibility on the part of the customs authorities in terms of a simplified and fast-track customs procedures, for example, the right to release goods on the basis of the minimum information provided with a subsequent customs declaration of goods in the following calendar month by means of submitting a single customs declaration in respect of all goods released within a calendar month. If authorized economic operators submit to the customs authorities a general guarantee of customs duties payment up to euro 1.5 mn, they are released from the need to provide non-recurrent guarantees in carrying out individual customs operations. Specifically, the overall sum of the general license decreases if AEO commits no

1 Order No.1015 of November 23, 2021 of the RF Federal Customs Service "On Entry of OOO Arctic SPG 2 in the Register of Owners of Free Warehouses and Issuing of Certificate of Entry in the Register of Owners of Free Warehouses"
2 URL: https://corporate.totalenergies.ru/ru/Arctik-SPG-2

violations. Special customs requirements have been set in respect of accounting of goods transported via the EEC's customs border and operations with them.

In the past few years, the Accounts Chamber of the Russian Federation have carried out customs administration-related supervising on a regular basis. In particular, in 2021 they checked correctness of assessments of customs payments in respect of goods which importation is related with payment of license royalties for intellectual property items. It was identified that foreign trade operators did not include license royalties in the customs value pattern. According to the oversight agency, as a result of this practice short-received customs duties and charges were equal to Rb98.5 bn (as estimated).[1] The publication of the outputs of the RF Accounts Chamber's review led to the customs authorities' large-scale checking of importing companies with a request to provide for examination license agreements which the latter failed to submit when declaring imported goods. Apart from trading companies paying license royalties for the utilization of trademarks, manufacturing companies engaging in production of licensed goods (under licensed know-how) were subjected to examination and requested to pay extra customs fees. It is noteworthy that the rules of including license royalties in the customs value in the EEU and the Russian Federation are not elaborated enough and this leads to disputes and conflicts between customs authorities and foreign trade operators. Arbitration courts of the Russian Federation reviewed about 300 lawsuits of importers to the customs authorities as regards the decision on including license royalties into the customs value. The results of court hearings of such cases and legal assessments of license royalties' inclusion into the customs value lack uniformity. Under similar circumstances, courts' rulings may be quite the opposite, thus enhancing the risks of additional customs charges being applied to the earlier released goods. However, by our estimates, courts make decision in favor of foreign trade operators on over 50% of such cases (with such a category of disputes).

The issues of classification of goods in accordance with EAEU CN of FEA are still topical for foreign trade operators. The main challenges are related with frequent cases of changes in the customs authorities' approaches to the classification of goods (CN of FEA code) with application of new approaches to goods imported in the previous period, which practice results in a retrospective revaluation of customs duties liable to payment. The right of foreign trade operators to secure the customs authorities' preliminary decision as regards classification of goods corresponds to the competence of the customs authorities to carry out verification within three years after the release of goods. Legal value of a preliminary decision consists in the fact that it cannot be changed retrospectively unless the foreign trade operator provided knowingly the falsified information. In other words, the preliminary decision on the classification is a kind of guarantee of stability of certain customs duty rate for a foreign trade operator. However, the institution of preliminary decisions needs fine tuning in terms of organization. In compliance with Order No.166 of March 2, 2021 of the RF Federal Customs Service, all regional

1 The official website of the RF Federal Customs Service. – URL: https://ach.gov.ru/checks/schetnaya-palata-vyyavila-priznaki-zanizheniya-tamozhennykh-platezhey-na-98-5-mlrd-rub-

customs (RC) are entrusted with the authorities to take preliminary decisions on classification of goods in accordance with EAEU CN of FEA, except for oil and petrochemicals which are attributed to group 27 of CN FEA, the prerogative of the RF Federal Customs Service. Specifically, regional customs lack skilled personnel for taking decisions on classification of a broad nomenclature of goods. The rules of classification in accordance with CN of FEA require special knowledge in various sectors (the chemical industry, metals, engineering and other). Each regional customs lacks narrowly-focused experts in specific sectors and therefore foreign trade operators are often refused for formal reasons to be given a preliminary decision. Further, as it is envisaged that a preliminary decision is to be made on each individual product of a certain trademark, model, article and modification, the institution of preliminary decisions becomes virtually inaccessible to foreign trade operators with a vast and often renewable range of the same-type goods with similar classification features.

In 2021, the RF Federal Customs service elaborated the "intellectual" crossing point concept which became an integral part of the Strategy of the Development of the RF Customs Service till 2030 approved by Instructions No.1388-r of May 23, 2020 of the Government of the Russian Federation. An "intellectual" crossing point is expected to be based on a single digital platform integrated with databases of all supervising authorities and software of technical control facilities: batch scanning units (PDM), dimension and weigh measurement systems, radiation control systems and systems identifying vehicle license plate number and containers' ID numbers. For each type of transportation (by road, railway, sea and air), the "intellectual" crossing point will be built with the specifics of carriage taken into account.

By Instructions No.3744-r of December 21, 2021 of the Government of the Russian Federation, a strategic line was approved in the field of digital transformation of the transportation industry of the Russian Federation till 2030, envisaging within its scope the "Seamless Freight Logistics" project aimed at completing the introduction of a freight tracing system with utilization of electronic navigation seals; developing a digital platform of the RF transportation industry; creating a system of end-to-end exchange of electronic carriage documents (including on an inter-state level); establishing a national digital logistics contour within the scope of implementation of the ecosystem of digital transportation corridors of the Eurasian Economic Union, as well as creation of conditions for development of e-platforms for ordering freight carriage services, logistics services and e-commerce services (FaaS) and establishing of intellectual crossing points on the state border of the Russian Federation.

By the Concept of development of electronic document flow at harbor border crossing points of the EEU member countries approved by Decision No.1 of February 5, 2021 of the Eurasian Intergovernmental Council, it is envisaged that the goal of a complete shift to electronic document flow and digital technologies at harbor border crossing points will be achieved in 2023–2025. It is planned to realize the principle of multiple utilization of data and single provision thereof by freight carriers, maritime agents, sea terminal operators and business entities to seaport captains, authorized entities and state authorities of member countries

for carrying out all types of state control (supervision), as well as for formalization of a vessel' call at and departure from a seaport and request for services there.

The RF Federal Customs Service is planning to upgrade the risk management system by shifting from risk assessment based on categorization of foreign trade operators to that based on big data processing and analysis, which data aggregate may point to violations.[1]

Also, they are developing a mobile app for air passengers who will be able to fill in a customs declaration on their smartphones and calculate and pay customs duties and fees. The new service is expected to be introduced in H1 2022.[2]

6.6. Russia in the system of multilateral cooperation[3]

In 2021, the US, the European Union and the UK consolidated their efforts to bolster their influence in international economic institutions. In the context of the increased importance of digitalization and the climate change agenda, they sought to secure the leadership in establishing new rules of global climate change management and in the collective regulatory framework for digital economy. Amidst this growing competition and geopolitical tensions, the ongoing pandemic and uneven economic recovery, the efficacy of multilateral cooperation has become an important factor in Russia's pursuit of its national interest, foreign policy priorities and development goals.

6.6.1. The outputs of work in G20 under the Italian presidency

Russia regards the G20 as an important venue for collective decision-making to ensure the balance of interests of all participants on a wide range of international cooperation issues. The Italian G20 presidency presided over a period of uneven economic recovery after the pandemic-induced crisis, which aggravating inequality[4], the need for a large-scale vaccination and higher risks

1 The official website of the Public Council under the RF Federal Customs Service. – URL: https://www.osfts.ru/meropriyatiya/2021/2110-glavnye-tseli-otkrytost-i-rezultativnost

2 The official website of the RF Federal Customs Service. – URL: https://customs.gov.ru/press/federal/document/319904

3 This section was written by : *Dorokhina K.M.,* Candidate of Political Sciences, Research Associate, Center for International Institutions Research (CIIR) RANEPA; *Ignatov A.A.,* Research Associate, CIIR RANEPA; *Larionova M.V.,* Doctor of Political Sciences, Director of the Center for International Institutions Research, RANEPA; *Popova I.M.*, Research Associate, Center for International Institutions Research (CIIR) RANEPA; *Sakharov A.G.,* Center for International Institutions Research (CIIR) RANEPA; *Shelepov A.V.,* Candidate of Economic Sciences, Senior Research Associate, Center for International Institutions Research (CIIR) RANEPA.

4 According to the World Bank's data, income inequality in different countries increased between the rich (two upper deciles) and the poor (two lower deciles). As per calculations, in 2021 individuals of the two upper deciles will make up for 50% of losses, while the poor are expected to lose another 5% of their incomes (See COVID-19 leaves a legacy of rising poverty and widening inequality. URL: https://blogs.worldbank.org/developmenttalk/covid-19-leaves-legacy-rising-poverty-and-widening-inequality-oŜ). At the same time, for the first time in many years the trend of reduction of inequality (by per capita income) between countries changed for the opposite one (See: Is COVID-19 increasing global inequality? URL: https://blogs.worldbank.org/opendata/covid-19-increasing-global-inequality). Increasing inequality in terms of the level of incomes is worsened by inequality in terms of access to vaccines and education (see: 2021 Year in Review in 11 Charts: The Inequality Pandemic. URL: https://www.worldbank.org/en/news/feature/2021/12/20/year-2021-in-review-the-inequality-pandemic).

of global warming by 2.5–3°C in 2041–2060.[1] In this context, the G20 presidency focused its attention on poverty alleviation priorities, well-being and prosperity, saving the planet and climate change.

Saving of the planet and the fight against climate change

The focus of attention of ministers of energy and environment, finance ministers and heads of central banks was impact of economic recovery measures on climate and ecology. At the G20 summit in Rome, leaders reaffirmed their commitment to hold the global average temperature increase well below 2°C roughly by mid-century and pursue efforts to limit it to 1.5°C above pre-industrial levels. They recognized the importance of achieving a zero level of net greenhouse gas emissions and committed to contributions determined at the national level to reduce emissions in the period until 2030. By roughly mid-century, closer to the guidelines of Russia, China and Indonesia, a target date was set for achieving carbon neutrality, and not the date of 2050 set by a majority of developed countries.[2] Also, the selection of policy measures for a shift to a low-carbon economy was formulated with the national specifics of emerging market countries taken into account. It envisages a large-scale introduction of nature-friendly solutions; cooperation in research, development and implementation of low-emission technologies; stepwise reduction and optimization of inefficient subsidies of fossil fuel; investments into sustainable infrastructure and groundbreaking technologies; and a shift to a circular economy.

Despite an active promotion by the IMF and the OECD and support by the G7 for approval of the minimum carbon price, the G20 countries failed to reach an agreement on this issue. Taking into account that in 2022, 2023 and 2024 the G20 meetings will be hosted by Indonesia, India and Brazil, respectively, it is believed that the issues of carbon pricing are not going to be the priorities for these presidencies. But the IMF, the OECD, the World Bank and the G7 together with other developed countries and the EU will undoubtedly advance these issues in the G20. Along with the institutes of the UN Framework Convention on Climate Change, the G20 will be a key venue for debates on the climate change agenda. For Russia it is important to take advantage of it for developing collective decisions that meet the priorities of the Strategy of the Social and Economic Development of the Russian Federation with a Low Level of Greenhouse Gas Emissions till 2050.

Ensuring well-being and eradication of poverty

Among issues of concern to the G20 were strengthening and upgrading preparedness and enhancing the response of healthcare systems to the pandemic, along with achieving Sustainable Development Goals (SDGs) related to healthcare for coverage of all the population. It was agreed to advance toward the goal of vaccinating at least 40% of the population in all countries by the end of 2021 and 70% by mid-2022; the G20 countries are also committed to boosting the supply of

1 Climate Change 2021. The Physical Science Basis. Summary for Policymakers. URL: https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM_final.pdf
2 G20 Rome Leaders' Declaration. URL: http://www.kremlin.ru/supplement/5729

vaccines and essential medical products and medicines in developing countries, to increasing their transparency and predictability, to removing financing constraints, to supporting the Initiative to speed up access to funds for combating COVID-19 and to refraining from export restrictions incompatible with the WTO rules. A decision was taken to establish a G20 Joint Finance-Health Task Force.

The new general allocation of $650 bn worth of Special Drawing Rights (SDR), implemented by the International Monetary Fund (IMF) in August 2021 is expected to become a source of funding for economic recovery and the achievement of SDGs. The G20 countries have agreed that members with strong external positions will channel part of the allocated SDRs (about $100 bn) to help vulnerable countries and establish a new IMF Trust Fund (Resilience and Sustainability Trust (RST)).[1] An important, though not quite sufficient, step towards debt sustainability and achievement of SDGs is the G20 and the Paris Club's commitment to step up efforts within the Common Framework for debt treatment beyond the Debt Service Suspension Initiative.[2] IMF estimates point to $12.7 bn of total debt service deferred under this initiative, that is, a small amount as compared to $1 trillion worth of developing countries' debt[3] (excluding China) to be repaid until 2030, while deferred payments increase a servicing burden from 2022; the G20 did not even consider the prospects of writing off debts or introducing a systemic mechanism of sovereign debt restructuring.

Economic recovery and prosperity

Between the need to sustain economic recovery, on one hand, and growing inflation, debts and capital flight risks on another, the G20 countries have agreed to avoid early scaling down of support measures and ensure simultaneously financial stability, long-term fiscal sustainability and safeguarding against downside risks and negative spill-overs. The G20 has proved its worth as a mechanism of harmonization of macroeconomic policies of developed and developing countries.

A long-awaited decision was taken on the reform of international taxation rules. The G20 approved a draft agreement on the Inclusive Mechanism for implementation of the G20/OECD Action Plan on base erosion and profit shifting. The draft agreement provides for redistribution of rights to taxation of large multinational companies' surplus profit (20%–30% of the profit received above the established level) in favor of jurisdictions in which they carry out market activities, as well as introduction of a minimum global tax of 15% on multinational companies.[4] Decisions are expected to be updated in 2022 and come into effect in 2023. By the OECD's estimates, the redistribution of rights is going to yield over

1 URL: https://www.imf.org/ru/News/Articles/2021/10/08/blog100821-sharing-the-recovery-sdr-channeling-and-a-new-trust
2 Till the end of December 2021.
3 Trade and Development Report 2021. URL: https://unctad.org/system/files/official-document/tdr2021_en.pdf
4 Addressing the tax challenges arising from the digitalization of the economy. URL: https://www.oecd.org/tax/beps/brochure-addressing-the-tax-challenges-arising-from-the-digitalisation-of-the-economy-july-2021.pdf

$100 bn, while the minimum tax, about $150 bn annually, thus contributing to fair taxation and inclusive growth.

The G20 did not return to the commitment to give up protectionist trade and investment policy which used to be among the key issues of the trade policy agenda before 2017. The G20 member-countries recognized the need to remove tensions and imbalances in trade and investments, pledged to work to ensure equal conditions for creating a favorable trade and investment environment, reform the WTO and improve all its functions. Vague and broad wordings conceal sharp divisions between G7 member-states on one side and China, Russia, India and a number of other countries, on the other side, regarding "distorting market conditions" of subsidies and the local component requirements, "digital protectionism", including data storage localization and digital trade guidelines approved on the eve of the G20 Rome summit.

Despite a large number of commitments in regard to the digital economy, the G20 failed to achieve new substantive agreements on this issue. The G20 reaffirmed the earlier formulated commitments to reinforce their actions towards the digital transformation of production, technological processes, services and business models. The G20 countries have agreed to step up cooperation to secure ICT (Information and Communication Technologies), remove shared vulnerabilities and threats, combat cyber-crime, as well as enhance confidence in the digital environment by improving internet safety. Due to substantial differences over data management issues and cross-border data flows, the G20 countries succeeded only in acknowledging the need to further their efforts to enhance general understanding and identify common approaches to regulation. The dialogue will continue within the framework of the working group on the digital economy.

The reunion of the G7 after Joseph Biden became the 46th US President and Italy's commitment to the EU Green Deal and common transatlantic values resulted in harmonization of the agenda of the G20 presidency with the priorities of the G7 in 2021 and the EU action plan to achieve climate neutrality by 2050. In this context, to preserve the role of G20 as a key economic cooperation forum, it was necessary to ensure a multilateral decision-making with priorities of developing countries and emerging market countries taken into account. This was achieved, but not without endeavor.

Overall, Italy's presidency was quite a success. The G20 showed a historically high level of fulfillment of obligations of the previous summit (86%). It is noteworthy that 225 concrete decisions were approved and institution building continued. The G20 has retained the role of a major forum of economic cooperation between developed and developing countries.

6.6.2. The BRICS: 15 years of cooperation

Russia has made a substantial contribution to the consolidation of the BRICS as an institute which facilitates the narrowing of positions, develops relations between member states, promotes the role of these five members in global management and restructuring of the system of international institutions.

Within the framework of Russia's third presidency in 2020, the BRICS managed to negotiate the approval of urgent measures to overcome the pandemic and update long-term joint work plans. In 2021, the India's presidency determined the safeguarding of continuity and consolidation of cooperation as priorities, having formulated the motto: "BRICS@15: Intra BRICS Cooperation for Continuity, Consolidation and Consensus."

The jubilee year was marred by new waves of the pandemic. India, Brazil and Russia were among the world' top five countries hit the hardest by the pandemic with 33 mn, 21 mn and 7 mn coronavirus cases, respectively, by the time of the BRICS summit on September 9.[1] The BRICS countries focused their efforts on fighting COVID-19 inside their countries and continued work on the following: development of a comprehensive early warning system against the risks of mass infectious diseases and on the establishment of the BRICS Center for Vaccine Development and Research, support for global efforts to strengthen healthcare systems and provide over a billion vaccine doses, including some on a free of charge basis within the framework of international cooperation. The BRICS supported Russia's proposal on mutual recognition of national vaccination documents and test results, as well as India's initiative on lifting vaccine patent protection with flexibility envisaged by the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights and the Agreement on TRIPS and Public Healthcare of the Doha Declaration.

In the context of implementation of the Strategy for BRICS Economic Partnership till 2025, the road map on trade and investment-related aspects of cooperation and the BRICS Action Plan on Cooperation in Agriculture in 2021—2024 were approved. The BRICS paid particular attention to the equitable achievement of all SDGs, including a shift to sustainable models of consumption and production, biodiversity conservation, and implementation of the goals of the Paris Agreement on the basis of the principles of common but differentiated responsibility with various national circumstances taken into account. Underlying the importance of digitalization, ICT and data in achieving SDGs, the BRICS countries failed to come out with any joint initiatives on new lines, such as regulation of digital platforms, data and digital currencies. During China's presidency in 2022, China's concrete proposals and further discussion of India's initiative on establishment of the BRICS platform on digital social goods can be expected. As regards digital security, the BRICS countries acknowledged their commitment to carry out the road map on practical cooperation to ensure ICT security and proceed with the development of legal frameworks of cooperation on international information security issues, but failed to come to an agreement on whether BRICS intergovernmental agreements or bilateral agreements between the Bricks member countries were going to be included as proposed by Russia and Brazil, respectively.

The BRICS countries reaffirmed their commitment to promote multilateralization and reforms of international institutions, primarily, the finalizing of the IMF quota and governance reforms, rehabilitation of the WTO two-tier dispute settlement system and restructuring of the UN main bodies. At the same time, the BRICS

1 WHO Coronavirus (COVID-19) Dashboard. URL: https://covid19.who.int/table

continued to develop internal mechanisms of cooperation, including the BRICS partnership on a new industrial revolution, the national currency bond fund, the Contingent Reserve Arrangement and the New Bank for Development (NBD). In 2021, the NBD expanded its membership[1], increased financing of projects and social and economic support measures of its member countries and proceeded with placing of securities on international markets. To facilitate economic recovery, the Board of Directors approved the allocation of the remaining $3 bn out of $10 bn worth of the emergency aid package agreed upon in 2020: $1 bn to the Russian Federation for support of the government plan to pay incentive rewards to healthcare workers, $1 bn to South Africa for job creation and $1 bn to China for revival of economic activity and employment. The funds were raised in particular through issuing and placing of yuan 5 bn worth of bonds on the Chinese inter-bank market, as well as $1.5 bn worth of five-year bonds and $2,25 bn worth of three-year bonds on international markets. The NBD became the first multilateral bank which introduced UNDP SDG Impact Standards for bond issuers.[2] In 2021, the NBD approved $1.5 bn worth of investments in sustainable and digital infrastructure projects.

In 2021 the BRICS negotiated the approval of 73 concrete obligations. Despite global challenges caused by the pandemic, the socioeconomic crisis, domestic problems and tensions between member countries, the BRICS succeeded in ensuring continuity, promoting cooperation and maintaining the momentum of institutional development. It is worth mentioning that Russia played a pivotal role in mediating differences between India and China. The average rate of implementation of the BRICS Moscow Summit decisions was equal to 72%.

6.6.3. The International Monetary Fund (IMF): an increase in lending and stalled reforms

In 2021, Russia, which is assigned the IMF creditor country status, continued to contribute funds to the IMF's pool, primarily, through the IMF quota system. Russia's quota remained unchanged since 2016 when it amounted to 12,9037 bn units of special drawing rights (SDRs) (as of early December 2021, 1 SDR was equal to about $1.4).[3] In addition to quotas there are also "defense line" obligations – new loan agreements under which Russia's contingent commitments amount to 8.88 bn SDRs (in case of Russia, the agreement is in effect till November 16, 2022)[4] and the bilateral loan agreement with liabilities in SDRs equal to $3.9 bn (these obligations are valid till December 31, 2023 and can be extended for another year).[5] Along with other IMF member countries, Russia's participation in the IMF credit facilities contributes to the boosting of the IMF lending capacity to about

1 Affiliation of the United Arab Emirates, Uruguay and Bangladesh was approved.
2 UNDP releases SDG Impact Standards for Bond Issuers. URL: https://www.undp.org/press-releases/undp-releases-sdg-impact-standards-bond-issuers
3 Russian Federation and the IMF. URL: https://www.imf.org/en/Countries/RUS
4 IMF Concludes Steps to Maintain its Lending Capacity. URL: https://www.imf.org/en/News/Articles/2021/01/08/pr214-imf-concludes-steps-to-maintain-its-lending-capacity
5 Loan Agreement between the Central Bank of the Russian Federation and the International Monetary Fund. URL: https://www.imf.org/-/media/Files/News/press-release/2021/pr214/pr214-signed-russia-2020-borrowing-agreements.ashx

$1 trillion on the back of redoubling of new agreements and renegotiation of bilateral loan agreements since 2020. It was really important, taking into account the fact that IMF resources were much in demand because of the COVID-19 pandemic, and the need could not be met by means of an increase in quotas alone as the 15th General Review of Quotas was not carried out, while the 16th General Review was expected to be completed only in 2023. Russia's contribution to the IMF mechanisms may help the IMF increase funding to minimize downturns in the poorest countries and, as a consequence, reduce transborder spillovers for the Russian economy.

Amid the ongoing COVID-19 pandemic, the IMF passed a decision on a large-scale support of the global economy through allocation of 456 bn SDRs or about $650 bn. The previous large-scale allocation of $250 bn worth of SDRs took place in 2009 and was aimed at overcoming the implications of the global financial crisis. The proposal to issue additional $400 bn worth of SDRs to fight the current crisis was voiced for the first time as far back as spring 2020. Despite a delay in decision-making, Kristalina Georgieva, IMF Managing Director regards the issuing of SDRs as "a vaccination for the global economy during the unprecedented crisis".[1] However, the efficiency of the new allocation of SDRs for support of countries which were hit the hardest by the crisis is limited not by the delay alone. As the issue of SDRs was distributed pro rata quotas of the IMF member countries, over 60% of funds were allocated to high-income countries with no shortage of reserves. The United States accounted for over 17% of the allocation, while low-income countries, for the mere 3%. Russia accounted for 2.71% of the allocation volume, that is, the equivalent of $17.5 bn.[2]

As SDRs are not physical assets, they have to be converted in order to be used for purposes which are different from transactions with the IMF. IMF member countries are in a position to sell, buy and pledge SDRs, exchange SDRs within swap arrangements, borrow and lend them, as well as receive SDRs free of charge from other countries. Importantly, unlike IMF credit facilities, the allocation of SDRs does not involve any conditions and obligations on the part of member countries. Despite the IMF's calls and some G20 countries' initiatives (worth $45 bn in total) on redistribution of new SDRs in favor of poorer countries via the RST or the IMF Poverty Reduction and Growth Trust (PRGT) to increase lending facilities to low-income countries, Russia did not pass any decisions to that effect: the Central Bank of Russia which received SDRs added them to its international reserves.

Apart from financial relations, in 2021 the IMF kept providing consulting and technical support to Russia. Based on the results of annual consultations with the IMF mission within the scope of Article IV of the IMF Articles of Agreement in 2020, a press briefing was held in February 2021.[3] It was specified that growth based on

1 IMF Governors Approve a Historic US$650 Billion SDR Allocation of Special Drawing Rights. URL: https://www.imf.org/en/News/Articles/2021/07/30/pr21235-imf-governors-approve-a-historic-us-650-billion-sdr-allocation-of-special-drawing-rights

2 2021 General SDR Allocation. URL: https://www.imf.org/en/Topics/special-drawing-right/2021-SDR-Allocation

3 Section 6. Institutional Changes. URL: https://www.iep.ru/files/text/trends/2020/06.pdf

the implementation of structural reforms through infrastructure development and upgrading of the business climate and institutional and regulatory environment should be sped up. In light of this, it is important to proceed with this work within the "regulatory guillotine" and national projects framework, avoiding at the same time a substantial increase in the government's involvement in the economy.[1]

In February 2021, the IMF and the World Bank launched a regular Financial Sector Assessment Program (FSAP) in Russia; this program is carried out every five years. The program includes two main components – the stability module and the development module – suggesting a remote analysis of the financial sector's regulation and supervising practices, as well as interviews with representatives of the regulators and the private sector. Within the framework of implementation of FSAP in Russia, they will analyze system risks, macroprudential policy instruments, banking sector and stock market regulation and crisis management instruments. Based on the outputs of the Program, final reports will be prepared and released early in 2022.[2]

Overall, in 2021 Russia's networking with the IMF was proceeding in the same direction as in the past few years. Russia fulfills consistently its obligations as an IMF creditor country, however, the IMF capital and management reforms, in which Russia is interested, including an increase in the share of quotas and voting rights of emerging market and developing countries, review of the quotas calculation formula and change in the SDRs basket composition by means of adding new reserve currencies, remain unimplemented.

6.6.4. The World Bank Group: cooperation amid the moratorium on new projects in the Russian Federation

In 2021, the priorities of networking between Russia and the World Bank Group (WBG) still include scientific research and expert analytics in macroeconomic model building and forecasting, as well as financial regulation standards.[3]

However, over the past few years there have been long-term problems in the relations between Russia and the WBG.[4] The moratorium on new projects in Russia introduced in 2014 by the International Bank for Reconstruction and Development (IBRD), the WBG's backbone institution, is still in effect. According to the data as of early December 2021, four projects approved before the moratorium were underway in the fields of upgrading statistical data collection systems, preservation of cultural heritage, development of public utilities and the hydro-meteorological service; the overall volume of the IBRD's funding of these projects was equal to $370 bn.[5] Also, other WBG institutions still upheld financial

1 Transcript of the Russia 2020 Article IV Consultation Press Briefing. URL: https://www.imf.org/en/News/Articles/2021/02/09/tr020921-transcript-of-the-2020-article-iv-consultation-on-russia-press-briefing
2 Information on participation of the RF Central Bank in the Financial Sector Assessment Program (FSAP) by the IMF and the World Bank in 2021. URL: http://www.cbr.ru/press/pr/?file=24022021_191749pr.htm
3 The World Bank Group. URL: https://www.cbr.ru/today/ms/smo/wb/
4 Section 6. Institutional Changes. URL: https://www.iep.ru/files/text/trends/2020/06.pdf
5 Projects. URL: https://projects.vsemirnyjbank.org/ru/projects-operations/projects-list?lang=ru&countrycode_exact=RU&os=0

restrictions introduced in 2014 on cooperation with Russia. As in networking between Russia and the IMF, no progress was made in Russia's relations with the WBG regarding implementation of equity capital and management reforms in the interests of emerging market and developing countries.

At the same time, taking into account the need to overcome socioeconomic implications caused by the pandemic, Russia continues cooperation with the WBG in scientific research and expert analytics. Apart from the above-mentioned participation jointly with the IMF in the program of assessment of the Russian financial sector (FSAP) in 2021, the World Bank released the 45th issue[1] and the 46th issue[2] of the Russia Economic Report. In particular, the latest issue of the report points to a negative effect of COVID-19 restrictions on economic growth momentum. Despite a slowdown of Russian economic growth rates in H2 2021, WBG experts estimate them to be equal to 4.3% for the year as a whole, which is higher than earlier forecasted, and expect them to slow down to 2.4% and 1.8% in 2022 and 2023, respectively. In the longer term, the development of the Russian economy will depend primarily on progress in implementation of structural reforms. Specifically, WBG experts pointed out the effect of the Strategy of Development of the Russian Federation with Low Greenhouse Gas Emissions (published in October 2021) on economic growth. In their view, an ambitious dual-purpose task of speeding up economic growth on average to 3% annually and ensuring the ecologization of the economy will require measures aimed at enhancing the competitive edge of the Russian economy and limiting "green" transition-related costs.[3] A key recommendation was to redistribute funds provided in terms of energy subsidies to Russian consumers; by estimates of WBG experts these funds amounted to 1.4% of GDP in 2019.[4]

In 2021, limitations that have existed for seven years can still be found in relations between Russia and the WBG. Within this framework, traditional networking in expert-analytics is underway, while the priority of financial cooperation with the WBG is unswervingly declining with alternative institutions, primarily, the NBD and the Asian Infrastructure Investment Bank (AIIB), becoming Russia's main partners in this field.

6.6.5. The World Health Organization: development of the global healthcare system amid the pandemic

Within the framework of the World Health Organization (WHO) in 2021 Russia concentrated its efforts on the priorities of institutional cooperation and

1 Russia's Economic Recovery Gathers Pace, Says New World Bank Report. URL: https://www.worldbank.org/en/news/press-release/2021/05/26/russia-s-economic-recovery-gathers-pace-says-new-world-bank-report

2 Amidst Strong Economic Rebound in Russia, Risks Stemming from COVID-19 and Inflation Build, Says World Bank Report. URL: https://www.worldbank.org/en/news/press-release/2021/12/01/amidst-strong-economic-rebound-in-russia-risks-stemming-from-covid-19-and-inflation-build-says-world-bank-report

3 46 Russia Economic Report. URL: https://documents1.worldbank.org/curated/en/099050011302118976/ pdf/P17756206d40310aa0a5e109d6fa60bc55a.pdf

4 Energy Subsidies in Russia. Size, Impact, and Potential for Reform. URL: http://documents1.worldbank.org/curated/en/099125011302110190/pdf/P1750280ca1db807e08cea076ac354e401b.pdf

consolidation of the WHO, provision of aid to developing countries and registration of the Sputnik V vaccine.

The spread of the coronavirus infection spurred the WHO member countries to find new approaches to fight epidemiological challenges globally. At the 74th Annual World Health Assembly in May 2021, a decision was taken on convening a special session on November 29 – December 1, 2021 to prepare an international agreement on strengthening preparedness to pandemics.[1] This line of activities is the WHO's most important one in 2021 as it lays structural and institutional foundations for networking of countries in the fight against pandemic threats in future.

Based on the results of the session, on December 1, 2021 a statement was made on the establishment of the intergovernmental negotiation body for development and approval of "a convention, agreement or any international document on pandemic prevention, preparedness and response".[2] The Russian side supported this decision in a statement made by Mikhail Murashko, RF Health Minister at the opening of the special session on November 29, 2021. Also, Mikhail Murashko noted that the work on the new document should be inclusive and transparent, while the new convention should not duplicate the existing documents, particularly, the WHO medical and sanitary regulations which remained the main legal document on strengthening of preparedness to emergency situations in healthcare.[3]

It is noteworthy that other aspects of the WHO activity are also very important. Russia acted as a co-organizer of two WHO events at the 76th UN General Assembly in September 2021. In particular, these events were dedicated to the achievement of SDGs in the fight against noncommunicable diseases and mental health disorders[4], as well as tuberculosis.[5]

Within the framework of the WHO European Regional Bureau (ERB), in 2021 Russia's representatives took part in joint initiatives together with European countries and the CIS. Particularly, in October 2021 the ERB held simulation exercises for rapid response mobile laboratories in order to build up stronger emergency response preparedness. The field component of the exercises took part in Kazan in October 1–15, 2021. In the course of training, they tested procedures

1 The Seventy-fourth World Health Assembly closes. URL: https://www.who.int/news/item/31-05-2021-the-seventy-fourth-world-health-assembly-closes

2 World Health Assembly agrees to launch process to develop historic global accord on pandemic prevention, preparedness and response. URL: https://www.who.int/news/item/01-12-2021-world-health-assembly-agrees-to-launch-process-to-develop-historic-global-accord-on-pandemic-prevention-preparedness-and-response

3 Russia expressed readiness to help develop an agreement on preparedness to pandemics. URL: https://ria.ru/20211129/pandemiya-1761317054.html

4 Meeting the Noncommunicable Diseases and Mental Health-related SDG Targets: the urgent need to scale up catalytic financing and technical support. URL: https://www.who.int/news-room/events/detail/2020/09/22/default-calendar/meeting-the-non-communicable-diseases-and-mental-health-related-sdg-targets

5 Official UN General Assembly Side Event: Progress and Multisectoral Action Towards Achieving Global Targets to End TB. URL: https://www.who.int/news-room/events/detail/2021/09/24/default-calendar/official-UNGA-side-event-on-TB-2021

and standards applied to rapid response mobile laboratories at the stage of their deployment. [1]

As regards the humanitarian aspect of cooperation, Russia continues to act as an international healthcare aid donor within the framework of the WHO. For instance, on July 15, 2021 the RF Government sent urgent medical aid and medical kit supplies to Afghanistan for the fight against cholera. The WHO representative in Afghanistan expressed gratitude to the RF Government for the contribution made to support the country's healthcare delivery services.[2]

Finally, an important line of activity is still the long drawn-out process of qualification of the Russian Sputnik V vaccine against the coronavirus (Gam-COVID-Vac) for an emergency use. In May-June 2021, the WHO Commission carried out inspections of four factories producing the Sputnik V vaccine and identified six groups of shortcomings at the "Ufa Vitamin Plant" factory related with the integrity of microbiological monitoring results and proper implementation of aseptic procedures. The certification process was suspended due to the identified drawbacks.[3] In October 2021, the WHO renewed the qualification process of Russian vaccines[4] and as of November 2021 expects the Russian side to provide the updated information.[5]

Russia continues to consolidate the WHO as the core of the global healthcare system by means of facilitating the development of new arrangements to deal with the most acute global challenges, supporting the existing mechanisms of cooperation and rendering aid to developing countries under the WHO guidance. Further, Russia has repeatedly come out for the consolidation of the WHO within the framework of other international institutions, including the G20 and the BRICS.

6.6.6. The UN: a new stage in negotiations on international information security

In 2021, Russia's key achievement on the UN platform was a breakthrough in multilateral negotiations on challenges to international information security (IIS). Starting from 2017, the negotiations stalled because the parties were not prepared to reach a compromise in the debates on application of the international law standards to ICT utilization by different countries. The US and its allies proceed from the position of complete and unconditional application of the existing standards of international law to ICT. According to the Russian position,

1 WHO ERB and GOARN will hold the 2nd simulation exercises for rapid response mobile laboratories in order to build up stronger emergency response preparedness. URL: https://www.euro.who.int/ru/media-centre/events/events/2021/10/whoeurope-and-goarn-second-simulation-exercise-for-rapid-response-mobile-laboratories-for-stronger-emergency-response-preparedness

2 Afghanistan receives shipment of medical kits to support health care delivery services. URL: https://www.who.int/news/item/15-06-2021-afghanistan-receives-shipment-of-medical-kits-to-support-health-care-delivery-services

3 PAHO Press Briefing on #COVID19 in the Americas. URL: https://twitter.com/i/broadcasts/1RDGlPAkevVGL

4 Status of COVID-19 Vaccines within WHO EUL/PQ evaluation process. URL: https://extranet.who.int/pqweb/sites/default/files/documents/Status_COVID_VAX_20Oct2021.pdf

5 Status of COVID-19 Vaccines within WHO EUL/PQ evaluation process. URL: https://extranet.who.int/pqweb/sites/default/files/documents/Status_COVID_VAX_11Nov2021.pdf

a probable implication of a country's enforcement of the right to self-defense in cyberspace realities can result in the use of cyber weapons in circumvention of the existing mechanisms, including the UN Security Council.

It is noteworthy that on the back of differences in the US and Russian approaches, in 2018 two negotiation processes were initiated: one within the scope of the open-ended working group (OEWG) and the other, within the framework of the Group of Government Experts (GGE). OEWG was established in compliance with the UN General Assembly's Resolution on the Development in the Field of Information and Telecommunications in the Context of International Security co-sponsored by Russia and other 32 countries, including the BRICS countries and the Shanghai Cooperation Organization, except Brazil.[1] GGE was established in compliance the UN General Assembly's Resolution on Advancing Responsible State Behavior in Cyberspace in the Context of International Security[2] initiated by the US and backed by the EU and other developed countries. Russia took part in the work of both groups, facilitating complementary negotiations and the narrowing of positions.

From March through May 2021, OEWG[3] and new members of GGE[4] presented final reports on their work. Parallel negotiations on two platforms failed to develop a common approach to the application of standards of international law for prevention of conflicts in cyberspace; both the documents include references to the need to carry on debates and other compromise non-binding options. At the same time, the approval of both the reports is the evidence of the parties' intentions to continue negotiations and take off the table the existing differences specified in the final report of the chairman of OEWG.[5]

In this context, the US-Russian Draft Resolution[6] put forward in October 2021 on Developments in the Field of Information and Telecommunications in the Context of International Security and Advancing Responsible State Behavior in Cyberspace in the Context of International Security[7] is a real breakthrough. The decision became feasible owing to the narrowing of positions between Russia and the US after the Geneva summit between President Vladimir Putin and US President Joe Biden in June 2021 where both the sides agreed to scale up the

1 Developments in the field of information and telecommunications in the context of international security. URL: https://undocs.org/en/A/RES/73/27
2 Advancing Responsible State Behavior in Cyberspace in the Context of International Security. URL: https://undocs.org/ru/A/RES/73/266
3 Open-ended working group on developments in the field of information and telecommunications in the context of international security. Final Substantive Report. URL: https://front.un-arm.org/wp-content/uploads/2021/03/Final-report-A-AC.290-2021-CRP.2.pdf
4 Report of the Group of Governmental Experts on Advancing responsible State behavior in cyberspace in the context of international security. URL: https://front.un-arm.org/wp-content/uploads/2021/06/final-report-2019-2021-gge-1-advance-copy.pdf
5 Open-ended Working Group on Developments in the Field of Information and Telecommunications in the Context of International Security. Chair's Summary. URL: https://front.un-arm.org/wp-content/uploads/2021/03/Chairs-Summary-A-AC.290-2021-CRP.3-technical-reissue.pdf
6 Co-sponsors of the US-Russian resolution were 53 countries, including those which criticized the Russian draft resolution on convening OEWG in 2018.
7 Developments in the field of information and telecommunications in the context of international security and advancing responsible State behavior in the context of application of information and communications technologies. URL: https://undocs.org/ru/A/C.1/76/L.13

exchange of data on cyber threats. Debates on the text of the Resolution were held within the framework of OEWG and GGE. If this Resolution is endorsed by general voting at the UN General Assembly in December 2021, OEWG established by Russian efforts will become a key negotiation venue for debates on IIS issues under UN auspices.

Endorsement of the US-Russian joint resolution should not be a reason for excessive optimism. It is based on a compromise: as regards the issue of the legal status of bilateral decisions, the resolution envisages the option of moving forward without binding decision-making. The new OEWG will have to resolve this dilemma amid justified concerns that progress in this work depends on the state of relations between the leading parties to the negotiations.

6.6.7. The outcomes of the 26th Conference of the parties to the United Nations framework convention on climate change

The UN Climate Change Conference held on October 31 – November 12, 2021 was one of the major international events of 2021. The declaration of the goal of attaining carbon neutrality by the world's leading economies by and around the mid-century, adoption of new crisis exit and growth strategies based on green investments, technologies and energy transition, unresolved Article 6 of the Paris agreement, growing awareness of the need to take immediate collective efforts and the pressure on the part of the civil society set very high expectations for the Glasgow summit. As a result of negotiations, although there was progress in most areas, in regard to the Paris agreement goals (to prevent an increase in temperature above 1.5°C), it was limited.

In Glasgow, the leading countries declared their intentions to ensure the balance between greenhouse gas emissions and their absorption. In strategies provided, the entire emission reduction would be carried out in the territory of concrete jurisdictions, with no inter-country trade in emission reduction units allowed; this may be less economically effective than climate projects and emissions reductions but less costly in some areas. Most countries seek to achieve these goals by means of a 80%-90% reduction in emissions with the remainder compensated through increased absorption. Russia's approach is different: the plan is to reduce emissions by only 15% of the level seen in 2019 by the year 2050 (from 2119 million tons to 1830 million tons)[1]. At the same time, from 2019 through 2050 absorption should increase by over 100% (from 535 million tons to 1200 million tons). This will ensure a 65% absorption of planned emissions to reach the target net emissions of 630 mn tons by 2050. On aggregately, it reduces emissions from 3,113.4 mn tons in 1990 to 630 mn tons by 2050 (aggregate emissions will be equal to 80%). Though Russia is hypothetically able to compensate greenhouse gas emission in this planned volume, in reality enormous efforts will be required to ensure efficiency of climate projects; it is also necessary to carry out reforms of the forest management system and pursue a consistent wildfire prevention

1 The Strategy of the social and economic development of the Russian Federation with low greenhouse gas emissions till 2050. URL: http://static.government.ru/media/files/ADKkCzp3fWO32e2yA0BhtIpyzWfHaiUa.pdf

and suppression policy. However, in the strategy of development with the low level of greenhouse gas emissions, this issue is not yet developed enough to meet the challenge of attaining neutrality within the framework of the current policy configuration.

Russia's main goal in COP26 was to negotiate the conditions of implementation of Article 6 of the Paris Agreement. In respect of Article 6.2, the "Guidance" on trade in emission reductions between countries[1] was endorsed. One of the main inconsistencies of Article 6 – dual accounting – was eliminated via approval of assignment of only those emission reductions which were received after 2021 and establishment of the single register to be kept by UN FCCC Secretariate. As regards Article 6.4, which is of a special interest to Russia in the context of implementation of climate change projects, an agreement was reached on "Rules, Modalities and Procedures" for special projects and programs creating units of emission reductions.[2] A Supervisory Board was established to approve projects. The decision envisages no limitations as to the type of projects and programs. After complex negotiations, owing to the principled stand of Brazil and India, a decision was made; it does not exclude but minimizes the use of projects and units of the clean development mechanism defined by the Kyoto Protocol. It is expected that the entire scheme of implementation of Article 6.4 can be launched by 2023, which is in line with the start of the Russian system of climate projects. However, its more realistic start is likely to take place in 2024–2025. Also, it has become possible to coordinate bilateral and multilateral initiatives (border payments, taxes, standards and criteria) within the scope of Article 6.8 in the future. The parties approved the "Work Program" on non-market cooperation, established a committee and plan to hold debates. However, in the near future the start of implementation of the Article's provisions is highly unlikely.

The issues of climate financing of developing countries are not priorities for Russia as it is neither a mandatory donor, nor an aid recipient. However, the Glasgow summit set the overall volumes of climate finance mobilized by developed countries (including private funds) in the amount of at least $100 bn per year. The COP26 calls on developed countries to double financing of adaptation (up to $40 bn per year).

Also, the Glasgow summit launched a number of international initiatives: a declaration on methane, forests, coal and oceans. Russia was a co-sponsor of the forest conservation initiative, but did not join the initiatives on methane and coal. Russia's absence in methane cooperation club creates risks that it may be excluded from the formation of the international regime and a discriminatory regulation will be adopted, while Russia is the second largest methane emitter. Also, it is noteworthy that China and the US concluded a bilateral agreement on coordinated actions over the next ten years in power generation and development of renewable energy sources and on reduction in methane emission and use of

1 Guidance on cooperative approaches referred to in Article 6, paragraph 2, of the Paris Agreement. URL: https://unfccc.int/sites/default/files/resource/cma3_auv_12a_PA_6.2.pdf
2 Rules, modalities and procedures for the mechanism established by Article 6, paragraph 4, of the Paris Agreement. URL: https://unfccc.int/sites/default/files/resource/cma3_auv_12b_PA_6.4.pdf

coal.[1] China sends a signal that it is a responsible participant of the global climate regulation and is prepared to promote cooperation in this area, particularly, with western partners. Unfortunately, Russia is not yet pursuing a relevant foreign policy line.

Within the framework of COP26, Russia has succeeded in gaining the required modalities for forest climate projects, which are going to play a decisive role in the achievement of the target absorption share: it became feasible to envisage for them more extended periods of issuing units (for ordinary projects: 5 years and two extensions; for forest projects: 15 years plus two extensions). Also, as Article 6.4 does not set mandatory requirements to climate forest and other nature projects, it is feasible to determine their configuration in terms of national priorities.

Overall, COP26 can be regarded as successful for Russia. However, the establishment of new climate clubs and signing of agreements which Russia is not a party to creates challenges to Russia's national interests. It is necessary to fill as quickly as possible the Strategy with concrete measures, including carbon pricing and, probably, review the ratio between emissions and absorptions. It is important to participate in negotiations in all venues with the highest level of representation because, despite the fact that Russia sent a large delegation to COP26 and assigned a high priority to the negotiation of technical aspects of the Agreement, the absence of the country's leaders at the summit is viewed as a signal that Russia is not prepared to assume serious obligations, and this weakens the negotiating position on strategic issues.

6.6.8. Green deal and Nord Stream 2 in relations between Russia and the European Union

In 2021, Russia's relations with its main economic partner – the EU – remained tense; no trends towards an improvement and revival of cooperation on important issues were seen and economic sanctions imposed in 2014 were further extended. At the same time, the EU presented the whole range of initiatives which may influence Russia's social and economic development in the near- and, particularly, long-term.

The measures of implementation and internationalization of the Green Deal which was presented in 2019 and was continued to be filled with concrete proposals on implementation thereof in 2021 ("Fit for 55" package) will influence both directly Russia's interests through the removal of requirements to the market entry and indirectly owing to a reduction in demand for hydrocarbons. In Russia. the most discussed Green Deal initiative was the carbon border adjustment mechanism (CBAM). After the draft law was published, it became clear that the situation was not that dramatic as it was initially expected because energy industries were not in the list and only direct emissions were to be accounted for at the initial stage. CBAM envisages time for a test run and provision of information on emissions without buying certificates from 2023 till 2025; though the volume

1 "China-US Joint Glasgow Declaration on Enhancing Climate Actions in the 2020s". URL: https://www.state.gov/u-s-china-joint-glasgow-declaration-on-enhancing-climate-action-in-the-2020s/

of free of charge permissions is subsiding, they remain actually within the scope of the EU quotas trading system till 2035. CBAM makes it feasible to "repackage" assets and production processes: with Russia sending to the EU less carbon-intensive products, importers of Russian goods will be buying fewer certificates. The existing draft regulation envisages reporting on direct and indirect emissions, while in case of buying certificates the accounting of only direct emissions is to be made before the receipt of sufficient information on the development of assessment methods. However, it is to be noted that CBAM modalities may be tightened. In the first instance, they may introduce accounting of indirect emissions when buying certificates even under the existing mechanism. In Russia, electricity is rather carbon intensive and this will adversely affect the overall footprint of exported products. Also, after 2035 CBAM is expected to be extended onto new sectors, including energy commodities. This will hit hard Russia's interests as an exporter.

In 2021, the G20 supported the EU initiative on establishment of the International Observatory on Methane Emissions as an international authority on data collection, verification and accounting. The EU is prepared to offer its methane emission retesting technologies, making it feasible to determine the extent of emission anywhere in the world. Within the framework of the Glasgow climate summit, a new global initiative on methane was prepared. For Russia, the world's second largest methane emitter, there are risks of a discriminating regulation to be endorsed by other actors as it does not take part in initiatives.

The more ambitious goals put forward by the EU in respect to the shares of renewable energy in the overall matrix (at least 40% by 2030) and energy efficiency (cuts in primary energy consumption (39%) and final energy consumption (36%) by 2030) will lead to a decrease in demand for Russian energy commodities, whose exports to Europe yield a substantial portion of revenues to the Russian budget. If demand for natural gas can even increase in the period till 2030 in the process of substitution in the EU of coal for cleaner sources, demand for other energy commodities will fall on the European market. However, increased natural gas consumption may not materialize because of growing political divisions.

2021 saw the completion of the Nord Stream-2 project which may deliver additional 55 bn cubic meters of natural gas to the EU directly, however, the start of its operation was delayed, particularly, on the back of pressure by some EU member countries and the US. On November 16, 2021, Germany's Federal Network Agency (BNetzA) suspended certification of the Nord Stream 2 AG because of the need to establish an operator in the form of a legal entity in accordance with the German legislation which is aimed at ensuring compliance with the EU Directive requirements as regards general domestic gas market rules of partition of delivery, transportation and distribution functions. However, after the establishment of a German subsidiary, owner of the German stretch of Nord Stream-2, its certification as an independent operator is not guaranteed, nor is likely to take place soon. The certification process may take up to 10 months and the European Commission is in a position to give its opinion on draft resolution before it is endorsed. In case of disagreement with the commission's findings, the European Commission

may initiate an investigation in the EU Court. Also, PGNiG, Polish state-owned energy company filed an application for the right to present evidence against the pipeline.[1]

After the German regulator postponed approval of operationalizing Nord Stream-2, the energy crisis broke out in Europe and prices for natural gas soared by 17%. Gazprom fulfilled in full its obligations on long-term contracts, but a number of factors (expectations of cold winter, a reduction in gas supplies to Europe from Norway, a decrease in windmill power generation and growing global demand for natural gas) in conjunction with low gas reserves in the EU and insufficient supply of gas on the spot market led to a surge in prices. In short-term, such a situation can be advantageous to Russia as increased gas supplies become even more sought out and with Nord Stream-2 put into operation this demand can be met. However, in mid-term and short-term the situation may unfold against Russia if amid growing political tensions, pressure on the part of pipeline opponents and too high prices for natural gas a decision will be taken on stepping up transition to renewable energy sources (RES). A speedy rollout of RES is impossible, but the required investments can be made to prevent crises in future. Apart from growth in the share of RES and energy efficiency, the EU can make a point of bolstering its energy security via diversification of gas supplies and reduction in its reliance on Russia.

Overall, the relations between Russia and the EU remain tense and it is impossible to reach an agreement on different issues; even the Nord Stream-2 project which is apparently economically advantageous to some EU key member countries encounters constantly opposition for political reasons. It is in Russian interests to pursue the climate policy and regulation and carry out energy transition nationwide to reduce adverse implications of some Green Deal measures and dependence of the economy on energy commodities exports to Europe.

6.6.9. The Shanghai Cooperation Organization (SCO): twenty years of cooperation

In 2021, Tajikistan's SCO presidency focused its attention on further promotion of trade and economic cooperation, overcoming of pandemic implications and networking on digitalization and climate issues.

As far back as the 2020 summit, Emomali Rakhmon, President of Tajikistan declared that the establishment of SCO specialized financial institutes would become a priority of the jubilee 20th year of the SCO cooperation. However, the SCO failed to come to an agreement on concrete steps to establish the Development Fund and the SCO Bank for Development for implementation of the SCO Development Strategy till 2025.[2] The Russian side still insists on consolidation of

1 PGNiG and PST expect to be granted participation in certification proceedings concerning Nord Stream 2. URL: https://en.pgnig.pl/news/-/news-list/id/pgnig-and-pst-expect-to-be-granted-participation-in-certification-proceedings-concerning-nord-stream-2/newsGroupId/1910852?changeYear=2021&currentPage=1

2 The Report by Vladimir Norov, SCO Secretary General at the 4th Meeting of Finance Ministers and Representatives of Central (National) Banks of SCO member countries. URL: http://rus.sectsco.org/archive_news/20210904/775052.html

efforts on the track of the SCO's Interbank Association (IBA)[1] and its networking with the Business Council.[2] Within the framework of the IBA, the SCO adopted the Strategy of Mid-Term Development (2022–2026) and the SCO's new IBA Strategy, which includes responsible financing and introduction of "green" technologies into the economy. The SCO works on the prospect of expanding the lending in national currencies and utilization of national currencies in implementing joint projects and negotiates the road map on a stepwise increase in the share of national currencies in mutual settlements in order to reduce the SCO' economies' reliance on external factors, as well as converting related and transaction costs.[3]

Taking into account the role of digitalization in promotion of economic growth, the SCO initiated the mechanism of conference meetings between heads of government departments and agencies responsible for development of information technologies in the SCO member countries. Russia declared that it was prepared to share with other SCO member countries its IT products and technologies, including those in 5G, big data, artificial intelligence and e-government services, as well as regulatory practices of introduction of digital innovations, such as the law on establishment of regulatory sandboxes for the purpose of lifting restrictions in respect of implementation of innovation projects.[4] The establishment of the SCO Pool of Technological parks proposed by Kazakhstan[5] is expected to facilitate digitalization and building of the innovative ecosystem of the SCO member countries. Russia where at present the number of the existing technological parks, including those under development, amounts to 73 projects can make a substantial contribution to the Pool.

In 2021, the first meeting of energy ministers was held on the stalled energy track, [6] the draft Concept of cooperation of the SCO member countries in the energy sector was endorsed, relevant mechanisms of multilateral cooperation – the meetings of SCO energy ministers and the SCO Energy Club Working Group[7] were approved. Also, Russia proposed to hold ministerial consultations on decarbonizing the economy.

The SCO held the 2nd meeting of the heads of government departments and agencies responsible for protection of the environment; they reached an agreement

1 The SCO Interbank Association (IBA) was established in 2005 as a result of the decision of 2004 of the Council of the Heads of Governments (Prime Ministers) of the SCO Member Countries on establishment of the SCO Development Fund. Due to serious differences in approaches, Russia's proposal was taken to work on two lines: the Development Fund and the "banking pool" which was later transformed into the IBA. URL: https://www.mid.ru/sanhajskaa-organizacia-sotrudnicestva-sos-/-/asset_publisher/0vP3hQoCPRg5/content/id/939476

2 The meeting of the Council of Heads of Governments of the SCO member countries. URL: http://government.ru/news/43901/

3 Ibid.

4 Maksim Reshetnikov: Russia is prepared to share its know-how in digital technologies with the SCO countries. URL: https://economy.gov.ru/material/news/maksim_reshetnikov_rossiya_gotova_podelitsya_narabotkami_v_sfere_cifrovyh_tehnologiy_so_stranami_shos.html

5 The meeting of experts of the SCO member countries on the draft Concept of establishment of the SCO's Pool of Technological Parks . URL: http://rus.sectsco.org/news/20210225/722653.html

6 The SCO Energy Club officially established as a consulting mechanism in 2013 failed to become a really effective institute. Coordination functions were assigned to the SCO Business Council.

7 Vladimir Nerov, SCO Secretary General: "The SCO space represents a giant market of energy reserves and their sources." URL: http://rus.sectsco.org/news/20210812/771511.html

on the establishment of the Special Working Group on Environmental Issues and approved the action plan on implementation of the Concept of Cooperation in the Field of Environment in 2022–2024. The endorsement of the Green Belt program – the first regulatory document on the climate policy – put forward by Uzbekistan is expected to facilitate further cooperation in utilization and implementation of modern energy, resource efficient and environmentally clean technologies.

An important step was the SCO's support of Russia's initiative on establishment of the Greater Eurasian Partnership (GEP) with participation of the SCO member countries, the Eurasian Economic Union, the Association of South East Asian Nations (ASEAN), as well as other interested countries and multilateral associations in the interests of development of Eurasian space of broad, open, mutually beneficial and equal cooperation.[1]

The issues of regional security were as important as economic cooperation in the SCO's agenda. In the context of the US exit from Afghanistan and Taliban takeover, the SCO's common position plays an important role in provision of aid to prevent a humanitarian disaster in Afghanistan, support of the inclusive peace process there and building of Afghanistan as an independent, neutral, unified, democratic and peaceful country free of terrorism, war and drugs. It is planned to consolidate efforts of the SCO-Afghanistan Contact Group within the framework of the presidency of Uzbekistan in SCO in 2022.

So, the SCO succeeded in promoting its institutional development, expanding its membership,[2] establishing cooperation with partner-countries[3], approving joint documents on digitalization, climate and energy, fighting trans-border epidemic diseases and overcoming negative socioeconomic implications of the COVID-19 pandemic. However, there are still differences on issues related to the establishment of the SCO financial institutions and much work is to be done on the development of the GEP concept with concreter parameters included. Taking into account Russia's interest in bolstering the SCO and creating GEP, it would be expedient to support the establishment of the SCO's Bank, which may become an important factor in negotiating modality of cooperation, Russia's resource of influence and the source of funding projects which are of priority to Russia in GEP.

6.6.10. Cooperation with the EEU: development of the digital and climate agenda

The development and promotion of integration processes and cooperation within the scope of the Eurasian Economic Union is a priority of Russian foreign economic policy.

On May 21, the heads of the EEU member countries endorsed "The Main Guidelines of the Macroeconomic Policy in 2021–2022." The document is aimed at facilitating the embarkment on the trajectory of advanced development with annual growth rates of 4.5%–5.5%.[4] Macroeconomic stability and investment

1 Declaration on the SCO's Twentith Anniversiry. URL: http://rus.sectsco.org/politics/
2 Iran initiated the procedure for joining the SCO.
3 Decisions were taken to grant the dialog partner status to Qutar, Egypt and Saudi Arabia.
4 The EEU established the main guidelines of the macroeconomic policy. URL: https://eec.eaeunion.org/news/v-eaes-opredelili-osnovnye-orientiry-makroekonomicheskoj-politiki/

growth are the main goals of this policy. On this track, the EEU member countries discussed the development of the single payment area and the draft agreement on granting permission to brokers and dealers of one EEU member country to participate in trading in other EEU member countries, where national exchanges are granted the right to recognize brokers' and dealers' licenses issued in the EEU member countries and make it feasible for them to have access to trading in securities, as well as financial derivatives. Further, to facilitate harmonization of procedures for mutual recognition of securities issues and listing them on exchanges of the EEU member countries, a draft agreement was prepared on mutual access to securities placement and trading on stock exchanges of the EEU member countries.

In 2021, "green" economy issues were in the focus of the EEU's attention. Plans were announced to develop Eurasian low-carbon development programs; a high-level working group on narrowing of positions within the scope of the climate agenda was established; joint efforts to support the most vulnerable sectors of industry were taken; the bank of climate initiatives on presentation of government technologies developed in the EEU member countries was formed. In October 2021, the EEU made a statement on economic cooperation of the EEU member countries within the framework of the climate agenda. In that statement, the leaders of the EEU member countries stressed the importance of an international exchange and non-discriminatory utilization of technologies, supported the narrowing of approaches to the monitoring and verification of emissions and absorption of greenhouse gases and reciprocally acknowledged the mechanisms of circulation of carbon units and systems of electrical energy origin verification. The heads of the EEU member countries declared their intention to promote economic cooperation on the climate agenda following the single market principles. Also, the Eurasian Economic Commission (EEC) discussed the importance of starting joint research in hydrogen; it was noted that electrolizer-manufacturing joint-ventures can become prospective projects.

Within the scope of digital agenda, the EEU's first digital project – "Work without Borders"[1] – was launched. The EEC started its work on the international agreement on trans-border data exchange in the EEU. With this Agreement endorsed, common mechanisms will be created to protect the rights of data exchange participants and reduce companies' costs related to their entry to other countries' digital space; this will lead to the expansion of markets for innovative products from the EEU member countries. A high-level working group on digital transformation was established for work on the Agreement and development of approaches to the implementation of the EEU digital agenda priorities.

Within the framework of development of the common market, important breakthroughs included the approval of the plan of roaming cancellation in the EEU, the road map on e-commerce with the relevant regulatory framework

1 The EEU launched its first digital project "Work without Borders": https://www.economy.gov.ru/material/news/v_eaes_zapushchen_pervyy_cifrovoy_proekt_rabota_bez_granic.html. Other projects include the Eurasian network of industrial cooperation, subcontracting and transfer of technologies, ecosystem of digital transport corridors of the Eurasian Economic Union, as well as digital technical regulation within the framework of the Union.

envisaged, measures facilitating a free flow of goods and preventing unfair practices, networking with third countries and a package of documents for the pilot project in online e-trade in goods from abroad.

Overall, in 2021 Russia and the EEU's partners and institutions cooperated to promote integration and strengthen their positions on the global stage. The approval of the strategy on data exchange is an important prerequisite for development of digital markets in the EEU and enhancing their competitive edge; efforts should be intensified on this track. The development of the EEU's climate agenda is particularly important in the context of making action-oriented the Strategy of Russia' Development with Low Level of Greenhouse Gas Emissions. The EEU has to ensure the implementation of the Concept of Introduction of Green Economy Guidelines in 2023. A set of measures proposed by the Commission – building of the carbon regulation system, mutual recognition of carbon rules, unified methods of calculation of carbon footprint and carbon units, implementation of "cross-cutting" Eurasian investment-climate projects and abandoning of climate barriers in trade inside the EEU arising due to regulatory burden differences – will lay a foundation for cooperation and united response to common challenges.[1] The Commission is the main driver of the development of all processes in key areas, but its initiatives are not actively carried out by member countries. Thus, it is a key barrier to development and upgrading integration in the EEU. Enhancement of efficiency of networking between supranational and national levels is crucially important for the future of the EEU, its position in the international system and capacity, which its member countries gain within the framework of the EEU to pursue and promote their national interests.

* * *

Despite an increasing trend towards the establishment of new rules and consolidation of the G7 leadership in the system of international institutions, Russia together with its BRICS and SCO partners succeeded in preventing further degradation of multilateralization and enhancing its role as a key global management participant. In the context of growing importance of digitalization and the climate agenda, as well as the G7's determination to take advantage of these issues in order to strengthen their positions in the global system of economic relations to cope with the risk of loss of influence, Russia will have to pursue a more active policy in key multilateral institutions. The implementation of national goals of digital transformation and low carbon development can become Russia's asset of influence in international cooperation in such areas as climate change, digital technology and the global system as a whole.

1 Analytical Report on "International Approaches to the Development and Introduction of the Principles, Measures and Mechanisms of "green" economy. URL: https://eec.eaeunion.org/upload/medialibrary/939/Doklad_Zelenaya_ekonomika_PDF_sayt.pdf

Annex 2[1]
Timeline of the key events in the spread of the new coronavirus infection in 2021

	Date	Event[2]
	01.01	France tightens containment measures in a number of regions (in particular, the duration of the curfew).
	02.01	Norway lifts the ban on air traffic with the UK and resumes air travel.
	02.01	Russia launches a service that allows the individuals vaccinated against the coronavirus to receive vaccination certificates.
	03.01	India approves the use of the Covaxin vaccine (Bharat Biotech).
	04.01	India approves the use of AstraZeneca AZD1222 vaccine (ChAdOx1 nCoV-19).
	04.01	The UK introduces a seven-week-long lockdown. Schools are shut until mid-February in response to a sharp morbidity increase. All non-food stores are shut from January 4. The UK Joint Biosafety Center raises the national alert level to 5.
	04.01	Public catering establishments in St. Petersburg that have been temporarily shut from December 30, now can stay open from 6:00 to 23:00.
	04.01	The procedure for receiving subsidies to cover housing and amenities costs without filing an application is extended until April 1.
	06.01	Mordovia launches vaccination against coronavirus for individuals over 65 years of age.
	07.01	Japan: a state of emergency is declared in the Greater Tokyo area after reports of a record surge in the number of new infections.
	07.01	Buryatia introduces a mandatory COVID-19 test for visitors.
	07.01	In St. Petersburg, theaters reopen.
	08.01	London is on high alert in response to a rapid spread of the coronavirus.
	08.01	Cyprus tightens containment measures for three weeks to curb the spread of the coronavirus. People may leave their homes twice a day if necessary, and are not allowed to go out without a significant reason.

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2 Event category: – events related to the health care sector, sanitary and epidemiological measures; – events related to the economic sphere; – events related to the social sphere and information coverage; – events related to the management sphere; – global-scale events or those happening outside Russia.

	Date	Event[2]
	10.01	The first case of infection with the British variant of the coronavirus is detected in the RF.
	11.01	Schools in the Ivanovo, Sverdlovsk, Samara, Pskov and some other regions switch back to the traditional full-time learning format.
	12.01	China extends containment measures to the provinces near Beijing after a spike in new infection cases.
	12.01	New Zealand's new border rules: all travelers (except those from Australia, Antarctica and several Pacific island nations) are required to test negative for COVID-19.
	12.01	Malaysia declares a nationwide state of emergency until August 1 in response to the ongoing COVID-19 spread and the political crisis. Parliament is suspended, elections are canceled, the government may pass laws without parliamentary approval.
	12.01	The temporary restriction on air traffic between Russia and the UK is extended until February 1.
	13.01	Based on phase 1 and 2 results, the efficacy and safety of the Ad26.COV2.S vaccine (Johnson and Johnson) is confirmed, the trial report is published in The New England Journal of Medicine.
	13.01	Italy extends the state of emergency until the end of April.
	13.01	Armenia allows the entry of foreigners who test negative for COVID-19.
	13.01	Switzerland tightens containment measures in response to the threat of new coronavirus strains: remote work mode is mandatory; non-food stores are shut, the protection of vulnerable persons in their workplace is strengthened.
	13.01	Norway requires that everyone who enters the country should take a coronavirus test at the border.
	13.01	The Sputnik V vaccine is registered in Venezuela.
	13.01	Brazil starts manufacturing and administering the Sputnik V vaccine.
	14.01	The results of phase 3 of the Chinese Ad5-nCov vaccine trial demonstrate that 92.5% of Russian volunteers have developed high antibody titers without serious adverse reactions.
	15.01	New Zealand: all travelers from the UK and the USA are required to take a test for COVID-19 before entering the country.
	17.01	Austria extends the lockdown period until February 7.
	18.01	Russia launches a mass coronavirus vaccination campaign.
	18.01	Across all Russian regions, schools switch back to the traditional full-time learning format (including high school).
	18.01	Turkmenistan registers the Sputnik V vaccine within the framework of an accelerated procedure, without additional clinical trials.
	20.01	Germany extends the lockdown period to February 14. The ban on meetings of more than two families continues, schools are shut, employers switch over their staff to remote work, the face mask wearing regime is tightened.
	21.01	In Malaysia, restaurants, food courts and delivery services may operate only until 22:00. Restrictions on movement between some regions are imposed.

	Date	Event[2]
	21.01 	Hungary and the UAE register the Sputnik V vaccine.
	22.01	Moscow reopens museums, libraries and other cultural institutions; colleges, extracurricular educational establishments, sports schools and children's recreation centers resume their routine schedule; the restrictions on the operation of cafes, bars and restaurants are left in place.
	24.01 	All EU travelers are required to take tests for COVID-19 not earlier than 72 hours before entering France.
	24.01	The Yamalo-Nenets autonomous national area lifts the mandatory stay-at-home regime for those risk group individuals who have been vaccinated against COVID-19 or display antibodies thereto.
	25.01 	The Moderna mRNA-1273 vaccine is shown to induce neutralizing antibodies against the British (B.1.1.7) and South African (B.1.351) variants of SARS-CoV-2.
	25.01 	An intermediate data analysis in the course of Oxford University PRINCIPLE study demonstrates that azithromycin and doxycycline produce no positive effect in patients over 50 years of age who are treated at home with either of the two antibiotics in the early stages of COVID-19 infection.
	25.01 	On their arrival in Singapore, all travelers (including citizens of Singapore and foreigners with a permanent residence permit) are required to take a PCR test for COVID-19.
	26.01 	The WHO Strategic Advisory Group of Experts on Immunization issues interim recommendations for the use of the Moderna vaccine. The recommendations include administering two doses 28 days apart. The interval can be extended up to 42 days depending on the epidemiological situation in a given country. The experts also advise against administering the vaccine to pregnant women, unless they are healthcare workers or otherwise at high risk of getting infected.
	26.01 	All air passengers flying to the USA from overseas must provide a negative COVID-19 test result or a certificate of recovery from the novel coronavirus infection.
	26.01 	Iran registers the Sputnik V vaccine.
	26.01	Rb2 bn is allocated to the State Research Center of Virology and Biotechnology VECTOR for the production of EpiVacCorona, a peptide-based vaccine against the coronavirus.
	27.01	Russia resumes air traffic with Vietnam, India, Finland, and Qatar.
	27.01	In Moscow, the requirement that not less than 30% of employees should be switched over to remote work becomes recommendatory instead of mandatory.
	27.01	A decree is signed concerning increased advance payments under government contracts in 2021. In 2021, the companies participating in government procurement projects can receive up to 50% of the contract price as an advance payment.
	28.01	In Karelia, individuals over 65 of age are allowed to visit cafes, restaurants, sports clubs and swimming pools; from February 1, schools, colleges and technical schools switch back to the traditional full-time learning format.
	29.01 	The phase 3 clinical trial of the single-component Ad26.COV2.S vaccine (Johnson and Johnson) demonstrates 66% and 85% efficacy in preventing a moderate and severe course of COVID-19, respectively, and complete protection against hospitalization and death within 28 days after vaccination.

	Date	Event[2]
	29.01	In the Chukotka autonomous national area, the stay-at-home regime is lifted for those residents over 65 years of age who have been vaccinated against the coronavirus; enterprises resume nighttime operation.
	30.01	Singapore suspends its air traffic agreements with Malaysia, Germany and South Korea in response to a global surge in infections and the emergence of new variants of the virus.
	31.01	Belgium, until March 1, bans all holiday and tourist travel (both in- and outbound).
	31.01	Peru launches a lockdown. In 10 regions, the capital including, retail outlets are shut until February 14, residents are not allowed to leave their homes unless absolutely necessary; churches are shut.
	31.01	Rb68.5 bn is allocated to the Social Security Fund to cover the payment of temporary disability benefits in H1 2021.
	01.02	Visitors arriving in Singapore are required to purchase travel insurance to cover the medical and hospitalization costs associated with COVID-19, with a minimum coverage of not less than $22,600.
	01.02	The lockdown regime in Israel is extended until February 5.
	01.02	The Novgorod region lifts restrictions on the operation of bars and restaurants.
	01.02	In Italy, the majority of regions lift some of their containment measures: bars and restaurants are allowed to stay open until 18:00; museums and historical architecture sites reopen.
	02.02	Russia extends the temporary ban on air traffic with the UK until February 16.
	04.02	A number of the Persian Gulf countries (Saudi Arabia, Kuwait, Qatar, Omar) tighten containment measures.
	04.02	A resolution on automatic renewal of licenses in 2021 is signed.
	06.02	Cuba introduces a quarantine for visitors from abroad.
	08.02	Belgium begins to gradually ease containment measures: recreation areas and campsites reopen; from January 13, zoos and hairdressers have reopened; from March 1, services involving close personal contact are to reopen, etc.
	08.02	Austria gradually eases containment measures: schools, retail outlets, hairdressers and museums reopen.
	08.02	Russian universities switch back to the traditional full-time learning format.
	08.02	Practically all the containment measures introduced in the Moscow region are lifted.
	09.02	Pakistan registers the Sputnik V vaccine.
	10.02	Malaysia: the 28-day ban on the operation of non-food stores is lifted.
	11.02	Until February 25, entry into Latvia for unimportant reasons from all EU countries, the European Economic Area, Switzerland, and the UK is prohibited.
	12.02	The AZD1222 vaccine (ChAdOx1 nCoV-19) does not show protection against mild-to-moderate infection caused by the South African variant of SARS-CoV-2 (B.1.351).

	Date	Event[2]
	12.02	Montenegro and Kazakhstan register the Sputnik V vaccine.
	12.02	Italy tightens containment measures: the ban on movement between regions remains, some regions are designated as orange zones (bars, restaurants, museums are shut there).
	12.02	In Udmurtia, the face mask wearing regime becomes recommendatory.
	12.02	Belarus approves the administration of the Sputnik V vaccine to individuals over 60 years of age.
	15.02	Russia resumes regular air traffic with Azerbaijan and Armenia on a reciprocal basis.
	15.02	The Nizhny Novgorod region partially lifts the ban on nighttime operation of cafes and restaurants; attractions, water parks, children's entertainment centers and food courts in shopping centers are allowed to reopen. The permitted occupancy of theater and cinema halls is increased from 40% to 60%, and all capacity restrictions for sporting events are lifted. In the Omsk region, spectators are allowed to attend sporting events, the occupancy of cinemas and sports halls is increased from 50% to 75%. From February 12, the region also lifts the ban on nighttime operation of clubs, bars and restaurants, and it is also allowed to reopen children's entertainment centers in shopping malls. The Amur region lifts the restrictions on opening hours and occupancy for cafes and restaurants, nightclubs and karaoke halls are al-lowed to reopen, the ban on sporting events is lifted, and the mandatory stay-at-home regime for people over 65 years of age is canceled. In Rostov-on-Don, food courts and ice rinks reopen, the stands at sporting events and cinema halls can be filled up to 50% of their capacity. In Khabarovsk Krai, the mandatory stay-at-home regime for elderly people is lifted.
	16.02	Bashkortostan lifts the mandatory hand glove wearing regime for retail outlets and banks.
	18.02	Armenia approves the use of the Sputnik V vaccine in its territory.
	20.02	Russia registers its third CoviVac vaccine.
	20.02	The Novosibirsk region lifts the occupancy restrictions for theaters and stadiums.
	21.02	Israel opens its trade centers, hotels, gyms, shops and cultural sites for vaccinated individuals.
	22.02	Estonia introduces new containment measures against the spread of the coronavirus (cancellation of group classes in schools, switch-over to remote learning, occupancy restrictions for the catering sector).
	24.02	Canada: Toronto extends the ban on mass gatherings until July 1.
	24.02	Egypt registers the Sputnik V vaccine.
	25.02	New restrictions in Estonia: remote learning mode for schools until the end of March, a ban on indoor events, catering establishments are required to close at 18:00.
	26.02	Canada approves the use of AstraZeneca AZD1222 vaccine (ChAdOx1 nCoV-19).
	26.02	Moldova registers the Sputnik V vaccine.

	Date	Event[2]
	27.02	The single-dose Ad26.COV2.S vaccine (Johnson and Johnson) is approved for emergency use in the USA.
	27.02	Russia approves a new relief package for entrepreneurs. It includes the new preferential loan program "FOT 3.0", to which Rb7.7 bn is allocated.
	28.02	In Yamal, the mandatory stay-at-home regime for elderly people is extended until March 31.
	01.03	In Finland, a state of emergency is introduced: in some areas, movement is restricted, and people are allowed to go out only to a pharmacy or grocery store.
	01.03	The Czech Republic tightens containment measures: people are not allowed to leave their districts, except to travel to work or care for relatives; kindergartens and schools are shut, similarly to all retail outlets except for grocery stores.
	01.03	Georgia resumes transportation traffic with Russia, on condition of a negative test for the coronavirus.
	05.03	All visitors arriving in Turkey by land, air or sea are required to present the negative result of a PCR test taken 72 hours before their arrival, the requirement is established until April 15.
	05.03	The Government of the Russian Federation recommends that employers prioritize the switchover of employees aged 65+ years to remote work.
	05.03	Iraq registers the Sputnik V vaccine.
	07.03	Perm Krai lifts the restrictions on nighttime operation of catering establishments.
	08.03	The stay-at-home regime for elderly people in the city of Moscow becomes recommendatory.
	08.03	Tunisia shortens the quarantine period for foreign tourists from seven to two days.
	10.03	Kenya and Morocco approve the use of the Sputnik V vaccine.
	11.03	The NVX-CoV2373 vaccine (Novavax) demonstrates 100% and 96.4% protection against severe and moderate infection caused by the normal strain, respectively; and 55.4% protection in the regions where B1.351 prevails.
	11.03	The EU approves the use of the Sputnik V vaccine.
	11.03	Estonia tightens containment measures: all educational establishments switch over to remote learning, all retail outlets (except for convenience and grocery stores) and catering establishments are shut. A temporary ban is imposed on indoor sports, movement on the streets is restricted.
	12.03	South Korea extends its current social distancing measures until March 28.
	12.03	The Voronezh region cancels the mandatory stay-at-home regime for elderly people.
	12.03	The government extends until the end of 2021 the relief measures for businesses trading in excisable goods. These are hotels, cafes and restaurants that have suffered losses because of the situation with the coronavirus.
	12.03	Khabarovsk Krai allows mass events for up to 100 people.

	Date	Event[2]
	13.03	2.7 billion rubles allocated to regions to provide free medicines for patients with coronavirus infection.
	13.03	The government launches additional measures to help unemployed citizens in finding a job.
	14.03	Kalmykia extends containment measures until April 11.
	15.03	Italy tightens containment measures: all schools, restaurants, shops and museums are shut until April 4. Besides, any region inside the country with more than 250 cases per 100,000 population is designated as a red zone with the highest epidemiological danger.
	15.03	Kaliningrad lifts all restrictions on the operations of catering businesses.
	16.03	Russia extends the temporary ban on air traffic with the UK until April 16.
	16.03	Yakutia reopens recreation parks and attractions, on condition of compliance with social distancing and the face mask wearing regime. Besides, the capacity limit for cinemas and theaters is increased to 75%.
	17.03	Iceland permits entry into the country for vaccinated tourists without a coronavirus test or a mandatory quarantine.
	18.03	Bulgaria introduces a 10-day lockdown: schools, restaurants, theaters, shopping centers, gyms and casinos are shut. Festive events are allowed for groups of not more than 15 people.
	20.03	Foreign students from the epidemiologically safe countries are allowed to return to Russia.
	22.03	According to US clinical trials, AstraZeneca's COVID-19 vaccine is 79% effective in preventing symptomatic illness, and 100% effective in preventing severe illness and hospitalization.
	22.03	Japan lifts the state of emergency in the Tokyo metropolitan area, which is the last remaining area of the country to have enforced it since early January.
	23.03	The quarantine in The Netherlands is extended for one more month.
	24.03	Germany extends the lockdown regime for three more weeks.
	26.03	The regions have received more than Rb3.5 bn for additional financing of hospitals and outpatient institutions operating under the compulsory medical insurance system.
	28.03	The government approves an algorithm for interagency cooperation in the event of the spread of dangerous infections.
	30.03	WHO releases a report on the investigation into the coronavirus pandemic's origin. It notes that a lab leak is unlikely, and the virus was probably transmitted through an intermediate animal to humans. Some countries express their doubts as to the study being unbiased.
	30.03	Spain's government tightens the face mask wearing regime, all citizens from the age of 6 years are required to wear face masks, including on the street, in beach areas and other open spaces, even if it is possible to maintain the required sanitary distance there.

	Date	Event[2]
	30.03	The government approves a decree on the possibility of receiving the results of tests for COVID-19 through the public services portal.
	31.03	The findings from the Pfizer-BioNTech COVID-19 vaccine trials show that it is 100% effective in children aged 12 to 15 years.
	31.03	The government approves temporary rules for the issuance of sick leave certificates and the related amount of remuneration. The citizens aged 65+ years who are staying at home due to the coronavirus infection may extend their electronic sick leaves until May 1.
	31.03	France shuts all schools and extends the curfew throughout its territory.
	01.04	The Netherlands suspends the use of the AstraZeneca vaccine because of concerns that it might induce the formation of blood clots.
	03.04	The Netherlands suspends the use of the AstraZeneca vaccine because of concerns that it might induce the formation of blood clots.
	04.04	The list of the President's instructions following his meeting with the government is released. Among other things, the measures designed to support the healthcare system in the Far Eastern federal okrug are envisaged.
	06.04	Canada announces the start of a third wave of the pandemic as the number of new infections exceeds 1 mn.
	09.04	The List of the President's Instructions following the meeting concerning measures designed to boost investment activity is published; both federal and regional packages are envisaged.
	11.04	Russia's Federal Medical-Biological Agency (FMBA) receives a patent for MIR-19, a drug against the coronavirus suitable for inhala-tion or nasal administration. An article on the new drug has been published in the acclaimed European journal Allergy.
	12.04	A study on the British variant of the coronavirus is published, scientists have come to the conclusion that this particular strain can spread faster but generally does not produce more severe consequences.
	13.04	The US regulator decides to suspend the use of Johnson & Johnson's vaccine because of the risk of blood clots.
	14.04	Switzerland and Belgium begin to relax their containment measures: indoor sports and cultural events are allowed, restaurant verandas reopen. In Belgium, restaurant verandas reopen, shops switch back to a standard operating mode (instead of serving customers by appointment), containment measures are eased in the services sector and with regard to social contacts.
	14.04	Serbia launches the production of the Sputnik V vaccine.
	14.04	According to official data released by Rospotrebnadzor, no cases of thrombosis after the administration of the Sputnik V vaccine have been detected, which is also confirmed by the results of a trial in Argentina.
	15.04	RF Government Edict No. 977-r dated April 15, 2021 envisages refunds to tourists under their contracts concluded not later than March 31, 2020 for tourism services that were canceled due to emergencies.

	Date	Event[2]
	15.04	Russia restricts air traffic with Turkey and Tanzania in response to the worsening epidemiological situation.
	16.04	WHO outlines the fundamental problem of equal access to vaccines; out of 832 mn vaccinations around the world, more than 82% were done in the countries with high to medium income levels; and only about 0.2%, in the most disadvantaged countries.
	17.04	The global number of coronavirus pandemic victims jumps above 3 mn; UN Secretary-General Antonio Guterres stresses the importance of ensuring that everyone around the world can receive vaccines.
	19.04	Chief pulmonologist of the RF Ministry of Health Sergey Avdeev notes that in Russia, more than 75% of those coronavirus patients who had to be administered artificial lung ventilation (ALV) have died. The Gamaleya Center informs that more than 3.8 mn people have been vaccinated, the vaccine effectiveness is estimated to be 97.6%.
	21.04	Address of President Putin to the Federal Assembly. The proposed measures are as follows: — payment of Rb5,600 per month for children aged 8–16 in single-parent families; — compensation of the mother's sick leave to care for her child aged under 7 years in the amount of 100% of her earnings; — payment of Rb6,350 per month to low-income pregnant women; — one-time payment of Rb10,000 for schoolchildren; — creation of additional 45,000 state-funded scholarships in universities; — gasification as a social priority; — additional measures to support small and medium-sized businesses; — prolongation of the cashback program until the end of the year, and a 50% refund to parents of their children's summer camp package price.
	23.04	US regulatory authorities lift restrictions on the use of Johnson & Johnson's coronavirus vaccine, having recognized its effectiveness and low risks.
	23.04	Executive Order of the President of the Russian Federation "On the establishment of non-working days on the territory of the Russian Federation in May 2021" (to be introduced from May 4 through May 7, 2021, with remuneration for employees).
	24.04	Belgium approves the use of the AstraZeneca vaccine for individuals over 41 years of age (the vaccine's benefits outweigh possible risks and side effects); Johnson & Johnson's vaccine is planned to be used for any age.
	26.04	Turkey introduces a lockdown from April 29 to May 17, shutting schools and imposing restrictions on intercity travel.
	26.04	The Russian Direct Investment Fund (RDIF) announces the first deliveries of the Sputnik V vaccine to India to be on May 1, with an agreement to produce more than 850 mn vaccine doses per year.
	27.04	RF Government Edict No. 1097-r dated April 27, 2021 allocates an additional Rb4.7 bn to refund tourists for their cancelled foreign tours within 20% of their cost, but not more than Rb20,000.
	28.04	Updates on Russia's vaccines are released. In May, the production of the Sputnik V vaccine will be launched Mexico; the Chumakov Federal Scientific Center of the Russian Academy of Sciences submits its CoviVac vaccine dossier for WHO prequalification.
	29.04	In Brazil, the number of deaths from COVID-19 exceeds 400,000; by mortality rate, the country ranks 2nd in the world.

	Date	Event[2]
	30.04	The World Health Organization (WHO) lists the Moderna COVID-19 vaccine for emergency use (previously, the list included the vaccines developed by Pfizer and BioNTech, Johnson & Johnson, and two variants of the AstraZeneca vaccine).
	01.05	India and the Philippines receives the first shipments of the Sputnik V vaccine. In India, the situation remains difficult, with more than 400,000 new infections per day.
	02.05	President of the Russian Federation Vladimir Putin approves the list of instructions for the implementation of his Address to the Federal Assembly dated April 21, 2021. It has to do with the social support issues outlined in the Address. The additional measures designed to develop the health care system are as follows: from July 1, to expand the preventive and routine medical examination programs; over the period 2021–2023, to deliver not less than 5,000 new ambulances to rural areas; and in 2022–2023, to deliver not less than 500 mobile medical complexes. Proposals should be developed concerning the improvement of long-term financial sustainability and independence of the budgets of the regions, and the allocation of loans thereto.
	03.05	The number of registered coronavirus infection cases in the world reaches 152 mn. The highest morbidity levels are observed in the USA (32.4 mn), India (19.5 mn), Brazil (14.7 mn), and France (5.7 mn).
	06.05	The EU has distributed more than 200 mn coronavirus vaccine doses among the member states. By July 2021, it is planned to vaccinate more than 70% of Europe's adult population. In order to speed up the vaccination campaign, the European Union and the USA also considered the idea of waiving patent protection for coronavirus vaccines.
	07.05	WHO lists the Sinopharm vaccine (China) for emergency use in individuals aged 18 years and above.
	09.05	Germany lifts containment measures for vaccinated citizens (the restrictions on social contacts, PCR tests, curfews). The restrictions on the operation of restaurants and cultural institutions are also lifted.
	10.05	The US regulator approves the use of BioNTech and Pfizer vaccines for minors aged 12 to 15 years; previously, vaccination was rec-ommended only for individuals over 16 years of age.
	14.05	Russia announces that from May 25, it resumes air traffic with Iceland, Malta, Mexico, Portugal, and Saudi Arabia. The number of flights to some other countries is increased.
	15.05	Ecuador registers the Russian Sputnik V vaccine.
	16.05	Turkey somewhat eases containment measures (intercity travel is resumed, preschool institutions reopen, vaccinated individuals over 65 years of age are allowed to go out).
	19.05	The list of instructions of the President following the joint meeting of the Presidium of the State Council and the Agency for Strategic Initiative is released. It envisages the development of proposals for financing the measures designed to implement in subjects of the Russian Federation target models under "Health Care", "Labor Market and Employment Support", and "Social Protection"; to high-light the regions' best practices in providing government services in the social sphere; and to ensure monitoring in this field.
	23.05	The number of infection cases in Russia since the onset of the pandemic exceeds 5 mn.

	Date	Event[2]
	24.05	Rospotrebnadzor reports a high efficacy of EpiVacCorona in vaccinating employees (95.8%).
	25.05	Moderna reports its COVID-19 vaccine to be 93% effective against COVID-19 in teenagers aged 12 to 17 two weeks after the first dose.
	26.05	Federal Law No. 151-FZ dated May 26, 2021 "On Amendments to Certain Legislative Acts of the Russian Federation" is signed, whereby the President's Address to the Federal Assembly (dated April 21, 2021) is to be implemented. Thus, the mother's sick leave to care for her child under 8 years of age will be compensated in the amount of 100% of her average earnings, regardless of her employment history; from July 1, single-parent families with children aged 8–16 years are to receive monthly payments (50% of a given region's subsistence minimum per capita for children); from July 1, women who have been pregnant less than 12 weeks are assigned a social benefit in the amount of 50% of subsistence minimum.
	26.05	Slovakia approves the use of the Sputnik V vaccine.
	31.05	Russia extends the ban on air traffic with Turkey and Tanzania until June 21, while air traffic is resumed with 9 countries, including the UK.
	31.05	Turkey eases containment measures (curfew is eased; restaurants, amusement parks reopen).
	01.06	WHO lists Sinovac (China's second vaccine) for emergency use.
	02.06	Russia's Federal Medical-Biological Agency (FMBA) says that the vaccine it is developing will be effective against any mutation of the coronavirus; its preclinical trials are to be completed in June.
	05.06	The list of instructions of the President following the meeting on the implementation of some provisions of the President's Address to the Federal Assembly is released. It is envisaged to refund, from the federal budget, 50% of the cost of children' tourism packages to those citizens who purchased vouchers thereof from recreation and rehabilitation organizations for children during the summer holidays of 2021, and to provide support for recreation and rehabilitation organizations for children.
	10.06	A more contagious coronavirus variant (Delta) is spreading. According to the UK Department of Health and Social Care, it makes up 91% of new infections in that country; the strain could be 40% more contagious.
	11.06	Mongolia registers the Sputnik Light vaccine.
	11.06	Israel plans to accept, from July 1, those tourists that have been fully vaccinated with approved vaccines. A PCR test will also be required.

	Date	Event[2]
	12.06	The list of instructions of the President of the Russian Federation following his meeting with the government is released. It is planned to extend the right to receive, from July 1, 2021, the monthly benefit for children aged 8 to 17 years to a child's guardian (or curator); in August 2021, a one-time payment of Rb10,000 to secondary school students with disabilities aged over 18 years or their legal representatives is also envisaged.
	12.06	The city Moscow imposes containment measures (No. 29-UM dated June 12, 2021 "On introducing amendments to the Decree of the Mayor of Moscow No. 68-UM dated June 8, 2020"). Non-working days are introduced in Moscow from June 13, it is recommended to switch over to a remote work mode, playgrounds in parks and shopping centers are shut, restrictions are imposed on the operation of restaurants after 23.00.
	13.06	Moscow universities are switching to remote mode in compliance with the city mayor's decree; thus, for example, from June 13, an online learning format is introduced at Moscow State University.
	14.06 	The UK postpones lifting its containment measures for 4 weeks (from June 21 to July 19).
	14.06 	The first batch of the Sputnik V vaccine is delivered to Turkey, which plans to launch its own production of that vaccine.
	17.06	Containment measures are introduced in St. Petersburg. The city authorities shut food courts, limit the nighttime opening hours of restaurants, reduce the occupancy limit for cinemas from 75% to 50%, and limit the number of spectators at cultural events to 3,000.
	18.06	The National Database of Coronavirus Genomic Sequences is created, the program has been developed by Rospotrebnadzor's Central Scientific Research Institute of Epidemiology.
	18.06	Because of the coronavirus pandemic, major music festivals are canceled (Wild Mint, Grushinsky Festival).
	18.06	The interdepartmental operational headquarters to monitor the situation with the coronavirus spread announces that air traffic with Turkey is to be resumed from June 22, while the suspension of air traffic with Tanzania is extended until July 19.
	18.06	Mandatory vaccination is introduced in Tver, and the Tver region becomes 7th in this country to impose such a measure. By August 18, not less than 60% of employees in socially significant sectors (retail, catering, hospitality, transportation, education, healthcare, housing and amenities, culture) must receive both components of the vaccine.
	18.06	Moscow imposes restrictions on planned medical care, over the next month planned hospitalization can be provided only to vaccinated patients, with the exception of some special cases and emergency care.
	18.06	The mayor of Moscow announces plans to create coronavirus-free zones in restaurants (serving only customers with a valid vaccination or PCR tests); 220 organizations agree to participate in the experiment.
	21.06 	According to WHO data, the Indian variant of the coronavirus (Delta) has been detected in 92 countries.

	Date	Event[2]
	22.06	By Decree of the Mayor of Moscow No. 35-UM dated June 22, 2021 "On introducing amendments to the Decree of the Mayor of Moscow No. 68-UM dated June 8, 2020", the city of Moscow introduces a number of restrictions. It is planned that cafes and restaurants will be open only to people with a QR code (which is issued to individuals who have been vaccinated, or recovered from the disease, or can produce a PCR test result valid for 3 days). The capacity limit for cultural events is set at 500, except for the events requiring the use of QR codes. There are also restrictions on nighttime operation of organizations.
	23.06	The Moscow region imposes restrictions similar to those in Moscow. Decree of the Governor of the Moscow Region No. 199-PG dated June 23, 2021 is published. QR codes are required for entering restaurants (except for summer verandas), mass events, hotels, and there are restrictions on entry to children's playrooms, attractions, and zoos.
	24.06	The list of instructions of the President of the Russian Federation following his meeting with social workers and representatives of non-profit organizations is released. It is proposed to work out measures to support the All-Russian Public Organization "Russian Red Cross", and to organize government awards to social workers for their active participation in the efforts against the spread of the novel coronavirus infection.
	26.06	Prime Minister Mikhail Mishustin allocates more than Rb46.6 bn to cover the benefits to be paid to pregnant women and single parents with children (Decree No. 1731-r dated June 26, 2021). A pregnant woman in a difficult situation will be able to receive about Rb6,300 (50% of the subsistence minimum); approximately 400,000 women will receive this benefit. Single parents with children aged from 8 to 17 years will receive Rb5,500 per month, and approximately 1 mn citizens will receive this type of support.
	27.06 	The number of coronavirus infection cases in the world exceeds 180 mn. The highest numbers are recorded in the USA (approximately 33.6 mn), India (30.2 mn), and Brazil (18.39 mn).
	28.06	Russia resumes air traffic with Belgium, Bulgaria, Jordan, Ireland, Italy, Cyprus, North Macedonia, and the USA.
	29.06 	In a situation where the Delta strain is spreading, Australia removes the age limit for the AstraZeneca vaccine (previously, it could not be administered to individuals below 60 years of age because of the risks of side effects).
	29.06	Moscow launches an anti-crisis relief package for those companies that have vaccinated their employees. Restaurants will be able to receive a lease deferment, be included in the subsidy program (Rb1 mn for the expenditures on the program list), receive preferential loans (up to Rb500 mn rubles at an interest rate within 6%).
	30.06	Direct Line with President Vladimir Putin. He speaks against compulsory vaccination, highlights the right of the regions to introduce mandatory vaccination for certain categories of citizens. It is suggested that the benefits for children aged 6 years and older should be paid regardless of their age of entry to school.
	01.07	Russia launches comprehensive (in-depth) medical checkup programs for those citizens who have recovered from the coronavirus infection or have been revaccinated (or received booster vaccine shots). The procedure for referring citizens to undergo an in-depth medical checkup is approved (Order of the RF Ministry of Health No. 698n dated July 1).
	01.07 	Armenia starts the production of Russia's Sputnik V vaccine against the coronavirus.

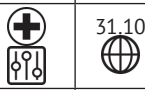
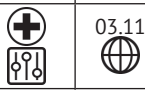
	Date	Event[2]
	02.07	Russia adopts new relief measures for businesses and individuals: VAT exemption for catering services from January 1, 2022 (Federal Law No. 305-FZ dated July 2); granting vaccine manufacturers the right to apply for VAT refunds (Federal Law No. 306-FZ dated July 2); one-time payments to families with children (Executive Order of the President of the Russian Federation of No. 396 dated Ju-ly 2); free vaccination under the CHI program in private medical clinics (Federal Law No. 316-FZ dated July 2).
	05.07	A clinical trial of Russia's Sputnik V vaccine against the coronavirus in teenagers aged 12 to 17 is launched in Moscow.
	06.07	The Moscow government decrees that grants to cover their utility bills should be allocated to those SMEs which will be among the first hundred to have vaccinated 60% of their staff.
	07.07 	Argentina manufactures the first batch of the second component of Russia's Sputnik V vaccine against the coronavirus.
	07.07	Decree of the Chief State Sanitary Physician of the Russian Federation No. 17 dated July 2, on reducing from two to one the number of PCR tests for those arriving from abroad on condition that they stay at home for 3 days after their arrival, comes into force (no tests are required for vaccinated individuals or those recovered from the infection). In order to control the spread of the coronavirus infection, Rospotrebnadzor issues instructions on holding mass events with due regard for the movement of epidemiological indicators (Decree of the Chief State Sanitary Physician of the Russian Federation No. 18 dated July 7).
	08.07	Moscow suspends visits to attraction sites in the territory of zoos; access to cafes and other catering establishments by persons without a QR code is extended until August 1 (Decree of the Mayor of Moscow No. 40-UM dated July 8).
	10.07 	Decree of the Chief State Sanitary Physician of the Russian Federation No. 17 dated July 2, on the use of the "Travel without COVID-19" mobile application to confirm a negative PCR test result by citizens of the member states of the Eurasian Economic Union and the Republic of Tajikistan, comes into force.
	14.07 	ГThe World Health Organization (WHO) Director General announces the onset of the third wave of the coronavirus in the world.
	15.07 	Nigeria registers Russia's Sputnik V vaccine against the coronavirus. Now the total number of countries where it has been approved is 68.
	16.07	The requirement that a vaccination certificate is necessary for tourists to be accommodated in hotels is introduced in the city of Sevastopol.
	19.07	Moscow cancels the system of mandatory QR codes for catering establishments. The nighttime operation of catering establishments, children's rooms, nightclubs, bars, and karaoke outlets is resumed (Decree of the Mayor of Moscow No. 42-UM dated July 16).
	22.07	Russia approves a new test system for identifying coronavirus strains. The Brazilian variant (Gamma) is detected in the country's territory.
	24.07 	Russia resumes regular air traffic with France and the Czech Republic on a reciprocal basis.

	Date	Event[2]
	25.07	The requirement for foreign citizens and stateless persons, as well as citizens of the Republic of Belarus, to provide a negative PCR test result through the "Travel Without COVID-19" mobile application when entering the Russian Federation from the territories of the Eurasian Economic Union's member states through airport security checkpoints, comes into force (RF Government Decree No. 1998-r dated July 20).
	30.07	In Moscow, the requirement to wear gloves in public places is abolished (Decree of the Mayor of Moscow No. 45-UM dated July 30).
	31.07	Small and medium-sized businesses and socially oriented non-profit organizations (NPOs) receive Rb8 bn as a short-term gratuitous grant (RF Government Decree No. 2127-r dated July 31).
	01.08	Restrictions on the accommodation of tourists in hotels are introduced in Krasnodar Krai.
	05.08	The number of coronavirus cases in the world rises above the psychological threshold of 200 mn.
	09.08	Russia resumes regular air traffic with Bahrain, the Dominican Republic, and Moldova.
	13.08	Moscow cancels the requirement for a mandatory switchover of 30% of employees to remote work (now it is recommendatory); the restrictions on visiting zoos are lifted (Decree of the Mayor of Moscow No. 51-UM dated August 13).
	23.08	The Republic of the Philippines registers Russia's Sputnik Light vaccine against the coronavirus.
	25.08	Indonesia approves the use of the Sputnik V vaccine. By the number of approvals received by state regulators, the vaccine now ranks second in the world.
	26.08	Russia registers its fifth vaccine against the coronavirus — EpiVacCorona.
	27.08	Russia resumes regular air traffic and charter flights with the Dominican Republic, South Korea and the Czech Republic.
	31.08	All foreign students are allowed to enter the Russian Federation.
	01.09	A reward program for citizens vaccinated against the coronavirus infection is launched. By December 1, two lucky draws with cash prizes will take place: by a government decision, there will be 1,000 wins, Rb100,000 each.
	01.09	By the start of the academic year in Russia, 45% of university faculty and 12% of students have been vaccinated.
	02.09	Russia has developed rapid test systems to detect the Iota and Lambda coronavirus strains.
	04.09	Russia cancels the mandatory stay-at-home requirement for those arriving from the UK (Decree of the Chief State Sanitary Physician of the Russian Federation No. 22 dated September 1).
	06.09	Rb2 bn is allocated for the implementation of measures to combat the spread of COVID-19 and other infections (the creation of a "sanitary shield"). (RF Government Edict No. 2461-r dated September 6).

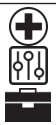
	Date	Event[2]
	08.09	It is decided to extend the moratorium on planned control (supervisory) activities for small businesses for the period until 2022 (RF Government Decree No. 1520 dated September 8).
	08.09	The total number of administered doses of the coronavirus vaccine reaches 5.5bn, of which 80% is in high-to-middle income countries.
	15.09	WHO suspends the approval process for Russia's Sputnik V coronavirus vaccine pending a fresh inspection.
	16.09	Moscow launches the issuance of QR codes for revaccinated individuals.
	17.09	Russia creates a test system for detecting SARS-CoV-2 RNA in any biomaterial.
	21.09	Russia resumes regular air traffic with Iraq, Spain, Kenya, and Slovakia.
	29.09	Hong Kong announces its recognition of Russian vaccination certificates.
	02.10	Singapore authorities require that foreigners arriving in the country for the purpose of work be fully vaccinated against the coronavirus.
	03.10	Qatar enters Sputnik V and Sinovac on its list of approved vaccines for arriving travelers. Under the new rules, travelers will be required to undergo a PCR test within 36 hours of crossing the border.
	04.10	The athletes vaccinated with Russian vaccines will be allowed to participate in the 2022 Winter Olympics in Beijing (Organizing Committee).
	04.10	From October 18 in the Chelyabinsk region, indoor events participated by more than 100 people can be attended only upon producing a QR code.
	05.10	From October 5, Russia resumes air traffic with Denmark, Djibouti, Peru, New Zealand, and South Africa.
	05.10	The effectiveness of the Pfizer-BioNTech COVID-19 vaccine decreases 47% six months after receiving the second dose. This finding is based on a study published in The Lancet (medical journal).
	06.10	In the Vologda, Voronezh and Ryazan regions, mandatory vaccination against the coronavirus is introduced for some categories of citizens, in particular those employed in retail, services, catering, housing and amenities services, and the civil service.
	06.10	The authorities of the Arkhangelsk region are going to introduce QR codes for visiting cafes and public events.
	07.10	Tatarstan introduces QR codes and a mandatory stay-at-home regime for individuals over 65 years of age who have not been vaccinated against the coronavirus (government decree).
	07.10	In Bashkiria, from October 27, visits to shopping centers, cinemas, swimming pools and fitness clubs will be possible only with a vaccination certificate or with a certificate of recovery from the coronavirus infection within the previous 6 months.

	Date	Event[2]
	09.10	In Sakhalin, cinemas and theaters will only be accessible to fully vaccinated individuals, while unvaccinated individuals over 60 years of age will be suspended from work.
	10.10	Chechnya will introduce QR codes that will be required to visit restaurants, shopping centers and retail outlets.
	10.10	Malaysia's authorities lift restrictions on travel throughout the country. Nearly 90% of the adult population there have been fully vaccinated.
	10.10	From October 12, according to the regional government's press release, the authorities of the Voronezh region will strengthen containment measures against the coronavirus, including shorter opening hours for catering establishments (until 21:00), switchover of educational establishments to remote learning mode.
	11.10	In Khakassia, it will be possible to enter catering outlets, cultural events and sports facilities only upon presenting a vaccination certificate or a certificate of recovery from the coronavirus infection.
	11.10	From November 15th, the Leningrad region introduces QR codes that will be necessary for visiting theaters, cinemas, swimming pools and fitness clubs.
 	11.10	Starting from November, Thailand will cancel the mandatory stay-at-home requirement for vaccinated tourists arriving from countries with a low incidence of COVID-19. These are the USA, the UK, China, and 7 other states. In the future, the list is going to be extended.
	11.10	From October 15 in Sevastopol, theaters, museums and cafes can be entered only upon presenting a QR code or a negative PCR test result.
	12.10	Bashkiria introduces a mandatory stay-at-home regime for unvaccinated senior citizens.
	12.10	The Komi authorities, from October 21, introduce the system of QR codes for visiting sports and cultural events.
	12.10	The Smolensk region introduces QR codes for visiting mass events, cultural institutions, shopping centers, beauty salons, public bathhouses, sports centers, and some other types of organizations.
	13.10	Chukotka introduces compulsory vaccination for fishermen, office workers and those employed in the services sector.
	13.10	Krasnodar Krai makes vaccination mandatory for government officials and students.
 	13.10	Chile is going to lift the quarantine regime for Russian tourists vaccinated with Sputnik V.
	13.10	Residents of the city of Moscow over 65 years of age who have been vaccinated against the coronavirus will be able to receive a cash reward of Rb10,000 instead of a reward gift set.
	14.10	In Khabarovsk Krai, regular hospitals are switching over to treating coronavirus patients. The local authorities announce the onset of a fourth coronavirus wave in the region.

	Date	Event[2]
	14.10	Indonesia's authorities open the Bali resort for vaccinated tourists from 19 countries. Russia is not on that list.
	14.10	From October 15, Kabardino-Balkaria introduces QR codes for visiting catering establishments and cultural events (as reported by the press service the region's head).
	15.10	The Philippines allows entry without a quarantine period for vaccinated visitors from 49 countries, including those vaccinated with Sputnik V and Sputnik Light.
	15.10	The Irkutsk region introduces compulsory vaccination for residents over 60 years of age and some other categories of citizens.
	16.10	The city of Irkutsk introduces mandatory vaccination for pensioners and students.
	17.10	Vietnam starts using Sputnik V in a vaccination campaign against COVID-19.
	18.10	From November 1, the Omsk region introduces QR codes for entering theaters, museums and concert halls.
	19.10	The Magadan region extends until December 15 the high alert regime by way of responding to COVID-19.
	19.10	Russia will share with Nicaragua its technology for the production of a COVID-19 vaccine
	20.10	In the Volgograd region from October 25, only vaccinated individuals or those with a negative PCR test result will be allowed to use intercity transportation and visit cafes.
	23.10	In Transbaikalia from October 25, a system of QR codes is to be introduced for visiting public places.
	23.10	From October 30, Kamchatka introduces QR codes for visiting catering and leisure establishments.
	23.10	From October 30 through November 7, the authorities of the Belgorod region will shut cafes, gyms, swimming pools, museums, cinemas and shopping centers in response to the aggravating epidemiological situation (region's governor).
	24.10	The Italian Ministry of Health extends the restrictions on entry from third countries, including the Russian Federation.
	24.10	The RF Ministry of Health approves Sputnik V for vaccinating nursing mothers.

	Date	Event[2]
	26.10	The Ulyanovsk region bans all mass events on non-working days (October 30 through November 7).
	29.10	The Volgograd court deems to be lawful the suspension from work for a refusal to be vaccinated.
	31.10	Cambodja approves the Sputnik V and Sputnik Light vaccines.
	01.11	The Novgorod region is the first among Russia's regions to announce the prolongation of the non-working period from November 8 for one more week.
	02.11	The Pskov region becomes Russia's first region to extend the QR code system until the New Year's Eve.
	02.11	According to the Chuvash Republic's head Oleg Nikolaev, QR codes in Chuvashia are to remain in place at least until the New Year's Eve.
	03.11	In Chukotka, the deadline for receiving reward payments for vaccination is extended until December 1.
	03.11	The authorities of Khabarovsk Krai announce a lockdown.
	03.11	WHO approves India's coronavirus vaccine Covaxin.
	05.11	From November 8, Primorsky Krai expands the use of QR codes: now they are required to enter non-food stores, hotels and beauty salons.
	05.11	The Russian government extends until the end of the year the lucky draw of Rb100,000 for those vaccinated against COVID-19.
	05.11	To get a European certificate of vaccination, those vaccinated with Sputnik V will be able to receive a booster dose of the Pfizer or Moderna vaccine in Italy.
	06.11	Tatarstan introduces QR codes on the public transportation system for residents over 18 years of age.
	07.11	Japan reports zero daily COVID-19 deaths for the first time in 15 months.
	07.11	Two hyenas kept at the Denver Zoo in the USA have tested positive for COVID-19, thus becoming the first known cases in the world.
	07.11	The Kaliningrad region, from November 8 until February, introduces QR codes for visiting multifunctional government services centers and government agencies, as well as cafes, hotels, fitness rooms and entertainment facilities.

	Date	Event[2]
	08.11	The Tula region, from November 8, introduces a stay-at-home regime for unvaccinated residents over 60 years of age. The city of Moscow and the Moscow region, after lifting the lockdown, continue to impose certain containment measures. The free travel passes for Moscow residents over 60 years of age and those chronically ill are suspended. The Republic of Mari El introduces a stay-at-home regime for those non-working pensioners over 60 years of age who have neither been vaccinated nor have recovered from the coronavirus infection. In Bashkiria, from November 10, only those vaccinated against COVID-19 or those who have been ill can visit hypermarkets and other large stores. The authorities of the Pskov region allow to hold wedding celebrations, as well as corporate parties, banquets and commemorations, on condition that both the participants and organizers of these events have received QR codes. Tyumen introduces QR codes for visiting shopping malls, cinemas and fitness centers.
	08.11 	The number of confirmed COVID-19 cases in the world exceeds 250 mn – John Hopkins University.
	09.11	The city of St. Petersburg introduces mandatory vaccination against COVID-19 for residents aged 60+ years and those with chronic illnesses (the first dose must be received by December 15; the second, by January 15).
	09.11 	Singapore authorities will discontinue covering the costs of coronavirus treatment for unvaccinated individuals. These changes do not apply to children under 12 years of age and to adults with contraindications to the vaccine.
	10.11	Krasnoyarsk Krai, from November 15, bans access to beauty salons, hotels, museums, catering and libraries for individuals without a QR code.
	10.11	The city of St. Petersburg's non-working residents over 60 years of age who are not vaccinated and have no QR code are not allowed to enter public catering, personal and household services outlets.
	11.11	From December 1, Khabarovsk Krai introduces a system of QR codes for entering railway stations and airports. From November 15, the Amur requires QR codes for visiting beauty salons and hairdressers. Krasnodar Krai launches mandatory vaccination for residents aged 60+ years.
	12.11	Chuvashia becomes Russia's first region to issue QR codes to individuals with high antibody titers.
	14.11 	Austria introduces a stay-at-home regime for unvaccinated citizens.
	15.11 	China restricts imports from Russia delivered by rail due to the coronavirus.
	15.11	Israel opens its borders to tourists vaccinated with Sputnik V.
	16.11	The Philippines approves the Sputnik Light vaccine as a universal booster.

	Date	Event[2]
	17.11	The ECtHR admits that a lockdown does not violate the Convention on Human Rights.
	17.11	Krasnoyarsk Krai launches mandatory vaccination against COVID-19 for police officers and elderly people. The Kaliningrad region introduces mandatory vaccination for residents over 60 years of age.
	20.11	The demonstration against the coronavirus restrictions held in Rotterdam led to riots, police fired warning shots. In central London, several thousand people took part in protests against coronavirus restrictions. Rallies against pandemic-related restrictions erupted in Vilnius, Zagreb and Vienna.
	21.11	Residents of Brussels took to the streets in mass protests against the tightening containment measures and mandatory vaccination.
	21.11	A rally against vaccination is held in Krasnodar Krai. The protesters demand the removal of all coronavirus restrictions and cancellation of QR codes.
	22.11	Kamchatka introduces relief measures for business during the pandemic (tax incentives and cash compensation).
	22.11	France faces the onset of a fifth wave — the number of new infections has soared by 80% over one week.
	23.11	Unvaccinated residents of the Khanty-Mansi autonomous national area will be required to send a notification about their leaving their home through a mobile application.
	23.11	Russia and Hungary agree on mutual recognition of certificates of vaccination against COVID-19.
	23.11	The Republic of San Marino approves Sputnik Light. This is Russia's second vaccine against the coronavirus approved in that country.
	24.11	The Nizhny Novgorod region introduces mandatory vaccination for individuals over 60 years of age.
	24.11	The RF Ministry of Health registers the Sputnik M vaccine against COVID-19 for teenagers aged 12 to 17 years.
	24.11	The Leningrad region introduces mandatory vaccination for individuals over 60 years of age and those with chronic illnesses.
	25.11	A new strain of the coronavirus (B.1.1.529) is discovered in southern Africa.
	26.11	The face mask wearing regime in Kamchatka is extended until the end of January 2022.
	26.11	Brazil is not going to require a COVID-19 vaccination certificate from visitors.

	Date	Event[2]
	26.11	In Europe, the first case of infection with a new strain of coronavirus from Africa is confirmed. It can spread around the world within a few months, according to the President of the European Commission. In response to the emergence of the new coronavirus strain, Russia will restrict entry from Hong Kong and southern African countries. The Philippines imposes a temporary ban on air flights from the Republic of South Africa and Botswana as a protective measure against the new variant of the coronavirus.
	27.11	WHO labels the new coronavirus strain Omicron and designates it a "variant of concern".
	27.11	The USA, Canada, Cyprus, Egypt, Argentina, Brazil, and Australia suspend air traffic with African countries. Qatar Airways suspends the admission to its flights of passengers from several African countries.
	28.11	The authorities of Iran and Kuwait suspend air traffic with southern African countries because of the Omicron strain.
	28.11	Israeli authorities announce the closure of borders for 14 days over the Omicron strain of the coronavirus.
	29.11	Canada and Austria confirm the first cases of infection with the new strain (Omicron); France identifies 8 possible cases of Omicron infection. The first cases of infection with the new coronavirus strain (Omicron) are recorded in Sweden and Spain. The new Omicron strain is identified in the family of an infected Italian; the total number of cases in Italy rises to 4.
	29.11	Primorsky Krai introduces mandatory vaccination against COVID-19 for senior citizens.
	29.11	The Winter Universiade 2021 in Switzerland is canceled because of the emergence of the new coronavirus strain.
	30.11	Ecuador and Kazakhstan are going to restrict entry from those countries that have become Omicron hotspots.
	30.11	From December 1, 2021, the Chelyabinsk region introduces mandatory vaccination against the coronavirus for people over 60 years of age and students over 18 years of age.
	01.12	WHO: Omicron has already been identified in 23 countries.
	01.12	Russia resumes air traffic with Brazil, Argentina and Bangladesh.
	01.12	Kamchatka introduces a stay-at-home regime for those elderly individuals who have not been vaccinated against the coronavirus.
	01.12	The Russian Premier League (RPL) comes to an agreement with Rospotrebnadzor and the Mayor of Moscow's office that the attendance of football matches in the capital should be increased to 70% of the stadiums' capacity (previously, the capacity limit was set at 30%).

	Date	Event[2]
	02.12	Finland confirms its first case of the Omicron strain infection. For that reason, the launch of the Allegro high-speed train between St. Petersburg and Helsinki is canceled. In Spain, the Omicron strain of COVID-19 is detected for the first time, in a resident who has not left the country.
	03.12	The authorities of Yakutia are easing COVID restrictions in response to the improving epidemiological situation.
	03.12	Japan suspends for at least one month the already issued new visas because of the threat posed by to the Omicron strain.
	05.12	From January 1, Saudi Arabia allows entry to individuals vaccinated with Sputnik V.
	06.12	Sputnik V becomes the second most effective and the first death-preventing vaccine in Hungary.
	06.12	Argentina approves Sputnik Light as a booster vaccine.
	08.12	PRospotrebnadzor reduces the validity period of the PCR test result to 48 hours.
	11.12	The Russian government completely bans entry into the country for foreigners from nine African countries and Hong Kong, by way of responding to the threat of the new coronavirus variant spread (to be labeled Omicron later on).
	13.12	It is decided to issue vaccination certificates (QR codes) to Russians vaccinated with foreign vaccines.
	16.12	Russia's excess mortality since the onset of the epidemic rises above 1 mn.
	17.12	The Sverdlovsk region introduces mandatory vaccination for students.
	18.12	The Crimea bans all concerts and entertainment events in public socializing areas during the New Year's holidays.
	20.12	Moscow extends the issuance of QR codes to recovered coronavirus patients.
	22.12	The RF Ministry of Health of Russia registers Mir-19, a drug against the coronavirus. The drug is approved for the treatment of coronavirus patients aged 18 to 65 years.
	23.12	WHO speaks against the universal vaccination of children against the coronavirus.
	23.12	Japan introduces a mandatory quarantine for arriving Russians because of the new Omicron strain.
	24.12	Omicron has been identified in 110 countries around the world.

	Date	Event[2]
	28.12	The RF Government extends the period of additional payments to the medical personnel providing medical care to coronavirus patients throughout the year 2022.
	28.12	Mir-19 and Sputnik M are included in the COVID-19 treatment guidelines.

Sources: own compilation based on data taken from official websites of the President of Russia, the Government of the Russian Federation, the Bank of Russia, WHO, the Moscow City Health Department, the Eurasian Economic Commission, the RF Ministry of Health, the RF Ministry of Education, the RF Ministry of Finance, the Moscow Mayor and Moscow City, the Moscow Government, Rospotrebnadzor (Federal Service for the Oversight of Consumer Protection and Welfare), Official Portal of Legal Information; and the following news and media websites: Vedomosti.ru, Izvestia (iz.ru), Interfax, Kommersant.ru, RBC, RIA Novosti (ria.ru), Rossiyskaya gazeta (rg.ru), and TASS Russian News Agency (tass.com).

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For Notes

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